Columbia DSL Communication Processor

CLI Reference Manual

For additional information, contact Conexant Systems, Inc. (together with its subsidiaries, "Conexant") at 1-888-855-4562 (toll-free within the U.S. and Canada) or 1-732-345-7500, or visit the Conexant internet site at www.conexant.com.

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1 About This Manual

Welcome to the Columbia DSL Communication Processor CLI Reference Manual. The commands and parameters of the Command Line Interface (CLI) to the Conexant Columbia communication processor are documented in this manual. The CLI enables an administrative user to configure and maintain Columbia's interfaces, Columbia-managed resources and end-customer communication services.

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1.1 Revision History

Revision	Date	Description
Issue 1	Ocober 2, 2002	Initial release
Issue 2	October 31, 2002	Updated with latest CLI commands
Issue 3	January, 2003	Updated with changes to CLI commands
Issue 4	February, 2003	Updated with changes to CLI commands
Issue 5	April, 2003	Added new commands and changed commands, to be updated with software release 2.0
Issue 6	May 16, 2003	Corrected minor typographical errors
Issue 7	June, 2003	Updated with changes to CLI commands and new commands, as per software release 2.5.
Issue 8	August, 2003	Updated with changes to CLI commands as per software release 2.5.1, and added a new section, section 1.5, on the Structure of a CLI command.
Issue 9	February 19, 2004	Updated as per software release 2.6. Please refer to Update summary for details.
Issue 10	June 04, 2004	Updated as per software release 2.7. Please refer to Update summary for details.
Issue 11	June 15, 2004	Updated as per software release 2.7. Please refer to Update summary for details.
Issue 11, Draft A	Sep 15, 2004	Updated as per software release 2.8. Please refer to Update summary for details.
Issue 12	Sep 25, 2004	Updated as per software release 2.8. Please refer to Update summary for details.

Revision	Date	Description
Issue 13	Oct 27, 2004	Updated as per software release 2.8.1.0. Please refer Update summary for details.
Issue 14	Dec 01, 2004	Updated as per software release 2.8.2.0. Please refer Update summary for details.

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1.2 Related Documents

You may want to refer to the following related documents:

- Columbia Data Sheet (DO-300205-DS)
- Columbia Design Guide (DO-300206-DG)
- Conexant Glossary of Technical Terms and Acronyms (DO-300255-DG)

1.3 Document Organization

About This Manual, Chapter 1, introduces you to the document.

Command Descriptions, Chapter 2, provides details of the commands and parameters. This chapter groups functionally related commands under level two section headings, e.g., 2.1. Each command is described in a level three section heading, e.g., 2.1.1.

Many groups of commands have common sections for related parameters, examples and output fields. These common sections are at the same heading level as the commands, e.g., 2.2.5. Some commands have their related parameters, example and output fields as level four heading, e.g., 2.1.1.1.

The *Command Index* has index entries for each command in the document, arranged in an alphabetical order.

1.4 Notation Conventions

- Keywords in a command that you must enter exactly as shown are presented in ***bold italics***.
- User specified values in a command are presented in regular typeface, i.e., not bold or italic.
- Parameter values enclosed in **< >** must be specified.
- Parameters enclosed in [ ] are optional. All **modify** parameters are shown as optional in CLI commands even if there exists only a single parameter.
- Parameter values are separated by a vertical bar **ì|î** only when one of the specified values can be used.
- Parameter values are enclosed in **{ }** when you must use one of the values specified.
- Parameters are enclosed in **{ }+** when you can specify the parameter one or more times, in the command line.

1.5 Structure of a CLI Command

CLI commands conform to the following structure except for some basic service commands such as   ping, traceroute etc.

<Action><Group><Sub group><Sub sub group> <tag1 value1>Ö<tagN valueN>

Consider the CLI command given below:

Figure 1-1:

<Action>. This is the first keyword of a CLI command. It indicates the type of operation to be performed. "create" is an example of this keyword. However, if no action is specified it will mean ìmodifyî. For example, ìmodify bridge port intf portid portid status enableì and ìbridge port intf portid portid status enable ì mean the same.

<Group>. This is the second keyword of a CLI command. It indicates the group of a CLI command. "bridge" is an example of this keyword.

<Sub group>. This is the third keyword of a CLI command. It indicates the sub group of a CLI command. "port" is an example of this keyword.

 <Sub sub group>. This is the fourth keyword of a CLI command. It indicates the sub group of a CLI command. "intf" is an example of this keyword.

 <tag1 value1> <tagN valueN>. These are <tag value> pairs and can vary from 0 to N. They indicate the parameter values passed to a CLI command. "ifname aal5-0", "portid 20", are examples of tag value pairs.

1.6 Glossary of Terms and Acronyms

This section contains a brief list of selected acronyms. For a detailed glossary, please refer to the Conexant Glossary of Technical Terms and Acronyms (DO-300255-DG)

ABBREVIATION	Description
AAL5	ATM Adaptation Layer 5
ACL	Access Control list
ADSL	Asymmetric Digital Subscriber Line
Attribute	An element of an MO
ATM	Asynchronous Transmission Mode
CLI	Command Line Interface
CP	Control Plane
DHCP	Dynamic Host Configuration Protocol
DP	Data Plane
DSL	Digital Subscriber Line
EOA	Ethernet over ATM
GARP	Generic Attribute Registration Protocol
GMRP	GARP Multicast Registration Protocol
GVRP	GARP VLAN Regenration Protocol
IGMP	InternetGroup Management Protocol
Index	An element of a tabular MO that uniquely identifies an entry
IP	Internet protocol
IRL	Input Rate Limiting
IVL	Individual VLAN Learning
IVM	Individual VLAN for Multicast
LACP	Link Aggregation Control Protocol
LAN	Local Area Network
ME - Management Entity	The entity, modified, controlled and monitored through MOs.
MO ID - MO Identifier	A unique number that identifies an MO. Interpretation of the information passed to GenAg for an MO depends upon this identifier

ABBREVIATION	Description
MO - Managed Object	Logical unit of manageable information. It is similar to a MIB. An ME is visible to the outside world in the form of one or more MOs that constitute it.
Operations	GAG supports five operations - Create, Delete, Modify, Get, Get-Next
ORL	Output Rate Limiting
OAM	Operations Administration and Management
RMON	Remote Monitoring
STP	Spanning Tree Protocol
SNTP	Simple Network Time Protocol
SVL	Shared VLAN Learning
SVM	Shared VLAN for Multicast
Specific Agent	Entities that use GenAg interfaces to manage the system
TEA	Target Engine Agent
VC	Virtual Channel
VLAN	Virtual LAN

2   Command Descriptions

This chapter describes each command of the Command Line Interface, in detail. Commands are functionally grouped in to separate subsections, along with parameters used by those commands.

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2.1 Interface Commands

2.1.1   get interface stats

Description   Use this command to view statistics for one interface or all the interfaces.

Command Syntax   *get interface stats [ifname* interface-name *]*

Parameters

Name	Description
Ifname interface-name	This uniquely identifies the interface, for which information is to be retrieved. If this is not specified, then information for all interfaces is displayed. **Type** : Optional **Valid values:** aal5-*, eth-0, eth-1,atm-*, eoa-*, dsl-*, dslf-*, dsli-*, aggr-*, ehdlc-*, pppoe-*, pppr-*, vdsl-*

Example   *$ get interface stats ifname eth-0*

Output   Verbose Mode On

```
Entry Created

Interface         : eth-0        Description       : eth-0
Type              : ETHERNET     Mtu               : 1500
Bandwidth         : 100000000    Phy Adddr         : 00:BB:CC:DD:EE:F1
Last Change(sec)  : 219          Unknown Prot Pkts : 0
Admin Status      : Up           Operational Status : Up
In Octets         : 396312       Out Octets        : 168929
In Discards       : 0            Out Discards      : 0
In Errors         : 0            Out Errors        : 0
In Ucast Pkts     : 2291         Out Ucast Pkts    : 2518
In Mcast Pkts     : 428          Out Mcast Pkts    : 0
In Bcast Pkts     : 1456         Out Bcast Pkts    : 0
LinkUpDnTrapEnable : Enable      Promiscous Mode   : True
Connector Present : True         CounterDiscontTime : 0
HC In Octets      : 0x000060c18
HC OutOctets      : 0x0000293e1
```

Output Fields

Field	Description
Interface	This uniquely identifies the interface, for which information is being displayed. It may be: *aal5-*, eth-0, eth-1,atm-*, eoa-*, dsl-*, dslf-*, dsli-*, aggr-*, ehdlc-*, pppoe-*, pppr-*, vdsl-*.*
Description	This is general information about the interface

Field	Description
Type	The type of interface, distinguished according the physical/link/network protocol, immediately below the IP layer. It may be: *ATM, ETHERNET, AAL5, EOA, DSL, FAST, INTERLEAVED,AGGR. EHDLC.*
Mtu	The size (in bytes) of the largest packet, which can be sent/received on this interface in octets.
Bandwidth	The current bandwidth of the interface, in bps.
Phy Addr	Interface's address, at its protocol sublayer.
Admin Status	This is the desired state of the interface. It may be: *Up, Down.*
Operational Status	The current operational state of the interface. If ifAdminStatus is disable(2), then ifOperStatus should be disable(2). If ifAdminStatus is changed to enable(1), then ifOperStatus should change to enable(1), if the interface is ready to transmit and receive network traffic. Interface will have the OperStatus value as dormant(5) if the 'configstatus' of the entry is 'config' and the interface is waiting for a packet to be sensed to get activated.
Last Change	Value of System UpTime (in seconds) at the time the interface entered its current operational state.
Unknown Prot Pkts	The number of packets received via the interface, which were discarded because of an unknown or unsupported protocol.
In Octets	The total number of octets received on the interface, including the framing characters. For Ethernet interfaces, this will have the lower 32 bits of HC in octets. Valid for *atm-*, eoa-*, aal5-*, eth-0, eth-1, dsl-*, dslf-*, dsli-*, aggr-*.*
Out Octets	The total number of octets transmitted out of the interface, including framing characters. For Ethernet interfaces, this will have the lower 32 bits of HC Out octets. Valid for *atm-*, eoa-*, aal5-*, eth-0, eth-1, dsl-*, dslf-*, dsli-*, aggr-*.*
In Discards	The number of inbound packets, which were discarded, though no errors were detected.
Out Discards	The number of outbound packets chosen to be discarded even though there were no errors.
In Errors	The number of inbound packets, which were not delivered to upper layers because of errors.
Out Errors	The number of outbound packets chosen to be discarded because there were errors.

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Field	Description
In Ucast Pkts	The number of unicast packets delivered to a higher layer protocol.
Out Ucast Pkts	The total number of packets requested to be sent to unicast addresses, by upper layer protocols.
HC In Octets	The total number of octets received on the interface, including framing characters. This object is a 64-bit version of **ifInOctets**. Valid for *eth-*.*
HC OutOctets	The total number of octets transmitted out of the interface, including framing characters. This object is a 64-bit version of **ifOutOctets**. Valid for *eth-*.*
In Mcast Pkts	The number of multicast packets delivered to a higher layer protocol.
Out Mcast Pkts	The total number of packets requested to be sent to multicast addresses, by upper layer protocols.
In Bcast Pkts	The number of broadcast packets delivered to a higher layer protocol.
Out Bcast Pkts	The total number of packets requested to be sent to broadcast addresses, by upper layer protocols.
LinkUpDnTrapEnable	Indicates whether *linkUp/ linkDown* traps should be generated for this interface.
Promiscous Mode	This object has a value of false if this interface only accepts packets/frames that are addressed to this station. This object has a value of true when the station accepts all packets/frames transmitted on the media. The value true is legal only for Ethernet interfaces. The value of PromiscuousMode does not affect the reception of broadcast and multicast packets/frames by the interface.
Connector Present	This indicates whether the interface sublayer has a physical connector or not. This is true only for physical Ethernet interfaces.
CounterDiscontTime	The value of **sysUpTime** on the most recent occasion, at which any one or more of this interface's counters suffered a discontinuity.

2.1.2   reset interface stats

Description   Use this command to reset the statistics of Ethernet, EoA, ATM, AAL5, DSL, DSLF, DSLI, Aggr and EHDLC interfaces.

Command Syntax   *reset interface stats ifname ifname*

2.1.3   get interface config

Description   Use this command to view Interface Configuration.

Command Syntax   `get interface config ifname ifname`

2.1.4   modify interface config

Description   Use this command to modify interface configuration.

Command Syntax   `modify interface config ifname ifname [trap enable/disable]`

Parameters

Name	Description
Ifname interface-name	Interface name, for which configuration is to be modified or viewed. **Type**: Get - Optional Modify - Mandatory **Valid values** : *eth-*,atm-*,aal5-*, eoa-*, dsl-*, dslf-*, dsli-*, aggr-*, ehdlc-*.*
trap enable/disable	Indicates whether *linkUp/linkDown* traps should be generated for this interface. **Type**: Modify – Optional **Valid values** : enable Or disable

Example   `$ get interface config`

Output   Verbose Mode On

```
IfName  LinkUp/DnTrap
--------------------
aal5-0  Enable
```

Output Fields

FIELD	Description
IfName	Interface name, for which configuration is to be viewed.
LinkUp/DnTrap	Indicates whether *linkUp/linkDown* traps shall be generated for this interface.

Caution   Reset of ATM VC interface stats also result in atm vc stat reset for the interface and reset of ethernet interface stats also result in dot3stats reset for the ethernet interface.

References   • ATM Interface commands
                  • Ethernet commands
                  • EoA commands

2.2 ATM Interface Commands

2.2.1 create atm port

Description   Use this command to create an ATM Port.

Command Syntax

```
create atm port  ifname interface-name lowif dsl-port interface-name
[enable | disable] [Maxvpibits maxvpibits] [Maxvcibits maxvcibits]
[oamsrc oamsrc] [Orl Orl] [Class0Thrshld class0thrshld]
[Class1Thrshld class1thrshld] [Class2Thrshld class2thrshld]
[Class3Thrshld class3thrshld] [ProfileName profilename]
[trfclassprofileid trfclassprofileid ] [Ctlpktinstid ctlpktinstid]
```

2.2.2 delete atm port

Description   This command is used to delete an ATM port.

Command Syntax   `delete atm port ifname interface-name`

2.2.3 get atm port

Description   Use this command to get information about a specific or all ATM ports.

Command Syntax   `get atm port [ifname interface-name]`

2.2.4 modify atm port

Description   Use this command to enable or disable the administrative status of ATM port.

Command Syntax

```
modify atm port ifname interface-name [enable | disable] [maxvcs
maxvcs] [Maxvpibits maxvpibits] [Maxvcibits maxvcibits] [oamsrc
oamsrc] [Orl Orl] [Class0Thrshld class0thrshld] [Class1Thrshld
class1thrshld] [Class2Thrshld class2thrshld] [Class3Thrshld
class3thrshld] [ProfileName profilename] [trfclassprofileid
trfclassprofileid ]
```

Parameters

Name	Description
ifname interface-name	This specifies the name of the ATM port. **Type:** Create - Mandatory Delete - Mandatory Get - Optional Modify - Mandatory **Valid values :** *atm-0 - **
maxvc max-num-vccs	This specifies the maximum number of VCCs (PVCCs), supported at this ATM interface. **Type :** Optional **Valid values :** 1 - GS_CFG_MAX_ATM_VC_PER_PORT **Default Value :** GS_CFG_DEF_ATM_VC_PER_PORT
oamsrc oam-src-id	Loopback source id assigned to the ATM port. The ATM port will respond to all loopback cells, which carry this OAM id. **Type :** Optional **Valid values :** 0x followed by 32 Hex Digits **Default Value :** *0xffff ffff ffff ffff ffff ffff ffff ffff*
Maxvpibits max-vpi-bits	Maximum number of VPI bits configured for use at this ATM interface. **Type :** Optional **Valid values :** 1 to 8. **Default Value :**
maxvcibits max-vci-bits	Maximum number of VCI bits configured for use at this ATM interface. **Type :** Optional **Valid values** : 1 to 16. **Default Value:** 16.
enable/*disable*	Administrative status of the ATM port **Type :** Optional **Valid values** : *enable* or *disable* **Default Value:** *enable*
lowif dsl-port-interface-name	This identifies the lower DSL interface, on which this ATM interface is configured. **Type :** Mandatory. **Valid values** *: dsl-**
Orl orl	This parameter specifies the output rate limiting value in Kbps to be applied on this interface. **Type**: create – Optional **Valid values** : *GS_CFG_MIN_ORL_ATM_RATE_KBPS – GS_CFG_MAX_ORL_ATM_RATE_KBPS*

Name	Description
ProfileName profilename	This specifies the scheduling profile to be associated with the ATM port. **Type**: Optional **Valid values**: **Default Value**: "SPROFILE"
trfclassprofileid *trfclassprofileid*	This specifies the traffic class profile associated with the ATM interface. **Type**: Optional **Valid values**:1 to GS_CFG_MAX_TRFCLASS_PRFLS **Default Value**: GS_CFG_DEF_ATM_TRF_CLASS_PRFL_ID
Ctlpktinstid	This specifies the control packet instance identifier associated with this interface. If the user does not provide any instance identifier while creating an interface, an instance is created internally from the default profile governed by the macro GS_CFG_CTRL_PKTS_DEF_ATM_PROF_ID and associated to the interface. This will reduce the total number to instances that can be now created by one. The default instance is governed by the macro GS_CFG_CTRL_PKTS_DEF_INSTANCE_ID. **TYPE**: Create -- Optional Valid Values:1 - GS_CFG_MAX_CPPR_INSTANCES Default Value: GS_CFG_CTRL_PKTS_DEF_INSTANCE_ID

Example
```
$ create atm port ifname atm-0 lowif dsl-0 maxvc 4 Class0Thrshld 2
Class1Thrshld 3 Class2Thrshld 2 Class3Thrshld 3 profilename gold
trfclassprofileid 3  ctlpktinstid 1
```

Output   Verbose Mode On

```
IfName              : atm-0            LowIfName            : dsl-0
MaxVccs             : 4               MaxConfVccs          : 0
MaxVpiBits          : 9               MaxVciBits           : 10
OAMSrc              : 0xffffffffffffffffffffffffffffffff
ORL (kbps)          : 640             RowStatus            : Active
UnknownVPI          : 2               UnknownVCI           : 3
ProfileName         : gold
Current Output Rate : 0
trfclassprofileid   : 3
Ctl Pkts Instance Id:1
Oper Status         : Up              Admin Status         : Up
```

Output Fields

FIELD	Description
IfName	This specifies the name of the ATM port. It can be: atm-0, atm-1, etc.
LowIfName	This specifies the name of the lower interface. It can be: dsl-0, dsl-1 etc,.

FIELD	Description
Max Vccs	The maximum number of VCCs (PVCCs) supported at this ATM interface.
MaxConfVccs	This specifies the current number of VCCs configured on this port. It may be : 0 - Value defined in MaxVccs
MaxVpiBits	The maximum number of active VPI bits configured for use at the ATM interface.
MaxVciBits	This specifies the maximum number of active VCI bits configured for use at this ATM interface.
OAMSrc	This specifies the loop back source id used for the OAM loop back testing
Oper Status	The actual/current state of the interface. It can be either Up or Down
Admin Status	The desired state of the interface. It may either be Up or Down
Orl (kbps)	This parameter specifies the output rate limiting value in Kbps to be applied on this interface.
RowStatus	This defines the row-status of the interface entry.
UnknownVPI	This parameter specifies the last seen unknown VPI on this ATM interface.
UnknownVCI	This parameter specifies the last seen unknown VCI on this ATM interface.
ProfileName	This specifies the scheduling profile to be associated with the ATM port.
Current Output Rate	This parameter specifies the current output rate value in KBPS that is available on this interface, based on the minimum of the DSL trained rate and the OutPut Rate limit configured for the ATM port.
trfclassprofileid	This specifies the traffic class profile associated with the ATM interface.
Ctl Pkts Instance Id	This specifies the control packet instance identifier associated with this interface. If the user does not provide any instance identifier while creating an interface, an instance is created internally from the default profile governed by the macro GS_CFG_CTRL_PKTS_DEF_ATM_PROF_ID and associated to the interface. This will reduce the total number to instances that can be now created by one. The default instance is governed by the macro GS_CFG_CTRL_PKTS_DEF_INSTANCE_ID.

Caution   The specified lower interface should already be created. If the parameter `maxvcperport` in `nbsize` command is modified, please ensure that `MaxConfVccs` in `atm port` command is less than or equal to `maxvcperport`.

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References   • ATM VC commands
                 • ATM statistics commands
                 • DSL commands.

2.3 ATM VC Commands

2.3.1   create atm vc intf

Description   Use this command to create a new ATM Virtual Circuit (VC).

Command Syntax   `create atm vc intf ifname interface-name vpi vpi vci vci lowif atm-port-interface-name [enable | disable] [aal5] [a5txsize aal5-cpcs-tx-sdu-size] [a5rxsize aal5-cpcs-rx-sdu-size] [vcmux | llcmux | auto] [pvc] [channel fast|interleaved] [mgmtmode data|mgmt|DataAndMgmt| raw] [maxnumproto maxnumproto] [autostatus Enable|Disable] [autosupportedprot none|{pppoa | eoa}+] [autovcmuxforcedprot None | pppoa | eoa] [autosensetriggertype dynamic | opstatechange]`

2.3.2   delete atm vc intf

Description   Use this command to delete an existing ATM Virtual Circuit (VC).

Command Syntax   `delete atm vc intf ifname interface-name`

2.3.3   get atm vc intf

Description   Use this command to display information corresponding to a single VC, or for all VCs.

Command Syntax   `get atm vc intf [ifname interface-name]`

2.3.4   modify atm vc intf

Description   Use this command to modify ATM VC parameters.

Command Syntax   `modify atm vc intf ifname interface-name [vpi vpi] [vci vci] {enable | disable} [a5txsize aal5-cpcs-tx-sdu-size] [a5rxsize aal5-cpcs-rx-sdu-size] [vcmux | llcmux | auto] [mgmtmode data | mgmt | DataAndMgmt | raw] [autosupportedprot none|{pppoa | eoa}+] [autovcmuxforcedprot None | pppoa | eoa] [autosensetriggertype dynamic | opstatechange]`

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Parameters

Name	Description
ifname interface-name	This specifies name of VC Interface. **Type**: Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory **Valid values** : *aal5-0 - **
lowif atm-port-interface-name	Interface Index of the ATM port, on which this VC is getting configured. **Type** : Mandatory **Valid values** : *atm-0 - **
vpi vpi	Virtual Path Identifier. In order to modify, the VPI value shall be the new VPI value and the admin status of VC interface shall be disabled. Also, the VPI and VCI value cannot be modified along with admin status in one command. **Type** : Create – Mandatory Modify – Optional **Valid values** : *0-2^8*
vci vci	Virtual Circuit Identifier. In order to modify, the VCI value shall be the new VCI value and the admin status of VC interface shall be disabled. Also, the VPI and VCI value cannot be modified along with admin status in one command. **Type** : Create – Mandatory Modify – Optional **Valid values** : *1-2^16*

Name	Description
`mgmtmode Data	Mgmt	DataAndMgmt	Raw`	It denotes the Management Mode of the ATM VC. If it is Data, then only data transmission can take place. If it is Mgmt, then management of remote CPE device can happen on that ATM VC and packets on that ATM VC shall start coming to Control Plane. In DataAndMgmt mode, data transmission as well as remote CPE management can happen on the same ATM VC interface. In DataAndMgmt mode, the acceptable values for *atmVCCAAL5EncapType* are **llcmux** and **auto**. In Mgmt mode, EoA interface cannot be created on the ATM VC and both Ethernet as well as non-ethernet packets on that ATM VC shall be received at the Control Plane. In DataAndMgmt mode, if EoA is created, then only non-ethernet packets on that ATM VC shall be received at the Control Plane. However, if EoA is not created then all the packets on that ATM VC shall be received at the Control Plane. However, to configure ATM VC in DataAndMgmt mode, a good practice is to to create ATM VC in disable mode till EoA is created on it, to prevent flooding at Control Plane. In order to run STP, the mode has to be DataAndMgmt. If the mode is RawATM(4), ATM cells are given to Control Plane. In this mode, EoA interface cannot be created on the ATM VC. If EoA interface is already created on the ATM VC, its mode cannot be changed to either Mgmt(2) or RawATM(4). **Type** **:** Create -- Optional **Default value:** Data
`enable|disable`	This specifies the Admin Status of the VC. **Type** : Optional **Default Value**: *enable*
`aal5`	This specifies the AAL type in use for this VC. The only type of AAL supported in Columbia Packet is AAL5. **Type**: The only value to be supported is aal5. **Default value** : aal5
`a5txsize aal5-cpcs-tx-sdu-size`	This specifies the maximum transmit CPCS SDU size to be used. **Type** : Optional **Valid values** : *1-GS_CFG_ATM_VC_MAX_RX_PDU_SIZE* **Default Value**: *GS_CFG_ATM_VC_DEF_TX_PDU_SIZE*
`a5rxsize aal5-cpcs-rx-sdu-size`	This specifies the maximum receive CPCS SDU size to be used **Type** : Optional **Valid values** : *1-GS_CFG_ATM_VC_MAX_TX_PDU_SIZE* **Default Value**: *GS_CFG_ATM_VC_DEF_TX_PDU_SIZE*

Name	Description
`vcmux/llcmux/auto`	This specifies the data multiplexing method to be used over the AAL5 SSCS layer. "auto" means autosense the muxType. **Type** : Optional **Default Value**: *llcmux*
`Pvc`	This specifies the type of VC. The only value supported is PVC. **Type** : Optional **Default Value**: *pvc*
`channel fast/interleaved`	This extension specifies the type of channel on which the ATM VC's cells have to be transmitted/received. **Type** : Optional **Default Value**: *Interleaved*
`Maxnumproto maxnumproto`	This field specifies the maximum number of simultaneous active protocol stacks supported on this interface. Currently, only one protocol stack is supported. **Type**: Create -- Optional **Default value**: GS_CFG_DEF_NUM_ATM_VC_PROTO_SUPPORTED
`Autostatus Enable/Disable`	This field specifies whether the Auto mode is to be enabled or not. In the Auto mode, the stack above this interface will be determined and created based on the protocol packets sensed on this interface. For example, if the protocol packet sensed above this interface is an EoA packet, then the corresponding EoA stack will be created above this interface. However, the corresponding EoA interface must have been created with the gsvEoaConfigMode field's bit corresponding to the 'Auto' set. **Type**: Create -- Optional **Default value**: GS_CFG_DEF_ATM_VC_AUTO_MODE
`autosupportedprot none/{pppoa	eoa}+`	This field specifies the higher layer protocols that can be supported for auto detection. The purpose of this parameter is to allow the network admin to allow only certain protocols to be autosensed in the field. It can only be present with the autostatus flag as enable. **Type**: Create -- Optional Modify -- Optional **Default value**: GS_CFG_DEF_ATM_VC_SUPPORTED _PROTOCOL

Name	Description
autovcmuxforcedprot None | pppoa | eoa	This field specifies that if the encap type detected is VCMux, the user can configure to build a specific protocol stack automatically. It can only be present with the autostatus flag as enable. In case of a conflict with autoSupportedProtocols, its value will override. **Type**: Create -- Optional Modify -- Optional **Default value**: GS_CFG_DEF_ATM_VC_MUX_FORCED_PROTOCOL
autosensetriggertype dynamic | opstatechange	This field specifies at what time the autodetection of the Encapsulation type or the higher protocol layers is to be done - At all times or only when the Operational Status of the ATM VC is changed to UP. If its value is 'dynamic', then detection can happen anytime a packet is received. If its value is 'opstatechange', then autodetection happens only when the Operational status of the ATM VC changes to UP. **Type**: Create -- Optional Modify -- Optional **Default value**: GS_CFG_DEF_ATM_VC_AUTO_TRIGGER_TYPE

Example

```
$ create atm vc intf ifname aal5-0 lowif atm-0 vpi 10 vci 10 enable
aal5 pvc a5txsize 1536 a5rxsize 1536 llcmux mgmtmode data
autosupportedprot pppoa eoa autovcmuxforcedprot pppoa
autosensetriggertype dynamic
```

Output   Verbose Mode On

```
Entry Created
VC IfName          : aal5-0       Low IfName        : atm-0
VPI                : 10           VCI               : 10
Admin Status       : Up           Oper Status       : Up
Aal5 Tx Size       : 1536         Aal5 Rx Size      : 1536
AAL Type           : AAL5         AAL5 Encap        : LLC Mux
channel            : Interleaved  Last Change       : 120
MgmtMode           : Data         Row Status        : active
VC Type            : PVC          VC Topology       : Point to Point
Max simultaneous protocol : 3     Auto Status       : Enable
Auto Supported Protocol   : pppoa eoa    Auto VC Mux Forced Protocol   : pppoa
Auto Sense Trigger Type   : dynamic      Auto Curr Sensed Encaps Typee : none
```

Output Fields

FIELD	Description
VC IfName	VC Interface Name. It can be : *aal5-0 - **
Low IfName	Interface Index of the ATM port, on which this VC is getting configured.
VPI	It is the Virtual Path Identifier.

FIELD	Description
VCI	It is the Virtual Circuit Identifier.
Oper Status	The actual/current state of the interface. It can be either *Up* or *Down*
Admin Status	The desired state of the interface. It may be either *Up/Down.*
Aal5 Tx Size	This specifies the transmit CPCS SDU size to be used.
Aal5 Rx Size	This specifies the receive CPCS SDU size to be used.
Aal Type	This specifies the AAL type in use for this VC. The only type of AAL supported in Columbia Packet is AAL5.
Aal5 Encap	This specifies the data encapsulation method to be used over the AAL5 SSCS layer. "auto" means autosense the muxType.
channel	This extension specifies the type of channel on which the ATM VC's cells have to be transmitted/ received.
Last Change	The value of sysUpTime at the time this VC entered its current operational state.
MgmtMode	It denotes the Management Mode of the ATM VC. If it is Data, then only data transmission can take place. If it is Mgmt, then management of remote CPE device can happen on that ATM VC and packets on that ATM VC shall start coming to Control Plane. In DataAndMgmt mode, data transmission as well as remote CPE management can happen on the same ATM VC interface. In DataAndMgmt mode, the acceptable values for *atmVCCAAL5EncapType* are **llcmux** and **auto**. In Mgmt mode, EoA interface cannot be created on the ATM VC and both Ethernet as well as non-ethernet packets on that ATM VC shall be received at the Control Plane. In DataAndMgmt mode, if EoA is created, then only non-ethernet packets on that ATM VC shall be received at the Control Plane. However, if EoA is not created then all the packets on that ATM VC shall be received at the Control Plane. However, to configure ATM VC in DataAndMgmt mode, a good practice is to to create ATM VC in disable mode till EoA is created on it, to prevent flooding at Control Plane. In order to run STP, the mode has to be DataAndMgmt. If the mode is RawATM(4), ATM cells are given to Control Plane. In this mode, EoA interface cannot be created on the ATM VC. If EoA interface is already created on the ATM VC, its mode cannot be changed to either Mgmt(2) or RawATM(4).

FIELD	Description
RowStatus	This defines the row-status of the interface entry
VC Type	This field specifies whether VC type is PVC or SVC.
VC Topology	This field specifies the VC connection topology type.
Max simultaneous protocol	This field specifies the maximum number of simultaneous active protocol stacks supported on this interface. Currently, only one protocol stack is supported.
Auto Status	This field specifies whether the Auto mode is to be enabled or not. In the Auto mode, the stack above this interface will be determined and created based on the protocol packets sensed on this interface. For example, if the protocol packet sensed above this interface is an EoA packet, then the corresponding EoA stack will be created above this interface. However, the corresponding EoA interface must have been created with the gsvEoaConfigMode field's bit corresponding to the 'Auto' set.
Auto Supported Protocol	This field specifies the higher layer protocols that can be supported for auto detection. The purpose of this parameter is to allow the network admin to allow only certain protocols to be autosensed in the field. It can only be present with the autostatus flag as enable.
Auto VC Mux Forced Protocol	This field specifies that if the encap type detected is VCMux, the user can configure to build a specific protocol stack automatically. It can only be present with the autostatus flag as enable. In case of a conflict with autoSupportedProtocols, its value will override.
Auto Sense Trigger Type	This field specifies at what time the autodetection of the Encapsulation type or the higher protocol layers is to be done - At all times or only when the Operational Status of the ATM VC is changed to UP. If its value is 'dynamic', then detection can happen anytime a packet is received. If its value is 'opstatechange', then autodetection happens only when the Operational status of the ATM VC change to UP.
Auto Curr Sensed Encaps Type	This field specifies the current sensed Encapsulation type in case the Encapsulation type is being autodetected. The value of this field will be the same as the field 'AAL5 Encapsulation Type' if the Encapsulation type is preconfigured. This is a read only field for all agents, except for the Auto Sense Agent.

Caution   The specified lower interface should exist. Please refer to the `create atm port` command.

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References
- ATM interface commands
- ATM statistics commands
- ATM OAM commands
- ATM VC statistics commands.

2.4 ATM OAM Loopback Commands

2.4.1   modify oam lpbk vc

Description   Use this command to start or stop OAM loopback.

Command Syntax   `modify oam lpbk vc ifname interface-name [lbid oam-loopbacklocation-id] [e2e | seg]`

2.4.2   get oam lpbk vc

Description   Use this command to display result of previous OAM loopback command.

Command Syntax   `get oam lpbk vc ifname interface-name`

Parameters

Name	Description
`vc ifname interface-name`	This parameter specifies the interface, for which information is desired. **Type** : Create - Mandatory Get - Mandatory **Valid values** : *aal5-0 - ***
`lbid oam-loopback-location-id`	This defines the loopback site, which will loopback the cell. **Type** : Optional **Valid values** : 0x followed by 32 Hexadecimal Number **Default value**: *0xffff ffff ffff ffff ffff ffff ffff ffff*
`e2e	seg`	This specifies the loopback type to be used. It can be end-to-end. **Type** : Optional **Valid values :** e2e , seg **Default value:** e2e

Example   `$ modify oam lpbk vc ifname aal5-0 e2e`

Output   Verbose Mode On

```
If-Name           : aal5-0   VPI           : 1         VCI         : 1
LB Type           : e2e
OAM Location Id   : 0xffffffffffffffffffffffffffffffff
OAM LB Result     : E2e Succeeded

Set Done
If-Name           : aal5-0   VPI           : 1         VCI         : 1
LB Type           : e2e
OAM Location Id   : 0xffffffffffffffffffffffffffffffff
OAM LB Result     : Test In Progress
```

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Output Fields

FIELD	Description
If-Name	The name of the aal5 (*aal5-0* etc) interface, whose statistics are to be retrieved.
VPI	This is the Virtual Port Identifier.
VCI	This is the Virtual Circuit Identifier.
LB Type	This specifies the loop back type used. It may be: *e2e or segment.*
OAM Location Id	This defines the loop back site, which was used to loopback the cell.
OAM LB Result	This specifies the result of the loop back test. It may be *Result Unavailable*, *Seg Succeeded*, *Seg Failed*, *E2e Succeeded*, *E2e Failed*, *Test Aborted*, or *Test In Progress.*

Caution   None.

References   • atm vc related commands
     • atm port and statistics related commands.

2.5 ATM OAM CC Commands

2.5.1 modify oam cc vc

Description   Use this command to modify the OAM F5 continuity check configuration and status parameters.

Command Syntax   `modify oam cc vc ifname interface-name [mode auto/manual] [action act|deact] [dir src|sink|both]`

2.5.2 get oam cc vc

Description   Use this command to get the OAM F5 continuity check configuration and status parameters.

Command Syntax   `get oam cc vc [ifname interface-name]`

Parameters

Name	Description
`ifname` *interface*-name	This parameter specifies the interface, for which information is desired. In case the field is not specified, then the information for all valid interfaces should be displayed. **Type** : Create : Mandatory Get : Optional **Valid values**: aal5-*
`mode auto | manual`	This specifies the activation/deactivation capability at a VCC. **Type** : Optional **Valid values** : auto, manual **Default Value** : auto
`action act | deact`	This field specifies the CC action to be taken. This is used along with ìdirî field. **Type** : Optional **Valid values** : act, deact. **Default Value** : deact
`dir src|sink|both`	This field specifies the direction for CC activation/ deactivation. Direction could be source (src), sink or both. **Type** : Optional **Valid values** : *src, sink, both* **Default Value** : *both*

Example :   `modify oam cc vc ifname aal5-0 mode auto action act dir sink`

Output   Verbose Mode On

```
Ifname   Mode   SourceOperStatus  SinkOperStatus    Initiator
-------------------------------------------------------------------
```

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```
aal5-0   manual   activated              LOC             Self

Set Done

Ifname   Mode  SourceOperStatus  SinkOperStatus   Initiator
----------------------------------------------------------------------
aal5-0   auto    activated              LOC             Self
```

Output Fields

Name	Description
Ifname	This parameter specifies the interface, for which information is desired.
Mode	This specifies the Activation/Deactivation capability of a VCC.
SourceOperStatus	This field specifies the current operational state of the source point of the VCC.
SinkOperStatus	This field specifies the current operational state of the sink point of the VCC.
Initiator	This field is valid only in **auto** mode, and it specifies the current initiator of CC Activation/Deactivation.

Caution   None.

References
- atm vc related commands
- atm port and statistics related commands
- atm oam loopback commands.

2.6 AAL5 VC Statistics Commands

2.6.1   get atm aal5 stats

Description	Use this command to get AAL5 VC statistics.
Command Syntax	`get atm aal5 stats [ifname interface-name]`

Parameters

Name	Description
`ifname interface-name`	This parameter specifies the interface for which information is desired **Type** : Get - Optional **Valid values** : *aal5-0 - **

Example   `$ get atm aal5 stats ifname aal5-0`

Output

```
Low IfName          : atm-0   VC IfName        : aal5-0
VPI            : 0            VCI              : 1
Tx Frames count  : 100         Rx Frames count  : 85
Tx Bytes count   : 1535       Rx Bytes count   : 1200
CRC Errors count : 0          Oversized SDU    : 0
```

Output Fields

FIELD	Description
`VC IfName`	The name of the **aal5** (*aal5-0* etc) interface, for which statistics needs to be retrieved.
`Low IfName`	This specifies the ATM port name. It can be : *atm-0*
`VPI`	This is the Virtual Port Identifier.
`VCI`	This is the Virtual Circuit Identifier.
`Tx Frames count`	The number of AAL5 CPCS PDUs transmitted on this AAL5 VCC.
`Rx Frames count`	The number of AAL5 CPCS PDUs received on this AAL5 VCC.
`Tx Bytes count`	The number of octets contained in AAL5 CPCS PDUs received on this AAL5 VCC.
`Rx Bytes count`	The number of octets contained in AAL5 CPCS PDUs received on this AAL5 VCC.
`CRC Errors count`	This specifies the number of CRC errors encountered.
`Oversized SDU`	This specifies the number of oversized SDUs received.

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Caution   None.

References
- atm vc related commands
- atm port and statistics related commands
- atm vc statistics commands.

2.7 ATM VC Statistics Commands

2.7.1 get atm vc stats

Description	Use this command to get statistical information about a specific or all ATM virtual circuits.
Command Syntax	`get atm vc stats [ifname interface-name]`

Parameters

Name	Description
`Ifname interface-name`	This specifies the Virtual Circuit. If this is not specified, then information for all VCs is displayed. **Type** : Get – Optional **Valid values** : *aal5-0 - **

Example   `$ get atm vc stats ifname aal5-0`

Output
```
Low IfName            : atm-0      VC IfName             : aal5-0
VPI                   : 1          VCI                   : 1
Total Tx Cells count  : 250        Total Rx Cells count  : 20
CLPI 0 Rx Cells count : 10         Rx Pkts Rejected count : 0
```

Output Fields

FIELD	Description
`LowIf`	This specifies the ATM port name. It can be : *atm-0*
`VPI`	It is the Virtual Port Identifier.
`VCI`	It is the Virtual Circuit Identifier.
`VC IfName`	The name of the aal5 (*aal5-0* etc) interface, for which statistics needs to be retrieved.
`Total Tx Cells count`	The total number of valid ATM cells transmitted by this interface.
`Total Rx Cells count`	The total number of valid ATM cells received by this interface.
`CLPI 0 Rx Cells`	The number of valid ATM cells received by this interface with CLP=0.
`Rx Pkts Rejected count`	The total number of valid ATM cells discarded by the interface.

Caution   None

References
- Other atm vc related commands
- oam lpbk command
- atm port related commands

- atm statistics related commands.

2.8 Ethernet Commands

2.8.1 create ethernet intf

Description   Use this command to create a physical Ethernet interface.

Command Syntax
```
create ethernet intf ifname interface-name [ip ip-address] [mask
net-mask][usedhcp true/false] [speed {auto/100BT/1000BT}] [type
uplink/downlink][enable | disable] [pkttype
Mcast/Bcast/UnknownUcast/All/None] [orl decvalue][duplex half/
full/auto][class0thrshld class0thrshld] [class1thrshld
class1thrshld] [class2thrshld class2thrshld] [class3thrshld
class3thrshld] [class4thrshld class4thrshld] [class5thrshld
class5thrshld] [class6thrshld class6thrshld] [class7thrshld
class7thrshld] [profilename profilename] [mgmtvlanid mgmtvlanid]
[priority priority]  [trfclassprofileid  trfclassprofileid ]
[Ctlpktinstid ctlpktinstid]
```

2.8.2 delete ethernet intf

Description   Use this command to delete a physical Ethernet interface.

Command Syntax   `delete ethernet intf ifname interface-name`

2.8.3 get ethernet intf

Description   Use this command to get information about a particular physical Ethernet interface, or about all the interfaces.

Command Syntax   `get ethernet intf [ifname interface-name]`

2.8.4 modify ethernet intf

Description   Use this command to modify physical Ethernet interface configuration.

Command Syntax
```
modify ethernet intf ifname interface-name [enable | disable]
[pkttype Mcast/Bcast/UnknownUcast/All/None] [ip ip-address] [mask
net-mask][usedhcp true/false] [speed{auto/100BT/1000BT}] [orl
decvalue] [duplex half/ full/auto] [class0thrshld class0thrshld]
[class1thrshld class1thrshld] [class2thrshld class2thrshld]
[class3thrshld class3thrshld] [class4thrshld class4thrshld]
[class5thrshld class5thrshld] [class6thrshld class6thrshld]
[class7thrshld class7thrshld] [profilename profilename] [mgmtvlanid
mgmtvlanid] [priority priority] [trfclassprofileid
trfclassprofileid ]
```

Parameters

Name	Description
ifname interface-name	This specifies the interface index used for the Ethernet type of interfaces. **Type** : Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory **Valid values** : *eth-0 - **
ip ip-address	This specifies the network mask configured for the interface. This is given in conjunction with IP Address configured and shall be given only if IP address has been given. This shall be removed whenever IP Address is removed. Modify of network mask for an Ethernet interface shall be supported only if some IP address is configured on the interface or 'UseDhcp' was configured to "GS_TRUE" previously. If Usedhcp is GS_TRUE and modify is done for this field then Usedhcp field shall be set to GS_FALSE. Both Usedhcp and this field shall not be specified together **Type** : Create - Optional. Modify - Optional **Valid Values:** Any valid class A/B/C / Classless IP address. **Default Value:** None
Mask net-mask	This specifies the network mask configured for the interface. This is given in conjunction with IP Address configured and shall be given only if IP address has been specified. This shall be removed whenever IP Address is removed. Modifying network mask for an Ethernet interface shall be supported only if some IP address is configured on the interface or 'etherUseDhcp' was configured to "GS_TRUE" previously. If Usedhcp is GS_TRUE and modify is done for this field then Usedhcp field shall be set to GS_FALSE. Both Usedhcp and this field shall not be specified together. **Type :** This field is not allowed when a physical interface is specified and IP is 0.0.0.0. In all other cases the field is mandatory. **Valid Values :** 255.0.0.0 - 255.255.255.255 **Default Value:** None

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Name	Description
`usedhcp true	false`	This specifies whether a DHCP client is to be triggered to obtain an IP address for this interface. If this is configured as GS_FALSE and IP address is not configured, then management IP traffic will not flow through the interface. If an IP address is configured and **modify** is done for this field, then IP address and net mask fields shall be set to Zero (0.0.0.0). Both Usedhcp and IP address shall not be specified together. If **Iftype** is slave then this field cannot be set to GS_TRUE. **Type** **:** Optional **Valid value** **:** true or false **Default value:** false
`speed {auto |100 BT| 1000BT}+`	This specifies the port speed for the net side interfaces. Auto specifies that the interface will determinethelinespeedusingauto-negotiation. **Type** : Optional. **Valid Values** : *auto, 100BT, 1000BT.* **Default Value** : *auto.*
`type uplink|downink`	This specifies the type of the Ethernet interfaces. The uplink is towards the NET side (2 at most) and downlink is towards the physical interface connected to the slave device. For uplink type, ip address not be null, if **usedhcp** is false. **Type** **:** Optional. **Valid Values** **:** *uplink, downlink.* **Default Value :** *uplink.*
`enable|disable`	Administrative status of the Ethernet interface. **Type** : Modify - Mandatory **Valid values** : enable or disable **Default value**: enable
`Duplex auto|half|full`	This defines the duplex mode to be used. **Type** : optional **Valid values**: *auto, half, full* **Default value**: *auto*
`Pkttype Mcast|Bcast|UnknownUcast	All|None`	This defines the packet type supported by the interface. etherPktTypeSupported shall be configured for every Ethernet interface. By default, all packets will be transmitted. The interface shall not transmit any other packet type than configured. **Type:** Create - optional Modify - optional **Valid values :** Mcast, Ucast, UnknownUcast, All **Default Value:** All

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Name	Description
Orl decvalue	This parameter specifies the output rate limiting value to be applied on this Interface. The unit for the same is in Mbits/sec. **Type:** Create - Optional Modify - Optional **Valid Values:** GS_CFG_MIN_ORL_ETH_RATE_MBPS - GS_CFG_MAX_ORL_ETH_RATE_MBPS **Default Value:** GS_CFG_DEF_ORL_ETH_RATE_MBPS
ProfileNameprofilename	This specifies the scheduling profile to be associated with the ethernet interface. This has the default value 'SPPROFILE' which indicates that Strict Priority (SP) scheduling is applied to the class queues of this interface. **Type** : Optional. **Default Value :** SPROFILE
mgmtvlanid mgmtvlanid	VLAN for management traffic on this interface. Non-zero value of this field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. If no Management Vlanid is specified (in the create operation) or it's value is set to zero (either in create or modify operation) then the system shall use the value of 'portvlanid' associated with the bridge port created on this interface as the Management Vlan Index. In case the management vlan (i.e. 'mgmtvlanid' or the associated 'portvlanid', if 'mgmtvlanid' is zero) does not exist on the system then IP based management on this management VLAN shall not happen on the interface till the corresponding VLAN is created with the Net side port as its member. **Type** : Create - optional Modify - optional **Valid values:** 0 -GS_CFG_MAX_VLAN_ID
priority priority	Priority to be set in Tagged Ethernet PDUs sent on Management VLAN over this interface. This field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. **Type**: Create - optional Modify - optional **Valid values**: 0 -GS_CFG_MAX_MGMT_PRIO

Name	Description
trfclassprofileid	This specifies the traffic class profile associated with the ATM interface. **Type**: Optional **Valid values**:1 to GS_CFG_MAX_TRFCLASS_PRFLS **Default Value**: GS_CFG_DEF_ATM_TRF_CLASS_PRFL_ID
Ctlpktinstid	This specifies the control packet instance identifier associated with this interface. If the user does not provide any instance identifier while creating an interface, an instance is created internally from the default profile governed by the macro GS_CFG_CTRL_PKTS_DEF_ETHER_PROF_ID and associated to the interface. This will reduce the total number to instances that can be now created by one. The default instance is governed by the macro GS_CFG_CTRL_PKTS_DEF_INSTANCE_ID. **TYPE**: Create -- Optional **Valid Values**:1 - GS_CFG_MAX_CPPR_INSTANCES **Default Value**: GS_CFG_CTRL_PKTS_DEF_INSTANCE_Id

Example

```
create ethernet intf ifname eth-0 ip 192.168.1.1 mask 255.255.255.0
speed 100bt class0thrshld 1 class1thrshld 2 class2thrshld 1
class3thrshld 2 class4thrshld 1 class5thrshld 2 class6thrshld 1
class7thrshld 2 profilename sprofile mgmtvlanid 2 priority 2
trfclassprofileid 1 Ctlpktinstid 1
```

Output   Verbose Mode On

```
Entry Created

Interface          : eth-0
Type               : Uplink          UseDhcp       : False
IP Address         : 192.168.1.1     Mask          : 255.255.0.0
Pkt Type           : Mcast
Orl(mbps)          : 100
Configured Duplex  : Auto            Duplex        : None
Configured Speed   : Auto
Profile Name       : SPPROFILE
Mgmt VLAN Index    : 2
Tagged Mgmt PDU Prio: 2
trfclassprofileid  : 1
Ctl Pkts Instance Id:1
Speed              : -
Operational Status : Down            Admin Status  : Up
```

Verbose Mode Off:

```
Entry Created
```

Output Fields

FIELD	Description
If-Name	The name of the interface, which has been created.
Type	The type of Ethernet interface - *uplink* or *downlink.*
UseDhcp	This specifies whether a DHCP client is to be triggered to obtain an IP address for this interface. If this is configured as GS_FALSE and etherIfIpAddress is not configured, then management IP traffic will not flow through the interface. If an IP address is configured and modify is done for this field then tEtherIfIpAddress and tAggrIfNetMask field shall be set to Zero (0.0.0.0). Both Usedhcp and tEtherIfIpAddress shall not be specified together. If Iftype is slave then this field cannot be set to GS_TRUE.
Ip Address	This specifies the network mask configured for the interface. This is given in conjunction with IP Address configured and shall be given only if IP address has been given. This shall be removed whenever IP Address is removed. Modify of network mask for an Ethernet interface shall be supported only if some IP address is configured on the interface or 'UseDhcp' was configured to "GS_TRUE" previously. If Usedhcp is GS_TRUE and modify is done for this field then Usedhcp field shall be set to GS_FALSE. Both Usedhcp and this field shall not be specified together
Mask	This specifies the network mask configured for the interface. This is given in conjunction with IP Address configured and shall be given only if IP address has been given. This shall be removed whenever IP Address is removed.Modify of network mask for an Ethernet interface shall be supported only if some IP address is configured on the interface or 'etherUseDhcp' was configured to "GS_TRUE" previously. If Usedhcp is GS_TRUE and modify is done for this field then Usedhcp field shall be set to GS_FALSE. Both Usedhcp and this field shall not be specified together.
pkttype	This defines the packet type supported by the interface. etherPktTypeSupported shall be configured for every Ethernet interface. By default, all packets will be transmitted. The interface shall not transmit any other packet type than configured.
Orl	This parameter specifies the output rate limiting value to be applied on this Interface.The units for the same is in Mbits/sec
Configured Duplex	The duplex mode to be used by the interface, as configured by the user.
Duplex	The duplex mode used by the interface.

FIELD	Description
`Configured Speed`	The configured speed of the interface.
`Mgmt VLAN Index`	VLAN for management traffic on this interface. Non-zero value of this field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. If no Management Vlanid is specified (in the create operation) or it's value is set to zero (either in create or modify operation) then the system shall use the value of 'portvlanid' associated with the bridge port created on this interface as the Management Vlan Index. In case the management vlan (i.e. 'mgmtvlanid' or the associated 'portvlanid', if 'mgmtvlanid' is zero) does not exist on the system then IP based management on this management VLAN shall not happen on the interface till the corresponding VLAN is created with the Net side port as its member.
`Tagged Mgmt PDU Prio`	Priority to be set in Tagged Ethernet PDUs sent on Management VLAN over this interface. This field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true.
`ProfileName`	This specifies the scheduling profile to be associated with the ethernet interface. This has the default value 'SPPROFILE' which indicates that Strict Priority (SP) scheduling is applied to the class queues of this interface.
`Speed`	The actual speed of the interface.
`Operational Status`	The operational status of the interface.
`Admin Status`	The administrative status of the interface.
`trfclassprofileid`	This specifies the traffic class profile identifier to be associated with the ethernet interface.
`Ctl Pkts Instance Id`	This specifies the control packet instance identifier associated with this interface. If the user does not provide any instance identifier while creating an interface, an instance is created internally from the default profile governed by the macro GS_CFG_CTRL_PKTS_DEF_ETHER_PROF_ID and associated to the interface. This will reduce the total number to instances that can be now created by one. The default instance is governed by the macro GS_CFG_CTRL_PKTS_DEF_INSTANCE_ID.

Caution   None

References   • Ethernet stats commands.

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2.9 Ethernet Stats Commands

Note: *Ethernet Stats Commands will be supported in future releases.*

2.9.1   get ethernet stats

Description   Use this command to get statistics on a particular Ethernet interface, or on all the Ethernet interfaces.

Command Syntax   *get ethernet stats [ifname interface-name]*

2.9.2   reset ethernet stats

Description   Use this command to reset statistics on a particular Ethernet interface.

Command Syntax   *reset ethernet stats ifname interface-name*

Parameters

Name	Description
Ifname interface-name	This parameter specifies the interface, for which information is desired. In case the field is not specified, then the information for all valid Ethernet interfaces should be displayed. **Type** : Optional **Valid values**: *eth-0-*.*

Example   *$ get ethernet stats ifname eth-0*

Output
```
If Name : eth-0
Align Error count        : 0    FCS Error count             : 0
Single Collisn Frame count : 0  Multi Collisn Frame count  : 30
SQE Test Errors count    : 2    Deferred Transaction count : 0
Late Collisn count       : 0    Excess Collisn count        : 0
Internal MAC Rx Errs count : 5  Internal MAC Tx Errs count : 0
Carrier Sense Errs count  : 0   Frame Too Long count        : 0
Symbol errors            : 100
```

Output Fields

FIELD	Description
If Name	The interface name
Align Error count	This is a count of frames received on the interface that are not an integral number of octets in length, and do not pass the Frame Check Sequence (FCS) check.
FCS Error count	This is a count of frames received on the interface that are an integral number of octets in length, but do not pass the FCS check.

FIELD	Description
Single Collision Frame count	This is a count of successfully transmitted frames on the interface, for which transmission is inhibited by exactly one collision.
Multi Collisn Frame Count	This is a count of successfully transmitted frames on the interface, for which transmission is inhibited by more than one collision.
SQE Test Errors count	This is a count of times that the SQE TEST ERROR message is generated by the PLS sub layer, for the interface.
Deferred Transactions count	This is a count of frames, for which the first transmission attempt on the interface is delayed because the medium is busy.
Late Collisions count	This is the number of times that a collision is detected on the interface later than 512 bit-times into the transmission of a packet
Excess Collisions count	This is a count of frames for which transmission on the interface fails, due to excessive collisions.
Internal MAC Rx Errors count	This is a count of frames, for which reception on the interface fails, due to an internal MAC sub layer receive error.
Internal MAC Tx Errors count	This is a count of frames, for which transmission on the interface fails due to an internal MAC sub layer transmit error.
Carrier Sense Errors count	This is the number of times that the carrier sense condition was lost, or never asserted, when attempting to transmit a frame on the interface
Frame Too Long	This is a count of frames received on the interface, that exceeds the maximum permitted frame size.
Symbol errors	For an interface operating at 100 Mb/s, the number of times there was an invalid data symbol, when a valid carrier was present.

Caution   None.

References   • Ethernet commands.

2.10 EOA Commands

2.10.1 create eoa intf

Description   Use this command to create an EoA interface towards the CPE side.

Command Syntax   `create eoa intf ifname interface-name lowif low-interface-name [pkttype {multicast |broadcast |unknown-unicast}+ | all] [fcs false | true][enable|disable] [inactivitytmrintrvl inactivitytmrintrvl][configstatus normal | config]`

2.10.2 delete eoa intf

Description   Use this command to delete an EoA interface.

Command Syntax   `delete eoa intf ifname interface-name`

2.10.3 get eoa intf

Description   Use this command to get information on a particular EoA interface, or on all the EoA interfaces.

Command Syntax   `get eoa intf [ifname interface-name]`

2.10.4 modify eoa intf

Description   Use this command to modify the properties of an eoa interface.

Command Syntax   `modify eoa intf ifname interface-name [pkttype {multicast |broadcast |unknown-unicast}+ | all| none] [fcs false | true][enable|disable] [inactivitytmrintrvl inactivitytmrintrvl]`

Parameters

Name	Description
`ifname interface-name`	This parameter specifies the name assigned to this interface. **Type** : Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory **Valid values** : *eoa-0,eoa-1….*
`lowif low-interface-name`	This parameter specifies the lower interface of an EoA interface. **Type** : Mandatory **Valid Values** : *aal5-0 - **

Name	Description
*pkttype {multicast |broadcast |unknown-unicast}+	all|none*	This defines the packet type supported by the interface. EoAPktTypeSupported shall be configured for every CPE-side Ethernet interface. By default, the option taken is 'ALL' and it means that all packets will be transmitted. The value 'None' means that normal UCast packets will be transmitted. The interface shall not transmit any other packet type than configured. **Type** : Optional. **Valid Values** : {multicast |broadcast |unknown-unicast}+	all **Default Value** : all.
*fcs false	true*	This specifies whether Ethernet FCS needs to be computed. Currently only **false** is supported. **Type** : Optional **Valid Values :** *false* or *true* **Default Value:** *false*.
Enable|disable	Administrative status of the interface **Type** : Optional **Valid values** : *enable* or *disable* **Default Values:** *enable*
inactivitytmrintrvl inactivitytmrintrvl	This field specifies the time (in seconds) after which a trap shall be generated, if there is no data activity on this interface. This is used only when the bit corresponding to 'ConfigEntry' is set for the gsvEoaConfigStatus field. A value of zero means the timer is not running. **Type**: Optional **Valid Values**: GS_CFG_EOA_MIN_INACTIVITY_TMR_INTRVL to GS_CFG_EOA_MAX_INACTIVITY_TMR_INTRVL **Default Value**: GS_CFG_DEF_EOA_INACTIVITY_TMR_INTRVL
*configstatus normal	config*	This parameter describes the configuration mode for this interface.The value of this parameter can be normal or config. If the value is config, then this interface shall be created, but will have a dormant status. Only after the receipt of an EoA packet from the CPE side, this interface shall become active. **Type**: Optional **Valid Values**: normal	config **Default Value**: GS_CFG_EOA_DEF_SENSE_MODE

Example *$create eoa intf ifname eoa-0 lowif aal5-0 enable fcs false*

Output Verbose Mode On

```
Entry Created

IfName              : eoa-0        LowIfName   : aal5-0
```

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```
FCS                     : False
Pkt Type                : ALL
InActivity Tmr Interval : 3
Config Status           : Normal
Oper Status             : Down           Admin Status : Up
```

Output Fields

Name	Description
IfName	The name of the interface that has been created.
LowIfName	Specifies the lower interface.
FCS	Whether FCS is true or false.
Pkt Type	This defines the packet type supported by the interface. EoAPktTypeSupported shall be configured for every CPE-side Ethernet interface. By default, the option taken is 'ALL' and it means that all packets will be transmitted. The value 'None' means that normal UCast packets will be transmitted. The interface shall not transmit any other packet type than that configured.
Admin Status	The desired state of the interface. It may be either *Up* or *Down*
Oper Status	The actual/current state of the interface. It can be either *up* or d*own*.
InActivity Tmr Interval	This field specifies the time (in seconds) after which a trap shall be generated, if there is no data activity on this interface. This is used only when the bit corresponding to 'ConfigEntry' is set for the gsvEoaConfigStatus field. A value of zero means the timer is not running.
Config Status	This parameter describes the configuration mode for this interface.The value of this parameter can be Normal, Config, NotInUse, or InUse. If the value is Config, then this interface shall be created, but will have a dormant status. Only after the receipt of an EoA packet from the CPE side, this interface shall become active. The 'InUse' and 'NotInUse' bits are read-only bits. The 'NotInUse' bit indicates that the entry is dormant and the 'InUse' bit indicates that the entry is activated.

Caution   None

References
- Ethernet commands
- Ethernet Stats commands.

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2.11 LACP AGGR Commands

2.11.1 create lacp agg

Description   Use this command to create an LACP aggregator.

Command Syntax   `create lacp aggr aggrifname aggrifname [ actorsystemprio`
`actorsystemprio ] [ actoradminkey actoradminkey ] [`
`collectormaxdelay collectormaxdelay ] [ aggrtype static | lacp ]`

2.11.2 delete lacp aggr

Description   Use this command to delete an LACP aggregator.

Command Syntax   `delete lacp aggr aggrifname aggrifname`

2.11.3 get lacp aggr

Description   Use this command to get a LACP aggregator.

Command Syntax   `get lacp aggr  [aggrifname aggrifname]`

2.11.4 modify lacp aggr

Description   Use this command to modify a LACP aggregator.

Command Syntax   `modify lacp aggr  aggrifname aggrifname [ actorsystemprio`
`actorsystemprio ] [ actoradminkey actoradminkey ] [`
`collectormaxdelay collectormaxdelay ] [ aggrtype static | lacp ]`

Parameter

Name	Description
`aggrifname aggrifname`	The Aggregator interface name. **Type** : Modify – Mandatory Get **-** Optional **Valid values:** aggr-*
`Actorsystemprio` `actorsystemprio`	A 2-octet read-write value indicating the priority value associated with the Actor's System ID. **Type** : Optional **Valid values:** *0 - 255*
`actoradminkey` `actoradminkey`	The current administrative value of the Key for the Aggregator **Type** : Optional **Valid values:** *0 - 2^16 – 1*

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Name	Description
collectormaxdelay *collectormaxdelay*	The value of this 16-bit read-write attribute defines the maximum delay, in tens of microseconds, that may be imposed by the Frame Collector between receiving a frame from an Aggregator Parser, and either delivering the frame to its MAC Client, or discarding the frame. **Type** : Optional **Valid values:** *0 - 2^16 – 1*
aggrtype Static | Lacp	Aggregation type. It can be either **static** or **lacp** **Type:** Optional

Example   *$ get lacp aggr aggrifname aggr-0*

Output
```
Aggr IfName       : aggr-0
Mac Address       : 23:45:67:89:00:01  Aggregate          : true
Actor Sys Priority : 2                 Partner Sys Priority : 2
Actor Sys ID      : 23:45:67:89:00:01  Partner Sys ID     : 23:45:67:89:00:01
Actor Oper Key    : 10                 Partner Oper Key   : 2
Actor Admin Key   : 1000               Collector Max Delay : 2
Aggregation Type  : Static
```

Output Fields

FIELD	Description
Aggr IfName	The Aggregator interface name.
Mac Address	A 6-octet read-only value carrying the individual MAC address assigned to the Aggregator.
Aggregate	A read-only Boolean value indicating whether the Aggregator represents an Aggregate (TRUE) or an Individual link (FALSE).
Actor Sys Priority	A 2-octet read-write value indicating the priority value associated with the Actor's System ID.
Partner Sys Priority	A 2-octet read-only value that indicates the priority value associated with the Partner's SystemID.
Actor Sys ID	A 6-octet read-write MAC address value used as a unique identifier for the System that contains this Aggregator.
Partner Sys ID	A 6-octet read-only MAC address value consisting of the unique identifier for the current protocol partner of this Aggregator. A value of **zero** indicates that there is no known Partner.
Actor Oper Key	The current operational value of the Key for the Aggregator.
Partner Oper Key	The current operational value of the Key for the Aggregator is current protocol Partner.
Actor Admin Key	The current administrative value of the Key for the Aggregator.

FIELD	Description
Collector Max Delay	The value of this 16-bit, read-write attribute defines the maximum delay, in tens of microseconds, that may be imposed by the Frame Collector between receiving a frame from an Aggregator Parser, and either delivering the frame to its MAC Client or discarding the frame.
Aggregation Type	Aggregation type done over the aggregator.

Caution   None

References
- lacp aggrport list
- lacp aggrport info
- lacp aggrport stats.

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2.12 LACP AGGRPort Info Commands

2.12.1 get lacp aggrport info

Description   Use this command to get a LACP aggregator port information.

Command Syntax   `get lacp aggrport info [ifname ifname]`

2.12.2 modify lacp aggrport info

Description   Use this command to modify LACP aggregator port information.

Command Syntax
```
modify lacp aggrport info ifname ifname [actoradminkey
actoradminkey] [partadminkey partadminkey] [actorportprio
actorportprio] [partadminportprio partadminportprio] [ actorsysprio
actorsysprio] [partadminsysprio partadminsysprio] [partadminsysid
partadminsysid] [ partadminport partadminport] [actoradminstate
activity | timeout | aggr ] [ partadminstate activity | timeout |
aggr] [aggrstatus enable|disable]
```

Parameter

Name	Description
`ifname ifname`	The **IfName** of the Ethernet interface for the aggregator. **Type** : Modify – Mandatory Get - Optional **Valid values :** *eth-*, eoa-**
`actoradminkey actoradminkey`	The current administrative value of the Key for the Aggregator. **Type** : Optional **Valid values:** *1 - 2^16 – 1*
`partadminkey partadminkey`	The current administrative value of the Key for the Aggregator's current protocol Partner. **Type** : Optional **Valid values:** *1 - 2^16 – 1*
`actorportprio actorportprio`	The priority value assigned to this Aggregation Port **Type** : Optional **Valid values :** *0 - 2^8 – 1*
`partadminportprio partadminportprio`	The current administrative value of the port priority, for the protocol Partner. **Type** : Optional **Valid values:** *0 – 255*
`actorsysprio actorsysprio`	A 2-octet read-write value indicating the priority value associated with the Actor's System ID. **Type** : Optional **Valid values:** *0 – 255*

Name	Description
partadminsysprio *partadminsysprio*	A 2-octet read-only value that indicates the priority value associated with the Partner's System ID. **Type** **:** Optional **Valid values:** *0 - 255*
partadminsysid *partadminsysid*	A 6-octet read-write MACAddress value representing the administrative value of the Aggregation Port's protocol Partner's SystemID **Type** **:** Optional **Valid values:** 00:00:00:00:00:00 - ff:ff:ff:ff:ff:ff
partadminport *partadminport*	The current administrative value of the port number for the protocol Partner. **Type** **:** Optional **Valid values:** 0 - 65535
actoradminstate activity *| timeout | aggr*	Administrative state of actor **Type:** Optional
partadminstate activity *| timeout | aggr*	Administrative state of Partner. **Type:** Optional
aggrstatus *enable|disable*	Specifies whether aggregation(bonding) is to be enabled over this Aggregation Port. **Type** **:** Optional **Valid values:** *enable|disable*

Example   *$ get lacp aggrport info ifname eth-0*

Output
```
Interface             : eth-0             Port Is Aggregate          : true
Actor Oper Key        : 10                Partner Oper Key           : 2
Actor Admin Key       : 1000              Partner Admin Key          : 2
Actor Port Priority   : 1                 Partner Admin Port Priority : 1
Actor System Priority : 2                 Partner Oper Port Priority  : 1
Actor System ID       : 23:45:67:89:00:01 Partner Admin Sys Priority  : 2
Actor Port            : 2                 Partner Oper Sys Priority  : 2
Partner Admin Sys Id  : 23:45:67:89:00:01 Partner Admin Port         : 1
Partner Oper Sys Id   : 23:45:67:89:00:01 Partner Oper Port          : 1
Port Actor Admin State : distrib
Port Partner Admin State : activity
Port Actor Oper State  : default
Port Partner Oper State : default
Attached Agg ID       : aggr-0            Selected Agg ID            : aggr-0
Aggregation Status    : Enable
```

Output Fields

FIELD	Description
Interface	The **IfName** of the Ethernet interface for the aggregator.
Port Is Aggregate	Boolean value indicating whether the Aggregation Port is able to Aggregate ('TRUE'), or is only able to operate as an Individual link ('FALSE').
Actor Oper Key	The current operational value of the Key for the Aggregator.

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FIELD	Description
Partner Oper Key	The current operational value of the Key for the Aggregator's current protocol Partner.
Actor Admin Key	The current administrative value of the Key for the Aggregator.
Partner Admin Key	The current administrative value of the Key for the Aggregator's current protocol Partner.
Actor Port Priority	The priority value assigned to this Aggregation Port.
Partner Admin Port Priority	The current administrative value of the port priority for the protocol Partner.
Actor System Priority	A 2-octet, read-write value indicating the priority value associated with the Actor's System ID.
Partner Oper Port Priority	The current operational value of the port priority for the protocol Partner.
Actor System ID	A 6-octet, read-write MAC address value, used as a unique identifier for the System that contains this Aggregator.
Partner Admin Sys Priority	A 2-octet, read-only value that indicates the priority value associated with the Partner's System ID.
Actor Port	The port number locally assigned to the Aggregation Port.
Partner Oper Sys Priority	A 2-octet read-only value that indicates the priority value associated with the Partner's System ID.
Partner Admin Sys Id	A 6-octet read-write MACAddress value representing the administrative value of the Aggregation Port's protocol Partner's System ID.
Partner Admin Port	The current administrative value of the port number for the protocol Partner.
Partner Oper Sys Id	A 6-octet read-write MACAddress value representing the operational value of the Aggregation Port's protocol Partner's System ID.
Partner Oper Port	The current operational value of the port number for the protocol Partner.
Port Actor Admin State	Administrative state of Actor.
Port Partner Admin State	Administrative state of Partner.
Port Actor Oper State	Operational state of Actor.
Port Partner Oper State	Operational state of Partner.
Attached Agg ID	The identifier value of the Aggregator that this Aggregation Port has currently selected.

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FIELD	Description
Selected Agg ID	The identifier value of the Aggregator that this Aggregation Port has currently selected.
Aggregation Status	Whether or not aggregation(bonding) is to be enabled over this Aggregation Port.

Caution   None

References
- lacp aggrport list
- lacp aggrport stats

2.13 LACP AGGRPort List Command

2.13.1 get lacp aggrport list

Description   Use this command to get a LACP aggregator port list.

Command Syntax   *get lacp aggrport list [aggrifname aggrifname]*

Parameter

Name	Description
Aggrifname aggrifname	The Aggregator interface name. **Type** **:** Optional **Valid values:** *aggr-**

Mode   Super-User, User

Example   *$ get lacp aggrport list*

Output
```
Aggr IfName :  aggr-0
Port List   :  eth-0 eth-1
```

Output Fields

FIELD	Description
Aggr IfName	The Aggregator interface name.
Port List	List of the ports corresponding to given aggregator index.

Caution   None

References   • lacp aggr
            • lacp aggrport info
            • lacp aggrport stats.

2.14   LACP AGGRPort Stats Commands

2.14.1 get lacp aggrport stats

Description   Use this command to get LACP aggregator port statistics.

Command Syntax   *get lacp aggrport stats [ifname ifname]*

2.14.2 reset lacp aggrport stats

Description   Use this command to reset LACP aggregator port statistics.

Command Syntax   *reset lacp aggrport stats ifname ifname*

Parameter

Name	Description
ifname ifname	The Interface name of the Ethernet interface for the aggregator. **Type** **:** Reset – Mandatory Get **-** Optional **Valid values:** *eth-*, eoa-**

Example   *$ get lacp aggrport stats ifname eth-0*

Output
```
Interface            : eth-0
LACPDUs Rx           : 1          LACPDUs Tx            : 1
MarkerPDUs Rx        : 1          MarkerPDUs Tx         : 1
Marker Response PDUs Rx : 1       Marker Response PDUs Tx : 1
Unknown Rx           : 1          Illegal Rx            : 1
```
Note: *This operation is not supported in this release.*

Output Fields

FIELD	Description
Interface	The Interface name of the Ethernet interface for the aggregator.
LACPDUs Rx	The number of valid LACP PDUs received on this Aggregation Port.
LACPDUs Tx	The number of LACP PDUs transmitted on this Aggregation Port.
MarkerPDUs Rx	The number of valid Marker PDUs received on this Aggregation Port.
MarkerPDUs Tx	The number of Marker PDUs transmitted on this Aggregation Port.
Marker Response PDUs Rx	The number of valid Marker Response PDUs received on this Aggregation Port.

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FIELD	Description
Marker Response PDUs Tx	The number of Marker Response PDUs transmitted on this Aggregation Port.
Unknown Rx	The number of frames received, that either carry the Slow Protocols Ethernet Type value, but contain an unknown PDU, or, are addressed to the Slow Protocols group MAC Address, but do not carry the Slow Protocols Ethernet Type.
Illegal Rx	The number of frames received, that carry the Slow Protocols Ethernet Type value, but contain a badly formed PDU or an illegal value of Protocol Subtype.

Caution   None

References
- lacp aggr
- lacp aggrport list
- lacp aggrport info.

2.15 GARP Port Info Commands

2.15.1 get garp port info

Description   Use this command to get.

Command Syntax   *get garp port info [portid portid]*

2.15.2 modify garp port info

Description   Use this command to modify.

Command Syntax   *modify garp port info portid portid [jointimer jointimer] [leavetimer leavetimer] [leavealltimer leavealltimer]*

Parameter

Name	Description
portid portid	Index of the Bridge Port **Type** : Get - Optional Modify - Mandatory **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
jointimer jointimer	The GARP Join time, in centiseconds. Join time value should be less than half the Leave time value **Type** :Optional **Valid values:** *10-255*
leavetimer leavetimer	The GARP Leave time, in centiseconds. Leave time value should be greater than 2 times Join time value. **Type** : Optional **Valid values:** *10-255*
leavealltimer leavealltimer	The GARP LeaveAll time, in centiseconds. LeaveAll time value should be large (more than 15 times) relative to Leave time value. **Type** : Optional **Valid values:** *10-65535*

Example   *$ get garp port info*

Output

```
PortId    Join Timer Leave Timer LeaveAll Timer
-------------------------------------------------------------------------------
6         30         90          5000
```

Output Fields

Field	Description
PortId	Index of the Bridge Port.
Join Timer	The GARP Join time, in centiseconds. Join time value should be less than half the Leave time value.
Leave Timer	The GARP Leave time, in centiseconds. Leave time value should be greater than 2 times Join time value.
LeaveAll Timer	The GARP LeaveAll time, in centiseconds. LeaveAll time value should be large (more than 15 times) relative to Leave time value.

Caution   None

References   • GVRP Commands

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2.16 GVRP Info Commands

2.16.1 get gvrp info

Description	Use this command to get GVRP information.
Command Syntax	`get gvrp info`

2.16.2 modify gvrp info

Description   Use this command to modify GVRP information.

Command Syntax   `modify gvrp info  gvrpstatus enable`

Parameter

Name	Description
`gvrpstatus enable / disable`	The administrative status requested by management for GVRP **Type:** Optional

Example   `$ modify gvrp info  gvrpstatus enable`

Output   Verbose Mode On:

```
VLAN Version Number : 1                       Current VLANS : 1000
GVRP Status        : enable

Set Done

VLAN Version Number : 1                       Current VLANS : 1000
GVRP Status        : enable
```

Verbose Mode Off:

```
Set Done
```

Output Fields

Field	Description
`VLAN Version Number`	Version Number of IEEE802.1Q, that device supports.
`Current VLANS`	The current number of IEEE 802.1Q VLANs that are configured on this device.
`GVRP Status`	The administrative status requested by management for GVRP.

Caution   None

References
- gvrp port info commands
- gvrp port stats commands.

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2.17 GVRP Port Info Commands

2.17.1 get gvrp port info

Description   Use this command to get.

Command Syntax   `get gvrp port info [ portid portid ]`

2.17.2 modify gvrp port info

Description   Use this command to modify.

Command Syntax   `modify gvrp port info portid portid [ portvlanid portvlanid ] [`
`acceptframetypes all | tagged ] [ ingressfiltering true|false ] [`
`gvrpstatus enable | disable ] [ restrictedvlanreg true|false ]`

Parameter

Name	Description
`portid portid`	The bridge port id. **Type** :Optional for all commands **Valid values:** *1 - GS_CFG_MAX_BRIDGE_PORTS*
`portvlanid portvlanid`	The VLAN Identifier. **Type** :Optional for all commands **Valid values:** 1 - GS_CFG_MAX_VLANID
`acceptframetypes all	tagged`	When this is **Tagged**, the device will discard untagged frames or Priority-Tagged frames received on this port. When this is **All**, untagged frames or Priority-Tagged frames received on this port will be accepted and assigned to the PVID for this port. **Type:** Optional for all commands
`ingressfiltering true|false`	When this is **true**, the device will discard incoming frames for VLANs, which do not include this Port in its Member set. When **false**, the port will accept all incoming frames. **Type** : Optional for all commands **Valid values:** *true* or *false*

Name	Description
gvrpstatus enable | disable	The state of the GVRP operation on this port. The value 'enable' indicates that GVRP is enabled on this port, as long as 'gvrpstatus' in the 'GVRP INFO' command is enabled for this device. When this is 'disable', even if 'gvrpstatus' in the 'GVRP INFO' command is 'enable' for the device, GVRP will be 'disable' on this port. In such a case, any GVRP packet received will be silently discarded and no GVRP registrations will be propagated from other ports. This object affects all GVRP Applicant and Registrar state machines on this port. This configuration shall not be effective for a bridge port created over PPPoE interface. **Type:** Optional for all commands
restrictedvlanreg restrictedvlanregtrue|false	The state of Restricted VLAN Registration on this port. If the value of this control **is true(1),** then creation of a new dynamic VLAN entry is permitted only if there is a Static VLAN Registration Entry for the VLAN concerned, in which, the Registrar Administrative Control value for this port is, Normal Registration. **Type :**Optional for all commands **Valid values:** *true* or *false*

Example   *$ get gvrp port info*

Output   Verbose Mode On:

```
Port Id                     : 10
Port VLAN Index             : 1          Accept Frame Types : all
Ingress Filtering           : true       Gvrp Status        : enabled
Failed Registrations        : 1000       Last Pdu Origin    : 23:45:67:89:00:01
Restricted Vlan Registration : false
```

Output Fields

Field	Description
Port Id	The bridge port id.
Port VLAN Index	The VLAN Identifier.
Accept Frame Types	When this is **Tagged**, the device will discard untagged frames or Priority-Tagged frames received on this port. When **All**, untagged frames or Priority-Tagged frames received on this port will be accepted and assigned to the PVID for this port.
Ingress Filtering	When this is **true**, the device will discard incoming frames for VLANs, which do not include this Port in its Member set. When **false**, the port will accept all incoming frames.

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Field	Description
Gvrp Status	The state of the GVRP operation on this port. The value 'enable' indicates that GVRP is enabled on this port, as long as 'gvrpstatus' in the 'GVRP INFO' command is enabled for this device. When this is 'disable', even if 'gvrpstatus' in the 'GVRP INFO' command is 'enable' for the device, GVRP will be 'disable' on this port. In such a case, any GVRP packet received will be silently discarded and no GVRP registrations will be propagated from other ports. This object affects all GVRP Applicant and Registrar state machines on this port. This configuration shall not be effective for a bridge port created over PPPoE interface.
Failed Registrations	The total number of failed GVRP registrations, for any reason, on this port.
Last Pdu Origin	The Source MAC Address of the last GVRP message received on this port.
Restricted Vlan Registration	The state of Restricted VLAN Registration on this port. If the value of this control is **true(1),** then creation of a new dynamic VLAN entry is permitted only if there is a Static VLAN Registration Entry for the VLAN concerned, in which, the Registrar Administrative Control value for this port is, Normal Registration.

Caution   None

References   • GVRP Commands

2.18 GVRP Port Stats Commands

2.18.1 get gvrp port stats

Description Use this command to get GVRP port statistics.

Command Syntax `get gvrp port stats [ portid portid ]`

2.18.2 reset gvrp port stats

Description Use this command to reset GVRP port statistics.

Command Syntax `reset gvrp port stats portid portid`

Parameter

Name	Description
portid portid	Index of the Bridge Port **Type** **:** Get **-** Optional Reset - Mandatory **Valid values** **:** *1 -* *GS_CFG_MAX_BRIDGE_PORTS* **Default value:** None

Example `$ get gvrp port stats`

Output
```
PortId          : 6
Recv Join Empty : 100        Send Join Empty : 100
Recv Join In    : 200        Send Join In    : 200
Recv Empty      : 200        Send Empty      : 200
Recv Leave      : 300        Send Leave      : 300
Recv Leave All  : 300        Send Leave All  : 300
Leave Empty Rx  : 300        Leave Empty Tx  : 300
```

Output Fields

Field	Description
PortId	Index of the Bridge Port.
Recv Join Empty	Counter for the number of Join Empty Messages received.
Send Join Empty	Counter for the number of Join Empty Messages sent.
Recv Join In	Counter for the number of Join In Messages received.
Send Join In	Counter for the number of Join In Messages sent.
Recv Empty	Counter for the number of Empty Messages received.

Field	Description
Send Empty	Counter for the number of Empty Messages sent.
Recv Leave	Counter for the number of Leave Messages received.
Send Leave	Counter for the number of Leave Messages sent.
Recv Leave All	Counter for the number of Leave All Messages received.
Send Leave All	Counter for the number of Leave All Messages sent.
Leave Empty Rx	Counter for the number of Leave Empty Rx received.
Leave Empty Tx	Counter for the number of Leave Empty Tx sent.

Caution   None

References   • GVRP Commands

2.19 GMRP Port Info Commands

Note: *GMRP Port Info commands are not supported in this release.*

2.19.1 get gmrp port info

Description   Use this command to get

Command Syntax   *get gmrp port info portid portid*

2.19.2 modify gmrp port info

Description   Use this command to modify

Command Syntax   *modify gmrp port info portid portid [gmrpstatus enable | disable]*
[restrictedgrpreg true|false]

Parameter

Name	Description
portid portid	The bridge port identifier **Type:** Mandatory **Valid values:** eth-* - eoa-*
gmrpstatus enable | *disable*	The administrative state of GMRP operation on this port **Type:** Optional
restrictedgrpreg *true|false*	The state of Restricted Group Registration on this port. If the value of this control is true(1), then creation of a new dynamic entry is permitted only if there is a Static Filtering Entry for the VLAN concerned, in which the Registrar Administrative Control value is Normal Registration **Type:** Optional

Example   *$ modify gmrp port info portid 1 gmrpstatus disable restrictedgrpreg*
True

Output   Verbose Mode On:

```
Port Id      : 1
Gmrp Status   : enable          Failed Registrations        : 60
Last Pdu Origin : 23:45:67:89:00:01  Restricted Group Registration : false

Set Done


Port Id      : 1
Gmrp Status   : disable         Failed Registrations        : 60
Last Pdu Origin : 23:45:67:89:00:01  Restricted Group Registration : true
```

Verbose Mode Off:

```
Set Done
```

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Output Fields

Field	Description
Port Id	The bridge port identifier
Gmrp Status	The administrative state of GMRP operation on this port
Failed Registrations	The total number of failed GMRP registrations, for any reason, in all VLANs, on this port
Last Pdu Origin	The Source MAC Address of the last GMRP message received on this port
Restricted Group Registration	The state of Restricted Group Registration on this port. If the value of this control is true(1), then creation of a new dynamic entry is permitted only if there is a Static Filtering Entry for the VLAN concerned, in which the Registrar Administrative Control value is Normal Registration

Caution   None.

References   None.

2.20 GMRP Port Stats Commands

Note: *GMRP Port Stats Commands are not supported in this release.*

2.20.1 get gmrp port stats

Description Use this command to get

Command Syntax `get gmrp port stats portid portid`

2.20.2 reset gmrp port stats

Description Use this command to reset

Command Syntax `reset gmrp port stats portid portid`

Parameter

Name	Description
portid portid	The bridge port identifier **Type:** Optional **Valid values:** 1-65535

Example `$ get gmrp port stats port id 1`

Output Verbose Mode On:

```
Set Done
Port Id        : 1
Recv Join Empty : 100       Send Join Empty : 100
Recv Join In   : 200       Send Join In   : 200
Recv Empty     : 200       Send Empty     : 200
Recv Leave     : 300       Send Leave     : 300
Recv Leave All : 300       Send Leave All  : 300
```

Verbose Mode Off:

```
Set Done
```

Output Fields

Field	Description
Port Id	The bridge port identifier
Recv Join Empty	Counter for the number of Join Empty Messages received
Send Join Empty	Counter for the number of Join Empty Messages sent
Recv Join In	Counter for the number of Join In Messages received
Send Join In	Counter for the number of Join In Messages sent

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Field	Description
Recv Empty	Counter for the number of Empty Messages received
Send Empty	Counter for the number of Empty Messages sent
Recv Leave	Counter for the number of Leave Messages received
Send Leave	Counter for the number of Leave Messages sent
Recv Leave All	Counter for the number of Leave All Messages received
Send Leave All	Counter for the number of Leave All Messages sent

Caution   None

References   None

2.21 VLAN Static Commands

2.21.1 create vlan static

Description   Use this command to create.

Command Syntax   *create vlan static vlanname vlanname vlanid vlanid [egressports egressports/none] [forbidegressports forbidegressports/none] [untaggedports untaggedports/none] [bridgingmode bridgingmode] [floodsupport enable/disable] [bcastsupport enable/disable]*

2.21.2 modify vlan static

Description   Use this command to modify.

Command Syntax   *modify vlan static vlanname vlanname | vlanid vlanid [egressports egressports/none] [forbidegressports forbidegressports/none] [untaggedports untaggedports/none]*

[bridgingmode bridgingmode] [floodsupport enable/disable] [bcastsupport enable/disable]

2.21.3 delete vlan static

Description   Use this command to delete.

Command Syntax   *delete vlan static vlanname vlanname | vlanid vlanid*

2.21.4 get vlan static

Description   Use this command to get.

Command Syntax   *get vlan static vlanname vlanname | vlanid vlanid*

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Parameters

Name	Description
`vlanname vlanname`	The VLAN Identifier. GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID. **Type**: Create - Mandatory Delete - Optional Get - Optional Modify - Optional For delete, get, modify - specify either vlanname or vlanid. **Valid values**: 1 - GS_CFG_MAX_VLAN_ID
`vlanid vlanid`	The VLAN Identifier. **Type:** Create – Mandatory Delete – Optional Get – Optional Modify – Optional For **delete**, **get**, **modify** - specify either **vlanname** or **vlanid.** **Valid values:** *1 – GS_CFG_MAX_VLAN_ID*
`egressports egressports / none`	The set of ports, which are permanently assigned to the egress list for this VLAN, by management. More than one value can be given, separated by spaces. **Type** **:** Optional **Valid values:** *1 – GS_CFG_MAX_BRIDGE_PORTS* **Default value:** none
`forbidegressports forbidegressports / none`	The set of ports, which are prohibited by management from being included in the egress list for this VLAN. This should include untagged ports. More than one value can be given, separated by spaces. **Type** **:** Optional **Valid values:** *1 – GS_CFG_MAX_BRIDGE_PORTS* **Default value:** none
`untaggedports untaggedports / none`	The set of ports, which should transmit egress packets for this VLAN, as, **untagged**. More than one value can be given, separated by spaces. **Type** **:** Optional **Valid values:** *1 – GS_CFG_MAX_BRIDGE_PORTS* **Default value:** none

Name	Description
bridgingmode *bridgingmode*	This specifies the state of full bridging for the VLAN. There can be three values associated with this, based on global fullBridgingStatus. These values can be restricted bridging, unrestricted full bridging and residential bridging. If the user does not specify the bridging mode at the time of VLAN creation the VLAN inherits the globally set bridging mode. The user can modify bridging mode for a created VLAN. If the dynamic entry for the VLAN to be created already exists, the user can only specify globally set bridging mode for this VLAN. The bridging modes are defined as GS_CFG_RSTRCD_BRIDGING, GS_CFG_UNRSTRCD_BRIDGING and GS_CFG_RSDNTL_BRIDGING. The default residential VLAN, like any other residential VLAN allows only one net side bridge port as its member. This port shall be added automatically to the default VLAN if it is the only net side bridge port being added to the VLAN. Subsequently, the user can add another net side port to the egressportslist and untaggedportslist only after removing the previously added net side bridge port. Unrestricted bridging is not applicable for bridge ports created over the PPPoE interface even though the VLAN may be unrestricted. **Type:** Create -- Optional Modify -- Optional **Valid values:** Restricted, Unrestricted, Residential **Default value:** residential

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Name	Description
floodsupport enable/disable	This specifies if flooding has to be done for unknown unicast packets for this vlan or not.The default value for this shall be taken from GS_CFG_DEF_VLAN_FLOOD when vlan is created. The unknown unicast packets shall be flooded on all ports for a vlan if global value (present in Dot1dTpInfo) is **enable** or **throttle,** and the value per vlan is also **enable** or **drop**. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_STATE_ENABLE, GS_STATE_DISABLE **Default value: GS_CFG_DEF_VLAN_FLOOD**
bcastsupport enable/disable	This specifies if the broadcast has to be done for this vlan or not. The default value for this shall be taken from GS_CFG_DEF_VLAN_BCAST when vlan is created. The broadcast packets shall be flooded on all ports for a vlan if global value (present in Dot1dTpInfo) and the value per vlan are both enable else dropped. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_STATE_ENABLE, GS_STATE_DISABLE **Default value: GS_CFG_DEF_VLAN_BCAST**

Example

```
$ create vlan static vlanname gsvlan vlanid 1 egressports 1 2 20
forbidegressports 34 5 untaggedports 2 bridgingmode Residential
bcastsupport enable floodsupport enable
```

Output   Verbose Mode On

```
VLAN Name                        : gsvlan
VLAN Index                       : 1
Egress ports                     : 1 2 20
Forbidden Egress Ports           : 34 5
Untagged Ports                   : 2
BridgingMode                     : Residential
Flood Support Status             : enable
Broadcast Support Status         : enable
```

Verbose Mode Off:

```
Entry Created
```

Output Fields

Field	Description
VLAN Name	An administratively assigned string, which may be used to identify the VLAN. This is mandatory in the case of create cmnd. In case of get/modify/delete - either vlan name or vlan id can be given.
VLAN Index	The VLAN Identifier. GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID.
Egress ports	The set of ports, which are permanently assigned to the egress list for this VLAN by management
Forbidden Egress Ports	The set of ports which are prohibited by management from being included in the egress list for this VLAN.
Untagged Ports	The set of ports, which should transmit egress packets for this VLAN, as untagged**.**
Bridging Mode	This specifies the state of full bridging for the VLAN. There can be three values associated with this, based on global fullBridgingStatus. These values can be restricted bridging, unrestricted full bridging and residential bridging. If the user does not specify the bridging mode at the time of VLAN creation, the VLAN inherits the globally set bridging mode. The user can modify bridging mode for a created VLAN. If the dynamic entry for the VLAN to be created already exists, the user can only specify globally set bridging mode for this VLAN. The bridging modes are defined as GS_CFG_RSTRCD_BRIDGING, GS_CFG_UNRSTRCD_BRIDGING and GS_CFG_RSDNTL_BRIDGING. The default residential VLAN, like any other residential VLAN allows only one net side bridge port as its member. This port shall be added automatically to the default VLAN if it is the only net side bridge port being added to the VLAN. Subsequently, the user can add another net side port to the egressportslist and untaggedportslist only after removing the previously added net side bridge port. Unrestricted bridging is not applicable for bridge ports created over the PPPoE interface even though the VLAN may be unrestricted.

Field	Description
Flood Support Status	This specifies if the flooding has to be done for unknown unicast packets for this vlan or not.The default value for this shall be taken fromGS_CFG_DEF_VLAN_FLOOD when vlan is created.The unknown unicast packets shall be flooded on all ports for a vlan if global value (present inDot1dTpInfo)is enabled or throttle, and the value pervlan is also enabled else dropped.
Broadcast Support Status	This specifies if the broadcast has to be done for this vlan or not. The default value for this shall be taken from GS_CFG_DEF_VLAN_BCAST when vlan is created. The broadcast packets shall be flooded on all ports for a vlan if global value (present in Dot1dTpInfo) and the value per vlan are both enabled else dropped.

Caution   None

References   • VLAN commands

2.22 Vlan curr info Commands

2.22.1 get vlan curr info

Description   Use this command to get.

Command Syntax   *get vlan curr info [vlanid* vlanid *]*

Parameters

Name	Description
vlanid vlanid	The VLAN Identifier. GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID. **Type**: Get -- Optional **Valid values**: 1 - GS_CFG_MAX_VLAN_ID

Example   *$ get vlan curr info vlanid* 45

Output

```
VLAN Index              : 45
VLAN Status             : 1
Egress Ports            : 24
Untagged Ports          : 24
Bridging Mode           : Residential
Flood support Status    : enable
Broadcast support Status : enable
```

Output field description

Field	Description
VLAN Index	The VLAN Identifier. GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID.
VLAN Status	This value indicates the status of the VLAN Port corresponding to this entry. other(1) - the entry is for the default VLAN created for the system. permanent(2) - this entry, corresponding to an entry in dot1qVlanStaticTable, is currently in use and will remain so after the next reset of the device. The port lists for this entry include ports from the equivalent dot1qVlanStaticTable entry and ports learnt dynamically. dynamic(3) - this entry is currently in use and will remain so until removed by GVRP. There is no static entry for this VLAN and it will be removed when the last port leaves the VLAN.

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Field	Description
Egress Ports	The set of ports, which are transmitting traffic for this VLAN, as either tagged or untagged frames.
Untagged Ports	The set of ports, which are transmitting traffic for this VLAN as untagged frames.
Bridging Mode	This specifies the state of full bridging for the VLAN. There can be three values associated with this based on global fullBridgingStatus. These values can be restricted bridging, unrestricted full bridging and residential bridging. The user can specify the bridging mode for the VLAN at the time of VLAN creation or modification, as one of these values. Otherwise the VLAN inherits the globally set bridging mode. The bridging modes are defined as GS_CFG_RSTRCD_BRIDGING, GS_CFG_UNRSTRCD_BRIDGING and GS_CFG_RSDNTL_BRIDGING. Unrestricted bridging is not applicable for bridge ports created overthe PPPoE interface even though the VLAN may be unrestricted.
Flood support Status	This tells if the flooding shall be done for unknown unicast packets for this vlan or not. The unknown unicast packets shall be flooded to all ports for a vlan if global value (present in Dot1dTpInfo) is enabled or throttle and the value per vlan is also enabled else dropped.
Broadcast support Status	This tells if the broadcast shall be done for this vlan or not. The broadcast packets shall be broadcasted on all ports for a vlan if global value (present in Dot1dTpInfo) and the value per vlan are both enabled else dropped.

Caution   None.

References   None.

2.23 VLAN Port Stats Commands

This set of commands is not supported.

2.23.1 get vlan port stats

Description   Use this command is used to get.

Command Syntax   *get vlan port stats [portid portid] [vlanid vlanid]*

2.23.2 reset vlan port stats

Description   Use this command to reset .

Command Syntax   *reset vlan port stats portid portid vlanid vlanid*

Parameters

Name	Description
portid portid	Index of the Bridge Port **Type** : Get – Optional Reset - Mandatory **Valid values:** *1 -* *GS_CFG_MAX_BRIDGE_PORTS*
vlanid vlanid	The VLAN identifier. **Type** : Get – Optional Reset - Mandatory **Valid values:** *1 - GS_CFG_MAX_VLAN_ID*

Example   *$ get vlan port stats*

Output
```
Port Id         : 1        Vlan Index            : 2
Vlan In Frames   : 200      Vlan Out Frames       : 100
Vlan In Discards : 50       Vlan In Overflow      : 69
Vlan Out Overflow : 60
```
Note: *This feature is not supported in this release.*

Output Fields

Field	Description
PortId	Index of the Bridge Port.
VLAN Index	The VLAN identifier.
Vlan In Frames	Number of valid frames received by this port.
Vlan Out Frames	Number of valid frames transmitted by this port.
Vlan In Discards	Number of valid frames discarded by this port.

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Field	Description
Vlan In Overflow	Count of Inframes counter overflow.
Vlan Out Overflow	Count of Outframes counter overflow.

Caution   None

References   • VLAN Commands.

2.24 Transparent Bridging Table Commands

2.24.1 modify bridge tbg info

Description   Use this command to modify.

Command Syntax   *modify bridge tbg info [aging aging-timeout] [slaveaging agingtimeout] [netaging aging-timeout] [floodsupport enable | disable] [bcastsupport enable | disable] [mcastsupport enable | disable] [mcastdrop enable | disable] [dropiffdbfull dropiffdbfull] [resnetlearning resnetlearning]*

2.24.2 get bridge tbg info

Description   Use this command to get bridging related global information.

Command Syntax   *get bridge tbg info*

Parameters

Name	Description
Aging aging-timeout	The timeout period, in seconds, for aging out dynamically learned forwarding information from CPEs. The value 0 can be configured when aging is to be stopped. **Type:** Modify -- Optional **Valid values:** GS_CFG_MIN_AGING_TIME - GS_CFG_MAX_AGING_TIME
slaveaging aging – timeout	The timeout period, in seconds, for aging out dynamically learned forwarding information learned from the slave device. The recommended value for this is more than or equal to the value for dot1dTpAgingTimeOut. The value 0 can be configured when aging is to be stopped.
netaging aging – timeout	The timeout period, in seconds, for aging out dynamically learned forwarding information from NET side port. This is used only for full bridge configuration. The recommended value of net aging timeout should be greater than that of the ìAgingî parameter. The value 0 can be configured when aging is to be stopped.
*floodsupport enable	disable*	This is used to specify whether the unknown unicast packets are to be flooded or not. The value for this is used along with per vlan configuration for flood support to determine if flooding has to be done for unknown unicast packet. **Type :** Optional **Valid Values**: enable	disable

Name	Description
bcastsupport enable/disable	This is used to specify whether the broadcasting is supported or not. The value for this is used along with per vlan configuration broadcast support, to determine if broadcasting has to be done for the broadcast packet.
mcastsupport enable/disable	Used to specify whether the multicast is supported or not. **Type** : Optional **Valid Values:** *enable| disable*
mcastdrop enable/disable	Used to specify whether the multicast packets are to be dropped, or to be forwarded, if multicast is not supported. This is only valid if **dot1dTpMcastSupport** is **false**. **Type** : Optional **Valid Values:** *enable|disable*
dropiffdbfull enable / disable	This specifies if the frame for which learning could not be done because of forwarding table limit being reached, is to be dropped. If this is enabled the frame for which learning could not be done because of limit exceeded shall be dropped, else forwarded based on bridge forwarding logic.This being enabled shall reduce flooding, as when a response to such a frame from which learning could not be done shall come the frame shall be flooded, as the entry for that unicast address, shall not be found in forwarding table. **Type** : Optional **Valid Values:** *enable or disable* **Default value:** GS_CFG_DEF_BRIDGE_IFFDBFULLDROP
resnetlearning enable / disable	This specifies if learning can be done over net side port for residential bridging. Learning shall be done on Net port in case of vlan with residential bridging if 'dot1dPortGsLearningStatus' and 'dot1dTpGsResidentialNetLearning'is enabled. In case of vlan with 'unrestricted' or 'restricted' bridging the learning is governed only by per port configuration i.e. 'dot1dBasePortTable'. Currently the modification of this parameter is not supported. **Type** : Optional **Valid Values:** *enable or disable* **Default value:** GS_CFG_DEF_NET_LEARNING_RSDNTL

Example   *modify bridge tbg info aging 20 slaveaging 100*

Output   Verbose Mode On

```
MacAddress            : 00:BB:CC:DD:EE:FF
No. of Ports          : 0
Base Type             : Transparent
Aging Timeout(sec)    : 300              Slaveaging TimeOut(sec) : 600
Netaging TimeOut(sec) : 600              Flood Support           : Disable
BroadCast Support     : Enable           MultiCast Support       : Enable
```

```
                         MultiCast Drop        : Disable       Full Bridging Status  : Unrestricted
                         Drop If FDB full status: Enable        ResidentialNetLearning : Enable

                         Set Done

                         MacAddress            : 00:BB:CC:DD:EE:FF
                         No. of Ports          : 0
                         Base Type             : Transparent
                         Aging Timeout(sec)    : 20             Slaveaging TimeOut(sec) : 100
                         Netaging TimeOut(sec) : 600            Flood Support         : Disable
                         BroadCast Support     : Enable         MultiCast Support     : Enable
                         MultiCast Drop        : Disable        Full Bridging Status  : Unrestricted
                         Drop If FDB full status: Enable        ResidentialNetLearning : Enable
```

Output Fields

Field	Description
MacAddress	The MAC address used by this bridge, when it must be referred to, in a unique fashion. It is the address of one of the Ethernet ports.
No. of Ports	The maximum number of ports that can be controlled by this bridge.
Base Type	Indicates what type of bridging this bridge can perform. It is always Transparent Bridging or STP.
Aging TimeOut	The timeout period, in seconds, for aging out dynamically learned forwarding information from CPEs. The value 0 can be configured when aging is to be stopped.
Slaveaging TimeOut	The timeout period, in seconds, for aging out dynamically learned forwarding information learned from the slave device. The recommended value for this is more than or equal to the value for dot1dTpAgingTimeOut. The value 0 can be configured when aging is to be stopped.
Floodsupport	This is used to specify whether the unknown unicast packets are to be flooded or not. The value for this is used along with per vlan configuration for flood support to determine if flooding has to be done for unknown unicast packet.
Bcastsupport	This is used to specify whether the broadcasting is supported or not. The value for this is used along with per vlan configuration broadcast support, to determine if broadcasting has to be done for the broadcast packet.
Mcastsupport	Used to specify whether the multicast is supported or not.
Mcastdrop	Used to specify whether the multicast packets are to be dropped, or to be forwarded, if multicast is not supported. This is only valid if **dot1dTpMcastSupport** is **false**.
NetAgingTimeout	The timeout period, in seconds, for aging out dynamically learned forwarding information from NET side port. This is used only for full bridge configuration. The recommended value of net aging timeout should be greater than that of dot1dTpAgingTimeOut.

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Field	Description
Full Bridging Status	This specifies the current state of full bridging on the bridge. Thebridge can be set to residential bridging, restricted full bridging or unrestricted full bridging. In residential bridging, all packets from a CPE side port are sent to Net side port without doing a lookup in the forwarding table. In restricted full bridging, there is a lookup and a packet coming from a CPE port destined for another CPE port is dropped. Hence, CPE-CPE switching is not permitted. In unrestricted full bridging, all traffic is forwarded based on lookup.
Drop If FDB full status	This specifies if the frame for which learning could not be done because of forwarding table limit being reached, is to be dropped. If this is enabled the frame for which learning could not be done because of limit exceeded shall be dropped, else forwarded based on bridge forwarding logic.This being enabled shall reduce flooding, as when a response to such a frame from which learning could not be done shall come the frame shall be flooded, as the entry for that unicast address, shall not be found in forwarding table.
ResidentialNetLearning	This specifies if learning can be done over net side port for residential bridging. Learning shall be done on Net port in case of vlan with residential bridging if 'dot1dPortGsLearningStatus' and 'dot1dTpGsResidentialNetLearning'is enabled. In case of vlan with 'unrestricted' or 'restricted' bridging the learning is governed only by per port configuration i.e. 'dot1dBasePortTable'. **Currently the modification of this parameter is not supported.**

Caution   None

References   • Bridge Port commands
                  • Bridge Port stats commands
                  • Ethernet commands.

2.25 STP Group Commands

2.25.1 get stp info

Description	Use this command to display the current status of the Spanning Tree Protocol Group.
Command Syntax	`get stp info`

2.25.2 modify stp info

Description	Use this command to alter the configuration for the spanning tree protocol group.
Command Syntax	`modify stp info [priority priority-value ] [maxage maximum-age ]` `[htime hello-time ] [fdelay forward-delay] [enable/disable]`

2.25.3 reset stp stats

Description	Use this command to reset STP global statistics.
Command Syntax	`reset stp stats`

Parameters

Name	Description
`Priority priority-value`	The value of the write-able portion of the Bridge ID,i.e.,the first two octets of the (8 octet long) Bridge ID. The other (last) 6 octets of the Bridge ID are given by the value of dot1dBaseBridgeAddress. **Type** : Optional **Valid values:** GS_MIN_STP_BRIDGE_PRIO – GS_MAX_STP_BRIDGE_PRIO.
`Maxage maximum-age`	The maximum age of Spanning Tree Protocol information learned from the network on any port before it is discarded, in units of seconds. This is the actual value that this bridge is currently using. **Type** : Optional **Valid values:** GS_MIN_STP_MAX_AGE - GS_MAX_STP_MAX_AGE.

Name	Description
htime `hello-time`	The amount of time between the transmission of Configuration bridge PDUs by this node on any port when it is the root of the spanning tree or trying to become so, in units of second. This is the actual value that this bridge is currently using. **Type** **:** Optional **Valid values:** `GS_MIN_STP_HELLO_TIME` - `GS_MAX_STP_HELLO_TIME`
Fdelay `forward-delay`	This is the actual time value, measured in units of seconds, controls how fast a port changes its spanning state when moving towards the Forwarding state. The value determines how long the port stays in each of the Listening and Learning states, which precede the Forwarding state. This value is also used, when a topology change has been detected and is underway, to age all dynamic entries in the Forwarding Database. **Type** **:** Optional **Valid values:** `GS_MIN_STP_FWD_DELAY` - `GS_MAX_STP_FWD_DELAY`
Enable/disable	Spanning Tree Protocol to be enabled on the Bridge or not. **Type** **:** Optional **Valid values:** `disable`

Example   *$ modify stp info priority 0x20 maxage 25 htime 5 fdelay 20 enable*

Output   Verbose Mode On

```
Protocol Spec  : IEEE 8021D              Priority : 0x8000
Top. Changes   : 1                       Curr Top. Age(sec) : 35.0
Desig Root     : 80:00:00:10:5A:6C:DB:20 Root Cost : 0
Root Port      : None                    Hold Time (sec) : 1.0
Br Max Age(sec)    : 20                  Curr Max Age (sec) : 20.0
Br Hello Time(sec) : 2                   Curr Hello Time(sec) : 2.0
Br Fwd Delay(sec)  : 15                  Curr Fwd Delay (sec) : 15.0

Set Done

Protocol Spec. : IEEE 8021D              Priority : 0x20
Top. Changes   : 1                       Curr Top. Age(sec) : 35.0
Desig Root     : 00:20:00:10:5A:6C:DB:20 Root Cost : 0
Root Port      : None                    Hold Time (sec) : 1.0
Br Max Age(sec) : 25                     Curr Max Age (sec) : 20.0
Br Hello Time(sec) : 5                   Curr Hello Time(sec) : 2.0
Br Fwd Delay(sec) : 20                   Curr Fwd Delay (sec) : 15.0
STP status       : enable
```

Verbose Mode Off

```
Set Done
```

Output Fields

Field	Description
Protocol Spec	An indication of what version of the Spanning Tree Protocol is being run.
Priority	The value of the write-able portion of the Bridge ID,i.e.,the first two octets of the (8 octet long) Bridge ID. The other (last) 6 octets of the Bridge ID are given by the value of dot1dBaseBridgeAddress.
Top. Changes	The total number of topology changes detected by this bridge since the management entity was last reset or initialized.
Curr Top. Age(Sec)	The time (in second) since the last time a topology change was detected by the bridge entity.
Desig Root	The bridge identifier of the root of the spanning tree as determined by the Spanning Tree Protocol as executed by this node. This value is used as the Root Identifier parameter in all Configuration Bridge PDUs originated by this node.
Root Cost	The cost of the path to the root as seen from this bridge.
Root Port	The port number of the port which offers the lowest cost path from this bridge to the root bridge.
Hold Time (Sec)	This time value determines the interval length during which no more than two Configuration bridge PDUs shall be transmitted by this node, in units of seconds.
Br Max Age(Sec)	The maximum age of Spanning Tree Protocol information learned from the network on any port before it is discarded, in units of seconds, when this bridge is the root of the spanning tree. Note that IEEE-802.1D specifies that the range for this parameter is related to the value of dot1dStpBridgeHelloTime.
Curr Max Age (Sec)	The maximum age of Spanning Tree Protocol information learned from the network on any port before it is discarded, in units of seconds. This is the actual value that this bridge is currently using.
Br Hello Time(Sec)	The value that all bridges use for HelloTime when this bridge is acting as the root.
Curr Hello Time(Sec)	The amount of time between the transmission of Configuration bridge PDUs by this node on any port when it is the root of the spanning tree or trying to become so, in units of second. This is the actual value that this bridge is currently using.

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Field	Description
Br Fwd Delay(Sec)	The value that all bridges use for ForwardDelay when this bridge is acting as the root. Note that IEEE-802.1D specifies that the range for this parameter is related to the value of dot1dStpBridgeMaxAge.
Curr Fwd Delay (Sec)	This is the actual time value, measured in units of seconds, controls how fast a port changes its spanning state when moving towards the Forwarding state. The value determines how long the port stays in each of the Listening and Learning states, which precede the Forwarding state. This value is also used, when a topology change has been detected and is underway, to age all dynamic entries in the Forwarding Database.
STP status	Spanning Tree Protocol to be enabled on the Bridge or not.

Caution   None.

References
- get stp info command
- stp port related commands.

2.26 STP Port Commands

2.26.1 get stp port

Description	Use this command to display port specific information for the Spanning Tree Protocol, for all ports, or for the specified port.
Command Syntax	`get stp port info portid portid`

2.26.2 modify stp port

Description	Use this command to alter the configuration for the spanning tree protocol.
Command Syntax	`modify stp port info portid portid [enable|disable] [pcost path-cost] [priority priority-value]`

2.26.3 reset stp port stats

Description	Use this command to reset the STP port stats for a specific interface.
Command Syntax	`reset stp port stats portid portid`

Parameters

Name	Description
`portid portid`	The port number of the port for which this entry contains Spanning Tree Protocol management information. **Type** : Mandatory **Valid values:** 1 to `GS_CFG_MAX_BRIDGE_PORTS;`
`enable|disable`	Spanning Tree Protocol to be enabled on the Port or not **Type** : Optional **Valid values:** enable, disable

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Name	Description
pcost path-cost	The contribution of this port to the path cost of paths towards the spanning tree root, which include this port. **Type** : Optional **Valid values:** GS_MIN_STP_PORT_PATH_COST - GS_MAX_STP_PORT_PATH_COST
priority priority-value	The value of the priority field which is contained in the most significant 6 bits of the more significant octet of the (2 octet long) Port ID. The least significant 2 bits of the more significant octet and the less significant octet (total 10 bits) of the Port ID is given by the value of dot1dStpPort. **Type** : Optional **Valid values :** GS_MIN_STP_PORT_PRIO - GS_MAX_STP_PORT_PRIO.

Example *$ modify stp port portid 1 disable pcost 1000 priority 0x10*

Output Verbose Mode On

```
Port ID : 1                Priority   : 0x0
State : Forwarding         PortStatus  : Enable
Path Cost : 100            Desig Cost  : 0
Desig Root:80:00:00:10:5A:6C  Desig Bridge:80:00:00:10:5A:6C
Desig Port : 0x8000        Fwd Transitions : 1
STP Status : Enable


Port ID : 1                Priority   : 0x0
State : Forwarding         PortStatus : Enable
Path Cost : 100            Desig Cost : 0
Desig Root:80:00:00:10:5A:6C  Desig Bridge:80:00:00:10:5A:6C
Desig Port : 0x8000        Fwd Transitions : 1
STP Status : Enable         Fwd Transitions : 1
```

Verbose Mode Off

```
Set Done
```

Output Fields

Field	Description
Port Id	The port number of the port for which this entry contains Spanning Tree Protocol management information.
Priority	The value of the priority field which is contained in the most significant 6 bits of the more significant octet of the (2 octet long) Port ID. The least significant 2 bits of the more significant octet and the less significant octet (total 10 bits) of the Port ID is given by the value of dot1dStpPort.

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Field	Description
State	The port's current state as defined by application of the Spanning Tree Protocol. This state controls what action a port takes on reception of a frame.
Port Status	The enabled/disabled status of the port.
Path Cost	The contribution of this port to the path cost of paths towards the spanning tree root which include this port.
Desig Cost	The path cost of the Designated Port of the segment connected to this port. This value is compared to the Root Path Cost field in received bridge PDUs.
Desig Root	The unique Bridge Identifier of the Bridge recorded as the Root in the Configuration BPDUs transmitted by the Designated Bridge for the segment to which the port is attached.
Desig Bridge	The Bridge Identifier of the bridge which this port considers to be the Designated Bridge for this port's segment.
Desig Port	The Port Identifier of the port on the Designated Bridge for this port's segment.
Fwd Transitions	The number of times this port has transitioned from the Learning state to the Forwarding state.
STP status	Spanning Tree Protocol to be enabled on the Bridge or not.

Caution   The specified interface should be an existing bridge interface.

References   • bridge port intf command.

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2.27 IP Route Table Commands

2.27.1 create ip route

Description   Use this command to create a routing table entry.

Command Syntax   `create ip route ip dest-ip-address gwyip gwy-ip-address mask net-mask`

2.27.2 delete ip route

Description   Use this command to delete an existing routing table entry.

Command Syntax   `delete ip route ip dest-ip-address mask net-mask`

2.27.3 get ip route

Description   Use this command to get the listing of all routing table entries or for a specific entry.

Command Syntax   `get ip route [ip dest-ip-address] [mask net-mask]`

Parameters

Name	Description
`ip dest-ip-address`	Destination IP address of this route. **Type**: Mandatory **Valid Values** : Any valid class A/B/C IP
`Gwyip gwy-ip-address`	The IP address of the next hop for this route. **Type**: Mandatory **Valid Values** : Any valid class A/B/C IP
`mask net-mask`	The Mask of the destination IP Address. **Type**: Mandatory **Valid Values** : *0.0.0.1 – 255.255.255.254*

Example   `$ create ip route ip 192.168.2.40 gwyip 192.168.1.1 mask 255.255.255.0`

Output   Verbose Mode On

```
Entry Created

Destination    Net Mask         Gateway       If-name    Route   Route  Age(sec)
                                                         Type    Orig
-------------------------------------------------------------------------------
192.168.2.40   255.255.255.0  192.168.1.1   eth-0      IND     LCL    0
```
Verbose Mode Off

```
Entry Created
```

Output Fields

FIELD	Description
Destination	Destination IP address of this route.
Mask	The Mask of the destination IP Address.
Gateway	The IP address of the next hop for this route.
If-Name	The local interface, through which the next hop of this route will be reached.
Route Type	The type of route. It may be : *dir* (for Direct) or *ind* (for Indirect).
Route Orig	The routing mechanism, through which this route was learned. It may be: *NET* (for Network Management), *LCL* (for Local), *RIP, ICMP,DYI* (Dynamic through Interface creation).
Age	The number of seconds since this route was last updated or otherwise determined to be correct.

Caution   None.

References
- get ip route command
- delete ip route command
- arp related commands.

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2.28 IP Net to Media Table Commands

2.28.1 create arp

Description Use this command to create a static entry in the ARP Table.

Command Syntax *create arp ip ip-address macaddr mac-address*

2.28.2 delete arp

Description Use this command to delete an entry from the ARP table.

Command Syntax *delete arp ip ip-address*

2.28.3 get arp

Description Use this command to display either the full ARP table or a single entry.

Command Syntax *get arp [ip ip-address]*

Parameters

Name	Description
ip ip-address	IP address corresponding to the media-dependent physical address **Type:** Mandatory **Valid values:** Any valid class A/B/C IP address
macaddr mac-address	The media-dependent physical address **Type:** Mandatory **Valid values:** *0:0:0:0:0:1 - ff:ff:ff:ff:ff:fe*

Example *$ create arp ip 192.168.1.1 macaddr 11:11:11:11:11:11*

Output Verbose Mode On

```
Entry Created

If Name    Type       Mac Address              Ip Address
-----------------------------------------------------------
eth-0     Static     11:11:11:11:11:11         192.168.1.1
```

Verbose Mode Off

```
Entry Created
```

Output Fields

FIELD	Description
If Name	This specifies the physical interface for the media. It may be: `eth-0` - *. This entry contains bridge management information.
Type	This defines the type of mapping in use. The value *Invalid* has the effect that this entry is not used. It may be: `Static`, `Dynamic`, Other
Mac Address	The media-dependent physical address
Ip Address	IP address corresponding to the media-dependent physical address

Caution   The specified interface should pre-exist. Please refer to the `create ethernet intf` command.

References
- delete arp command
- get arp command
- create ethernet intf command
- ip route related commands.

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2.29   Bridge Mode Commands

2.29.1 get bridge mode

Description	Use this command to get the current bridging mode.
Command Syntax	*get bridge mode*
Parameters	None
Example	*$ get bridge mode*
Output	Bridging Mode is Enabled
Output Fields	None
Caution	None.
References	• modify bridge mode command
	• bridge port command
	• bridge port stats command
	• bridge static command
	• bridge forwarding command
	• DHCP Client commands.

2.30 DHCP Client Commands

2.30.1 get dhcp client info

Description	Use this command to get DHCP client information for clients, on the specified interface, or for all the interfaces.
Command Syntax	`get dhcp client info [ifname interface-name]`

Parameters

Name	Description
`Ifname interface-name`	This specifies the interface name on which DHCP is running. If this is not specified, then information for clients on all such interfaces will be displayed. **Type** : Optional **Valid values :** eth-*, aggr-*

Mode	Super-User, User
Example	`$ get dhcp client info ifname eth-0`

Output

```
If-name   Server        Status     Lease Start Date          Lease Time (sec)
-------------------------------------------------------------------------------
eth-0     1.1.1.1       Bound        Thu Jan 01 00:00:38 1970     500
```

Output Fields

FIELD	Description
`If-Name`	This is an interface on which DHCP is running: It can be : *eth-*, aggr-*
`Server`	This specifies the address of the DHCP server with whom the client has obtained the IP address and other configuratio.s
`Status`	This specifies the current state of the client. It may be: *Init, Selecting, Bound, Requesting, Renew or Bind.*
`Lease Start Date`	This signifies the date on which the DHCP server leased out the IP address to the client.
`Lease Time`	This specifies the time period, (in seconds), for which an IP address was leased out by the server. The client is expected to renew the lease before the expiry of this timer or release the IP Address.

Caution	None.
References	• dhcp client stats related commands

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2.30.2 get dhcp client stats

Description Use this command to get DHCP client statistics on an interface on which the DHCP client is running, or on all such interfaces.

Command Syntax `get dhcp client stats [ifname interface-name]`

Parameters

FIELD	Description
Ifname interface-name	This specifies the interface name on which DHCP is running. If this is not specified then information for clients on all such interfaces will be displayed. **Type**: Optional **Valid values** : *eth-0- **

Mode Super-User, User

Example `$ get dhcp client stats ifname eth-0`

Output
```
If-name             : eth-0
Msgs Sent           : 4          Msgs Rcvd        : 0
Decline Sent        : 0          Offer Msgs Rcvd  : 0
Discover Msgs Sent  : 4
Req Sent            : 0          Acks Rcvd        : 0
Rel Sent            : 0          Nacks Rcvd       : 0
Inform Sent         : 0          Invalid Rcvd     : 0
```

Output Fields

FIELD	Description
If-Name	This is an interface on which DHCP is running: It can be : *eth-0*
Msgs Sent	This specifies number of DHCP messages received sent on this interface.
Msgs Rcvd	This specifies number of DHCP messages sent received on this interface.
Decline Sent	This specifies number of DHCP decline messages sent on this interface.
Offer Msgs Rcvd	This specifies number of DHCP offer messages received on this interface.
Discover Msgs Sent	This specifies number of DHCP discover messages sent on this interface.
Req Sent	This specifies number of DHCP request messages sent on this interface.
Acks Rcvd	This specifies number of DHCP acks received on this interface.
Rel Sent	This specifies number of DHCP release messages sent on this interface.

FIELD	Description
Nacks Rcvd	This specifies number of DHCP nacks received on this interface.
Inform Sent	This specifies number of DHCP inform messages sent on this interface.
Invalid Rcvd	This specifies number of invalid dhcp messages received on this interface.

Caution   None.

References   • dhcp client info related commands.

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2.31 Forwarding Table Commands

2.31.1 get bridge forwarding

Description   Use this command to get.

Command Syntax   *get bridge forwarding [vlanid vlanid] [macaddr mac-address]*

Parameters

Name	Description
vlanid vlanid	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learned entry or all learned entries, the FdbId should be set to a valid value in case of IVL. In SVL case, this value is ignored except when the value is GS_UNREGISTERED_VLANID which is the value of a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. When Vlan transparency feature is supported, the valid range for this also includes GS_UNREGISTERED_VLANID. **Type**: Delete -- Mandatory Get -- Optional **Valid values**: 0 - GS_CFG_MAX_VLAN_ID
macaddr mac-address	A unicast MAC address for which the bridge has forwarding and/or filtering information. In the case of "delete all" entries in a given FDB; the MacAddr shall have INVALID value specified by FF:FF:FF:FF:FF:FF. To delete an individual entry, valid value of Mac address has to be specified. **Type:** Delete -- Mandatory Get -- Optional

2.31.2 delete bridge forwarding

Description   Use this command to delete.

Command Syntax   *delete bridge forwarding vlanid vlanid macaddr mac-address*

Mode   Super-User, User

Example   *$ get bridge forwarding vlanid 10 macaddr 01:2e:22:3d:44:56*

Output
```
        MAC Addr              PortId    VlanId      Status
        ----------------------------------------------------------
        01:2e:22:3d:44:56    10         10          learned
```

Output Fields

FIELD	Description
MAC Addr	A unicast MAC address for which the bridge has forwarding and/or filtering information. In the case of "delete all" entries in a given FDB; the MacAddr shall have INVALID value specified by FF:FF:FF:FF:FF:FF. To delete an individual entry, valid value of Mac address has to be specified.
PortId	Port number of the port on which a frame having a source address equal to the value of the corresponding instance of dot1qTpFdbAddress, has been seen. This may have a value of "0" if the statically configured address has a dynamic port binding and the port has not been learned yet.
VlanId	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learned entry or all learned entries, the FdbId should be set to a valid value in case of IVL. In SVL case, this value is ignored except when the value is GS_UNREGISTERED_VLANID, which is the value of a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. When Vlan transparency feature is supported, the valid range for this also includes GS_UNREGISTERED_VLANID.
Status	The status of this entry. The value learned (3), indicates that the value of the corresponding instance of portid was learned, and is being used. mgmt(5) - the value of the corresponding instance of mac-address is also the value of an existing instance of dot1qStaticAddress. The value other (1) indicates that this is associated with a sticky port.

Caution   None

References
- bridge port related commands
- bridge port stats command
- bridge static related commands
- bridge mode related commands.

2.31.3 get bridge port forwarding

Description   Use this command to get.

Command Syntax   *get bridge port forwarding [portid portid] [vlanid vlanid] [macaddr macaddr]*

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2.31.4 delete bridge port forwarding

Description   Use this command to delete.

Command Syntax   `delete bridge port forwarding portid portid [ vlanid vlanid ] [ macaddr macaddr ]`

Parameters

Name	Description
`portid portid`	Port ID identifying the entries learnt on this port and entries statically configured on this port in FDB. **Type:** Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
`vlanid vlanid`	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learned entry or all learned entries, the FdbId should be set to a valid value in case of IVL. In SVL case, this value is ignored except when the value is GS_UNREGISTERED_VLANID, which is the value of a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. When Vlan transparency feature is supported, the valid range for this also includes GS_UNREGISTERED_VLANID. Type: Delete -- Mandatory Get -- Optional Valid values: 0 - GS_CFG_MAX_VLAN_ID:
`macaddr macaddr`	In the case of "delete all" entries corresponding to a port in a given FDB; the MacAddr shall have INVALID value specified by FF:FF:FF:FF:FF:FF. To delete an individual entry, valid value of Mac address has to be specified. **Type:** Delete -- Optional Get -- Optional

Example   `$ get bridge port forwarding portid 10 vlanid 10 macaddr 02:03:ee:34:55:66`

Output   Verbose Mode On

```
Port Id  : 10                    vlan id : 10
Mac Addr : 02:03:ee:34:55:66
Status   : Mgmt
```

Output Fields

FIELD	Description
Port Id	Port number of the port on which a frame having a source address equal to the value of the corresponding instance of dot1qTpFdbAddress, has been seen. This may have a value of "0" if the statically configured address has a dynamic port binding and the port has not been learnt yet.
vlan id	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learned entry or all learned entries, the FdbId should be set to a valid value in case of IVL. In SVL case, this value is ignored except when the value is GS_UNREGISTERED_VLANID, which is the value of a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. When Vlan transparency feature is supported, the valid range for this also includes GS_UNREGISTERED_VLANID.
Mac Addr	In the case of "delete all" entries corresponding to a port in a given FDB; the MacAddr shall have INVALID value specified by FF:FF:FF:FF:FF:FF. To delete an individual entry, valid value of Mac address has to be specified.
Status	The status of this entry. The value learned (3), indicates that the value of the corresponding instance of dot1qTpFdbPort was learned, and is being used. mgmt(5) - the value of the corresponding instance of dot1qTpFdbAddress is also the value of an existing instance of dot1qStaticAddress. The value other (1) indicates that this is associated with a sticky port.

Caution   None

References   None

2.32 Multicast Forwarding Table Commands

2.32.1 get bridge mcast forwarding

Description	Use this command to get.
Command Syntax	`get bridge mcast forwarding [vlanid vlanid] [macaddr macaddr]`
Parameter	

Name	Description
`vlanid vlanid`	The VLAN id for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - **get**. For **No Vlan** case, vlan id is not required. **Type:** Optional **Valid values:** 0 - GS_CFG_MAX_VLAN_ID
`macaddr macaddr`	The destination Group MAC address in a frame to which this entry's filtering information applies. Bit 0 of the first octet of mac addr indicates a group (multicast) mac addr if the bit is SET.Eg 01:00:00:00:00:00,03:FF:FF:FF:FF. **Type:** Optional Valid values:

Example	`$ get bridge mcast forwarding vlanid 1 macaddr 01:00:5E:00:08:01`
Output	``` Vlan Index 1 Mac Address : 01:00:5E:00:08:01```

```
Vlan Index   1          Mac Address : 01:00:5E:00:08:01
Egress Ports : 10 20
Group Learnt : 10
```

Output Fields

Field	Description
`Vlan Index`	The VLAN id for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required.
`Mac Address`	The destination Group MAC address in a frame, to which this entry's filtering information applies.

Field	Description
Egress Ports	The complete set of bridge ports, in this VLAN, to which frames destined for this Group MAC address are currently being explicitly forwarded. This does not include ports for which this address is only implicitly forwarded, in the **dot1qForwardAllPorts** list.
Group Learnt	The subset of bridge ports in EgressPorts, which were learned by GMRP or some other dynamic mechanism, in this Filtering database.

Caution   None

References   • bridge static multicast

2.33 Bridge Static Unicast Commands

2.33.1 create bridge static ucast

Description This command is used to create.

Command Syntax `create bridge static ucast [vlanid vlanid] ucastaddr ucastaddr [portid portid]`

2.33.2 delete bridge static ucast

Description This command is used to delete.

Command Syntax `delete bridge static ucast [vlanid vlanid] ucastaddr ucastaddr`

2.33.3 get bridge static ucast

Description This command is used to get.

Command Syntax `get bridge static ucast [ vlanid vlanid ] [ ucastaddr ucastaddr ]`

2.33.4 modify bridge static ucast

Description This command is used to modify.

Command Syntax `modify bridge static ucast [vlanid vlanid] ucastaddr ucastaddr [ portid portid ]`

Parameter

Name	Description
`vlanid vlanid`	The VLAN index referring to this VLAN. In case of device capability not supporting vlans, vlan id "0" is a valid value. GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID. **Type** : Optional **Valid values**: 1- GS_CFG_MAX_VLAN_ID

Name	Description
ucastaddr ucastaddr	The Destination unicast Mac Address, to which filtering info applies **Type:** Mandatory **Valid values:**
portid portid	The set of ports, for which a frame with a specific unicast address will be flooded in the event that it has not been learned. It also specifies the set of ports a specific unicast address may be dynamically learnt on. This list shall have only the CPE side ports. Currently only one port can be set in this list. **Type :** Optional **Valid values**: *1- GS_CFG_MAX_BRIDGE_PORT*

Example   *$ modify bridge static ucast vlanid 1 ucastaddr 1:1:1:1:1:1 portid 2*

Output   Verbose Mode On:

```
VLAN Index          : 1       Ucast Address : 1:1:1:1:1:1
Port Id             : 2

Set Done
```

Verbose Mode Off:

```
Set Done
```

Output Fields

Field	Description
Vlan Index	The VLAN index referring to this VLAN. In case of device capability not supporting vlans, vlan id "0" is a valid value.GS_UNREGISTERED_VLANID is a special Vlan Id used for managing the traffic for those VLANs that are neither created nor learned in the system. The valid range for this field also includes GS_UNREGISTERED_VLANID besides the range 1-GS_CFG_MAX_VLAN_ID.
Ucast Address	The Destination unicast Mac Address, to which filtering information applies.
Port Id	The set of ports, for which a frame with a specific unicast address will be flooded in the event that it has not been learned. It also specifies the set of ports a specific unicast address may be dynamically learnt on. This list shall have only the CPE side ports. Currently only one port can be set in this list.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   • Bridge Commands.

2.34 Bridge Static Multicast Commands

2.34.1 create bridge static mcast

Description   Use this command is used to create.

Command Syntax   `create bridge static mcast [vlanid vlanid] mcastaddr mcastaddr [ egressports egressports ] [ forbidegressports forbidegressports ]`

2.34.2 delete bridge static mcast

Description   Use this command is used to delete.

Command Syntax   `delete bridge static mcast [vlanid vlanid] mcastaddr mcastaddr`

2.34.3 get bridge static mcast

Description   Use this command is used to get.

Command Syntax   `get bridge static mcast [ vlanid vlanid ] [ mcastaddr mcastaddr ]`

2.34.4 modify bridge static mcast

Description   Use this command is used to modify

Command Syntax   `modify bridge static mcast [vlanid vlanid] mcastaddr mcastaddr [ egressports egressports ] [ forbidegressports forbidegressports ]`

Parameter

Name	Description
Vlanid vlanid	The VLAN ID for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across VLANs. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required. This feature is not supported for VLAN with vlanid as GS_UNREGISTERED_VLANID. **Type**: Optional for all commands **Valid values**: 0 - GS_CFG_MAX_VLAN_ID **Default value**:

mcastaddr mcastaddr	The destination multicast MAC address in a frame, to which this entry's filtering information applies. Bit **0** of the first octet of the MAC address indicates a group (multicast) MAC address, if the bit is SET. For example, 01:00:00:00:00:00,03:FF:FF:FF:FF. Addresses in the range 01:80:C2:00:00:00 - 01:80:C2:00:00:0f and 01:80:C2:00:00:20 - 01:80:C2:00:00:2f have been blocked as value of this index, as these are reserved GARP addresses.
	Type **:** Create – Mandatory
	           Modify – Mandatory
	           Delete – Mandatory
	           Get - Optional
	Default value:

egressports egressports/none	The set of ports, to which frames received from a specific port and destined for a specific Multicast MAC address must be forwarded. A port may not be added in this set, if it is already a member of the set of ports in **ForbidEgressPorts**. More than one value can be given, separated by spaces. **Type** **:**Optional for all commands **Valid values:** *1 – GS_CFG_MAX_BRIDGE_PORTS* **Default value:** none
forbidegressports forbidegressports/none	The set of ports, to which frames received from a specific port and destined for a specific Multicast MAC address must not be forwarded, regardless of any dynamic information. A port may not be added in this set if it is already a member of the set of ports in **EgressPorts**. **Type** **:**Optional for all commands **Valid values :** *1 – GS_CFG_MAX_BRIDGE_PORTS* **Default value:** none

Example   *$ create bridge static mcast vlanid 7 mcastaddr 01:00:5e:00:00:01 egressports 10 forbidegressports 20*

Output   Verbose Mode On:

```
Entry Created

VLan Index            : 7          Mcast Address : 01:00:5E:00:00:01
Egress ports          : 10
Forbidden Egress ports : 20
```

Verbose Mode Off:

```
Entry Created
```

Output Fields

Field	Description
VLan Index	The VLAN ID for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required. This feature is not supported for VLAN with vlanid as GS_UNREGISTERED_VLANID.
Mcast Address	The destination multicast MAC address in a frame, to which the filtering information of this entry applies.
Egress ports	The set of ports, to which frames received from a specific port and destined for a specific Multicast MAC address must be forwarded. A port may not be added in this set if it is already a member of the set of ports in ForbiddenEgressPorts.
Forbidden Egress ports	The set of ports, to which frames received from a specific port and destined for a specific Multicast MAC address must not be forwarded, regardless of any dynamic information. A port may not be added in this set if it is already a member of the set of ports in EgressPorts.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   • Bridge Commands

2.35 Bridge mcast fwdall commands

2.35.1 get bridge mcast fwdall

Description	Use this command to get.

Command Syntax   `get bridge mcast fwdall [ vlanid vlanid ]`

2.35.2 modify bridge mcast fwdall

Description	Use this command to create.

Command Syntax   `modify bridge mcast fwdall [vlanid vlanid] [egressports egressports|none ] [ forbidegressports forbidegressports |none ]`

Parameters

Name	Description
`vlanid vlanid`	The VLAN ID for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across VLANs. Hence, vlanid is not required and is passed as zero. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence, VLAN ID is a mandatory parameter and a valid value of vlanid must be passed. For No Vlan case, VLAN iD is not required. When Vlan transparency feature is supported , the valid range for vlanid also includes GS_UNREGISTERED_VLANID. In case of "Shared Vlan Multicast" also, there shall always be a seperate entry for GS_UNREGISTERED_VLANID if the VLAN with that VLAN Id is created. **Type** : Get - Optional Modify - Optional **Valid values**: 0 - GS_CFG_MAX_VLAN_ID **Default value**:

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Name	Description
Egressports *egressports/none*	The set of ports configured by management in this VLAN to which all multicast group-addressed frames are to be forwarded. More than one value can be given, separated by spaces. **Type** : Modify - Optional **Valid values:** 1-386
forbidegressports *forbidegressports /none*	The set of ports configured by management in this VLAN for which the Service Requirement attribute Forward All Multicast Groups may not be dynamically registered by GMRP. More than one value can be given, separated by spaces. **Type** : Modify - Optional **Valid values:** 1-386

Example
```
$ modify bridge mcast fwdall vlanid 1 egressports 34
forbidegressports 345
```

Output Verbose Mode On

```
VLAN Index                : 1
Forward All Ports         : 34
Forward All Static Ports  : 34
Forward All Forbidden Ports : 345

Set Done

VLAN Index                : 1
Forward All Ports         : 34
Forward All Static Ports  : 34
Forward All Forbidden Ports : 345
```

Verbose Mode Off

```
Set Done
```

Output Fields

Field	Description
VLAN Index	The VLAN ID for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across VLANs. Hence, vlanid is not required and is passed as zero. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence, VLAN id is a mandatory parameter and a valid value of vlanid must be passed. For No Vlan case, VLAN id is not required. When Vlan transparency feature is supported , the valid range for vlanid also includes GS_UNREGISTERED_VLANID. In case of "Shared Vlan Multicast also there shall always be a seperate entry for GS_UNREGISTERED_VLANID if the VLAN with that VLAN Id is created.
Forward All Ports	The complete set of ports in this VLAN, to which all multicast group-addressed frames are to be forwarded. This includes ports for which this need has been determined dynamically by GMRP, or configured statically by management.
Forward All Static Ports	The set of ports, configured by management in this VLAN, to which all multicast group-addressed frames are to be forwarded. More than one value can be given, separated by spaces.
Forward All Forbidden Ports	The set of ports configured by management in this VLAN, for which the Service Requirement attribute Forward All Multicast Groups, may not be dynamically registered by GMRP. More than one value can be given, separated by spaces.

Caution An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References • Bridge commands.

2.36 Bridge mcast fwdunreg commands

2.36.1 get bridge mcast fwdunreg

Description   Use this command to get.

Command Syntax   `get bridge mcast fwdunreg [ vlanid vlanid ]`

2.36.2 modify bridge mcast fwdunreg

Description   Use this command to create.

Command Syntax   `modify bridge mcast fwdunreg vlanid vlanid [egressports egressports|none][forbidegressports forbidegressports |none]`

Parameters

Name	Description
`vlanid vlanid`	The VLAN id for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across VLANs. Hence, vlanid is not required and is passed as zero. In devices supporting "Independent Vlan for multicast" capability. Each vlan can have its own information for a multicast MAC address. Hence, VLAN ID is a mandatory parameter and a valid value of vlanid must be passed. For No Vlan case, VLAN ID is not required. When Vlan transparency feature is supported, the valid range for vlanid also includes GS_UNREGISTERED_VLANID. In case of "Shared Vlan Multicast" also, there shall always be a seperate entry for GS_UNREGISTERED_VLANID if the VLAN with that VLAN Id is created. **Type** : Modify - Optional Get - Optional **Valid values**: 0 - GS_CFG_MAX_VLAN_ID **Default value**:

Name	Description
Egressports *egressports/none*	The set of ports configured by management, in this VLAN, to which multicast group-addressed frames for which there is no more specific forwarding information, are to be forwarded. More than one value can be given, separated by spaces. **Type** : Modify - Optional **Valid values:** 1-386
forbidegressports *forbidegressports /none*	The set of ports configured by management in this VLAN for which the Service Requirement attribute Forward Unregistered Multicast Groups may not be dynamically registered by GMRP. More than one value can be given separated by spaces. **Type** : Modify - Optional **Valid values:** 1-386

Example   `$ modify bridge mcast fwdunreg vlanid 1 egressports 34`
`forbidegressports 345`

Output   Verbose Mode On

```
VLAN Index                         : 1
Forward Unregistered Ports         : 45
Forward Unregistered Static Ports  : 45
Forward Unregistered Forbidden Ports : 34

Set Done

VLAN Index                         : 1
Forward Unregistered Ports         : 45
Forward Unregistered Static Ports  : 45
Forward Unregistered Forbidden Ports : 34
```

Verbose Mode Off

```
Set Done
```

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Output Fields

Field	Description
VLAN Index	The VLAN id for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across VLANs. Hence, vlanid is not required and is passed as zero. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence, VLAN id is a mandatory parameter and a valid value of vlanid must be passed. For No Vlan case, VLAN id is not required. When Vlan transparency feature is supported, the valid range for vlanid also includes GS_UNREGISTERED_VLANID. In case of "Shared Vlan Multicast" also, there shall always be a seperate entry for GS_UNREGISTERED_VLANID if the VLAN with that VLAN Id is created.
Forward Unregistered Ports	The complete set of ports in this VLAN, to which multicast group-addressed frames for which there is no more specific forwarding information, will be forwarded. This includes ports, for which this need has been determined dynamically by GMRP, or configured statically by management.
Forward Unregistered Static Ports	The set of ports, configured by management, in this VLAN, to which multicast group-addressed frames for which there is no more specific forwarding information, are to be forwarded. More than one value can be given, separated by spaces.
Forward Unregistered Forbidden Ports	The set of ports, configured by management in this VLAN, for which the Service Requirement attribute **Forward Unregistered Multicast Groups**, may not be dynamically registered by GMRP. More than one value can be given, separated by spaces.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   • Bridge commands.

2.37 Bridge tbg traps Commands

2.37.1 get bridge tbg traps

Description   Use this command to get.

Command Syntax   `get bridge tbg traps`

2.37.2 modify bridge tbg traps

Description   Use this command to modify.

Command Syntax   `modify bridge tbg traps [ bindingstatus enable | disable ]`

Parameters

Name	Description
`bindingstatus enable | disable`	This allows the user to enable or disable the generation of 'binding status changed' trap. **Type:** Modify -- Optional

Example   `$ get bridge tbg traps`

Output   Binding Status Changed Trap : enable

Output Fields

FIELD	Description
`Binding Status Changed Trap`	This allows the user to enable or disable the generation of 'binding status changed' trap.

Caution   None

References   • Bridge Commands.

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2.38 Bridge Port Table Commands

2.38.1 create bridge port intf

Description   Use this command to create a new bridge port.

Command Syntax   `create bridge port intf portid portid ifname ifname [maxucast max-ucast-addresses ] [learning enable/disable][status enable/disable] [stickystatus enable | disable] [FdbModify  enable | disable][ aclglbdenyapply Enable | Disable ] [ aclglbtrackapply Enable | Disable ]`

2.38.2 delete bridge port intf

Description   This command is used to delete an existing bridge port.

Command Syntax   `delete bridge port intf portid portid`

2.38.3 get bridge port intf

Description   Use this command to get the information about a specific bridge port or for all the ports.

Command Syntax   `get bridge port intf [ portid portid ]`

2.38.4 modify bridge port intf

Description   Use this command to modify bridge port extension attributes

Command Syntax   `modify bridge port intf portid portid [maxucast max-ucast-addresses ] [learning enable/disable][status enable/disable] [stickystatus enable | disable][FdbModify  enable | disable][ aclglbdenyapply Enable | Disable ][ aclglbtrackapply Enable | Disable ]`

Parameters

Name	Description
`portid portid`	The bridge port id **Type:** Create -- Optional Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
`Ifname ifname`	The interface name associated with the given port. **Type:** Create -- Mandatory **Valid values:** eth-*, eoa-*, pppoe-*, vir-*

Name	Description
`maxucast maxucast`	This specifies the maximum number of unicast addresses that can be learned from this port. This is modifiable when the admin status of the bridge port is disabled. The maximum number of unicast entries that can be learned or configured on a bridge port on the CPE side is *GS_CFG_MAX_NUM_CPE_PORT_UCAST_MAC_ENTRIES.* The default value for the number of unicast entries that can be learned or configured on a CPE side bridge port is *GS_CFG_DEF_NUM_CPE_PORT_UCAST_MAC_ENTRIES.* The maximum number of unicast entries that can be learned or configured on a bridge port on the NET side is *GS_CFG_MAX_NUM_NET_PORT_UCAST_MAC_ENTRIES.* The default value for the number of unicast entries that can be learned or configured on a bridge port is *GS_CFG_DEF_NUM_NET_PORT_UCAST_MAC_ENTRIES.* The maximum number of unicast entries that can be learned or configured on a bridge port on the downlink side is *GS_CFG_MAX_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES.* The default value for the number of unicast entries *that can be learned or configured on a bridge port is GS_CFG_DEF_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES.* This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Create -- Optional Modify -- Optional **Default value**: 256

Name	Description
learning enable/disable	The *State of Learning* on this bridge port. The value enable (1) indicates that unicast Mac address learning is enabled and the value disable indicates that unicast Mac address learning is disabled on this bridge port. The default value of learning status for a CPE/Downlink side bridge ports shall be *GS_CFG_DEF_PORT_LEARNING_STATUS* and for a NET side bridge port, the default value shall be *GS_CFG_DEF_NET_PORT_LEARNING_STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Create -- Optional Modify -- Optional **Valid Values**: *enable or disable* **Default value**: *enable*
status enable/disable	The desired state of the bridge port. On creation, the bridge port shall be created in enabled AdminStatus by default. **Type:** Create -- Optional Modify -- Optional **Valid Values:** enable or disable **Default value:** disable
stickystatus enable /disable	Indicates if the port has been set as sticky. The value enable (1) indicates that the entries learned on this port shall not be aged out. It also indicates that the entries learned on this port shall not be learned on any other port. The entries learned on this port can only be removed by a management action or by setting the value to disable (2), so that the entries can be aged out. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Create -- Optional Modify -- Optional **Valid Values**: *enable or disable* **Default value**: *enable*
FdbModify enable /disable	This specifies whether this port can overwrite an existing forwarding database entry. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Create -- Optional Modify -- Optional **Valid Values**: *enable or disable* **Default value**: *enable*

Name	Description
aclglbdenyapply Enable /Disable	This specifies whether the global acl macentry deny list represented by the MO AclGlobalMacList is to be applied to this port or not. The default value of this parameter shall depend on the port type. For Net side ports, the default value shall be *GS_CFG_DEF_NET_PORT_ACL_GLB_DENY_STATUS*. For CPE side ports, the default value shall be *GS_CFG_DEF_CPE_PORT_ACL_GLB_DENY_STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPOE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Modify - Optional
aclglbtrackapply Enable/ Disable	This specifies whether the global acl macentry track list represented by the MO AclGlobalMacList is to be applied to this port or not. The default value of this parameter shall depend on the port type. For Net side ports, the default value shall be *GS_CFG_DEF_NET_PORT_ACL_GLB_TRACK_STATUS*. For CPE side ports, the default value shall be *GS_CFG_DEF_CPE_PORT_ACL_GLB_TRACK_STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPOE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface. **Type**: Modify -- Optional

Example

```
$ create bridge port intf ifname eth-0 portid 10 maxucast 200
learning enable stickystatus enable status enable fdbmodify disable
aclglbdenyapply Disable aclglbtrackapply Disable
```

Output

```
Entry Created

Port Id             : 10            IfName              : eth-0
Max Unicast Addresses : 10          Learning Status     : Enable
Port Oper Status    : Disable       Port Admin Status   : Disable
Sticky Status       : Enable        FDB Modify          : Disable
Acl Global Deny Apply : Disable
Acl Global Track Apply: Disable
Sensed IfIndex      :eoa-1
```

Output Fields

FIELD	Description
Port Id	The bridge port identifier
If Name	The interface name associated with the given port.

FIELD	Description
Max Unicast Addresses	This specifies the maximum number of unicast addresses that can be learned from this port. This is modifiable when the admin status of the bridge port is disabled. The maximum number of unicast entries that can be learned or configured on a bridge port on the CPE side is *GS_CFG_MAX_NUM_CPE_PORT_UCAST_MAC _ENTRIES.* The default value for the number of unicast entries that can be learned or configured on a CPE side bridge port is *GS_CFG_DEF_NUM_CPE_PORT_UCAST_MAC _ENTRIES.* The maximum number of unicast entries that can be learned or configured on a bridge port on the NET side is *GS_CFG_MAX_NUM_NET_PORT_UCAST_MAC _ENTRIES.* The default value for the number of unicast entries that can be learned or configured on a bridge port is *GS_CFG_DEF_NUM_NET_PORT_UCAST_MAC_ ENTRIES.* The maximum number of unicast entries that can be learned or configured on a bridge port on the downlink side is *GS_CFG_MAX_NUM_DNLINK_PORT_UCAST_M AC_ENTRIES.* The default value for the number of unicast entries *that can be learned or configured on a bridge port is GS_CFG_DEF_NUM_DNLINK_PORT_UCAST_M AC_ENTRIES.* This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.
Learning status	The *State of Learning* on this bridge port. The value enable (1) indicates that unicast Mac address learning is enabled and the value disable indicates that unicast Mac address learning is disabled on this bridge port. The default value of learning status for a CPE/Downlink side bridge ports shall be *GS_CFG_DEF_PORT_LEARNING_STATUS* and for a NET side bridge port, the default value shall be *GS_CFG_DEF_NET_PORT_LEARNING_STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.

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FIELD	Description
Port oper status	The current operational state of the bridge port. If AdminStatus of the bridge port is **disable (2)**, then OperStatus of the port should be **disable (2)**. If AdminStatus of the bridge port is changed to **enable(1)**, then OperStatus of the port should change to **enable(1)** if the bridge port is ready to transmit and receive network traffic. The bridge port will have the OperStatus value as **dormant (5)** if the 'configstatus' of the bridge port is 'config' and it is waiting for a packet to be sensed, on it's lower interface index, to get activated.
Port admin status	The desired state of the bridge port. On creation the bridge port shall be created in enabled AdminStatus by default.
Sticky Status	Indicates if the port has been set as sticky. The value enable (1) indicates that the entries learned on this port shall not be aged out. It also indicates that the entries learned on this port shall not be learned on any other port. The entries learned on this port can only be removed by a management action or by setting the value to disable (2), so that the entries can be aged out. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.
FDB Modify	This specifies whether this port can overwrite an existing forwarding database entry. This field is unused if the bridge port is created over a PPPoE interface or if PPPoE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.
Acl Global Deny Apply	This specifies whether the global acl macentry deny list represented by the MO AclGlobalMacList is to be applied to this port or not. The default value of this parameter shall depend on the port type. For Net side ports, the default value shall be *GS_CFG_DEF_NET_PORT_ACL_GLB_DENY_STATUS*. For CPE side ports, the default value shall be *GS_CFG_DEF_CPE_PORT_ACL_GLB_DENY_STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPOE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.

FIELD	Description
Acl Global Track Apply	This specifies whether the global acl macentry track list represented by the MO AclGlobalMacList is to be applied to this port or not. The default value of this parameter shall depend on the port type. For Net side ports, the default value shall be *GS_CFG_DEF_NET_PORT_ACL_GLB_TRACK_ STATUS*. For CPE side ports, the default value shall be *GS_CFG_DEF_CPE_PORT_ACL_GLB_TRACK_ STATUS*. This field is unused if the bridge port is created over a PPPoE interface or if PPPOE is sensed. Any value of this field shall be ignored for a bridge port created over a PPPoE interface.
Sensed IfIndex	This specifies the sensed interface index corresponding to the bridge port. This field is used to determine the stack sensed for this bridge port in the auto sensing scenario. This field canot be modified. If the oper status of the bridge port is 'enable' or 'disable' then the value of this field gives the interface index on which the bridge port is currently stacked. If the oper status is 'dormant' and the value of this field is other than '-', then it represents the last interface index on which the bridge port had been stacked..

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2.39 Bridge Port Stats Table Commands

2.39.1 get bridge port stats

Description	Use this command to get the statistics of a single port, or all the ports.
Command Syntax	`get bridge port stats [portid portid]`

2.39.2 reset bridge port stats

Description	Use this command to reset bridge port statistics.
Command Syntax	`reset bridge port stats portid portid`

Parameters

Name	Description
`portid portid`	This is the bridge port identifier. If this is not specified in the **get** command, then information for all ports is displayed. **Type** : Get – Optional Reset - Mandatory **Valid values** : *1- GS_CFG_MAX_BRIDGE_PORTS*

Example `$ get bridge port stats portid 1`

Output Verbose Mode On

```
PortId          : 1          Max Info Size    : 1500
Out Frames      : 138        In Frames        : 129
In Discards     : 3          HC In Frames     : 300
HC Out Frames   : 350        HC In Discards   : 400
```

Output Fields

FIELD	Description
`PortId`	This is the bridge port identifier. It can be : *1-* GS_CFG_MAX_BRIDGE_PORTS
`Max Info Size`	The maximum size of the INFO (non-MAC) field that this port will receive or transmit.
`Out Frames`	The number of frames that have been transmitted by this port to its segment.
`In Frames`	The number of frames that have been received by this port from its segment.
`In Discards`	Count of valid frames received, which were discarded (i.e., filtered) by the Forwarding Process.

FIELD	Description
HC In Frames	Number of frames that have been received by this port from its segment. This is valid only for Ethernet interfaces.
HC Out Frames	Number of frames that have been transmitted by this port to its segment. This is valid only for Ethernet interfaces.
HC In Discards	Count of valid frames received and discarded (i.e filtered) by the Forwarding Process. This is valid only for Ethernet interfaces.

2.40 Bridge Port Cap Commands

2.40.1 get bridge port cap

Description   Use this command is used to get.

Command Syntax   *get bridge port cap [portid portid]*

Parameter

Name	Description
portid portid	The index of base port **Type** **:**Optional **Valid values:** *1 -* *GS_CFG_MAX_BRIDGE_PORTS* **Default value:** None

Mode   Super-User, User

Example   *get bridge port cap*

Output
```
Portid : 45
Port Capabilities : Tagging FrameTypes IngressFiltering
```

Output Fields

Field	Description
portid	The index of base port.
Port Capabilites	Capabilities that are allowed on a per-port basis.

Caution   None

References   None

2.41 Bridge Port Map Commands

2.41.1 get bridge port map

Description   Use this command to get.

Command Syntax   *get bridge port map [portid* portid *] [ifname* ifname *]*

2.41.2 create bridge port map

Description   Use this command to create.

Command Syntax   *create bridge port map portid* portid *ifname* ifname

2.41.3 delete bridge port map

Description   Use this command to delete.

Command Syntax   *delete bridge port map portid* portid *ifname* ifname

**Input Parameter
Description**

Name	Description
portid portid	The bridge port with which a lower interface is being associated in the autosensing scenario. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
ifname ifname	'ifname' associated with 'portid'. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Values**: eoa-*, pppoe-*

Example   *$ create bridge port map portid* 2 *ifname* eoa-0

Output   Verbose Mode On

```
Entry Created

Port Id : 2          Interface Index : eoa-0
```
Verbose Mode Off:
```
Entry Created
```

Output field description

Field	Description
Port Id	The bridge port with which a lower interface is being associated in the autosensing scenario.
Interface Index	'ifname' associated with 'portid'. Values: eoa-*, pppoe-*.

Cautions   None.

References   None.

2.42 Ping Commands

2.42.1 ping

Description   This command is used to send one or more ICMP messages to another host for a reply.

Command Syntax   *ping {ip-address | domain-name} [-t | -n number] [-i time-to-live] [-w seconds] [-s size]*

Parameters

Name	Description
*ip-address	domain-name*	This specifies the Destination address to be pinged. **Type** : Mandatory **Valid values** : Any Valid IP Address (*0.0.0.0 – 255.255.255.255*) or Domain Name - String of Max 63 characters ('a'-'z', 'A'- 'Z', '0'-'9', '-', '_'and '.')
-t	This indicates continuous ping to host, until the user interrupts. **Type**: Optional
-n number	This specifies the number of pings to send to host. **Type** : Optional **Valid values** : *1-65535* **Default Value:** *4*
-w seconds	This specifies the time interval between successive ping requests **Type** : Optional **Valid values** : *0-65535* **Default Value :** *2*
-I time-to-live	This specifies the time-to-live, to be filled in the ping request **Type**: Optional **Valid values** : *0 – 255* **Default Value** : *64*
-s size	This specifies the size of payload for ping. **Type**: Optional **Valid values** : *4-1500* **Default Value :** 64

Example   *$ ping 192.168.1.13*

Output
```
$ ping 192.168.1.13
64 bytes of data from 192.168.1.13, seq=0 ttl=64 rtt=0.000 msec
64 bytes of data from 192.168.1.13, seq=1 ttl=64 rtt=0.000 msec
64 bytes of data from 192.168.1.13, seq=2 ttl=64 rtt=0.000 msec
64 bytes of data from 192.168.1.13, seq=3 ttl=64 rtt=0.000 msec

------------------- Ping Statistics -------------------
```

```
4 packets transmitted, 4 packets received, 0 percent packet loss
```

Output Fields

FIELD	Description
64 bytes of...	This denotes the number of bytes in the ping packet and the source IP Address.
Seq	This denotes the ping attempt counter value.
Ttl	This is the Time to live for the packet.
Rtt	This denotes the Round trip Time for the packet. A value less than *10ms* is shown as *0.*

2.43 RMON Statistics Group Commands

2.43.1 create srmon probe

Description   Use this command to create RMON probe.

Command Syntax   *create srmon probe rindex rindex ifname interface-name owner owner-string*

2.43.2 delete srmon probe

Description   Use this command to delete the RMON probe.

Command Syntax   *delete srmon probe rindex rindex*

2.43.3 get srmon probe

Description   Use this command to get RMON probe information and statistics.

Command Syntax   *get srmon probe [rindex rindex]*

Parameters

Name	Description

rindex rindex	Unique identifier of the probe.
	Type : Create – Mandatory
	                    Delete – Mandatory
	                    Get - Optional
	Valid values : *0-20*

Ifname interface-name	This specifies the Interface name. **Type** : Create – Mandatory **Valid values** : *eoa-0 - *, eth-0-**
Owner owner-string	The entity that configured this probe, and is therefore using the resources assigned to it**.** **Type** : Create – Mandatory **Valid values** : Strings of up to 64 ASCII characters.

Example   *$ get srmon probe rindex 1*

Output   Verbose Mode On

```
RMON Probe Index       : 1
If-Name                : eth-0      Stats Owner             : Conexant
Total Octets           : 800        Total  Packets          : 200
Total Broadcast Packets : 138       Total Multicast Packets : 200
Total 64 Octets        : 100        Total 65-127 Octets     : 200
Total 128-255 Octets   : 200        Total 256-511 Octets    : 300
Total 512-1023 Octets  : 50         Total 1024-1518 Octets  : 100
```

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Output Fields

FIELD	Description
RMON Probe Index	Unique identifier of RMON probe.
If-Name	This specifies the Interface name. It can be : *eoa-0 - *, eth-**
Stats Owner	The entity that configured this entry and is therefore using the resources assigned to it.
Total Octets	The total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).
Total Packets	The total number of packets (including bad packets, broadcast packets, and multicast packets) received.
Total Broadcast Packets	The total number of good packets received, that were directed to the broadcast address.
Total Multicast Packets	The total number of good packets received, that were directed to a multicast address.
Total 64 Octets	The total number of packets (including bad packets) received, that were 64 octets in length (excluding framing bits but including FCS octets).
Total 65-127 Octets	The total number of packets (including bad packets) received, that were between 65 and 127 octets in length inclusive (excluding framing bits but including FCS octets).
Total 128-255 Octets	The total number of packets (including bad packets) received that were between 128 and 255 octets in length inclusive (excluding framing bits but including FCS octets).
Total 256-511 Octets	The total number of packets (including bad packets) received that were between 256 and 511 octets in length inclusive (excluding framing bits but including FCS octets).
Total 512-1023 Octets	The total number of packets (including bad packets) received that were between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets).
Total 1024-1518 Octets	The total number of packets (including bad packets) received that were between 1024 and 1518 octets in length inclusive (excluding framing bits but including FCS octets).

Caution This command is not supported on an EoA interface for which ConfigStatus is set to Config.

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2.44 ADSL Line Profile Commands

2.44.1 get adsl line profile

Description   Use this command to get.

Command Syntax   `get adsl line profile [ifname ifname]`

2.44.2 modify adsl line profile

Description   Use this command to modify.

Command Syntax   `modify adsl line profile ifname ifname [atucrateadaptation fixed | adaptAtStartup | adaptAtRuntime] [gsparamtestinputfile gsparamtestinputfile] [atuctargetsnr atuctargetsnr] [atucmaxsnrmargin atucmaxsnrmargin] [atucgsrsintcorrectionup 125us | 250us | 500us | 1ms | 2ms | 4ms | disable] [atucdnshiftsnrmargin atucdnshiftsnrmargin] [atucupshiftsnrmargin atucupshiftsnrmargin] [atucminupshifttime atucminupshifttime] [atucmindnshifttime atucmindnshifttime] [atucfastmintxrate atucfastmintxrate] [atucintlmintxrate atucintlmintxrate] [atucfastmaxtxrate atucfastmaxtxrate] [atucintlmaxtxrate atucintlmaxtxrate] [atucmaxintldelay atucmaxintldelay] [type noChannel | fastOnly | interleavedOnly | fastOrInterleaved | fastAndInterleaved] [atucgstxendbin atucgstxendbin] [atucgstxstartbin atucgstxstartbin] [atucgsmaxbitsperbin atucgsmaxbitsperbin] [atucgsrxstartbin atucgsrxstartbin] [atucgsrxendbin atucgsrxendbin] [atucgsrxbinadjust disable] [atucgsltriggermode disable | {locCrc | rmtCrc | snrInc | snrDec}+] [atucgsadi2x standard] [atucgsstandard t1413 | gLite | gDmt | alctl14 | multimode | adi | alctl | t1413Auto | adslPlus| GspanPlus | adsl2 | adsl2Plus | readsl2 | adsl2auto | adsl2PlusAuto] [atucgsinitiate waitPn | ctone | initiatePn] [atucgstxpoweratten 0 | .1 | .2 | .3 | .4 | .5 | .6 | .7 | .8 | .9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40] [atucgscodinggain Auto | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7] [atucgsrsfastovrhddn 50 | 25 | 12 | 6 | 3 | 1 | Disable] [atucgsrsintcorrectiondn 125Us | 250Us | 500Us | 1Ms | 2Ms | 4Ms | Disable] [atucgsrsfastovrhdup 50 | 25 | 12 | 6 | 3 | 1 | Disable] [atucgsdrstby Disable | Enable] [atucgsexpexch Expanded | Short] [atucgsescfastretrain Enable | Disable] [atucgsfastretrain Enable | Disable] [atucgsbitswap Disable | Enable] [atucgsntr LocalOcs | Refck8K] [atucgsannextype AnnexA | AnnexB | HighSpeed| GspanPlus | V1010 | Adsl2] [atucgsalctlusver Unknown] [atucgsusecustombin Enable | Disable] [atucgsdnbinusage atucgsdnbinusage] [atucgsmaxdco 64 | 128 | 256] [atucgsfullretrain Enable | Disable] [atucgsadvcap disable | {annexa | annexb | adslplus | gspanplus}+] [atucgspsdmasktype Adsl | HsadslM1 | HsadslM2 | CoMsk2Rfi0 | Adsl2NonovlpM1 | Adsl2NonovlpM2 | Adsl2NonovlpFlat] [dmtconfmode ecMode | fdmMode] [atucgseraseprofs enable | disable] [atucgsextrsmemory present | notpresent] [paramhybridlossteststart paramhybridlossteststart] [paramhybridlosstestend paramhybridlosstestend] [dmttrellis on | off] [aturtargetsnrmargin aturtargetsnrmargin] [aturdnshiftsnrmargin aturdnshiftsnrmargin] [aturupshiftsnrmargin aturupshiftsnrmargin] [aturminupshifttime aturminupshifttime] [aturmindnshifttime aturmindnshifttime] [aturfastmintxrate aturfastmintxrate] [aturintlmintxrate aturintlmintxrate] [aturfastmaxtxrate aturfastmaxtxrate] [aturintlmaxtxrate aturintlmaxtxrate] [aturmaxintldelay aturmaxintldelay][databoost Enable|Disable][upstreampsd Extended|Standard] [atucconfpmmode pmstatel3enable|pmstatel2enable] [atucconfpml0time`

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```
atucconfpml0time] [ atucconfpml2time atucconfpml2time ][
atucconfpml2atpr atucconfpml2atpr ] [ atucconfpml2minrate
atucconfpml2minrate ] [ atucconfgsreadsl2enable disable|enable]  [
atucconfmsgminds atucconfmsgminds ] [ aturconfmsgminus
aturconfmsgminus ] [ atucminsnrmgn atucminsnrmgn ] [ aturminsnrmgn
aturminsnrmgn ] [atucfrontenddesigntype El1508 | El1528 | Le87213 ]
[atuchwpwrreduction Disable | Enable ][ atucgsusbitswap Disable |
Enable ] [ aturmaxsnrmgn aturmaxsnrmgn ] [ atucconfmininp Inp0 |
InpPoint5 | Inp1 | Inp2 | InpAuto ] [ atucpml2entrythreshrate
atucpml2entrythreshrate ] [ atucpml2exitthreshrate
atucpml2exitthreshrate ] [ atucpml2entryratemintime
atucpml2entryratemintime ]
```

Parameters

Name	Description
ifname ifname	The ADSL line interface name, whose profile is to be modified or viewed **Type** : Modify -- Mandatory Get -- Optional **Valid values:** dsl-0 - dsl-*
atucrateadaptation fixed | adaptAtStartup | adaptAtRuntime	Defines what form of transmit rate adaptation is configured, on this modem. Refer to ADSL Forum TR- 005 for more information. **Type** : Modify -- Optional
gsparamtestinputfile gsparamtestinputfile	Indicates Name of the Input file, which contains the Mask Array Size, lower and upper mask Array . Null string means no file is specified. **Type** : Modify -- Optional
atuctargetsnr atuctargetsnr	Configured Target Signal/Noise Margin. This is the Noise Margin the modem must achieve with a BER of 10 to the power 7, or better, to successfully complete initialization. **Type** : Modify -- Optional **Valid values:** 0 - 310
atucmaxsnrmargin atucmaxsnrmargin	Configured Maximum acceptable Signal/Noise Margin. If the Noise Margin is above this, the modem should attempt to reduce its power output to optimize its operation. **Type** : Modify -- Optional **Valid values:** 0 - 310
atucgsrsintcorrectionup 125us | 250us | 500us | 1ms | 2ms | 4ms | disable	Sets the correction time for the upstream interleaved buffer. RS can also be disabled. **Type** : Modify -- Optional
atucdnshiftsnrmargin atucdnshiftsnrmargin	Configured Signal/Noise Margin for rate downshift. If the noise margin falls below this level, the modem should attempt to decrease its transmit rate. In the case that RADSL mode is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 310

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Name	Description
atucupshiftsnrmargin *atucupshiftsnrmargin*	Configured Signal/Noise Margin for rate upshift. If the noise margin rises above this level, the modem should attempt to increase its transmit rate. In the case that RADSL is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 310
atucminupshifttime *atucminupshifttime*	Minimum time that the current margin is above UpshiftSnrMgn, before an upshift occurs. In the case that RADSL is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 16383
atucmindnshifttime *atucmindnshifttime*	Minimum time that the current margin is below DownshiftSnrMgn, before a downshift occurs. In the case that RADSL is not present, the value will be 0. **Type** : Modify -- Optional Get -- Optional **Valid values:** 0 - 16383
atucfastmintxrate *atucfastmintxrate*	Configured Minimum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode. Refer to ATU-R transmit rate for ATU-C receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffffffff
atucintlmintxrate *atucintlmintxrate*	Configured Minimum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and refer to ATU-R transmit rate for ATU-C receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffffffff
atucfastmaxtxrate *atucfastmaxtxrate*	Configured Maximum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode. Refer to ATU-R transmit rate for ATU-C receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffffffff
atucintlmaxtxrate *atucintlmaxtxrate*	Configured Maximum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and ATU-R transmit rate for ATU-C receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffffffff

Name	Description
atucmaxintldelay *atucmaxintldelay*	Configured maximum Interleave Delay for this channel. Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream, allowing for improved impulse noise immunity at the expense of payload latency. **Type** : Modify -- Optional **Valid values:** 0 - 255
type noChannel | fastOnly | interleavedOnly | fastOrInterleaved | fastAndInterleaved	This object is used to configure the ADSL physical line mode **Type** : Modify -- Optional
atucgstxendbin *atucgstxendbin*	The highest bin number allowed for Tx signal. **Type** : Modify -- Optional **Valid values:** 0x06 - GS_CFG_MAX_ATUC_TX_END_BIN
atucgstxstartbin *atucgstxstartbin*	The lowest bin number allowed for Tx signal. **Type** : Modify -- Optional **Valid values:** 0x06 - GS_CFG_MAX_ATUC_TX_START_BIN
atucgsmaxbitsperbin *atucgsmaxbitsperbin*	The maximum Rx number of bits per bin. **Type** : Modify -- Optional **Valid values:** 0 - 15
atucgsrxstartbin *atucgsrxstartbin*	The lowest bin number allowed for Rx signal. **Type** : Modify -- Optional **Valid values:** 0x01 - GS_CFG_MAX_ATUC_RX_START_BIN
atucgsrxendbin *atucgsrxendbin*	The highest bin number allowed for Rx signal. **Type** : Modify -- Optional **Valid values:** 0x06 - GS_CFG_MAX_ATUC_RX_END_BIN
atucgsrxbinadjust disable	This parameter employs Rx Start/End bin settings **Type :** Modify -- Optional
atucgsltriggermode disable | {locCrc | rmtCrc | snrInc | snrDec}+	The type of event that triggers a fast retrain **Type:** Modify -- Optional
atucgsadi2x standard	For non-standard compliant ADI CPE **Type:** Modify -- Optional

Name	Description
atucgsstandard t1413 | gLite | gDmt | alctl14 | multimode | adi | alctl | t1413Auto|adslPlus| GspanPlus | adsl2 | adsl2Plus | readsl2 | adsl2auto | adsl2PlusAuto	Preferred standard compliance. Outcome is dependent upon standard support of the remote unit.Conexant High Speed ADSL DMT (ADSL+)applications only. **Type:** Modify -- Optional
atucgsinitiate waitPn | ctone | initiatePn	Specifies which end initiates startup. It is also used to send a C-tone to the remote unit. **Type:** Modify -- Optional
atucgstxpoweratten 0 | .1 | .2 | .3 | .4 | .5 | .6 | .7 | .8 | .9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40	The value in dB of Tx power attenuation **Type:** Modify -- Optional
atucgscodinggain Auto | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7	Sets the coding gain in dB increments **Type:** Modify -- Optional
atucgsrsfastovrhddn 50 | 25 | 12 | 6 | 3 | 1 | Disable	This parameter sets the percentage overhead for the downstream fast buffer. RS can also be disabled. **Type:** Modify -- Optional
atucgsrsintcorrectiondn 125Us | 250Us | 500Us | 1Ms | 2Ms | 4Ms | Disable	This parameter sets the correction time for the downstream interleaved buffer. RS can also be disabled. **Type:** Modify -- Optional
atucgsrsfastovrhdup 50 | 25 | 12 | 6 | 3 | 1 | Disable	This parameter sets the percentage overhead for the upstream fast buffer. RS can also be disabled. **Type:** Modify -- Optional
atucgsdrstby Disable | Enable	This parameter provides the ability to disable power to the line driver **Type:** Modify -- Optional
atucgsexpexch Expanded | Short	T1.413 parameter that Enables/Disables EES **Type:** Modify -- Optional
atucgsescfastretrain Enable | Disable	This parameter enables/disables escape to the fast retrain capability **Type:** Modify -- Optional
atucgsfastretrain Enable | Disable	This parameter enables/disables the fast retrain capability. Currently supported only in G.lite mode. **Type:** Modify -- Optional

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Name	Description
`atucgsbitswap Disable | Enable`	This parameter enables/disables bit swapping **Type:** Modify -- Optional
`atucgsntr LocalOcs | Refck8K`	This parameter enables/disables NTR on a per chip basis **Type:** Modify -- Optional
`atucgsannextype AnnexA | AnnexB  | HighSpeed | GspanPlus | V1010 | Adsl2`	This parameter is set as per annex compliance of the code release. Conexant High Speed ADSL DMT (ADSL+) applications only **Type:** Modify -- Optional
`atucgsalctlusver Unknown`	For T1.413 demo purposes only **Type:** Modify -- Optional
`atucgsusecustombin Enable | Disable`	This parameter enables/disables user selection of any of the 511 bins that will be enabled for upstream and downstream transmission. **Type:** Modify -- Optional
`atucgsdnbinusage atucgsdnbinusage`	'1' in bit position indicates usage of corresponding bin. '0' disables usage of corresponding bin. **Type:** Modify -- Optional
`atucgsmaxdco 64 | 128 | 256`	Maximum interleaving depth supported by the customer's hardware **Type:** Modify -- Optional
`atucgsfullretrain Enable | Disable`	Indicates enable/disable of auto retrain capability **Type:** Modify -- Optional
`atucgsadvcap disable | {annexa | annexb | adslplus | gspanplus}+`	This parameter controls if the CO will attempt to startup using alternate standards if the CPE does not support ADSL+. **Type:** Modify -- Optional
`atucgspsdmasktype Adsl | HsadslM1 | HsadslM2 | CoMsk2Rfi0 | Adsl2NonovlpM1 | Adsl2NonovlpM2 | Adsl2NonovlpFlat`	This parameter selects the PSD mask option to be used **Type:** Modify -- Optional
`dmtconfmode ecMode | fdmMode`	Indicates whether there is overlap or no overlap of bins **Type:** Modify -- Optional
`atucgseraseprofs enable | disable`	This parameter enables/disables the ability to erase all fast retrain profiles at startup **Type:** Modify -- Optional
`atucgsextrsmemory present | notpresent`	Indicates whether customer's Hardware uses external RS RAM **Type:** Modify -- Optional

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Name	Description
paramhybridlossteststart *paramhybridlossteststart*	Start bin for range of bins to be measured **Type** : Modify -- Optional **Valid values:** 0x0 - GS_CFG_MAX_ATUC_HYBRID_TEST_START_B IN
paramhybridlosstestend *paramhybridlosstestend*	End bin for range of bins to be measured **Type** : Modify -- Optional **Valid values:** 0x0 - GS_CFG_MAX_ATUC_HYBRID_TEST_END_BIN
dmttrellis on | off	This parameter enables/disables trellis coding. Trellis coding should always be enabled for its clear performance advantage. **Type** : Modify -- Optional
aturtargetsnrmargin *aturtargetsnrmargin*	Configured Target Signal/Noise Margin. This is the Noise Margin the modem must achieve with a BER of 10to the power 7 or better, to successfully complete initialization. **Type** : Modify -- Optional **Valid values:** 0 - 310
aturdnshiftsnrmargin *aturdnshiftsnrmargin*	Configured Signal/Noise Margin for rate downshift. If the noise margin falls below this level, the modem should attempt to decrease its transmit rate. In the case that RADSL mode is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 310
aturupshiftsnrmargin *aturupshiftsnrmargin*	Configured Signal/ Noise Margin for rate upshift. If the noise margin rises above this level, the modem should attempt to increase its transmit rate. In the case that RADSL is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 310
aturminupshifttime *aturminupshifttime*	Minimum time that the current margin is above UpshiftSnrMgn before an upshift occurs. In the case that RADSL is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 16383
aturmindnshifttime *aturmindnshifttime*	Minimum time that the current margin is below DownshiftSnrMgn before a downshift occurs. In the case that RADSL mode is not present, the value will be 0. **Type** : Modify -- Optional **Valid values:** 0 - 16383

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Name	Description
aturfastmintxrate *aturfastmintxrate*	Configured Minimum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and ATU-C transmit rate for ATU-R receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
aturintlmintxrate *aturintlmintxrate*	Configured Minimum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and refer to ATU-C transmit rate for ATUR receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
aturfastmaxtxrate *aturfastmaxtxrate*	Configured Maximum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and refer to ATU-C transmit rate for ATUR receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
aturintlmaxtxrate *aturintlmaxtxrate*	Configured Maximum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and ATU-C transmit rate for ATU-R receive rates. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
aturmaxintldelay *aturmaxintldelay*	Configured maximum Interleave Delay for this channel. Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream, allowing for improved impulse noise immunity at the expense of payload latency. **Type** : Modify -- Optional **Valid values:** 0 - 255
databoost Enable/Disable	Conexant parameter that enables/disables DataBoost option **Type** : Modify -- Optional **Valid values:** Enable|Disable
upstreampsd *Extended/Standard*	Conexant parameter that sets the upstream PSD to be either extended or standard. Used for GSpan Plus only **Type** : Modify -- Optional **Valid values:** Extended|Standard

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Name	Description

`atucconfpmmode`
`pmstate13enable/pmstate1`
`2enable`
	PM-related parameter used by ATU-C to set the allowed link states. Both bit values can be given simultaneously in the input.
	Type: Modify -- Optional

`atucconfpml0time` `atucconfpml0time`	PM configuration parameter, related to the L2 low power state. This parameter represents the minimum time (in seconds) between an exit from the L2 state and the next entry into the L2 state. It ranges from 0 to 255 seconds. **Type**: Modify -- Optional **Valid values**: 0 - 255
`atucconfpml2time` `atucconfpml2time`	PM configuration parameter, related to the L2 low power state. This parameter represents the minimum time (in seconds) between an Entry into the L2 state and the first Power Trim in the L2 state and between two consecutive Power Trims in the L2 State. It ranges from 0 to 255 seconds. **Type**: Modify -- Optional **Valid values**: 0 - 255
`atucconfpml2atpr` `atucconfpml2atpr`	PM configuration parameter, related to the L2 low power state. This parameter represents the maximum aggregate transmit power reduction (in dB) that can be performed through a single Power Trim in the L2 state. It ranges from 0 dB/10 to 310 dB/10. **Type**: Modify -- Optional **Valid values**: 0 - 310
`atucconfpml2minrate` `atucconfpml2minrate`	PM configuration parameter, related to the L2 low power state. This parameter specifies the minimum net data rate during the low power state (L2). The data rate is coded in bit/s, and can range from 0x1F40 (8000) bps to 0xFA000 (1024000) bps. **Type**: Modify -- Optional **Valid values**: 0x1F40 - 0xFA000
`atucconfgsreadsl2enable` `disable/enable`	This READSL2 configuration parameter defines whether or not downstream READSL2 operation should be forced by ATU-C. **Type**: Modify -- Optional
`atucconfmsgminds` `atucconfmsgminds`	Configures downstream overhead channel bandwidth. This feature is not supported by DSLPHY as yet. **Type**: Modify - Optional
`aturconfmsgminus` `aturconfmsgminus`	Configures upstream overhead channel bandwidth. This feature is not supported by DSLPHY as yet. **Type**: Modify - Optional

Name	Description
atucminsnrmgn *atucminsnrmgn*	Atuc Configured Minimum Signal/Noise Margin. This is the Noise Margin, the modem must achieve with a BER of 10 to the power -7 or better, to successfully complete initialization. The default value mentioned is an indicative value only. **Type**: Modify - Optional
aturminsnrmgn *aturminsnrmgn*	Atur Configured Minimum Signal/Noise Margin. This is the Noise Margin, the modem must achieve with a BER of 10 to the power -7 or better, to successfully complete initialization. The default value mentioned is an indicative value only. **Type**: Modify - Optional
atucfrontenddesigntype *El1508 | El1528 | Le87213*	Conexant parameter that is used to indicate front end hardware reference design being used. **Type**: Modify -- Optional
atuchwpwrreduction *Disable | Enable*	Conexant parameter that customers must set based on their hardware configuration. **Type**: Modify -- Optional
atucgsusbitswap Disable *| Enable*	This parameter enables/disables upstream bit swapping. **Type**: Modify -- Optional
aturmaxsnrmgn *aturmaxsnrmgn*	Configured Maximum acceptable downstream Signal/Noise Margin. If the Noise Margin is above this the modem attempts to reduce its power output to optimize its operation. The value set by the user is in dB/10, and ranges from 0 to 31 dB in 1 dB steps. **Type**: Modify -- Optional **Valid values**: 0 - 310
atucconfmininp Inp0 | *InpPoint5 | Inp1 | Inp2 |* *InpAuto*	Parameter used to specify the minimum impulse noise protection for the downstream bearer channel. **Type**: Modify -- Optional
atucpml2entrythreshrate *atucpml2entrythreshrate*	PM config param. L2 state entry data rate. **Type**: Modify -- Optional **Valid values**: 0 - 0xffffffff
atucpml2exitthreshrate *atucpml2exitthreshrate*	PM config param. L2 state exit data rate. **Type**: Modify -- Optional **Valid values**: 0 - 0xffffffff
atucpml2entryratemintime *atucpml2entryratemintime*	PM config param.Min L2 entry rate time. **Type**: Modify -- Optional **Valid values**: 900 - 65535

Example   *$ get adsl line profile ifname dsl-0*

Output   Verbose Mode On

```
IfName              : dsl-0

ADSL ATUC Configuration :
```

```
                          --------------------------
                          Rate Adaptation       : fixed
                          Target Snr Margin(dB/10) : 20          Max Snr Margin(dB/10)      : 40
                          GsRsIntCorrectionUp      : 1ms         Dnshift SnrMargin(dB/10)   : 35
                          Upshift SnrMargin(dB/10) : 50          Min Upshift Time(sec)      : 70
                          Min Dnshift Time(sec)    : 10          Fast Min Tx Rate(bps)      : 0x20
                          Intl Min Tx Rate(bps)    : 0x40        Fast Max Tx Rate(bps)      : 0x50
                          Intl Max Tx Rate(bps)    : 0x60        Max Intl Delay(ms)         : 10
                          GsTxStartBin             : 0x20        GsTxEndBin                 : 0x06
                          GsRxStartBin             : 0x06        GsRxEndBin                 : 0x1f
                          GsMaxBitsPerBin          : 15          GsMaxDCo                   : 64
                          GsRxBinAdjust            : enable      GsEraseProfiles            : enable
                          GsAdi2x                  : standard    GsStandard                 : t1413
                          GsInitiate               : waitPn      GsTxPowerAtten             : .6
                          GsCodingGain             : Auto        GsRsFastOvrhdDown          : 1
                          GsRsIntCorrectionDown    : 125Us       GsRsFastOvrhdUp            : 50
                          GsDrStby                 : Disable     GsExpandedExchange         : Short
                          GsEscapeFastRetrain      : Enable      GsFastRetrain              : Enable
                          GsBitSwap                : Enable      GsNtr                      : LocalOcs
                          GsAnnexType              : AnnexA      GsAlctlUsVer               : Unknown
                          GsUseCustomBin           : Enable      GsFullRetrain              : Enable
                          GsPsdMaskType            : Adsl        DmtConfMode                : ecMode
                          GsExtRsMemory            : ExtRsMemory GsParamHybridLossTestStart : 0x10
                          GsParamHybridLossTestEnd : 0x23        GsDmtTrellis               : on
                          GsAdvertisedCapabilities : disable
                          GslTriggerMode           : rmtCrc
                          Type                     : noChannel
                          GsDnBinUsage             : 0xff
                          ParametricTestInputFile  : TestFile
                          Data Boost               : Enable       Upstream PSD             : Standard
                          Conf PM Mode             : pmstatel3enable  pmstatel3disable
                          Conf PML0 Time(sec)      : 120
                          Conf PML2 Time(sec)      : 255          Conf PML2 ATPR (dB/10) : 30
                          Conf PML2 Min Rate(bps)  : 0xFA00
                          MSG Min Ds               : 4000         Minimum Snr Margin(dB/10) : 20
                          FrontEnd H/W Design      : El1508
                          H/W Pwr Reduction        : Enable
                          GsUsBitSwap              : Enable       Minimum INP              : Inp0
                          PML2 Entry Thresh Rate   : 0x1000       PML2 Exit Thresh Rate    : 0x1000
                          PML2 Entry Rate Min Time : 1800

                          ADSL ATUR Configuration :
                          --------------------------
                          Target Snr Margin(dB/10) : 20          Dnshift SnrMargin(dB/10)   : 35
                          Upshift SnrMargin(dB/10) : 50          Min Upshift Time(sec)      : 70
                          Min Dnshift Time(sec)    : 10          Fast Min Tx Rate(bps)      : 0x20
                          Intl Min Tx Rate(bps)    : 0x10        Fast Max Tx Rate(bps)      : 0x40
                          Intl Max Tx Rate(bps)    : 0x60        Max Intl Delay(ms)         : 10
                          MSG Min Us               : 4000        Minimum Snr Margin(dB/10)  : 20
                          Maximum Snr Margin(dB/10): 20
```

Output Fields

Field	Description
IfName	The ADSL line interface name, whose profile is to be modified or viewed.
Rate Adaptation	Defines what form of transmit rate adaptation is configured on this modem. Refer to ADSL Forum TR- 005 for more information.
Target Snr Margin(dB/10)	Configured Target Signal/Noise Margin. This is the Noise Margin the modem must achieve with a BER of 10 to the power -7 or better to successfully complete initialization.

Field	Description
Max Snr Margin(dB/10)	Configured Maximum acceptable Signal/Noise Margin. If the Noise Margin is above this, the modem should attempt to reduce its power output to optimize its operation.
GsRsIntCorrectionUp	Sets the correction time for the upstream interleaved buffer. RS can also be disabled.
Dnshift SnrMargin(dB/10)	Configured Signal/Noise Margin for rate downshift. If the noise margin falls below this level, the modem should attempt to decrease its transmit rate. In the case that RADSL mode is not present, the value will be 0.
Upshift SnrMargin(dB/10)	Configured Signal/Noise Margin for rate upshift. If the noise margin rises above this level, the modem should attempt to increase its transmit rate. In the case that RADSL is not present, the value will be 0.
Min Upshift Time(sec)	Minimum time that the current margin is above UpshiftSnrMgn before an upshift occurs. In the case that RADSL is not present, the value will be 0.
Min Dnshift Time(sec)	Minimum time that the current margin is below DownshiftSnrMgn before a downshift occurs. In the case that RADSL is not present, the value will be 0.
Fast Min Tx Rate(bps)	Configured Minimum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and refer to ATU-R transmit rate for ATU-C receive rates.
Intl Min Tx Rate(bps)	Configured Minimum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and refer to ATU-R transmit rate for ATU-C receive rates.
Fast Max Tx Rate(bps)	Configured Maximum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and ATU-R transmit rate for ATU-C receive rates.
Intl Max Tx Rate(bps)	Configured Maximum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAtucConfRateChanRatio' for information regarding RADSL mode and ATU-R transmit rate for ATU-C receive rates.

Field	Description
Max Intl Delay(ms)	Configured maximum Interleave Delay for this channel. Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream, allowing for improved impulse noise immunity at the expense of payload latency.
GsTxStartBin	The lowest bin number allowed for Tx signal.
GsTxEndBin	The highest bin number allowed for Tx signal.
GsRxStartBin	The lowest bin number allowed for Rx signal.
GsRxEndBin	The highest bin number allowed for Rx signal.
GsMaxBitsPerBin	The maximum Rx number of bits per bin.
GsMaxDCo	Maximum interleaving depth supported by the customer's hardware.
GsRxBinAdjust	This parameter employs Rx Start/End bin settings.
GsEraseProfiles	This parameter enables/disables the ability to erase all fast retrain profiles at startup.
GsAdi2x	For non-standard compliant ADI CPE.
GsStandard	Preferred standard compliance. Outcome is dependent upon standard support of the remote unit. Conexant High Speed ADSL DMT (ADSL+)applications only.
GsInitiate	Specifies which end initiates startup. It is also used to send a C-tone to the remote unit.
GsTxPowerAtten	The value in dB of Tx power attenuation.
GsCodingGain	Sets the coding gain in dB increments.
GsRsFastOvrhdDown	This parameters sets the percentage overhead for the downstream fast buffer. RS can also be disabled.
GsRsIntCorrectionDown	This parameter sets the correction time for the downstream interleaved buffer. RS can also be disabled.
GsRsFastOvrhdUp	This parameter sets the percentage overhead for the upstream fast buffer. RS can also be disabled.
GsDrStby	This parameter provides the ability to disable power to the line driver.
GsExpandedExchange	T1.413 parameter that Enables/Disables EES.
GsEscapeFastRetrain	This parameter enables/disables escape to the fast retrain capability.

Field	Description
GsFastRetrain	This parameter enables/disables the fast retrain capability. Currently supported only in G.lite mode.
GsBitSwap	This parameter enables/disables bit swapping.
GsNtr	This parameter enables/disables NTR on a per chip basis.
GsAnnexType	This parameter is set as per Annex compliance of the code release. Conexant High Speed ADSL DMT (ADSL+) applications only
GsAlctlUsVer	For T1.413 demo purposes only.
GsUseCustomBin	This parameter enables/disables user selection of some of those 511 bins, that will be enabled for upstream and downstream transmission.
GsFullRetrain	Indicates enable/disable of auto retrain capability.
GsPsdMaskType	This parameter selects the PSD mask option to be used
DmtConfMode	Indicates whether there is overlap or no overlap of bins.
GsExtRsMemory	Indicates whether customer's Hardware uses external RS RAM.
GsParamHybridLossTestStart	Start bin for range of bins to be measured.
GsParamHybridLossTestEnd	End bin for range of bins to be measured.
GsDmtTrellis	This parameter enables/disables trellis coding. Trellis coding should always be enabled for its clear performance advantage.
GsAdvertisedCapabilities	This parameter controls if the CO will attempt to startup using alternate standards if the CPE does not support ADSL+.
GslTriggerMode	The type of event that triggers a fast retrain.
Type	This object is used to configure the ADSL physical line mode.
GsDnBinUsage	'1' in bit position indicates usage of corresponding bin, whereas a '0' disables usage of corresponding bin.
ParametricTestInputFile	Indicates Name of the Input file that contains the Mask Array Size, lower and upper mask Array. Null string means no file is specified.
Target Snr Margin(dB/10)	Configured Target Signal/Noise Margin. This is the Noise Margin the modem must achieve with a BER of 10 to the power -7, or better, to successfully complete initialization.

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Field	Description
Dnshift SnrMargin(dB/10)	Configured Signal/ Noise Margin for rate downshift. If the noise margin falls below this level, the modem should attempt to decrease its transmit rate. In the case that RADSL mode is not present, the value will be 0.
Upshift SnrMargin(dB/10)	Configured Signal/ Noise Margin for rate upshift. If the noise margin rises above this level, the modem should attempt to increase its transmit rate. In the case that RADSL is not present, the value will be 0.
Min Upshift Time(sec)	Minimum time that the current margin is above UpshiftSnrMgn, before an upshift occurs. In the case that RADSL is not present, the value will be 0.
Min Dnshift Time(sec)	Minimum time that the current margin is below DownshiftSnrMgn, before a downshift occurs. In the case that RADSL mode is not present, the value will be 0.
Fast Min Tx Rate(bps)	Configured Minimum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and ATU-C transmit rate for ATU-R receive rates.
Intl Min Tx Rate(bps)	Configured Minimum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and to ATU-C transmit rate for ATUR receive rates.
Fast Max Tx Rate(bps)	Configured Maximum Transmit rate for 'Fast' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and to ATU-C transmit rate for ATUR receive rates.
Intl Max Tx Rate(bps)	Configured Maximum Transmit rate for 'Interleave' channels, in bps. Also refer to 'adslAturConfRateChanRatio' for information regarding RADSL mode and to ATU-C transmit rate for ATU-R receive rates.
Max Intl Delay(ms)	Configured maximum Interleave Delay for this channel. Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream, allowing for improved impulse noise immunity at the expense of payload latency.
Data Boost	Conexant parameter that enables/disables DataBoost option.

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Field	Description
`Upstream PSD`	Conexant parameter that sets the upstream PSD to be either extended or standard. Used for GSpan Plus only.
`Conf PM Mode`	PM-related parameter used by ATU-C to set the allowed link states. Both bit values can be given simultaneously in the input.
`Conf PML0 Time(sec)`	PM configuration parameter, related to the L2 low power state. This parameter represents the minimum time (in seconds) between an exit from the L2 state and the next entry into the L2 state. It ranges from 0 to 255 seconds.
`Conf PML2 Time(sec)`	PM configuration parameter, related to the L2 low power state. This parameter represents the minimum time (in seconds) between an Entry into the L2 state and the first Power Trim in the L2 state and between two consecutive Power Trims in the L2 State. It ranges from 0 to 255 seconds.
`Conf PML2 ATPR (dB/10)`	PM configuration parameter, related to the L2 low power state. This parameter represents the maximum aggregate transmit power reduction (in dB) that can be performed through a single Power Trim in the L2 state. It ranges from 0 dB/10 to 310 dB/10.
`Conf PML2 Min Rate(bps)`	PM configuration parameter, related to the L2 low power state. This parameter specifies the minimum net data rate during the low power state (L2). The data rate is coded in bit/s, and can range from 0x1F40 (8000) bps to 0xFA000 (1024000) bps.
`MSG Min Ds`	Configures downstream overhead channel bandwidth. This feature is not supported by DSLPHY as yet.
`Minimum Snr Margin(dB/ 10)`	Atuc Configured Minimum Signal/Noise Margin. This is the Noise Margin, the modem must achieve with a BER of 10 to the power -7 or better, to successfully complete initialization. The default value mentioned is an indicative value only.
`FrontEnd H/W Design`	Conexant parameter that is used to indicate front end hardware reference design being used.
`H/W Pwr Reduction`	Conexant parameter that customers must set based on their hardware configuration.
`MSG Min Us`	Configures upstream overhead channel bandwidth. This feature is not supported by DSLPHY as yet.
`Minimum Snr Margin(dB/ 10)`	Atur Configured Minimum Signal/Noise Margin. This is the Noise Margin, the modem must achieve with a BER of 10 to the power -7 or better, to successfully complete initialization. The default value mentioned is an indicative value only.

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Field	Description
GsUsBitSwap	This parameter enables/disables upstream bit swapping.
Maximum Snr Margin(dB/ 10)	Configured Maximum acceptable downstream Signal/Noise Margin. If the Noise Margin is above this the modem attempts to reduce its power output to optimize its operation. The value set by the user is in dB/10, and ranges from 0 to 31 dB in 1 dB steps.
Minimum INP	Parameter used to specify the minimum impulse noise protection for the downstream bearer channel.
PML2 Entry Thresh Rate	PM config param. L2 state entry data rate.
PML2 Exit Thresh Rate	PM config param. L2 state exit data rate.
PML2 Entry Rate Min Time	PM config param. Min L2 entry rate time

Caution   None

References   • ▪ADSL Commands.

2.45 ADSL Line Intf Commands

2.45.1 get adsl line intf

Description   Use this command to view ADSL line configuration.

Command Syntax   `get adsl line intf [ ifname ifname ]`

2.45.2 modify adsl line intf

Description   Use this command to modify ADSL line configuration.

Command Syntax
```
modify adsl line intf ifname ifname [ lineconfgsaction startup |
spectrumReverb | analogLb | digitalLb | atmLp | spectrumMedley |
spectrumPilot | spectrumCMtpr | spectrumRMtpr | hybridLossTest |
rcvLinearityTest | rcvFilterTest | rcvPowerPerBinTest |
idleNoisePerBinTest | totalIdleNoiseTest|selt | shutdown | wakeup]
[ linepmconfpmsf L3ToL0StateForce | L0ToL2StateForce | L3StateForce
| L2ToL0StateForce ] [ linedeltconfldsf inhibit|force ] [enable |
disable] [ LineTransAtucConfig { ansit1413 | etsi |
q9921PotsNonOverlapped | q9921PotsOverlapped |
q9921IsdnNonOverlapped | q9921isdnOverlapped |
q9921tcmIsdnNonOverlapped | q9921tcmIsdnOverlapped |
q9922potsNonOverlapped | q9922potsOverlapped |
q9922tcmIsdnNonOverlapped | q9922tcmIsdnOverlapped |
q9921tcmIsdnSymmetric | adslPlusPotsNonOverlapped |
q9921GspanPlusPotsNonOverlapped | q9921GspanPlusPotsOverlapped |
q9923Adsl2PotsOverlapped | q9923Adsl2PotsNonOverlapped |
q9925Adsl2PlusPotsOverlapped | q9925Adsl2PlusPotsNonOverlapped |
q9923Readsl2PotsOverlapped | q9923Readsl2PotsNonOverlapped |
adslPlusPotsOverlapped}+ ]
```

Parameters

Name	Description
ifname ifname	The Interface name of DSL port. **Type** : Modify – Mandatory Get - Optional **Valid values:** *dsl-**
lineconfgsaction startup | spectrumReverb | analogLb | digitalLb | atmLp | spectrumMedley | spectrumPilot | spectrumCMtpr | spectrumRMtpr | hybridLossTest | rcvLinearityTest | rcvFilterTest | rcvPowerPerBinTest | idleNoisePerBinTest | totalIdleNoiseTest|selt | shutdown | wakeup	Allows action on per-line basis. **Type** : Optional
Enable|disable	Administrative Status of the interface. **Type** : Optional **Valid values:** *enable* or *disable*
linepmconfpmsf L3ToL0StateForce | L0ToL2StateForce | L3StateForce | L2ToL0StateForce	PM-related parameter used by the ATU-C to force a change in the line state.(Not available for ADSL/ADSL2Plus). **Type** : Modify -- Optional

Name	Description
linedeltconfldsf inhibit/force	The DELT-related parameter used by ATU-C to force the line into the loop diagnostics mode. (Not available for ADSL and ADSL2plus) **Type**: Modify -- Optional
LineTransAtucConfig {ansit1413/etsi/q9921Pot sNonOverlapped/q9921Pots Overlapped/q9921IsdnNonO verlapped/q9921isdnOverl apped/q9921tcmIsdnNonOve rlapped/q9921tcmIsdnOver lapped/q9922potsNonOverl apped/q9922potsOverlappe d/q9922tcmIsdnNonOverlap ped/q9922tcmIsdnOverlapp ed/q9921tcmIsdnSymmetric /adslPlusPotsNonOverlapp ed/q9921GspanPlusPotsNon Overlapped/q9921GspanPlu sPotsOverlapped/q9923Ads l2PotsOverlapped/q9923Ad sl2PotsNonOverlapped/q99 25Adsl2PlusPotsOverlappe d/q9925Adsl2PlusPotsNonO ver lapped/q9923Readsl2PotsO verlapped/ q9923Readsl2PotsNonOverl apped/adslPlusPotsOv erlapped}+	The transmission modes that the ATU-C is capable of supporting. The modes available are limited by the design of the equipment. **REFERENCE** "Section 7.3.2 ITU G.997.1" (length = 4 bytes).

Example   *$ get adsl line intf ifname dsl-0*

Output   Verbose Mode On

```
IfName               : dsl-0
Line Type            : Interleaved          Coding Type       : dmt
GsUtopia  L2TxAddr   : 23                   GsUtopia L2RxAddr : 10
Gs Clock Type        : oscillator           Gs Action         : StartUp
Admin Status         : Enable               Oper Status       : Enable
Trans Atuc Cap       : q9921PotsNonOverlapped
Trans Atuc Actual    : q9921PotsNonOverlapped
Trans Atuc Config    : ansit1413
GsDmtTrellis         : trellisOn
Trans Atur Cap       : ansit1413
PM Conf PMSF         : idleop
Line DELT Conf LDSF  : inhibit
Curr Output Pwr(dBm/10) : 10
```

Output Fields

Field	Description
IfName	The interface name of the DSL port.
Line Type	Line type used by the DSL port.

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Field	Description
Coding Type	Line coding type used by the port.
GsUtopia L2TxAddr	UTOPIA Level 2 Tx address for a line.
GsUtopia L2RxAddr	UTOPIA Level 2 Rx address.
Gs Clock Type	Indicates use of crystal or oscillator.
Gs Action	Allows action on per-line basis.
Admin Status	Administrative Status of the interface.
Oper Status	Operational Status of the interface.
Trans Atuc Cap	Transmission modes that ATU-C is capable of.
Trans Atuc Actual	Transmission modes
GsDmtTrellis	Indicates whether trellis coding has been enabled or not.
Trans Atur Cap	The transmission modes that the ATU-R is capable of supporting. The modes available are limited by the design of the equipment (length = 4 bytes).
PM Conf PMSF	PM-related parameter used by ATU-C to force a change in the line state. (Not available for ADSL/ADSL2Plus)
Line DELT Conf LDSF	The DELT-related parameter used by ATU-C to force the line into the loop diagnostics mode. (Not available for ADSL and ADSL2plus)
Trans Atuc Config	The transmission modes that the ATU-C is capable of supporting. The modes available are limited by the design of the equipment. **REFERENCE** "Section 7.3.2 ITU G.997.1" (length = 4 bytes).
Curr Output Pwr(dBm/10)	This conexant parameter indicates the measure of total output power transmitted by this ATU. The value of this parameter is dynamic and will also show the change in Tx power due to Power Management. For example, the value will decrease in L2 low power mode. This value can be negative.

Caution   None.

References   • modify adsl line profile
              • modify adsl alarm profile
              • get adsl line profile
              • get adsl alarm profile.

2.46 DSL System Commands

2.46.1 get dsl system

Description   Use this command to view DSL system sizing information.

Command Syntax   `get dsl system`

2.46.2 create dsl system

Description   Use this command to create.

Command Syntax   `create dsl system [dsltype Adsl | Sdsl | Shdsl | Vdsl] [linecoding Other | Dmt | Cap | Qam | Mcm | Scm] [adsltxcfg { ansit1413 | etsi | q9921PotsNonOverlapped | q9921PotsOverlapped | q9921IsdnNonOverlapped |q9921IsdnOverlapped | q9921TcmIsdnNonOverlapped | q9921TcmIsdnOverlapped | q9922PotsNonOverlapped | q9922PotsOverlapped | q9922TcmIsdnNonOverlapped | q9922TcmIsdnOverlapped | q9921TcmIsdnSymmetric | adslPlusPotsNonOverlapped | q9921GspanPlusPotsNonOverlapped | q9921GspanPlusPotsOverlapped | q9923Adsl2PotsOverlapped | q9923Adsl2PotsNonOverlapped | q9925Adsl2PlusPotsOverlapped | q9925Adsl2PlusPotsNonOverlapped | q9923Readsl2PotsOverlapped | q9923Readsl2PotsNonOverlapped | adslPlusPotsOverlapped }+] [shdsltxmode { Region1 | Region2 }+]`

Parameters

Name	Description
`dsltype Adsl	Sdsl	Shdsl	Vdsl`	Identifies the firmware to be downloaded. **Type** :Optional for all commands **Default value:** *adsl*
`linecoding Other	Dmt	Cap	Qam	Mcm	Scm`	ADSL line code type. **Type** :Optional for all commands **Default value:** *Dmt*

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Name	Description
adsltxcfg { *ansit1413/etsi* */q9921PotsNonOverlapped* */q9921PotsOverlapped* */q9921IsdnNonOverlapped/* *q9921IsdnOverlapped/q992* *1TcmIsdnNonOverlapped* */q9921TcmIsdnOverlapped/* *q9922PotsNonOverlapped/q* *9922PotsOverlapped/q9922* *TcmIsdnNonOverlapped/q99* *22TcmIsdnOverlapped/q992* *1TcmIsdnSymmetric/adslPl* *usPotsNonOverlapped/q992* *1GspanPlusPotsNonOverlap* *ped/q9921GspanPlusPotsOv* *erlapped/q9923Adsl2PotsO* *verlapped/q9923Adsl2Pots* *NonOverlapped/q9925Adsl2* *PlusPotsOverlapped/q9925* *Adsl2PlusPotsNonOverlapp* *ed/q9923Readsl2PotsOverl* *apped/q9923Readsl2PotsNo* *nOverlapped/adslPlusPots* *Overlapped }+*	Transmission capabilities with which the DSL system is configured. Its default value depends on the Annex Type supported.Not valid for SHDSL. **Type** : Optional for all commands **Default value:** GS_CFG_DEF_DSP_LINE_TX_CFG
shdsltxmode{Region1/Regi on2}+	Annexure Type, specifies the regional settings for the SHDSL line. Only valid for SHDSL. **Type**: Create -- Optional **Default value**: GS_CFG_DEF_SHDSL_REGION

Example   *$ create dsl system dsltype Adsl linecoding Dmt adsltxcfg ansit1413*

Output   Verbose Mode On

```
Entry created

DSL Type    : Adsl
Line coding : Dmt
Adsl Tx Config : ansit1413
Shdsl Tx Mode  : -

Verbose Mode Off:
Entry Created
```

Output Fields

Field	Description
DSL Type	Identifies the firmware to be downloaded.
Line coding	ADSL line code type.

Field	Description
Adsl Tx Config	Transmission capabilities with which the DSL system is configured. Its default value depends on the Annex Type supported.Not valid for SHDSL.
Shdsl Tx Mode	Annexure Type, specifies the regional settings for the SHDSL line. Only valid for SHDSL.

Caution   None.

References   • DSL commands.

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2.47 Dsl chip Commands

2.47.1 get dsl chip

Description   Use this command to get.

Command Syntax   *get dsl chip [chipid* chipid *]*

2.47.2 create dsl chip

Description   Use this command to create.

Command Syntax   *create dsl chip chipid* chipid *[dsltype* Adsl | Sdsl | Shdsl | Vdsl *] [linecoding* Other | Dmt | Cap | Qam *| Mcm | Scm] [adsltxcfg {* ansit1413 | etsi | q9921PotsNonOverlapped | q9921PotsOverlapped | q9921IsdnNonOverlapped | q9921IsdnOverlapped | q9921TcmIsdnNonOverlapped | q9921TcmIsdnOverlapped | q9922PotsNonOverlapped | q9922PotsOverlapped | q9922TcmIsdnNonOverlapped | q9922TcmIsdnOverlapped | q9921TcmIsdnSymmetric | adslPlusPotsNonOverlapped | q9921GspanPlusPotsNonOverlapped | q9921GspanPlusPotsOverlapped | q9923Adsl2PotsOverlapped | q9923Adsl2PotsNonOverlapped | q9925Adsl2PlusPotsOverlapped | q9925Adsl2PlusPotsNonOverlapped | q9923Readsl2PotsOverlapped | q9923Readsl2PotsNonOverlapped | adslPlusPotsOverlapped *}+] [shdsltxmode {* Region1 | Region2 *}+]*

Input Parameter Description

Name	Description
chipid chipid	Identifies the chip to be build and initialized. **Type:** Create -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_DSLME_CHIP_ID - GS_CFG_MAX_DSLME_CHIP_ID
dsltype Adsl	Sdsl	Shdsl	Vdsl	Identifies the firmware to be downloaded. **Type:** Create -- Optional **Default value:** Adsl
linecoding Other	Dmt	Cap	Qam	Mcm	Scm	ADSL line coding type. Not valid for SHDSL. **Type:** Create -- Optional **Default value:** Dmt

Name	Description
adsltxcfg { ansit1413 | etsi | q9921PotsNonOverlapped | q9921PotsOverlapped | q9921IsdnNonOverlapped | q9921IsdnOverlapped | q9921TcmIsdnNonOverlapped | q9921TcmIsdnOverlapped | q9922PotsNonOverlapped | q9922PotsOverlapped | q9922TcmIsdnNonOverlapped | q9922TcmIsdnOverlapped | q9921TcmIsdnSymmetric | adslPlusPotsNonOverlapped | q9921GspanPlusPotsNonOverlapped | q9921GspanPlusPotsOverlapped | q9923Adsl2PotsOverlapped | q9923Adsl2PotsNonOverlapped | q9925Adsl2PlusPotsOverlapped | q9925Adsl2PlusPotsNonOverlapped | q9923Readsl2PotsOverlapped | q9923Readsl2PotsNonOverlapped | adslPlusPotsOverlapped }+	Transmission capabilities with which the DSL system is configured. Its default value depends on the Annex Type supported. Not valid for SHDSL. **Type:** Create -- Optional **Default value:** GS_CFG_DEF_DSP_ADSL_LINE_TX_CFG
shdsltxmode { Region1 | Region2 }+	Annexure Type, specifies the regional settings for the SHDSL line. Only valid for SHDSL. **Type:** Create -- Optional **Default value:** GS_CFG_DEF_SHDSL_REGION

Example *$ create dsl chip chipid* 1 *dsltype* Adsl *linecoding* Dmt *adsltxcfg* ansit1413 q9921PotsOverlapped q9921PotsNonOverlapped

Output Verbose Mode On

```
Entry Created

Chip Id       : 1
DSL Type      : Adsl
Line coding   : Dmt
Adsl Tx Config : ansit1413 q9921PotsOverlapped q9921PotsNonOverlapped
Shdsl Tx Mode :
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Chip Id	Identifies the chip to be build and initialized.
DSL Type	Identifies the firmware to be downloaded.
Line coding	ADSL line coding type. Not valid for SHDSL.
Adsl Tx Config	Transmission capabilities with which the DSL system is configured. Its default value depends on the Annex Type supported. Not valid for SHDSL.
Shdsl Tx Mode	Annexure Type, specifies the regional settings for the SHDSL line. Only valid for SHDSL.

Cautions   None.

References   None.

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2.48 ADSL Cap Commands

2.48.1 get adsl cap

Description	Use this command to view DSL transmission capability.
Command Syntax	*get adsl cap*
Parameters	None
Example	*$ get adsl cap*
Output	Verbose Mode On

```
Tx Capability  : q9921potsOverlapped      q9921potsNonOverlapped
```

Output Fields

FIELD	Description
Tx Capability	Transmission capabilities of the DSL system.

Caution	None
References	• create dsl system
	• get dsl system.

2.49 ADSL Alarm Profile Commands

2.49.1 get adsl alarm profile

Description   Use this command to view ADSL alarm profile, corresponding to an ADSL interface.

Command Syntax   `get adsl alarm profile [ ifname ifname ]`

2.49.2 modify adsl alarm profile

Description   Use this command to modify ADSL alarm profile, corresponding to an ADSL interface.

Command Syntax
```
modify adsl alarm profile ifname ifname [ atucthresh15minlofs
atucthresh15minlofs ] [ atucthresh15minloss atucthresh15minloss ]
[atucthresh15minlols atucthresh15minlols ] [ atucthresh15minlprs
atucthresh15minlprs ] [ atucthresh15miness atucthresh15miness ]
[atucthreshfastrateup atucthreshfastrateup ] [
atucthreshintlrateupatucthreshintlrateup ] [ atucthreshfastratedn
atucthreshfastratedn ] [atucthreshintlratedn atucthreshintlratedn ]
[ atucinitfailtrap atucinitfailtrap][atucoptrapenable
atucoptrapenable ] [ aturthresh15minlofs aturthresh15minlofs ][
aturthresh15minloss aturthresh15minloss ] [
aturthresh15minlprsaturthresh15minlprs ] [ aturthresh15miness
aturthresh15miness ] [aturthreshfastrateup aturthreshfastrateup ] [
aturthreshintlrateupaturthreshintlrateup ] [ aturthreshfastratedn
aturthreshfastratedn ] [aturthreshintlratedn aturthreshintlratedn ]
[atucgspmstatetrapenable False | True ] [ linealarmgscntrsreset
False | True ]
```

Parameters

Name	Description
`ifname ifname`	The ADSL alarm interface name, whose profile is to be modified or viewed **Type** **:** Modify -- Mandatory Get -- Optional **Valid values:** dsl-0 - dsl-*
`atucthresh15minlofs` `atucthresh15minlofs`	The number of Loss of Frame Seconds encountered by an ADSL interface within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLofsThreshTrap' **Type** **:** Modify -- Optional **Valid values:** 0 - 900

Name	Description
atucthresh15minloss *atucthresh15minloss*	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLossThreshTrap' **Type** : Modify -- Optional **Valid values:** 0 - 900
atucthresh15minlols *atucthresh15minlols*	The number of Loss of Link Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLolsThreshTrap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
atucthresh15minlprs *atucthresh15minlprs*	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLprsThreshTrap' **Type** : Modify -- Optional **Valid values:** 0 - 900
atucthresh15miness *atucthresh15miness*	The number of Error Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfESsThresh- Trap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
atucthreshfastrateup *atucthreshfastrateup*	Applies to 'Fast' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate >= ChanPrevTxRate plus the value of this object **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
atucthreshintlrateup *atucthreshintlrateup*	Applies to 'Interleave' channels only. Configured change in rate causing an adslAtucRateChange- Trap. A trap is produced when, ChanCurrTxRate >= ChanPrevTxRate plus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
atucthreshfastratedn *atucthreshfastratedn*	Applies to 'Fast' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate <= ChanPrevTxRate minus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff

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Name	Description
atucthreshintlratedn *atucthreshintlratedn*	Applies to 'Interleave' channels only. Configured change in rate causing an adslAtucRateChange-Trap. A trap is produced when, ChanCurrTxRate <= ChanPrevTxRate minus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 0xffff
atucinitfailtrap *atucinitfailtrap*	Enables and disables the InitFailureTrap. This object is defaulted disable. **Type** : Modify -- Optional **Valid values:** true, false
atucoptrapenable *atucoptrapenable*	Enables/disables the OpStateChangeTrap. **Type** : Modify -- Optional **Valid values:** true, false
aturthresh15minlofs *aturthresh15minlofs*	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLofsThreshTrap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthresh15minloss *aturthresh15minloss*	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLossThreshTrap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthresh15minlprs *aturthresh15minlprs*	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLprsThreshTrap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthresh15miness *aturthresh15miness*	The number of Error Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an ''adslAturPerfESsThresh-Trap'. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthreshfastrateup *aturthreshfastrateup*	Applies to 'Fast' channels only. Configured change in rate causing an adslAturRateChangeTrap. A trap is produced when, ChanCurrTxRate > ChanPrevTxRate plus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 900

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Name	Description
aturthreshintlrateup *aturthreshintlrateup*	Applies to 'Interleave' channels only. Configured change in rate causing an adslAturRateChange-Trap. A trap is produced when, ChanCurrTxRate > ChanPrevTxRate plus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthreshfastratedn *aturthreshfastratedn*	Applies to 'Fast' channels only. Configured change in rate causing an adslAturRateChangeTrap. A trap is produced when, ChanCurrTxRate < ChanPrevTxRate minus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 900
aturthreshintlratedn *aturthreshintlratedn*	Applies to 'Interleave' channels only. Configured change in rate causing an adslAturRateChange-Trap. A trap is produced when, ChanCurrTxRate < ChanPrevTxRate minus the value of this object. **Type** : Modify -- Optional **Valid values:** 0 - 900
atucgspmstatetrapenable *False* | *True*	This indicates change in power mangement state **Type** : Modify -- Optional **Valid values:** False, True
linealarmgscntrsreset *False* | *True*	This parameter resets performance counters at runtime **Type** : Modify -- Optional **Valid values:** False, True

Example   *$ get adsl alarm profile ifname dsl-0*

Output   Verbose Mode On

```
IfName                 : dsl-0
ADSL ATUC Configuration :
-------------------------
Thresh 15Min Lofs(sec)    : 10         Thresh 15Min Loss(sec)     : 20
Thresh 15Min Lols(sec)    : 30         Thresh 15Min Lprs(sec)     : 50
Thresh 15Min Ess(sec)     : 40         Thresh Fast Rate Up(bps)   : 70
Thresh Intl Rate Up(bps)  : 30         Thresh Fast Rate Down(bps) : 10
Thresh Intl Rate Down(bps) : 30        Init Fail Trap             : true
OpStateTrapEnable      : false            PowerMgmtTrapEnable      :  true
Performance counters reset : true

ADSL ATUR Configuration :
-------------------------
Thresh 15Min Lofs(sec)    : 0
Thresh 15Min Loss(sec)    : 0          Thresh 15Min Lprs(sec)     : 0
Thresh 15Min Ess(sec)     : 0          Thresh Fast Rate Up(bps)   : 0
Thresh Intl Rate Up(bps)  : 0          Thresh Fast Rate Down(bps) : 0
Thresh Intl Rate Down(bps) : 0
```

Output Fields

Field	Description
IfName	The ADSL alarm interface name, whose profile is to be modified or viewed.
Thresh 15Min Lofs(sec)	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLofsThreshTrap'.
Thresh 15Min Loss(sec)	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLossThreshTrap'.
Thresh 15Min Lols(sec)	The number of Loss of Link Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLolsThreshTrap'.
Thresh 15Min Lprs(sec)	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLprsThreshTrap'.
Thresh 15Min Ess(sec)	The number of Error Seconds encountered by an ADSL interface within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfESsThreshTrap'.
Thresh Fast Rate Up(bps)	Applies to 'Fast' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate >= ChanPrevTxRate plus the value of this object.
Thresh Intl Rate Up(bps)	Applies to 'Interleave' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate >= ChanPrevTxRate plus the value of this object.
Thresh Fast Rate Down(bps)	Applies to 'Fast' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate <= ChanPrevTxRate minus the value of this object.
Thresh Intl Rate Down(bps)	Applies to 'Interleave' channels only. Configured change in rate causing an adslAtucRateChangeTrap. A trap is produced when, ChanCurrTxRate <= ChanPrevTxRate minus the value of this object.
Init Fail Trap	Enables and disables the InitFailureTrap. This object is, by default **disable.**

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Field	Description
OpStateTrapEnable	Enables/disables the OpStateChangeTrap.
Thresh 15Min Lofs(sec)	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLofsThreshTrap'.
Thresh 15Min Loss(sec)	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLossThreshTrap'.
Thresh 15Min Lprs(sec)	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLprsThreshTrap'.
Thresh 15Min Ess(sec)	The number of Error Seconds encountered by an ADSL interface, within any given 15 minutes performance data collection period, which causes the SNMP agent to send an 'adslAturPerfESsThreshTrap'.
Thresh Fast Rate Up(bps)	Applies to 'Fast' channels only. Configured change in rate causing an adslAturRateChangeTrap A trap is produced when, ChanCurrTxRate > ChanPrevTxRate plus the value of this object.
Thresh Intl Rate Up(bps)	Applies to 'Interleave' channels only. Configured change in rate causing an adslAturRateChangeTrap. A trap is produced when, ChanCurrTxRate > ChanPrevTxRate plus the value of this object.
Thresh Fast Rate Down(bps)	Applies to 'Fast' channels only. Configured change in rate causing an adslAturRateChangeTrap. A trap is produced when, ChanCurrTxRate < ChanPrevTxRate minus the value of this object.
Thresh Intl Rate Down(bps)	Applies to 'Interleave' channels only. Configured change in rate causing an adslAturRateChangeTrap A trap is produced when, ChanCurrTxRate < ChanPrevTxRate minus the value of this object.
PowerMgmtTrapEnable	This indicates change in power mangement state.
Performance counters reset	This parameter resets performance counters at runtime.

Caution   None

References   • ADSL commands.

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2.50 ADSL ATUR Trapsext Commands

2.50.1 get adsl atur trapsext

Description   Use this command to get.

Command Syntax   `get adsl atur trapsext [ ifname ifname ]`

Parameters

Name	Description
`ifname` ifname	The ADSL Interface Name **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID

Example   `$ get adsl atur trapsext ifname` dsl-0

Output

```
Ifname               : dsl-0
SesL Thresh 15Min Trap : 1          UasL Thresh 15Min Trap : 0
FecsL Thresh 15Min Trap: 0
Lofs Thresh 1Day Trap  : 1          Loss Thresh 1Day Trap  : 0
Lprs Thresh 1Day Trap  : 1          ESs Thresh 1Day Trap   : 1
SesL Thresh 1Day Trap  : 1          UasL Thresh 1Day Trap  : 0
FecsL Thresh 1Day Trap : 0
```

Output field description

Field	Description
`Ifname`	The ADSL Interface Name.
`SesL Thresh 15Min Trap`	Severely Error Seconds 15-minute interval threshold reached.
`UasL Thresh 15Min Trap`	Unavailable Error Seconds 15-minute interval threshold reached.
`FecsL Thresh 15Min Trap`	Forward error correction Seconds 15-minute interval threshold reached.
`Lofs Thresh 1Day Trap`	Loss of Frames 1-day interval threshold reached.
`Loss Thresh 1Day Trap`	Loss of Signal 1-day interval threshold reached.
`Lprs Thresh 1Day Trap`	Loss of Power 1-day interval threshold reached.
`ESs Thresh 1Day Trap`	Error Seconds 1-day interval threshold reached.
`SesL Thresh 1Day Trap`	Severely Error Seconds 1-day interval threshold reached.
`UasL Thresh 1Day Trap`	Unavailable Error Seconds 1-day interval threshold reached.
`FecsL Thresh 1Day Trap`	Forward error correction Seconds 1-day interval threshold reached.

Caution • None

References • ADSL Commands

2.51 ADSL ATUC Trapsext Commands

2.51.1 get adsl atuc trapsext

Description   Use this command to get.

Command Syntax   `get adsl atuc trapsext [ ifname ifname ]`

Parameter

Name	Description
ifname ifname	The IfIndex of DSL port. **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID

Example   `$ get adsl atuc trapsext ifname dsl-0`

Output
```
Ifname                        : dsl-0
Failed FastR Thresh 15Min Trap : 1        SesL Thresh 15Min Trap  : 1
UasL Thresh 15Min Trap         : 1        FecsL Thresh 15Min Trap : 0
Lofs Thresh 1Day Trap          : 0        Loss Thresh 1Day Trap   : 1
Lols Thresh 1Day Trap          : 1        Lprs Thresh 1Day Trap   : 1
ESs Thresh 1Day Trap           : 0        SesL Thresh 1Day Trap   : 0
UasL Thresh 1Day Trap          : 1        FecsL Thresh 1Day Trap  : 0
```

Output field description

Field	Description
Ifname	The IfIndex of DSL port.
Failed FastR Thresh 15Min Trap	Failed retrains 15-minute interval threshold reached.
SesL Thresh 15Min Trap	Severely Errored Seconds 15-minute interval threshold reached.
UasL Thresh 15Min Trap	Unavailable Error Seconds 15-minute interval threshold reached.
FecsL Thresh 15Min Trap	Forward error correction Seconds 15-minute interval threshold reached.
Lofs Thresh 1Day Trap	Loss of Frames 1-day interval threshold reached.
Loss Thresh 1Day Trap	Loss of Signal 1-day interval threshold reached.
Lols Thresh 1Day Trap	Loss of Link 1-day interval threshold reached.
Lprs Thresh 1Day Trap	Loss of Power 1-day interval threshold reached.
ESs Thresh 1Day Trap	Errored Seconds 1-day interval threshold reached.
SesL Thresh 1Day Trap	Severely Errored Seconds 1-day interval threshold reached.

Field	Description
UasL Thresh 1Day Trap	Unavailable Errored Seconds 1-day interval threshold reached.
FecsL Thresh 1Day Trap	Forward error correction Seconds 1-day interval threshold reached.

Caution   None.

References   None.

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2.52 ADSL Alarm Profilext Commands

2.52.1 get adsl alarm profilext

Description   Use this command to get.

Command Syntax   `get adsl alarm profilext [ ifname ifname ]`

2.52.2 modify adsl alarm profilext

Description   Use this command to modify.

Command Syntax   `modify adsl alarm profilext ifname` ifname `[ atucthresh15minffstr` atucthresh15minffstr `] [ atucthresh15minsesl` atucthresh15minsesl `] [ atucthresh15minuasl` atucthresh15minuasl `] [atucthresh15minfecsl` atucthresh15minfecsl`] [ atucthresh1daylofs` atucthresh1daylofs `] [ atucthresh1dayloss` atucthresh1dayloss `] [ atucthresh1daylols` atucthresh1daylols `] [ atucthresh1daylprs` atucthresh1daylprs `] [ atucthresh1dayess` atucthresh1dayess `] [ atucthresh1daysesl` atucthresh1daysesl `] [ atucthresh1dayuasl` atucthresh1dayuasl `] [atucthresh1dayfecsl` atucthresh1dayfecsl `] [ aturthresh15minsesl` aturthresh15minsesl `] [ aturthresh15minuasl` aturthresh15minuasl `] [aturthresh15minfecsl` aturthresh15minfecsl`] [ aturthresh1daylofs` aturthresh1daylofs `] [ aturthresh1dayloss` aturthresh1dayloss `] [ aturthresh1daylprs` aturthresh1daylprs `] [ aturthresh1dayess` aturthresh1dayess `] [ aturthresh1daysesl` aturthresh1daysesl `] [ aturthresh1dayuasl` aturthresh1dayuasl `] [aturthresh1dayfecsl` aturthresh1dayfecsl`]`

Parameters

Name	Description
ifname ifname	The ADSL alarm interface name, whose profile is to be modified or viewed **Type:** Modify -- Mandatory Get -- Optional
atucthresh15minffstr atucthresh15minffstr	The number of failed retrains encountered by an ADSL interface within any giving 15 minute performance data collection period, which cause the SNMP agent to send an adslAtucFailedFastRTrap. **Type:** Modify -- Optional **Valid values:** 0 - 900
atucthresh15minsesl atucthresh15minsesl	The number of Severe errored seconds encountered by an ADSL interface within any giving 15 minute performance data collection period, which cause the SNMP to send an adslAtucSesLTrap. **Type:** Modify -- Optional **Valid values:** 0 - 900

Name	Description
atucthresh15minuasl	The number of unavailable errored seconds encountered by an ADSL interface within any giving 15 minutes performance data collection period, which cause the SNMP agent to send an adslAtucUasLThreshTrap **Type:** Modify -- Optional **Valid values:** 0 - 900
atucthresh15minfecsl *atucthresh15minfecsl*	The number of Forward error correction seconds encountered by an ADSL interface within any giving 15 Minutes performance data collection period, which causes adslAtucPerfFecsLThreshTrap. **Type**: Modify -- Optional **Valid values**: 0 - 900
atucthresh1daylofs atucthresh1daylofs	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLofsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1dayloss atucthresh1dayloss	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLossThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1daylols atucthresh1daylols	The number of Loss of Link Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLolsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1daylprs atucthresh1daylprs	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfLprsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1dayess atucthresh1dayess	The number of Errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfESsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400

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Name	Description
atucthresh1daysesl atucthresh1daysesl	The number of Severe errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAtucPerfSesLThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1dayuasl atucthresh1dayuasl	The number of unavailable errored seconds encountered by an ADSL interface within any giving 1 day performance data collection period, which cause the SNMP agent to send an adslAtucPerfUasLThresh1DayTrap **Type:** Modify -- Optional **Valid values:** 0 - 86400
atucthresh1dayfecsl ***atucthresh1dayfecsl***	The number of Forward error correction seconds encountered by an ADSL interface within any giving 1 day performance data collection period, which causes atucPerfFecsLThresh1DayTrap. **Type**: Modify -- Optional **Valid values**: 0 - 86400
aturthresh15minsesl aturthresh15minsesl	The number of Severe errored seconds encountered by an ADSL interface within any giving 15 minute performance data collection period, which cause the SNMP to send an adslAturPerfSesLThresh15MInTrap. **Type:** Modify -- Optional **Valid values:** 0 - 900
aturthresh15minuasl aturthresh15minuasl	The number of unavailable errored seconds encountered by an ADSL interface within any giving 15 Minutes performance data collection period, which cause the SNMP agent to send an adslAturPerfUasLThresh1DayTrap **Type:** Modify -- Optional **Valid values:** 0 - 900
aturthresh15minfecsl ***aturthresh15minfecsl***	The number of Forward error correction seconds encountered by an ADSL interface within any giving 15 Minutes performance data collection period, which causes adslAturPerfFecsLThreshTrap. **Type**: Modify -- Optional **Valid values**: 0 - 900
aturthresh1daylofs aturthresh1daylofs	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLofsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400

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Name	Description
aturthresh1dayloss aturthresh1dayloss	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLossThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
aturthresh1daylprs aturthresh1daylprs	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAturPerfLprsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
aturthresh1dayess aturthresh1dayess	The number of Errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAturPerfESsThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
aturthresh1daysesl aturthresh1daysesl	The number of Severe errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes the SNMP agent to send an 'adslAturPerfSesLThresh1DayTrap'. **Type:** Modify -- Optional **Valid values:** 0 - 86400
aturthresh1dayuasl aturthresh1dayuasl	The number of unavailable errored seconds encountered by an ADSL interface within any giving 1 day performance data collection period, which cause the SNMP agent to send an adslAturPerfUasLThresh1DayTrap **Type:** Modify -- Optional **Valid values:** 0 - 86400
aturthresh1dayfecsl *aturthresh1dayfecsl*	The number of Forward error correction seconds encountered by an ADSL interface within any given 1 day performance data collection period, which causes aturPerfFecsLThresh1DayTrap. **Type**: Modify -- Optional **Valid values**: 0 - 86400

Example   *$ get adsl alarm profilext ifname* dsl-0

Output
```
IfName                        : dsl-0
Atuc Thresh 15Min Fail FastR(sec) : 10
Atuc Thresh 15Min SesL(sec)   : 14
Atuc Thresh 15Min UasL(sec)   : 10
Atuc Thresh 15Min FecsL(sec)  : 10
Atuc Thresh 1 Day Lofs(sec)   : 10
Atuc Thresh 1 Day Loss(sec)   : 10
Atuc Thresh 1 Day Lols(sec)   : 10
Atuc Thresh 1 Day Lprs(sec)   : 10
```

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```
Atuc Thresh 1 Day ESs(sec)       : 10
Atuc Thresh 1 Day SesL(sec)      : 10
Atuc Thresh 1 Day UasL(sec)      : 10
Atuc Thresh 1 Day FecsL(sec)     : 10
Atur Thresh 15Min Sesl(sec)      : 10
Atur Thresh 15Min UasL(sec)      : 10
Atur Thresh 15Min FecsL(sec)     : 10
Atur Thresh 1 Day Lofs(sec)      : 10
Atur Thresh 1 Day Loss(sec)      : 10
Atur Thresh 1 Day Lprs(sec)      : 10
Atur Thresh 1 Day ESs(sec)       : 10
Atur Thresh 1 Day SesL(sec)      : 10
Atur Thresh 1 Day UasL(sec)      : 10
Atur Thresh 1 Day FecsL(sec)     : 10
```

Output field description

Field	Description
IfName	The ADSL alarm interface name, whose profile is to be modified or viewed
Atuc Thresh 15Min Fail FastR(sec)	The number of failed retrains encountered by an ADSL interface within any given 15 minute performance data collection period, which causes adslAtucFailedFastRTrap.
Atuc Thresh 15Min SesL(sec)	The number of Severe errored seconds encountered by an ADSL interface within any given 15 minute performance data collection period, which causes adslAtucSesLTrap.
Atuc Thresh 15Min UasL(sec)	The number of unavailable errored seconds encountered by an ADSL interface within any given 15 Minute performance data collection period, which causes adslAtucUasLThreshTrap.
Atuc Thresh 15Min FecsL(sec)	The number of Forward error correction seconds encountered by an ADSL interface within any given 15 Minute performance data collection period, which causes adslAtucPerfFecsLThreshTrap.
Atuc Thresh 1 Day Lofs(sec)	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfLofsThresh1DayTrap.
Atuc Thresh 1 Day Loss(sec)	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfLossThresh1DayTrap.
Atuc Thresh 1 Day Lols(sec)	The number of Loss of Link Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfLolsThresh1DayTrap.
Atuc Thresh 1 Day Lprs(sec)	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfLprsThresh1DayTrap.

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Field	Description
Atuc Thresh 1 Day ESs(sec)	The number of Errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfESsThresh1DayTrap.
Atuc Thresh 1 Day SesL(sec)	The number of Severe errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAtucPerfSesLThresh1DayTrap.
Atuc Thresh 1 Day UasL(sec)	The number of unavailable errored seconds encountered by an ADSL interface within any given 1 day performance data collection period, which causes adslAtucPerfUasLThresh1DayTrap.
Atuc Thresh 1 Day FecsL(sec)	The number of Forward error correction seconds encountered by an ADSL interface within any given 1 day performance data collection period, which causes atucPerfFecsLThresh1DayTrap.
Atur Thresh 15Min Sesl(sec)	The number of Severe errored seconds encountered by an ADSL interface within any given 15 minute performance data collection period, which causes adslAturPerfSesLThresh15MInTrap.
Atur Thresh 15Min UasL(sec)	The number of unavailable errored seconds encountered by an ADSL interface within any given 15 Minute performance data collection period, which causes adslAturPerfUasLThresh1DayTrap.
Atur Thresh 15Min FecsL(sec)	The number of Forward error correction seconds encountered by an ADSL interface within any given 15 Minute performance data collection period, which causes adslAturPerfFecsLThreshTrap.
Atur Thresh 1 Day Lofs(sec)	The number of Loss of Frame Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAturPerfLofsThresh1DayTrap.
Atur Thresh 1 Day Loss(sec)	The number of Loss of Signal Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAturPerfLossThresh1DayTrap.
Atur Thresh 1 Day Lprs(sec)	The number of Loss of Power Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAturPerfLprsThresh1DayTrap.
Atur Thresh 1 Day ESs(sec)	The number of Errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAturPerfESsThresh1DayTrap.

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Field	Description
Atur Thresh 1 Day SesL(sec)	The number of Severe errored Seconds encountered by an ADSL interface, within any given 1 day performance data collection period, which causes adslAturPerfSesLThresh1DayTrap.
Atur Thresh 1 Day UasL(sec)	The number of unavailable errored seconds encountered by an ADSL interface within any given 1 day performance data collection period, which causes adslAturPerfUasLThresh1DayTrap.
Atur Thresh 1 Day FecsL(sec)	The number of Forward error correction seconds encountered by an ADSL interface within any given 1 day performance data collection period, which causes aturPerfFecsLThresh1DayTrap.

Caution
- None

References
- ADSL Commands

2.53 ADSL ATUC Physical Commands

2.53.1 get adsl atuc physical

Description Use this command to get ATUC physical interfaces.

Command Syntax `get adsl atuc physical [ifname interface-name]`

Parameters

Name	Description
`ifname interface-name`	The ADSL ATUC physical interface name, for which configuration is to be viewed.
	Type : Get – Optional
	Valid values : *dsl-0-**

Example `$ get adsl atuc physical ifname dsl-0`

Output Verbose Mode On

```
Ifname                        : dsl-0
Serial Number                 : Conexant 1.0
Vendor ID                     : 0039
Version Number                : 1.0
Curr Status                   : noDefect
Curr Snr Margin(dB/10)        : 20              Curr Atn(dB/10)       : 80
CurrAttainable Rate(bps)      : 40               Curr Output Pwr(dB/10): 90
GsOpState                     : Data            GsActualStandard      : T1_413
GsTxAtmCellCounter            : 214             GsRxAtmCellCounter    : 215
GsStartProgress               : 213
GsIdleBertError               : 200             GsIdleBertCells       : 100
GsBertSync                    : BertOutOfSync
GsParametricTestResult        : Ok
GsBertError                   : NoSync 0x0
GsSeltInfoValid               : NotConnected
GsSeltLoopLen (in Feet)       : 20
GsSeltLoopEnd                 : open
GsSeltLoopGauge               : greater_26awg
DataBoost Status              :Enable
GsSeltUpShannonCap (in bps)   : 10
GsSeltDownShannonCap (in bps) : 20
Chan Perf CD                  : 2               Chan Perf BE          : 5
Delt HLINSCus                 : 2               Delt HLOGMTus         : 2
Delt QLNMTus                  : 2               DELT Last Tx State    : dmtatucg9941
PM State                      : idleop          Chan Perf CU          : 10
Extended PSD Status           : Jj100           Chip Version          : 2
Pilot Tone                    : 21         Overhead Channel    : 4000
Psd Mask                      : Adsl
Delt SnrmtUs                  : 100
Bin Number Number of bits/bin
[0 ]        82  117 110  0    4   0   0   0   1   0   0   0   0   0   0   0
[16]         4    0   0   0  211  0   0   0   0   0   0   0   4   0   0   0
[32]         0  255   0   0   15  0   0   0   7   0   0   0  15   0   0   0
[48]         0    0   0   0    0 128  0   0   0   0   0   0   0 128   0   0

Parametric Info
[0 ]            0           0           0           0
[4 ]            0           0           0           0
[8 ]            0           0           0           0
```

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```
[12]            0              0              0              0
[16]            0              0              0              0
[20]            0              0              0              0
[24]            0              0              0              0
[28]            0              0              0              0
[32]            0              0              0              0
[36]            0              0              0              0
[40]            0              0              0              0
[44]            0              0              0              0
[48]            0              0              0              0
[52]            0              0              0              0
[56]            0              0              0              0
[60]            0              0              0              0
[64]            0              0              0              0
[68]            0              0              0              0
[72]            0              0              0              0
[76]            0              0              0              0
[80]            0              0              0              0
[84]            0              0              0              0
[88]            0              0              0              0
[92]            0              0              0              0
[96]            0              0              0              0
[100]           0              0              0              0
[104]           0              0              0              0
[108]           0              0              0              0
[112]           0              0              0              0
[116]           0              0              0              0
[120]           0              0              0              0
[124]           0              0              0              0
[128]           0              0              0              0
[132]           0              0              0              0
[136]           0              0              0              0
[140]           0              0              0              0
[144]           0              0              0              0
[148]           0              0              0              0
[152]           0              0              0              0
[156]           0              0              0              0
[160]           0              0              0              0
[164]           0              0              0              0
[168]           0              0              0              0
[172]           0              0              0              0
[176]           0              0              0              0
[180]           0              0              0              0
[184]           0              0              0              0
[188]           0              0              0              0
[192]           0              0              0              0
[196]           0              0              0              0
[200]           0              0              0              0
[204]           0              0              0              0
[208]           0              0              0              0
[212]           0              0              0              0
[216]           0              0              0              0
[220]           0              0              0              0
[224]           0              0              0              0
[228]           0              0              0              0
[232]           0              0              0              0
[236]           0              0              0              0
[240]           0              0              0              0
[244]           0              0              0              0
[248]           0              0              0              0
[252]           0              0              0              0

Delt HLINpsus
-------------
[0 ]            0
Delt HLOGpsus
-------------
[0 ]            0
Delt QLNpsus
------------
[0 ]            0
```

```
Delt DMT Bin SNR
----------------
[0 ]         0
```

Output Fields

FIELD	Description
Ifname	The ADSL ATUC physical interface name.
Serial Number	The vendor specific string that identifies the vendor equipment.
Vendor ID	Vendor ID code.
Version Number	The vendor specific version number sent by this ATU as part of the initialization messages.
Curr Status	Indicates current state of the ATUC line. This is a bit-map of possible conditions.
Curr Snr Margin(dB/10)	Noise Margin as seen by this ATU with respect to its received signal in tenth dB.
Curr Atn(dB/10)	Measured difference in the total power transmitted by the peer ATU and the total power received by this ATU.
CurrAttainable Rate(bps)	Indicates the maximum currently attainable data rate by the ATU. This value will be equal to, or greater than the current line rate.
Curr Output Pwr(dB/10)	Measured total output power transmitted by this ATU. This is the measurement that was reported during the last activation sequence.
GsOpState	Operational state of the Xcvr.
GsActualStandard	Actual standard used for connection, based on the outcome of the negotiation with the Remote Unit.
GsTxAtmCellCounter	Provides Tx ATM cell counter.
GsRxAtmCellCounter	Provides Rx ATM cell counter.
GsStartProgress	Defines the current detailed start up state of Xcvr. 0x0 – startup not in progress; 0x0 – 0x0FFF Handshake/ Training/ Profile Management/ Fast Retrain in progress; 0x8000 – 0x8FFF DSP firmware DownLoad in progress; 0xF000 – 0xFFFF illegal Parameter
GsBertError	Provides the number of bit errors detected during BERT.
Delt SnrmtUs	DELT-related parameter that provides the number of symbols used to measure the upstream SNR(f) values. (Not available for ADSL and ADSL2plus).
Bin Number	Bin index.

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FIELD	Description
Number of bits/bin	Number of bits/ bin for the bin indexed by this element of the string. The 0th element contains the number of bits per bin for 0, through the 31st element, which contains the number bits for bin 31.
GsIdleBertError	Number of bit errors.
GsIdleBertCell	Number of idle cells.
GsBertSync	Indicates whether the Signal is in Sync or not.
GsParametricTestResult	Indicates the Result of the Parametric Test conducted on the Xcvr.
GsSeltInfoValid	Indicates the information validity for the SELT operation conducted on the Xcvr.
GsSeltLoopLen (in Feet)	Indicates the LOOP Length in Feet once when the SELT information is valid on the Xcvr.
GsSeltLoopEnd	Indicates whether the loop is short or open once when the SELT information is valid on the Xcvr.
GsSeltLoopGauge	Indicates the LOOP wire gauge information once, when the SELT information is valid on the Xcvr.
GsSeltUpShannonCap (in bps)	Indicates the upstream shannon capacity once, when the SELT information is valid on the Xcvr.
GsSeltDownShannonCap (in bps)	Indicates the downstream shannon capacity once, when the SELT information is valid on the Xcvr.
Data Boost Status	Conexant parameter that indicates whether DataBoost is utilized for the connection.
Parametric Info	Conexant parameter that indicates the Parametric Test Array.
Chan Perf CD	The near-end delineated total cell count performance parameter is a count of the total number of cells passed through the cell delineation and HEC function process, operating on the ATM Data Path, while in the SYNC state. (Not available for ADSL)
Chan Perf BE	The near-end idle bit error count performance parameter is a count of the number of bit errors in the idle cell payload received in the ATM Data Path at the near-end. (Not available for ADSL)
Delt HLINSCus	The DELT-related parameter that provides the scale factor to be applied to the upstream Hlin (f) values. (Not available for ADSL and ADSL2plus)
Delt HLINpsus	The DELT-related parameter that provides an array of complex upstream Hlin (f) values in linear scale. (Not available for ADSL and ADSL2plus)

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FIELD	Description
Delt HLOGMTus	The DELT-related parameter that provides the number of symbols used to measure the upstream Hlog (f). (Not available for ADSL and ADSL2plus)
Delt HLOGpsus	The DELT-related parameter that provides an array of real upstream Hlog (f) values in dB. (Not available for ADSL and ADSL2plus)
Delt QLNMTus	The DELT-related parameter that provides the number of symbols used to measure the upstream QLN (f) values. (Not available for ADSL and ADSL2plus)
Delt QLNpsus	The DELT-related parameter that provides an array of real upstream QLN (f) values in dB. (Not available for ADSL and ADSL2plus)
Delt DMT Bin SNR	The DELT-related parameter that provides an array of real upstream SNR (f) values in dB. (Not available for ADSL and ADSL2plus)
DELT Last Tx State	The DELT-related parameter that provides the last successful transmitted initialization state by the ATU-C. (Not available for ADSL and ADSL2plus)
PM State	The Line Power Management state. (Not available for ADSL)
Chan Perf CU	The total number of data-only cells received by ATU-C.
Extended PSD Status	The used upstream PSD status.
Chip Version	The DSP version number.
Pilot Tone	Conexant parameter that indicates the Pilot Tone Index.
Overhead Channel	Indicates the Overhead Channel. This feature is not supported by DSLPHY as yet.
Psd Mask	Conexant parameter that indicates the actual Psd Mask currently being used.

Caution   None

References   • ADSL commands.

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2.54 ADSL ATUC Channel Commands

2.54.1 get adsl atuc channel

Description   Use this command to get ADSL ATUC channels.

Command Syntax   `get adsl atuc channel [ifname interface-name]`

Parameters

Name	Description
`ifname interface-name`	The ADSL ATUC channel interface name for which configuration is to be viewed. **Type** : Get – Optional **Valid values** : *dslf-**, dsli-**

Example   `$ get adsl atuc channel ifname dsli-0`

Output   Verbose Mode On

```
Ifname             : dsli-0
Interleave Delay(ms): 20      Curr Tx Rate(bps)       : 80
Prev Tx Rate(bps)  : 40      Crc Block Length(byte)   : 90
Gs Curr Atm Status : OK      GsSymbolsPerRsWord       : 10
GsRsDepth          : 20      GsRedundantBytesPerRsCode : 100
```

Output Fields

FIELD	Description
`Ifname`	The ADSL ATUC channel interface name.
`Interleave Delay(ms)`	Interleave delay for this channel.
`Curr Tx Rate(bps)`	Actual transmit rate on this channel.
`Prev Tx Rate(bps)`	The rate at the time of the last adslAtucRateChangeTrap event.
`Crc Block Length(byte)`	Indicates the length of the channel data-block, on which the CRC operates.
`Gs Curr Atm Status`	Indicates the current ATM Status.
`GsSymbolsPerRsWord`	Indicates the number of DMT symbols per Reed-Solomon code word (S), in the downstream direction.
`GsRsDepth`	Indicates interleaving depth (D), in the downstream direction.
`GsRedundantBytesPerRsCode`	Indicates the number of redundant bytes (R), per Reed-Solomon code in the downstream direction

Caution   None

References   • ADSL commands.

2.54.2 get adsl atuc chanperf

Description   Use this command to get.

Command Syntax   `get adsl atuc chanperf [ifname interface-name]`

Parameters

Name	Description
`ifname interface-name`	The ADSL ATUC channel interface name, for which performance is to be viewed. **Type** : Get – Optional **Valid values** : *dsli-0 - *, dslf-0 - ***

Example   `$ get adsl atuc chanperf ifname dsli-0`

Output   Verbose Mode On

```
Ifname                : dsli-0
Perf Valid Intervals   : 20
Perf Invalid Intervals : 30
                          PerfData   Curr15Min   Curr1Day   Prev1Day
Time Elapsed/Monitored(sec) 15         10          20         45
Rx Blocks                 10         45          30         89
Tx Blocks                 20         65          70         48
Corrected Blocks          25         35          35         25
Uncorrected Blocks        30         95          80         30
NCD Count                 90         86          35         20
OCD Count                 60         42          15         20
HEC Count                 45         21          75         35
```

Output Fields

FIELD	Description
`Ifname`	The ADSL ATUC channel interface name.
`Perf Valid Intervals`	Number of previous 15-minute intervals, for which the data was collected.
`Perf Invalid Intervals`	Number of previous 15-min intervals for which no data is available
`Time Elapsed/ Monitored(sec)`	Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day.
`Rx Blocks`	Performance Data : Count of all encoded blocks received on this channel since agent was reset . Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received on this channel in the current 15 minute/ current 1 day/ previous 1 day interval.

FIELD	Description
Tx Blocks	Performance Data : Count of all encoded blocks transmitted on this channel since agent reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks transmitted on this channel in the current 15-minute/ current 1-day/ previous 1-day interval.
Corrected Blocks	Performance Data : Count of all encoded blocks received with corrected errors on this channel since agent reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received with corrected errors on this channel, in the current 15 minute/ current 1 day/ previous 1 day interval.
Uncorrected Blocks	Performance Data : Count of all encoded blocks received with uncorrected errors on this channel since agent was reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received with uncorrected errors on this channel in the current 15 minute/ current 1 day/ previous 1 day interval.
NCD Count	Performance Data : Number of packets with NCD (No Cell Delineation) error. Curr15Min/Curr1Day/Prev1Day : Number of packets with NCD error received in the current 15-minute/ current 1-day/ previous 1-day interval.
OCD Count	Performance Data : Number of packets with OCD (Out of Cell Delineation) error. Curr15Min/Curr1Day/Prev1Day : Number of packets with OCD error received in the current 15-minute/ current 1-day/ previous 1-day interval.
HEC Count	Performance Data : Number of packets with HEC error. Curr15Min/Curr1Day/Prev1Day : Number of packets with HEC error received in the current 15 minute/ current 1 day/ previous 1 day interval.

Caution   None

References   • ADSL Commands.

2.55 ADSL ATUC Channel Interval Commands

2.55.1 get adsl atuc chanintrvl

Description   Use this command to get

Command Syntax   `get adsl atuc chanintrvl ifname interface-name [sintrvl start-interval-number] [nintrvl num-of-intervals]`

Parameters

Name	Description
ifname interface-name	The ADSL atuc channel interface name whose performance data collection interval is to be viewed **Type**: Get – Mandatory **Valid values** : *dsli-0 - *, dslf-0 - **
sintrvl start-interval-number	Start interval number **Type**: Get – Optional **Valid values** : 1- 96 **Default Value :** 1
nintrvl num-of-intervals	Number of intervals. **Type**: Get – Optional **Valid values** : 1- 96 **Default Value :** 12

Example   `$ get adsl atuc chanintrvl ifname dsli-0 sintrvl 1 nintrvl 1`

Output
```
Ifname                 : dsli-0  IntervalNumber    : 1
Rx Blocks              : 10      Tx Blocks         : 45
Corrected Blocks       : 20      Uncorrected Blocks : 1
Gs Time Elapsed(sec)   : 30      Valid Data         : true
GsNoCellDelineation    : 20      GsHeaderErrorCheck : 10
GsOutOfCellDelineation :50
```

Output Fields

FIELD	Description
Ifname	The ADSL ATUC channel interface name.
IntervalNumber	Performance Data Interval number.
Rx Blocks	Count of all encoded blocks received on this channel during this interval.
Tx Blocks	Count of all encoded blocks transmitted on this channel during this interval.
Corrected Blocks	Count of all encoded blocks received with errors that were corrected on this channel during this interval.
Uncorrected Blocks	Count of all encoded blocks received with uncorrected errors on this channel during this interval.

FIELD	Description
Gs Time Elapsed(sec)	Total time elapsed (in seconds) in this interval.
Valid Data	Indicates if the data for this interval is valid.
GsNoCellDelineation	Count of no cell delineation on this channel for this interval.
GsHeaderErrorCheck	Header error check counter on this channel during this interval.
GsOutOfCellDelineation	Count of out cell delineation on this channel for this interval.

Caution   None

References   • ADSL Commands.

2.56 ADSL ATUC Trap Commands

2.56.1 get adsl atuc traps

Description	Use this command to get.
Command Syntax	`get adsl atuc traps [ifname interface-name]`
Parameters	

Name	Description
`ifname interface-name`	The ADSL interface name **Type** : Get – Optional **Valid values** : *dsl-0 - **

Example   `$ get adsl atuc traps ifname dsl-0`

Output   Verbose Mode On

```
Ifname          : dsl-0
Lofs Thresh Trap : 0        Loss Thresh Trap  : 1
Lols Thresh Trap : 0        Lprs Thresh Trap  : 1
ESs Thresh Trap  : 1        Init Failure Trap : 1
Rate Change Trap : 0        Gs OpState Trap   : 1
PM State Trap    : 2
```

Output Fields

FIELD	Description
`Ifname`	The ADSL interface name.
`Lofs Thresh Trap`	Loss of Framing 15 minute threshold reached.
`Loss Thresh Trap`	Loss of Signal 15 minute threshold reached.
`Lols Thresh Trap`	Loss of Link 15 minute threshold reached.
`Lprs Thresh Trap`	Loss of Power 15 minute threshold reached.
`ESs Thresh Trap`	Errored Second 15 minute threshold reached.
`Init Failure Trap`	ATUC initialization failed.
`Rate Change Trap`	ATUC transmit rate has changed.
`Gs OpState Trap`	Op State change of Line.
`PM State Trap`	PM state change trap used for ADSL2 / ADSL2plus PM operation. This trap is not valid for ADSL mode.

Caution   None

References   • ADSL commands.

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2.57 ADSL ATUC Perf Commands

2.57.1 get adsl atuc perf

Description	Use this command to get ADSL ATUC interface performance.
Command Syntax	`get adsl atuc perf [ifname interface-name]`

Parameters

Name	Description
`ifname interface-name`	The ADSL ATUC interface name, for which performance is to be viewed. **Type** : Get – Optional **Valid values** : *dsl-0 - dsl-**

Example   `$ get adsl atuc perf ifname dsl-0`

Output   Verbose Mode On

```
Ifname               : dsl-0
Perf Valid Intervals  : 20
Perf Invalid Intervals : 30
AtucPerfStatLossL     : 10
                           PerfData   Curr15Min  Curr1Day   Prev1Day
Time Elapsed/Monitored(sec) 30         10         20         30
LOFS (sec)                  40         45         35         50
LOSS (sec)                  30         65         75         20
LOLS (sec)                  30         35         65         10
LPRS (sec)                  10         95         30         80
ES (sec)                    90         85         32         90
INITS                       60         42         15         20
Perf Stat FastR             45         21         75         35
Perf Stat Failed FastR      43         46         40         45
Perf Stat SESL              41         48         67         65
Perf Stat UASL              37         49         90         50
Perf Stat FecsL             10         16         11         11
Perf Stat InitsFailed       10         16         11         11
```

Output Fields

FIELD	Description
`Ifname`	The ADSL ATUC interface name.
`Perf Valid Intervals`	The number of previous 15-minute intervals in the interval table, for which data was collected.
`Perf Invalid Intervals`	The number of intervals in the range of **0** to the value of **ìadslAtucPerfValid-Intervalsî**, for which no data is available.
`AtucPerfStatLossL`	Count of 1-second intervals containing one or more loss of signal (LOS) defects. (Not available for ADSL)

FIELD	Description
Time Elapsed/ Monitored(sec)	**Performance Data :** Total time elapsed in seconds Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day
LOFS (sec)	**Performance Data :** Count of number of Loss of Framing failures since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of Framing.
LOSS (sec)	**Performance Data :** Count of number of Loss of signal failures since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of signals.
LOLS (sec)	**Performance Data :** Count of number of Loss of link failures since agent reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of link.
LPRS (sec)	**Performance Data :** Count of number of Loss of power failures since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of power.
ES (sec)	**Performance Data :** Count of number of errored seconds since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of errored seconds in the current 15-minute/ current 1-day/ previous 1-day interval.
INITS	**Performance Data :** Count of line initialization attempts since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of line initialization attempts in the current 15-minute/ current 1-day/ previous 1-day interval. Includes both successful and failed attempts.
Perf Stat FastR	**Performance Data :** Count of fast retrain. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Fast Retrain.
Perf Stat Failed FastR	**Performance Data :** Count of failed fast retrain. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval when there was Failed Fast Retrain.

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FIELD	Description
Perf Stat SESL	**Performance Data :** Count of severely errored second line. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval when there was severely errored second.
Perf Stat UASL	**Performance Data :** Count of unavailable errored seconds. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval when there was unavailable errored seconds.
Perf Stat FecsL	**Performance Data**: Count of 1-second intervals, with one or more forward error correction (FEC) anomalies, since agent reset. (Not available for ADSL) **Curr15Min/Curr1Day/Prev1Day**: Count of 1-second intervals, in the current 15-minute/current 1-day/previous 1-day interval, with one or more forward error correction (FEC) anomalies. (Not available for ADSL)
Perf Stat InitsFailed	**Performance Data**: Count of the failed full initialization attempts in current 15-minute/current 1-day/previous 1-day interval. A failed full initialization is when showtime is not reached at the end of the full initialization procedure.

Caution   None

References   • ADSL commands.

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2.58   ADSL ATUC Interval Commands

2.58.1 get adsl atuc interval

Description   This command is used to get.

Command Syntax   `get adsl atuc interval ifname interface-name [sintrvl start-interval-number] [nintrvl num-of-intervals]`

Parameters

Name	Description
ifname interface-name	The ADSL ATUC channel interface name, for which performance data collection interval is to be viewed. **Type** : Get – Mandatory **Valid values** : *dsl-0, dsl-1* Ö
sintrvl start-interval-number	Start interval number. **Type** : Get – Optional **Valid values** : 1- 96 **Default Value :** 1
nintrvl num-of-intervals	Number of intervals. **Type** : Get – Optional **Valid values** : 1- 96 **Default Value :** 12

Example   `$ get adsl atuc interval ifname dsl-0 sintrvl 1 nintrvl 1`

Output   Verbose Mode On

```
Ifname             : dsl-0
IntervalNumber    : 12        IntervalValidData   : False
IntervalLofs(sec)  : 83        IntervalLoss(sec)   : 84
IntervalLols(sec)  : 85        IntervalLprs(sec)   : 86
IntervalESs(sec)   : 87        IntervalInits       : 88
IntervalFastR     : 191        IntervalFailedFastR : 192
IntervalSesL(sec) : 193        IntervalUasL(sec)   : 194
IntervalFecsL(sec) : 15        GsTimeElapsed(sec)  : 1001
IntervalInitsFailed: 15
```

Output Fields

FIELD	Description
Ifname	The ADSL ATUC channel interface name.
IntervalFecsL(sec)	Count of seconds in the interval when there was Forward error correction seconds.
IntervalNumber	Performance Data Interval number.
IntervalValidData	This indicates if the data for this interval is valid.
IntervalLofs	Count of seconds in the interval when there was Loss of Framing.

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FIELD	Description
IntervalLoss	Count of seconds in the interval when there was Loss of Signal.
IntervalLols	Count of seconds in the interval when there was Loss of Link.
IntervalLprs	Count of seconds in the interval when there was Loss of Power.
IntervalESs	Count of Errored Seconds in the interval.
IntervalInits	Count of the line initialization attempts during the interval.
IntervalFastR	Count of seconds in the interval when there was Fast Retrains.
IntervalFailedFastR	Count of seconds in the interval when there was Failed Fast Retrains.
IntervalSesL	Count of seconds in the interval when there was severely errored seconds.
IntervalUasL	Count of seconds in the interval when there was unavailable errored seconds.
GsTimeElapsed(sec)	Total elapsed seconds in this interval.
IntervalInitsFailed	Count of the failed full line initialization attempts during the interval.

Caution   None

References   • ADSL commands

2.59 ADSL ATUR Physical Commands

2.59.1 get adsl atur physical

Description   This command is used to get.

Command Syntax   *get adsl atur physical [ifname ifname]*

Parameters

Name	Description
ifname ifname	The ADSL Interface Name **Type** : Get -- Optional **Valid values:** dsl-0 - dsl-*

Example   *$ get adsl atur physical ifname dsl-0*

Output   Verbose Mode On

```
Ifname                    : dsl-0
Serial Number             : CO123456
Vendor ID                 : Vendor123
Version Number            : VerNo98114
Curr Status               : LossOfFraming
Curr Snr Margin(dB/10)    : 10              Curr Atn(dB/10)        : 10
CurrAttainable Rate(bps)  : 10              Curr Output Pwr(dB/10) : 10
AturGsConfig              : 0x0121020203
Chan Perf CD              : 5              Chan Perf CU           : 5
Chan Perf BE              : 5              Delt HLINSCds          : 2
Delt HLOGMTds             : 8              Delt QLNMTds           : 5
DELT Last Tx State        : dmtaturg9941
Overhead Channel          : 4000           Delt SnrmtDs           : 100
Bin Number    Number of bits/bin
[0 ]        68  109 116 0   0   0   0   0   0   255 0   0   15  0   0   0
[16]        7   0   0   0   15  0   0   0   0   0   0   0   0   128 0   0
[32]        0   0   0   0   0   128 0   0   0   128 0   0   0   0   0   0
[48]        0   0   0   0   2   0   0   0   0   0   0   0   0   32  0   0
[64]        0   0   0   0   17  0   0   0   0   0   0   0   2   0   0   0
[80]        0   0   0   0   0   0   0   0   2   0   0   0   64  0   0   0
[96]        1   0   0   0   60  0   0   0   0   0   0   0   120 0   0   0
[112]       0   0   0   0   0   0   0   0   0   125 0   0   0   125 0   0
[128]       0   112 23  0   0   112 23  0   16  0   0   0   0   128 0   0
[144]       0   0   0   0   2   3   48  48  48  48  48  48  48  48  53  50
[160]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[176]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[192]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[208]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[224]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   255 255
[240]       255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255
[256]       255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255
[272]       255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255
[288]       255 255 255 255 255 255 255 255 255 255 255 255 255 255 0   0
[304]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[320]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[336]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[352]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[368]       0   0   0   0   0   0   0   0   0   0   0   0   48  48  48  48
[384]       48  48  48  48  53  50  0   0   0   0   0   0   0   0   0   0
[400]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[416]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[432]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
[448]       0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
```

```
[464]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[480]        0    0    0    0   48   48   48   48   48   48   48   48   53   50    0    0
[496]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[512]        0    0    0    0    0    0    0    0    2    0    0    0   12   32    0    0
[528]       12   32    0    0  172   84  143    2    0    0    0    0    0    0    0    0
[544]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[560]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[576]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[592]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[608]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[624]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[640]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[656]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[672]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[688]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[704]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[720]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[736]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[752]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[768]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[784]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[800]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[816]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[832]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[848]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[864]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[880]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[896]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[912]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[928]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[944]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[960]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[976]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[992]        0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
[1008]       0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0

Delt HLINpsds
-------------
[0 ]        0
Delt HLOGpsds
-------------
[0 ]        0
Delt QLNpsds
------------
[0 ]        0
Delt DMT Bin SNR
----------------
[0 ]        0
```

Output Fields

FIELD	Description
Ifname	The ADSL Interface Name
Serial Number	The vendor specific string that identifies the vendor equipment (EOC - read 5 seconds after data mode).
Vendor ID	Vendor ID code (EOC - read 5 seconds after data mode).
Version Number	The vendor specific version number sent by this ATU, as part of the initialization messages (EOC - read 5 seconds after data mode).

FIELD	Description
Curr Status	Indicates current State of ATUR Line. This is a bitmap of possible conditions. Due to the isolation of the ATU-R when line problems occur, many state conditions such as loss of power, loss of quality signal, and initialization errors, cannot be determined.
Curr Snr Margin(dB/10)	Noise Margin as seen by this ATU, with respect to its received signal, in tenth dB.
Curr Atn(dB/10)	Measured difference in the total power transmitted by the peer ATU, and the total power received by this ATU.
CurrAttainable Rate(bps)	Indicates the maximum currently attainable data rate by the ATU. This value will be equal to, or greater than, the current line rate.
Curr Output Pwr(dB/10)	Measured total output power transmitted by this ATU. This is the measurement that was reported during the last activation sequence.
AturGsConfig	The upstream and downstream ATU-R configuration data (EOC - read 5 second after data mode).
Bin Number	Bin index.
Number of bits/bin	Number of bits per bin, for the bin indexed by this element of the string. The 0th element contains the number of bits for bin 0, through to the 511th element, which contains the number of bits for bin 511. The range of expected values is from 0 to 15 bits per bin (256 bytes for Annex A and Annex B, 512 bytes for Adsl+).
Chan Perf CD	The far-end delineated total cell count performance parameter is a count of the total number of cells passed through the cell delineation and HEC function process, operating on the ATM Data Path, while in the SYNC state. (Not available for ADSL)
Chan Perf CU	The far-end user total cell count performance parameter is a count of the total number of cells in the ATM Data Path delivered at the V-C (for ATU-C) or T-R (for ATUR) interface. (Not available for ADSL)
Chan Perf BE	The far-end idle bit error count performance parameter is a count of the number of bit errors in the idle cell payload received in the ATM Data Path at the far-end. (Not available for ADSL)
Delt HLINSCds	The DELT-related parameter that provides the scale factor to be applied to the downstream Hlin (f) values. (Not available for ADSL and ADSL2plus)

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FIELD	Description
Delt HLINpsds	The DELT-related parameter that provides an array of complex downstream Hlin (f) values in linear scale. (Not available for ADSL and ADSL2plus)
Delt HLOGMTds	The DELT-related parameter that provides the number of symbols used to measure the downstream Hlog (f). (Not available for ADSL and ADSL2plus)
Delt HLOGpsds	The DELT-related parameter that provides an array of real downstream Hlog (f) values in dB. (Not available for ADSL and ADSL2plus)
Delt QLNMTds	The DELT-related parameter that provides the number of symbols used to measure the downstream QLN (f) values. (Not available for ADSL and ADSL2plus)
Delt QLNpsds	The DELT-related parameter that provides an array of real downstream QLN (f) values in dB. (Not available for ADSL and ADSL2plus)
Delt SnrmtDs	DELT-related parameter that provides the number of symbols used to measure the downstream SNR(f) values. (Not available for ADSL and ADSL2plus)
DMT Bin SNR	The DELT-related parameter that provides an array of real downstream SNR (f) values in dB (Not available for ADSL and ADSL2plus)
DELT Last Tx State	The DELT-related parameter that provides the last successful transmitted initialization state by ATU-R. (Not available for ADSL and ADSL2plus)
Overhead Channel	Indicates the Overhead Channel. This feature is not supported by DSLPHY as yet.

Caution   None.

References   None.

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2.60 ADSL ATUR Channel Commands

2.60.1 get adsl atur channel

Description	This command is used to get.
Command Syntax	`get adsl atur channel [ ifname ifname ]`
Parameters	

Name	Description
`ifname ifname`	The ADSL Interface Name **Type** : Get -- Optional **Valid values:** *dsli-0 - dsli-* ,dslf-0 - dslf-**

Example	`$ get adsl atur channel ifname dslf-0`
Output	Verbose Mode On

```
Ifname             : dslf-0
Interleave Delay(ms) : 10           Curr Tx Rate(bps)       : 10
Prev Tx Rate(bps)    : 10           Crc Block Length(byte)  : 10
Gs Curr Atm Status   : 1            GsSymbolsPerRsWord      : 10
GsRsDepth            : 10           GsRedundantBytesPerRsCode : 10
```

Output Fields

FIELD	Description
`Ifname`	The ADSL Interface Name
`Interleave Delay(ms)`	Interleave delay for this channel. Interleave delay applies only to the interleave channel and defines the mapping (relative spacing) between subsequent input bytes at the interleaver input and their placement in the bit stream at the interleaver output. Larger numbers provide greater separation between consecutive input bytes in the output bit stream, allowing for improved impulse noise immunity at the expense of payload latency.
`Curr Tx Rate(bps)`	Actual transmit rate on this channel
`Prev Tx Rate(bps)`	The rate at the time of the last Adsl Atur Rate Change Trap event.
`Crc Block Length(byte)`	Indicates the length of the channel data-block on which the CRC operates.
`Gs Curr Atm Status`	Indicates an ncd or lcd failure if the counter surpasses 127. If neither ATM counter surpasses 127, the return value will be NoAtmDefect.

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FIELD	Description
GsSymbolsPerRsWord	Indicates number of DMT symbols per Reed-Solomon code word (S) in the upstream direction. Note that S is not restricted to interleaved mode only. Even in fast mode, S is a valid constant value and is equal to 1.
GsRsDepth	Indicates interleaving depth (D) in the upstream direction Note that D is not restricted to interleaved mode only. Even in fast mode, D is a valid constant value and is equal to 1.
GsRedundantBytesPerRsCode	Indicates number of redundant bytes (R) per Reed-Solomon code in the upstream direction.

Caution   None

References   None

2.61 ADSL ATUR Trap Commands

2.61.1 get adsl atur traps

Description   This command is used to get.

Command Syntax   `get adsl atur traps [ ifname ifname ]`

Parameters

Name	Description
`ifname ifname`	The ADSL Interface Name **Type** **:** Get -- Optional **Valid values:** *dsl-0 - dsl-**

Example   `$ get adsl atur traps ifname dsl-0`

Output   Verbose Mode On

```
Ifname          : dsl-0
Lofs Thresh Trap : 1          Loss Thresh Trap : 1
Lprs Thresh Trap : 1          ESs Thresh Trap  : 0
Rate Change Trap : 0
```

Output Fields

FIELD	Description
`Ifname`	The ADSL Interface Name
`Lofs Thresh Trap`	Loss of Framing 15-minute interval threshold reached
`Loss Thresh Trap`	Loss of Signal 15-minute interval threshold reached
`Lprs Thresh Trap`	Loss of Power 15-minute interval threshold reached
`ESs Thresh Trap`	Errored Second 15-minute interval threshold reached
`Rate Change Trap`	The ATU-Rs transmit rate has changed (RADSL mode only).

Caution   None

References   None

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2.62 ADSL ATUR Perf Commands

2.62.1 get adsl atur perf

Description   This command is used to get.

Command Syntax   `get adsl atur perf [ ifname ifname]`

Parameters

Name	Description
`ifname ifname`	The ADSL Interface Name **Type** : Get -- Optional **Valid values:** *dsl-0 - dsl-**

Example   `$ get adsl atur perf ifname dsl-0`

Output   Verbose Mode On

```
Ifname               : dsl-0
Perf Valid Intervals   : 20
Perf Invalid Intervals : 30
AturPerfStatLossL      : 14
                               PerfData   Curr15Min   Curr1Day   Prev1Day
Time Elapsed/Monitored(sec)               10          20         30
LOFS (sec)                     40         45          35         50
LOSS (sec)                     30         65          75         20
LPRS (sec)                     10         95          30         80
ES (sec)                       90         85          32         90
Perf Stat SESL                 41         48          67         65
Perf Stat UASL                 37         49          90         50
Perf Stat FecsL                11         13          19         21
```

Output Fields

FIELD	Description
`Ifname`	The ADSL interface name.
`Perf Valid Intervals`	The number of previous 15-minute intervals in the interval table, for which data was collected.
`Perf Invalid Intervals`	The number of intervals in the range of **0** to the value of **ìPerf Intervalsî**, for which no data is available.
`AtucPerfStatLossL`	Count of 1-second intervals containing one or more far end loss of signal (LOS) defects. (Not available for ADSL)
`Time Elapsed/ Monitored(sec)`	Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day.

FIELD	Description
LOFS (sec)	**Performance Data :** Count of number of Loss of Framing failures since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of Framing.
LOSS (sec)	**Performance Data :** Count of number of Loss of signal failures since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of signals.
LPRS (sec)	**Performance Data :** Count of number of Loss of power failures, since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was Loss of power.
ES (sec)	**Performance Data :** Count of number of errored seconds since agent was reset. **Curr15Min/Curr1Day/Prev1Day :** Count of errored seconds in the current 15-minute/ current 1-day/ previous 1-day interval.
Perf Stat SESL	**Performance Data :** Count of severely errored second line. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was severely errored second.
Perf Stat UASL	**Performance Data :** Count of unavailable errored seconds. **Curr15Min/Curr1Day/Prev1Day :** Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval, when there was unavailable errored seconds.
Perf Stat FecsL	**Performance Data**: Count of 1-second intervals, with one or more forward error correction (FEC) anomalies, since agent reset. (Not available for ADSL) **Curr15Min/Curr1Day/Prev1Day**: Count of 1-second intervals, in the current 15-minute/current 1-day/previous 1-day interval, with one or more forward error correction (FEC) anomalies. (Not available for ADSL)

Caution   None

References   • ADSL commands

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2.63 ADSL ATUR Interval Commands

2.63.1 get adsl atur interval

Description   This command is used to get.

Command Syntax   `get adsl atur interval ifname ifname [sintrvl sintrvl] [ nintrvl nintrvl]`

Parameters

Name	Description
`ifname` *ifname*	The ADSL interface name. **Type** : Get – Mandatory **Valid values** : *dsl-0 – dsl-*.*
`sintrvl sintrvl`	Start interval number. Performance Data Interval number 1 is the most recent previous interval; interval 96 is 24 hours ago. **Type** : Get – Optional **Valid values** : *1- 96* **Default Value :** 1
`nintrvl nintrvl`	Number of 15 minutes intervals. **Type** **:** Get -- Optional **Valid values:** *1 - 96* **Default value:** 12

Example   `$ get adsl atur interval ifname dsl-0 sintrvl 1 nintrvl 1`

Output   Verbose Mode On

```
Ifname           : dsl-0
IntervalNumber   : 1          IntervalValidData : true
IntervalLofs(sec) : 10        IntervalLoss(sec) : 10
IntervalLprs(sec) : 10        IntervalESs(sec)  : 10
IntervalSesl(sec) : 10        IntervalUasL(sec) : 10
IntervalFecsL(sec): 10
```

Output Fields

FIELD	Description
`Ifname`	The ADSL interface name.
`IntervalNumber`	Count from 1 through 96, of 15 minute intervals.
`IntervalValidData`	This indicates if the data for this interval is valid.
`IntervalLofs(sec)`	Count of seconds in the interval when there was Loss of Framing.
`IntervalLoss(sec)`	Count of seconds in the interval when there was Loss of Signal.
`IntervalLprs(sec)`	Count of seconds in the interval when there was Loss of Power.

FIELD	Description
IntervalESs(sec)	Count of Errored Seconds in the interval. The error second parameter is a count of one-second intervals containing one or more crc anomalies, or one or more los or sef defects.
IntervalSesl(sec)	Count of seconds in the interval when there was severely errored seconds.
IntervalUasL(sec)	Count of seconds in the interval when there was unavailable errored seconds.
IntervalFecsL(sec)	Count of seconds in the interval when there was Forward error correction seconds.

Caution   None

References   • ADSL commands

2.64 ADSL ATUR Chanperf Commands

2.64.1 get adsl atur chanperf

Description   This command is used to get.

Command Syntax   `get adsl atur chanperf [ ifname ifname ]`

Parameters

Name	Description
`ifname` *ifname*	The ADSL interface name. **Type** : Get – Mandatory **Valid values** : *dsli-0 – dsli-*, dslj-0 – dslj-*.*

Example   `$ get adsl atur chanperf ifname dsli-0`

Output   Verbose Mode On

```
Ifname              : dsli-0
Perf Valid Intervals   : 20
Perf Invalid Intervals : 30

                             PerfData    Curr15Min    Curr1Day    Prev1Day
Time Elapsed/Monitored(sec)     -           10           20          45
Rx Blocks                       10          45           30          89
Tx Blocks                       20          65           70          48
Corrected Blocks                25          35           35          25
Uncorrected Blocks              30          95           80          30
NCD Count                       90          86           35          20
HEC Count                       45          21           75          35
```

Output Fields

FIELD	Description
Ifname	The ADSL interface name.
Perf Valid Intervals	Number of previous 15-minute intervals, for which the data was collected.
Perf Invalid Intervals	Number of previous 15- minute intervals, for which no data is available.
Time Elapsed/ Monitored(sec)	Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day.

FIELD	Description
Rx Blocks	Performance Data : Count of all encoded blocks received on this channel, since agent was reset . Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received on this channel in the current 15 minute/ current 1 day/ previous 1 day interval.
Tx Blocks	Performance Data : Count of all encoded blocks transmitted on this Channel, since agent reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks transmitted on this channel in the current 15-minute/ current 1-day/ previous 1-day interval.
Corrected Blocks	Performance Data : Count of all encoded blocks received with corrected errors on this channel, since agent reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received with corrected errors on this channel, in the current 15 minute/ current 1 day/ previous 1 day interval.
Uncorrected Blocks	Performance Data : Count of all encoded blocks received with uncorrected errors on this channel, since agent was reset. Curr15Min/Curr1Day/Prev1Day : Count of all encoded blocks received with uncorrected errors on this channel, in the current 15 minute/ current 1 day/ previous 1 day interval.
NCD Count	Performance Data : Number of packets with NCD (No Cell Delineation) errors. Curr15Min/Curr1Day/Prev1Day : Number of packets with NCD error, received in the current 15-minute/ current 1-day/ previous 1-day interval.
HEC Count	Performance Data : Number of packets with HEC error. Curr15Min/Curr1Day/Prev1Day : Number of packets with HEC error received in the current 15 minute/ current 1 day/ previous 1 day interval.

Caution   None

References   • ADSL commands

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2.65 ADSL ATUR Chanintrvl Commands

2.65.1 get adsl atur chanintrvl

Description   This command is used to get.

Command Syntax   `get adsl atur chanintrvl  ifname ifname  [sintrvl sintrvl] [ nintrvl nintrvl]`

Parameters

Name	Description
`ifname ifname`	The ADSL interface name. **Type** : Get – Mandatory **Valid values** : *dsli-0 – dsli-*, dslj-0 – dslj- *.*
`sintrvl sintrvl`	Start interval number. Performance Data Interval number 1 is the most recent previous interval; interval 96 is 24 hours ago. **Type** : Get – Optional **Valid values** : *1- 96* **Default Value :** 1
`nintrvl nintrvl`	Number of 15 minutes intervals. **Type** **:** Get -- Optional **Valid values:** *1 - 96* **Default value:** 12

Example   `$ get adsl atur chanintrvl ifname dsli-0 nintrvl 1`

Output   Verbose Mode On

```
Ifname             : dsli-0     IntervalNumber     : 1
Rx Blocks          : 10         Tx Blocks          : 10
Corrected Blocks   : 10         Uncorrected Blocks : 10
GsNoCellDelineation : 10        GsHeaderErrorCheck : 10
Valid Data         : true
```

Output Fields

FIELD	Description
`Ifname`	The ADSL interface name
`IntervalNumber`	Count from 1 through 96, of 15 minute intervals.
`Rx Blocks`	Count of all encoded blocks received on this channel, during this interval.
`Tx Blocks`	Count of all encoded blocks transmitted on this channel, during this interval.
`Corrected Blocks`	Count of all encoded blocks received with errors that were corrected on this channel, during this interval.

FIELD	Description
Uncorrected Blocks	Count of all encoded blocks received with errors that cannot be corrected, on this channel, during this interval.
GsNoCellDelineation	Conexant parameter. Count of no cell delineation (NCD) on this channel, during this interval.
GsHeaderErrorCheck	Conexant parameter. Header error check counter (HEC) on this channel, during this interval.
Valid Data	This indicates if the data for this interval is valid.

Caution   None

References   • ADSL commands

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2.66 System Configuration Save And Restore Commands

2.66.1 commit

Description	Use this command to commit the active configuration to the flash.
Command Syntax	*commit*
Parameters	None
Example	*$ commit*
Output	Set Done
Caution	This command will take some time to execute.
References	• reboot command
	• download command.

2.66.2 reboot

Description   Use this command to reboot the system and to set the boot configuration.

Command Syntax   *reboot [control <nvram/network>] [dataplane <nvram/network>]*
[config <network | default | last | backup | clean | minimum | safe >]

Parameters

Name	Description
control **<nvram/network>**	This specifies whether the control plane binaries are to be fetched from the network or the binaries already present in NVRAM are to be used. **Type :** Optional **Default value:** Binary present in NVRAM.

Name	Description
dataplane **<nvram/network>**	This specifies whether the data plane binaries are to be fetched from the network or the binaries already present in NVRAM are to be used. **Type:** Optional **Default value:** Binaries present in NVRAM.
config **<network/default/last/ba ckup/clean/minimum/safe>**	This specifies the boot configuration – the *last/backup/clean/minimum/safe>* source, from which to boot up. The boot configuration is set to *last* automatically, whenever a *commit* command is given. The boot configuration being an optional parameter, if it is not specified, it retains the previous value. So giving *reboot* after a *commit* will result in a reboot from the committed configuration. *Defaul*t: Use Default factory configuration while booting up. *Backu*p: Use the Backup configuration to boot the system. *Last* : Use last committed configuration to boot the system. *Minimum:* Use a configuration in which: • the size command is executed. • the user (login name and password as root) is created. • an Ethernet interface with IP address 192.168.1.1 mask 255.255.0.0 is created. *Clean:* The system comes up with nothing configured. *Network:* The system fetches the default configuration file from the remote host and system comes up with this default configuration. *Safe:* The system comes up with safe configuration. **Type:** Optional **Default value:** If a reboot is being given for the first time, then the default value is *defaul*t. Otherwise, the default value is the same as what was given the last time.

Mode   Super-User.

Example   *$ reboot*

Output   None

Output Fields   None

Caution   None.

References   • commit command.

2.67 System Control Table Commands

2.67.1 create user

Description   Use this command to create a user account. A maximum two accounts can exist.

Command Syntax   `create user name user-name passwd password [root | user]`

2.67.2 delete user

Description   Use this command to delete a user login.

Command Syntax   `delete user name user-name`

2.67.3 get user

Description   Use this command to display information of all the users. Password information is not displayed.

Command Syntax   `get user`

Parameters

Name	Description
`Name user-name`	This specifies the User Name to be created. **Type:** Mandatory **Valid values:** String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ";"
`passwd password`	This specifies the password required by this user to login to the unit. **Type** : Mandatory **Valid values:** String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ";".
`Root|user`	This indicates the privilege level of the user. **Type** : Optional **Default value:** *user*

Example   `$ create user name user1 passwd temp1 user`

Output   Verbose Mode On

```
Entry Created

Privilege      UserName
---------------------
user           user1
```
Verbose Mode Off

```
Entry Created
```

Output Fields

FIELD	Description
UserName	This shows the new user login, which has been created.
Privilege	This represents the privilege level associated with the user name shown. It may be: *user, root*

Caution None.

References
- delete user command.
- get user command
- passwd related commands.

2.67.4 passwd

Description Use this command to change the password associated with a user login. An ordinary user may change the password for another user if he knows the old password. However, the root does not need to know a user's existing password before changing it. The passwords are not echoed on to the screen.

Command Syntax *passwd [name]*

Parameters

Name	Description
name	The id of the user whose password is to be changed. If not specified then the current user is assumed. **Type:** Mandatory, if user is logged in through serial port and user authentication is disabled through serial port. Otherwise, Optional. **Valid values:** String of up to 64 characters (All printable characters except ';')

Mode Super-User, User.

Example Normal Usage

```
$passwd
Old Password:
New Password:
Confirm New Password:
Set Done.
```

Super User (for ordinary user)

```
$passwd User1
Enter New Password:
Confirm New Password:
Set Done.
```

Output None

Caution   None.

References   • user command

2.68 System Info Commands

2.68.1 get system info

Description   This command to get system parameters.

Command Syntax   `get system info`

2.68.2 modify system info

Description   Use this command to modify the system parameters.

Command Syntax   `modify system info [contact` sys-contact `] [name` sys-name `] [location` sys-location `] [vendor` sys-vendor-info `] [logthresh` sys-log-threshold `] [systime` systime `] [dst` <on |off>`] [ timezone` <timezone> `]`

Parameters

Name	Description
`contact sys-contact`	This contains the textual identification of the contact person for this modem, together with information on how to contact this person **Type** **:** Optional **Valid values:** String of up to 63 ASCII Characters
`name sys-name`	This specifies the name of the modem **Type** **:** Optional **Valid values:** String of up to 63 ASCII Characters
`Location sys-location`	This specifies the physical location of this modem **Type** **:** Optional **Valid values:** String of up to 63 ASCII Characters
`vendor sys-vendor-info`	This contains the vendor-specific information **Type** **:** Optional **Valid values:** String of up to 63 ASCII Characters
`logthresh sys-log-threshold`	This specifies the severity level of the trap equal to or lower than that shall be logged. 1 is the lowest and represents critical traps. **Type:** Optional **Valid values:** *1-4*
`Systime systime`	This specifies the current system time. **Type:** Optional **Valid values:** System Time String in format. The total string length must be 20 characters. Single digits should be prepended with a `0', e.g. `1' should be given as `01' mon dd hh:mm:ss year e.g. "Feb 01 21:20:10 2001"

Name	Description
dst <on | off>	This specifies if the Daylight Savings Time has been enabled or not. **Type:** Optional **Valid values:** on|off

Name	Description
timezone <timezone>	Time zone **Type:** Optional **Valid values:** Given below, are the valid values within ì ì, followed by their descriptions. "IDLW" - International Date Line West "NT" - Nome "HST" - Hawaii Standard ìCAT" - Central Alaska "AHST"- Alaska-Hawaii Standard "YST" - Yukon Standard "PST"- US Pacific Standard "MST"- US Mountain Standard "CST"- US Central Standard "EST"- US Eastern Standard "AST"- Atlantic Standard "NFST"- Newfoundland Standard "NFT"- Newfoundland "BRST"-Brazil Standard "AT"- Azores ìWAT" - West Africa "GMT" - Greenwich Mean "UTC" - Universal (Coordinated) "WET" - Western European "CET" - Central European "FWT" - French Winter "MET" - Middle European "MEWT" - Middle European Winter "SWT" - Swedish Winter "EET" - Eastern Europe, Russia Zone 1 "IST" - Israeli Standard "BT" - Baghdad, Russia Zone 2 "IT" - Iran "ZP4" - "Russia Zone 3" "ZP5" - "Russia Zone 4" "INST" - "Indian Standard" "ZP6" - "Russia Zone 5" "NST" - "North Sumatra" "WAST" - West Australian Standard "SSMT" - South Sumatra, Russia Zone 6 "JT" - Java "CCT" - China Coast, Russia Zone 7 "ROK" - Korean Standard "KST" - Korean Standard "JST" - Japan Standard, Russia Zone 8 "CAST" - Central Australian Standard "EAST" - Eastern Australian Standard "GST" - Guam Standard, Russia Zone 9 "IDLE" - International Date Line East "NZST" - New Zealand Standard "NZT" - New Zealand Example: ìIDLWî , that stands for International Date Line West

Example   *$ get system info*

Output   Verbose Mode On

```
Description        : Columbia
Name               : conexant.com
Location           : Conexant Systems, Inc.,100 Schulz Drive,
                     RedBank,NJ 07701,U.S.A
Contact            : Conexant Systems, Inc.,100 Schulz Drive,
                     RedBank,NJ 07701,U.S.A
Vendor             : Conexant Systems, Inc.,100 Schulz Drive,
                     RedBank,NJ 07701,U.S.A
LogThreshold       : 0
Object-id          : 1.3.6.1.4.1.200
Up Time(HH:MM:SS) : 5:2:0
HwVersion          : c023b6d3
CPSwVersion        : COL2.6.3.0.040707
DPSwVersion        :
System Time        : Thu Jan 01 05:02:00 1970
Time Zone          : GMT
DST                : off
Services           : physical datalink internet end-to-end applications
```

Output Fields

Field	Description
Description	This is a textual description of the entity.
Name	This specifies the name of the system.
Location	This specifies the physical location of this node.
Contact	This shows the textual identification of the contact person for this managed node, together with the information on how to contact this person.
Vendor	This shows the vendor-specific information.
LogThreshold	This specifies the severity level of the trap equal to or lower than that shall be logged. 1 is the lowest and represents critical traps.
Object-id	This shows the vendor's authoritative identification of the network management subsystem contained in the entity.
Up Time	This specifies the time in seconds since the system is up.
HwVersion	This specifies the hardware and firmware version of the system.
CPSwVersion	This specifies the software version of the CP.
DPSwVersion	This specifies the software version of the DP.
System Time	This shows the current system time.
Time Zone	This specifies the time zone that has been set on the modem.

Field	Description
DST	This specifies whether Daylight Saving Time has been enabled or not.
Services	This specifies the functionality provided by this node. These may be: physical, datalink, internet, end-to-end, or applications.

Caution   None

References
- Get/modify nbsize
- Get system stats

2.68.3 get rmon idletime

Description   Use this command to display a list of idle time records.

Command Syntax   *get rmon idletime [numentries numentries]*

Parameters

Name	Description
Numentries numentries	This specifies last *numentries* idle time records to be displayed **Type**: Optional **Valid values** : *1 to GS_CFG_MAX_IDLE_TIME_RECORDS* **Default** : 10

Mode   Super-User, User

Example   *$ get rmon idletime numentries 1*

Output

```
$get rmon idletime  numentries 1


Start  Time              End Time             Total   Idle    Util %

                                              Time    Time

-------------------------------------------------------------------------

Thu Jan 1 12:34:51 1970   Thu Jan 1 12:35:00 1970  10s     7s      30
```

Output Fields

FIELD	Description
Start Time	This specifies the starting time of the period for which the idle time was recorded
End Time	This specifies the end time of the period for which the idle time was recorded
Total Time	This specifies the total time (in seconds) elapsed in this period.
Idle Time	This specifies the time (in seconds) for which the system was idle during this period.
Util %	This specifies the Utilization (in percentage) of the system during this period

Caution None.

References None

2.69 System manuf info Commands

2.69.1 get system manuf info

Description	This command is used to display manufacturing text information in the system.
Command Syntax	`get system manuf info`
Parameters	None
Mode	Super-User, User
Example	`$ get system manuf info`

Output

```
$get system manuf info

CpeUtopiaMode          : Tx 16 Bit Rx 8 Bit
NetUtopiaMode          : Tx 16 Bit Rx 8 Bit
CpeUtopiaMaster        : True      NetUtopiaMaster        : False
MaxEthMacPhy           : 2         ColumbiaIdSel          : 18
CpeUtopiaFreq          : 40 MHz
Eth Speed              : 100 Mbps

S.No  |  SelfMacAddr       |  EthPortIdSel |   EthType
---------------------------------------------------
1     | 00:BB:CC:DD:EE:FF  |  16           |   Data    Mgmt
2     | 00:BB:CC:DD:EE:FE  |  17           |   Data    Mgmt

Dsl manuf Text Info
--------------------
Num of LBRams          : 2         Num of Chips           : 2
Num of Ports           : 24        Interface Type         : Host Bus
Chip Type              : G24
Serial Number          : <co-0123456>
Vendor Id              : FFBSGSPN
Version Number         : Z3219

Chip No    Base Addr      LBRam
------------------------------
1          0x84a00000       0
2          0x84a00c00       1

Logical To Physical Port Mapping
-------------------------------
[  0 - 7  ]     0    1    2    3    4    5    6    7
[  8 - 15 ]     8    9    10   11   12   13   14   15
[ 16 - 23 ]     16   17   18   19   20   21   22   23
[ 24 - 31 ]     24   25   26   27   28   29   30   31
[ 32 - 39 ]     32   33   34   35   36   37   38   39
[ 40 - 47 ]     40   41   42   43   44   45   46   47

UART manuf Text Info
--------------------

Num of UARTs           : 1

HSSL Port Id           : 1         Baud Rate              : 9600
Data Bits              : 8         Stop Bit               : 2
Parity                 : Even      UART Mode              : Polling
Application Type       : Console
      $
      $
```

Output Fields

FIELD	Description
CpeUtopiaMode	Mode of operation of CPE side Utopia interface
NetUtopiaMode	Mode of operation of NET side Utopia interface
CpeUtopiaMaster	This specifies whether CPE side Utopia interface is master
NetUtopiaMaster	This specifies whether NET side Utopia interface is master
MaxEthMacPhy	This specifies the maximum number of MACs that can be configured
ColumbiaIdSel	Specifies the address bit in the PCI bus, which is connected to IDSEL pin of the Columbia
CpeUtopiaFreq	CPE Frequency for Utopia Interface
Eth Speed	This specifies the speed of operation. Supported speeds are – 10 Mbps, 100 Mbps, 1000 Mbps. It is a bitmask.
SelfMacAddr	This specifies the self MAC address
EthPortIdSel	This specifies the address bit in the PCI bus, which is connected to IDSEL pin of the Ethernet device
EthType	This specifies the Defines the ethernet types – data , mgmt, or both. It is a bitmask.
Num of LBRams	This specifies the number of LBRams in the system.
Num of Chips	This specifies the number of Chips in the system.
Num of Ports	This specifies the number of Ports per Chip in the system.
Interface Type	This specifies the InterfaceType. Following are the values it can take – Host Bus, PCI, Utopia
Chip Type	This specifies the Type of Chip – G24, G16, Octane.
Serial Number	This specifies the vendor specific string that identifies the vendor equipment .
Vendor Id	This specifies the binary vendor identification field.
Version Number	This specifies the vendor specific version number sent by this ATU as part of the initialization message
Base Addr	This specifies the base address of the chip.
LBRam	This specifies the LBRam associated with the chip
Logical To Physical Port Mapping	This specifies the Logical To Physical Port Mapping.
No of UARTs	This specifies the number of UARTs configured.
HSSL Port Id	This specifies the HSSL port to be used for UART.

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FIELD	Description
Baud Rate	This specifies the Baud Rate of the port
Data Bits	This specifies the number of data bits to be used
Stop Bit	This specifies the stop bits used on HSSL – 1, 2, 1.5
Parity	This specifies the parity used on HSSL – even, odd, none
UART Mode	This specifies the UART Mode – polling, interrupt based
Application Type	This specifies the application name using this UART.

Caution   None.

References   None

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2.70 System crash info commands

2.70.1 get system crash info

Description   This command is used to display a list of crashes that were encountered by the system.

Command Syntax   `get system crash info [numentries numentries]`

Parameters

Name	Description
Numentries numentries	This specifies the last *<numentries>* number of crashes encountered in the system. **Type**: Optional **Valid values**: 1 to 128 **Default** : 1

Mode   Super-User, User

Example   `$ get system crash info numentries 1`

Output
```
Crash Id        : 1            Crash IU          : 0
Time of Crash   : Thu Jan 01 00:00:25 1970
Crash Cause     : CP crashed after DP Init

PSR Reg         : 0x940060de  Wim Reg           : 0x0
PC              : 0x474204c   nPC               : 0x4742050
Y Reg MSW       : 0x0         Y Reg LSW         : 0x491f699
Trap Num        : 0x92        Trap Base Reg     : 0x4602920
Fault Status Reg : 0x14       Double Fault Reg  : 0x9e0
IER             : 0x2000

Alternate Window # 0x1f
Reg#:Local      :  In        |Reg#:Local      :  In       |
 0  : 0x1       : 0x0        | 1  : 0x2       : 0x0
 2  : 0x3       : 0x0        | 3  : 0x4       : 0x0
 4  : 0x5       : 0x0        | 5  : 0x6       : 0x0
 6  : 0x7       : 0x0        | 7  : 0x7       : 0x0

 .
 .
 .
 .
 .
 .
 .
 .


Alternate Window # 0x18
Reg#:Local      :  In        |Reg#:Local      :  In       |
 0  : 0x0       : 0x0        | 1  : 0x0       : 0x0
 2  : 0x0       : 0x0        | 3  : 0x0       : 0x0
 4  : 0x0       : 0x0        | 5  : 0x0       : 0x0
 6  : 0x0       : 0x0        | 7  : 0x0       : 0x0

Current Standard Window Dump
Registers :   Global    :    Out      :   Local     :    In
 0        : 0x0         : 0x5848940   : 0x5844e34   : 0x5848940
 1        : 0x940060e9  : 0x4d13d7a   : 0x3b1a      : 0x4d13d78
```

```
2        : 0x7         : 0x4741fd4   : 0x3800       : 0x2000000
3        : 0x18        : 0x8         : 0x3b18       : 0x4d13d78
4        : 0x0         : 0x4d13d80   : 0x5844e34    : 0x4d13d80
5        : 0x2050044c  : 0x3b17      : 0x5854d0d    : 0x3b14
6        : 0x58f3c00   : 0x4d13c18   : 0x1          : 0x4d13c90
7        : 0x0         : 0x471073c   : 0x3b1c       : 0x4700f28


CCP Register Dump
CCSR Register        : 0x1a2a4021   CCCRC Register       : 0x1ffffbbd
CCPR Register        : 0xa2aabdfc
CCIR Register        : 0xbabfbfe1   CCIBR Register       : 0x3fd1ed7f
CCOBR Register       : 0x44208200   CCOR Register        : 0x9bb2eecc


Stack at the time of the Crash
StackDepth : CallAddress : Return Address: Frame Ptr  :StackPtr
8          : 0x48ea65c   : 0x471073c    :0x4d13c18   :   0x4951e60
7          : 0x471073c   : 0x4700f28    :0x4d13c90   :   0x4d13c18
6          : 0x4700f28   : 0x46eab20    :0x4d13d10   :   0x4d13c90
5          : 0x46eab20   : 0x46ea25c    :0x4d14360   :   0x4d13d10
4          : 0x46ea25c   : 0x46e9d20    :0x4d143e8   :   0x4d14360
3          : 0x46e9d20   : 0x48e356c    :0x4d144f0   :   0x4d143e8
```

Output Fields

FIELD	Description
Crash Id	The crash number.
Crash IU	The internal processor number.
Time of Crash	This specifies the time of the crash.
Crash Cause	This specifies the crash cause. Following are the possible causes: *- Ctrl Transfer To CP Failed* *- Crash in CP self processing* *- DP Init Failure* *- CP crashed after DP Init* *- DP crashed after DP Init* *- DP internal Failure* *- System in Loop* *- Crash in DP Processing*
PSR Reg	This specifies the value of the processor state register at the time of the crash.
Wim Reg	The window invalid mask register.
PC	This specifies the value of the program counter at the time of the crash.
nPC	This specifies the value of the next program counter at the time of the crash.
Y Reg MSW	This specifies the value of MSW of the Y Register at the time of the crash.
Y Reg LSW	This specifies the value of LSW of the Y Register at the time of the crash.
Trap Num	This specifies the number of traps that caused the crash.

FIELD	Description
`Trap Base Reg`	This specifies the value of the Trap Base register at the time of the crash.
`Fault Status Reg`	This specifies the value of the Fault Status Register at the time of the crash.
`Double Fault Reg`	This specifies the value of the Double Fault Register at the time of the crash.
`IER`	This specifies the value of the Implementation Extension Register at the time of the crash.
`Alternate Window - Reg# Local`	For crashes involving Alternate Windows, this capture specifies all local register for Alternate Windows # 24 to 31 (0x1f to 0x18).
`Alternate Window - Reg# In`	For crashes involving Alternate Windows, this capture specifies all input register for Alternate Windows # 24 to 31(0x1f to 0x18).
`Current Standard Window Dump - Registers - Global`	The Sparclet Global register.
`Current Standard Window Dump - Registers - Out`	The output registers of the specified Sparclet Window.
`Current Standard Window Dump - Registers - Local`	The local registers of the specified Sparclet Window.
`Current Standard Window Dump - Registers - In`	The input registers of the specified Sparclet Window.
`CCSR Register`	The CCP Status register.
`CCCRC Register`	The CCP CRC register.
`CCPR Register`	The CCP Polynomial register.
`CCIR Register`	The CCP InReg register.
`CCIBR Register`	The CCP InBuf register.
`CCOBR Register`	The CCP OutBuf register.
`CCOR Register`	The CCP OutReg register.
`Stack at the time of the Crash - StackDepth - CallAddress`	The callee function address.
`Stack at the time of the Crash - StackDepth - Return Address`	The return address back to the caller function.

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FIELD	Description
Stack at the time of the Crash - StackDepth - Frame Ptr	The frame pointer at the time of the call.
Stack at the time of the Crash - StackDepth - StackPtr	The stack pointer at the time of the call.

Caution   None.

References   None.

2.71 System version commands

2.71.1 get system version

Description This command is used to get the information of the versions with which the system has come up.

Command Syntax *get system version*

Parameters None

Example *$ get system version*

Output Verbose Mode On

```
Control Plane Binary  : COL 2.6.0.0.040217
Data Plane Binary     : DP_B02_06_19
```

Output Fields

FIELD	Description
Control Plane Binary	This tells about the version of the control plane binary with which the system has come up.
Data Plane Binary	This tells about the version of the data plane binary with which the system has come up.

Caution None

References None.

2.72 System reboot info command

2.72.1 get system reboot info

Description   This command is used for displaying a list of reboot failures that were encountered when the system was trying to come up.

Command Syntax   `get system reboot info [numentries]`

Parameters

Name	Description
`numentries`	This specifies the last <numentries> number of reboot failures recorded in the system. **Type**: Optional **Valid values** : *1 to 100* **Default** : 1

Example   `$ get system reboot info numentries 1`

Output   Verbose Mode On

```
CP Bin Version     : 1.6
DP Bin Version     : 1.8
Time of Reboot     : Thu Jan 2 12:34:56 1970
Reboot Failure Cause : DP Init Failure
Reboot Type        : Secondary CFG
```

Output Fields

FIELD	Description
`Control Plane Version`	The control Plane Version with which the system could not come up.
`Data Plane Version`	The data Plane Version with which the system could not come up.
`Time of Reboot`	Time at which the reboot failure occurred.

FIELD	Description
Type of Reboot	Its tells the type of reboot with which the system is trying to come up. The various possible values are :- Last, Back Up, Default, Minimum, Clean.
Failure Cause	This tells the various causes of failure that system encountered while rebooting. It can be :- Sdram CP Decompress failed Nvram CP Decompress failed Sdram DP Decompress failed Nvram DP Decompress failed DP Init Failure Nvm CP Nvm DP CI Mismatch Nvm CP Sdram DP CI Mismatch Sdram CP Nvm DP CI Mismatch Sdram CP Sdram DP CI Mismatch Sdram CP All DP CI Mismatch Nvm CP All DP CI Mismatch Applying Last cfg failed Applying BackUp cfg failed Applying Min cfg failed Applying Nvm FD failed Applying Sdram FD failed Nvm CP Last CFG CI Mismatch Nvm CP Backup CFG CI Mismatch Sdram CP Last CFG CI Mismatch Sdram CP Backup CFG CI Mismatch NVRAM CP had invalid sign SDRAM CP had invalid sign Control Plane wrongly linked CP mem req exceeds limit Applying Clean cfg Failed

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2.73 System Size Commands

2.73.1 get nbsize

Description   Use this command to view System Sizing parameters available on next boot.

Command Syntax   `get nbsize`

2.73.2 modify nbsize

Description   Use this command to modify System Sizing parameters available on next boot.

Command Syntax
```
modify nbsize [maxatmport max-atm-port] [maxvcperport max-vcper-
port] [maxvc max-vc] [maxatmoam max-atm-oam-activities] [maxrmon
max-rmon] [maxnumethprioQs maxnumethprioQs] [maxmulticast max-
multicast][maxmac max-mac] [maxhashbuck max-hash-bucket] [
maxnumvlan max-num-vlans] [maxvlanidval maxvlanidval
][maxnumacentry maxnummacentry] [devcap devcap] [maxnumeoaprioQs
maxnumeoaprioQs] [bridgingmode bridgingmode ] [maxhpriotreenodes
maxhpriotreenodes] [maxlpriotreenodes  maxlpriotreenodes] [
maxClfrTrees maxClfrTrees ] [maxClfrProfiles maxClfrProfiles ]

[maxinrules maxinrules] [maxoutrules maxoutrules]
[maxinhpriosubrules maxinhpriosubrules] [maxinlpriosubrules
maxinlpriosubrules] [maxouthpriosubrules maxouthpriosubrules]
[maxoutlpriosubrules maxoutlpriosubrules] [mcastcap ivmcapable |
svmcapable | none] [maxnumac maxnumac] [maxnumsrcmac maxnumsrcmac]
```

Parameters

Name	Description
`maxatmport max-atm-port`	Maximum number of ATM ports. **Type**: Modify – Optional **Valid values** : *1- GS_CFG_MAX_ATM_PORT.*
`maxvcperport max-vc-per-port`	Maximum number of VCs possible per ATM port. **Type**: Modify – Optional **Valid values** : *1- GS_CFG_MAX_ATM_VC_PER_PORT.*
`maxvc max-vc`	Maximum number of VCs possible in the system. **Type**: Modify – *Optional* **Valid values** *: 1 – (GS_CFG_MAX_ATM_PORT * GS_CFG_MAX_ATM_VC_PER_PORT)*
`maxatmoam max-atm-oam-activities`	Maximum number of OAM activities that can be active at a time. **Type**: Modify – Optional **Valid values** : *1 – GS_CFG_MAX_OAM_ACT*

Name	Description
`maxrmon max-rmon`	Maximum number RMON probes that can be applied simultaneously in the system. **Type**: Modify – Optional **Valid values** : *1 - GS_CFG_MAX_RMON_PROBES*
`Maxnumethprioq̃s` `maxnumethprioq̃s`	This specifies the max number of priority queues that can be configured on a bridge port created over an ethernet interface. **Type**: Modify – Optional **Valid values** : *1 – GS_CFG_MAX_ETH_PRIO*
`maxmulticast max-` `multicast`	Maximum number of multicast groups that can be configured in the system. **Type**: Modify – Optional **Valid values** : *1 – GS_CFG_MAX_MCAST_GROUPS*
`maxmac max-mac`	Maximum number of MAC addresses that can be learned by the system. This should be multiples of 32. **Type**: Modify – Optional **Valid values** : *1 – GS_CFG_MAX_MAC_ADDRS*
`maxhashbuck max-hash-` `bucket`	Maximum number of hash buckets for the Forwarding table. This value should be a power of 2. (1, 2, 4, 8 ,...) **Type**: Modify – Optional **Valid values** : *1 - GS_CFG_MAX_HASH_BKTS*
`maxnumvlan  max-num-` `vlans`	This specifies the maximum number of Vlans Supported. **Type**: Modify – Optional **Valid values** : *1 - GS_CFG_MAX_VLAN*
`maxvlanidval max-vlan-` `id-val`	This specifies the maximum value of Vlan Id that a bridge can support. **Type**: Modify – Optional **Valid values** : *1 - GS_CFG_MAX_ VLAN_ID*
`maxnumacentry max-num-` `mac-entry`	This specifies the maximum number of Static Ucast Entries Supported. **Type**: Modify – Optional **Valid values** : *1 – GS_CFG_MAX_STATIC_ENTRIES*
`devcap devcap`	This specifies the capabilities of the device. **Type**: Modify – Optional **Valid values** : IVL, SVL, none
`maxnumeoaprioq̃s` `maxnumeoaprioq̃s`	This specifies the max number of priority queues that can be configured on a bridge port created on EOA interface **Typ**e: Modify – Optional **Valid values** : *1 –* GS_CFG_MAX_EOA_PRIO_QUEUES

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Name	Description
bridgingmode *bridgingmode*	This specifies the state of full bridging on the bridge. Value residential specifies that packets coming from CPE side would be forwarded to the net side port without a lookup. In case of restricted bridging, the packets would undergo a lookup and if the destination is another CPE port, the packet would be dropped, i.e. CPE to CPE traffic is not allowed. Unrestricted bridging is forwarding based on lookup in all cases. **Type:** Modify – Optional **Valid values :** residential, restricted, unrestricted
maxhpriotreenodes *maxhpriotreenodes*	Maximum number of classifier tree nodes of high access priority that can be created. **Type** **:** Modify - Optional **Valid values :** 1-GS_CFG_MAX_CLFR_TREE_NODE_MPRIO
maxlpriotreenodes *maxlpriotreenodes*	Maximum number of classifier tree nodes of low access priority that can be created. **Type** **:** Modify - Optional **Valid values :** 1-GS_CFG_MAX_CLFR_TREE_NODE_LPRI
maxClfrTrees *maxClfrTrees*	Maximum number of classifier trees that can be created **Typ**e: Modify – Optional **Valid values** : $1 -$ GS_CFG_MAX_CLFR_TREE
maxClfrProfiles *maxClfrProfiles*	Maximum number of classifier profiles that can be created **Typ**e: Modify – Optional **Valid values** : $1 -$ GS_CFG_MAX_CLFR_PROFILES
maxinrules maxinrules	Maximum number of generic filter ingress rules that can be created. **Type:** Modify - Optional **Valid values :** *1-GS_CFG_MAX_GFLTR_RULES_INGRESS*
maxoutrules maxoutrules	Maximum number of generic filter egress rules that can be created. **Type:** Modify - Optional **Valid values :** *1-GS_CFG_MAX_GFLTR_RULES_EGRESS*
maxinhpriosubrules *maxinhpriosubrules*	Maximum number of generic filter ingress subrules of high access priority that can be created. **Type:** Modify - Optional **Valid values :** 1-GS_CFG_MAX_GFLTR_SUBRULES_INGRESS_MPRIO

Name	Description
maxinlpriosubrules *maxinlpriosubrules*	Maximum number of generic filter ingress subrules of low access priority that can be created. **Type:** Modify - Optional **Valid values :** *1-GS_CFG_MAX_GFLTR_SUBRULES_INGRESS_LPRIO*
maxouthpriosubrules *maxouthpriosubrules*	Maximum number of generic filter egress subrules of high access priority that can be created. **Type:** Modify - Optional **Valid values :** *1-GS_CFG_MAX_GFLTR_SUBRULES_EGRESS_MPRIO*
maxoutlpriosubrules *maxoutlpriosubrules*	Maximum number of generic filter egress subrules of low access priority that can be created. **Type:** Modify - Optional **Valid values :** 1-*GS_CFG_MAX_GFLTR_SUBRULES_EGRESS_LPRIO*
mcastcap ivmcapable | *svmcapable | none*	It denotes the Multicast Device Capability **Type**: Modify – Optional **Valid values** : ivmcapable, svmcapable
Maxnumac maxnumac	It denotes the maximum number of Access Concentrators supported. **Type**: Modify -- Optional **Valid values**: GS_CFG_MIN_NUM_AC_SUPPORTED - GS_CFG_MAX_NUM_AC_SUPPORTED
Maxnumsrcmac *maxnumsrcmac*	It denotes the maximum number of Source MAC addresses that can be used across the different PPPoE interfaces. **Type**: Modify -- Optional **Valid values**: GS_CFG_MIN_NUM_SRCMAC_SUPP ORTED - GS_CFG_MAX_NUM_SRCMAC_SUPP ORTED

Example *$ get nbsize*

Output Verbose Mode On

```
Max ATM Ports          : 48        Max VC per Port          : 8
Max VCs                : 384       Max OAM activities       : 10
Max RMON probes        : 20        Bridging Mode            : Residential
Max Multicast groups   : 256       Max MAC addresses        : 4000
Max Hash buckets       : 8192      Max Vlans                : 512
Max VlanId Value       : 4095      Max num Static Mac Entries: 512
Dev Capabilities       : IVL Tagging
Max Num EOA Prio Qs     : 4        Max Num Eth Prio Qs      : 8
Max High Prio Tree Nodes : 128     Max Low Prio Tree Nodes   : 512
Max Clfr Trees         : 63        Max Clfr Profiles        : 127
Max In Rules           : 275       Max Out Rules            : 25
Max In HighPrio SubRules : 75      Max In LowPrio  SubRules  : 425
Max Out HighPrio SubRules: 25      Max Out LowPrio  SubRules : 175
Mcast Capabilities     : ivmcapable   Max Access Concentrators  : 8
Max PPPOE Src MAC      : 8
```

Output Fields

FIELD	Description
Max ATM Ports	Maximum number of ATM ports.
Max VC per Port	Maximum number of VCs possible per ATM port.
Max VCs	Maximum number of VCs possible in the system.
Max OAM activities	Maximum number of OAM activities that are active at a time.
Max RMON probes	Maximum number RMON probes that can be applied simultaneously in the system.
Bridging Mode	This specifies the state of full bridging on the bridge. Value 'residential' specifies that packets coming from the CPE side would be forwarded to the net side port without a lookup. In case of 'restricted' bridging, the packets would undergo a lookup and if the destination is another CPE port, the packet would be dropped, i.e. CPE to CPE traffic is not allowed. 'Unrestricted' bridging is forwarding based on lookup in all cases.
Max Multicast groups	Maximum number of multicast groups that are configured in the system.
Max MAC addresses	Maximum number of MAC addresses that are learned by the system.
Max Hash buckets	Maximum number of hash buckets for the Forwarding table. This value should be a power of 2. (1, 2, 4, 8 ,...)
Max VLANs	Maximum number of Vlans supported.
Max VlanId Value	Maximum value of VLANID that the bridge can support.
Max Num Static MacEntries	Maximum number of static Unicast entries.
Dev Capabilities	Device capabilities of the bridge.
Max Num EOA Prio Qs	This specifies the max number of priority queues that can be configured on a bridge port created on the EOA interface.
Max Num Eth Prio Qs	This specifies the max number of priority queuesthat can be configured on a bridge port created overan ethernet interface.
Max High Prio Tree Nodes	Maximum number of classifier tree nodes of high access priority that can be created.
Max Low Prio Tree Nodes	Maximum number of classifier tree nodes of low access priority that can be created.
Max Clfr Trees	Maximum number of classifier trees that can be created.

FIELD	Description
Max Clfr Profiles	Maximum number of classifier profiles that can be created.
Max In Rules	Maximum number of generic filter ingress rules that can be created.
Max Out Rules	Maximum number of generic filter egress rules that can be created.
Max In HighPrio SubRules	Maximum number of generic filter ingress subrules of high access priority that can be created.
Max In LowPrio SubRules	Maximum number of generic filter ingress subrules of low access priority that can be created.
Max Out HighPrio SubRules	Maximum number of generic filter egress subrules of high access priority that can be created.
Max Out LowPrio SubRules	Maximum number of generic filter egress subrules of low access priority that can be created.
Mcast Capabilities	It denotes the Multicast Device Capability.
Max Access Concentrators	It denotes the maximum number of Access Concentrators supported.
Max PPPOE Src MAC	It denotes the maximum number of Source MAC addresses that can be used across the different PPPoE interfaces.

Caution   None

References
- get/modify system info
- get system stats.

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2.74 System Stats Commands

2.74.1 get system stats

Description   Use this command to view System Statistics.

Command Syntax   *get system stats*

2.74.2 reset system stats

Description   Use this command to reset System Statistics.

Command Syntax   *reset system stats*

Parameters   None

Example   *$ get system stats*

Output   Verbose Mode On

```
CPE Ucast Addr Count      : 10      DnLink Ucast Addr Count  : 80
NET Ucast Addr Count      : 20      CPE Learn Entry Discards : 90
DnLink Learn Entry Discards : 30    NET Learn Entry Discards : 100
Dyn Addr Conflicts Static : 40      Moved Dyn Addrs Count    : 110
Ucast Lookup Fail Count   : 50      Mcast Lookup Fail Count  : 120
Tx Ctl Pkts Count         : 60      Rx Ctl Pkts Count        : 130
Ctl Pkts Discards Count   : 70
PPPOE Session Look Up Failures: 5
```

Output Fields

FIELD	Description
CPE Ucast Addr Count	Number of unicast addresses, which were learned from the CPE ports.
DnLink Ucast Addr Count	Number of unicast addresses which were learned from the Downlink port.
Learn Entry Discards	Number of addresses that were not learned from the CPE ports, due to any reason.
DnLink Learn Entry Discards	Number of addresses that were not learned from the Downlink ports, due to any reason.
Dyn Addr Conflicts Static	Number of times a learned address conflicted with a static address.
Moved Dyn Addrs Count	Number of times a learned address moved from one port to another.
Ucast Lookup Fail Count	Number of times Unicast address lookup failed.
Mcast Lookup Fail Count	Number of times Multicast address lookup failed.
Tx Ctl Pkts Count	Number of packets sent to the Control module.

FIELD	Description
Rx Ctl Pkts Count	Number of packets received from Control module.
Ctl Pkts Discards Count	Number Control module packets discarded.
NumNetUcastAddrCount	Number of unicast addresses which were learned from the Net ports.
NumNetLearnEntryDiscards	Number of addresses that were not learned from the Net ports, due to any reason.
PPPOE Session Look Up Failures	This field specifies the number of PPPoE session look up failures.

Caution   None

References
- get/modify system info
- get/modify nbsize

2.75 System Traps Commands

2.75.1 reset traps

Description	Use this command to delete all trap logs.
Command Syntax	*reset traps*
Parameters	None
Mode	Super-User
Example	*$ reset traps*
Output	Set Done
Output Fields	None
Caution	None.
References	• get traps command.

2.76 System Trap Log Table Commands

2.76.1 get traps

Description   Use this command to get the listing of all Trap Log Table entries (tTraps) or the last few tentries (Traps).

Command Syntax   `get traps [num-of-traps]`

Parameters

Name	Description
Num-of-traps	This specifies the maximum number of (entries) traps to be displayed from trap log table; if not specified then all entries are displayed. **Type**: Optional **Valid values** : *0 to 4294967295*

Mode   Super-User, User

Example   `$ get traps`

Output

```
Thu Jan 01 00:00:13 1970 : STATUS ALARM : ATM VC Up :Interface Name- aal5-0
Thu Jan 01 00:00:13 1970 : STATUS ALARM : System Up
```

Output Fields   The output fields in this command are separated by a ì : ì

FIELD	Description
Trap time	This specifies the time at which the trap was logged.
Trap severity	This specifies the severity level of the trap. It can be – CRITICAL ALARM MAJOR ALARM WARNING STATUS ALARM

FIELD	Description
Trap name	This specifies the name of the trap. It can be – **System Init Failed** - This trap is originated at the time of system initialization failures. The failure could be due to an internal error or due to a wrong/ corrupted configuration file. Trap parameters are *Module* and *Cause.* **System Up** - This trap is originated after the unit boots up successfully. **ADSL ATUC Up** - This trap indicates that the DSL port is in data mode. **ADSL ATUC Down** - This trap indicates that the DSL port is no longer in data mode. **ATM Interface Up** - This trap indicates that the ATM port is operationally up. Trap parameter is *Interface No.* **ATM Interface Down** - This trap indicates that the ATM port is operationally down. Trap parameter is *Interface No.* **ETHER Interface Up** - This trap indicates that the Ethernet port is operationally up. Trap parameter is *Interface No.* **ETHER Interface Down** - This trap indicates that the Ethernet port is operationally down. Trap parameter is *Interface No.* **ATM VC Up** - This trap indicates that the ATM VC is operationally up. Trap parameter is *Interface Name.* **ATM VC Down** - This trap indicates that the ATM VC is operationally down. Trap parameter is *Interface Name.* **ADSL ATUC Loss of Frame 15-Minute Threshold hit** - This trap indicates that 15-minute interval threshold for ATUC Loss of Frame has reached. **ADSL ATUC Loss of Signal 15-Minute Threshold hit** - This trap indicates that 15-minute interval threshold for ATUC Loss of Signal has reached. **ADSL ATUC Loss of Link 15-Minute Threshold hit** - This trap indicates that 15-minute interval threshold for ATUC Loss of Link has reached. **ADSL ATUC Loss of Power 15-Minute Threshold hit** - This trap indicates that 15-minute interval threshold for ATUC Loss of Power has reached. **ADSL ATUC Errored Seconds 15-Minute Threshold hit** - This trap indicates that 15-minute interval threshold for ATUC Errored Seconds has reached. **EoA Interface Up** – This trap indicates that the EOA interface is operationally up. Trap parameter is Interface name **EOA Interface Down** - This trap indicates that the EOA Interface is operationally down. Trap parameter is *Interface Name.* **ADSL Loss of Frame Threshold hit** - This trap indicates that Loss of Framing 15-minute interval threshold has reached.

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FIELD	Description
	ADSL Loss of Signal Threshold hit - This trap indicates that Loss of Signal 15-minute interval threshold has reached ***ADSL Loss of Power Threshold hit*** - This trap indicates that Loss of Power 15-minute interval threshold has reached. ***ADSL Errored Seconds Threshold hit*** - This trap indicates that Errored Second 15-minute interval threshold has reached ***ADSL ADUC Tx Rate changed*** - This trap indicates that the ATUCs transmit rate has changed (RADSL mode only). ***ADSL Loss of Link Threshold hit***- This trap indicates that Loss of Link 15-minute interval threshold has reached ***ADSL ATUC Init failed*** - This trap indicates that ATUC initialization failed. See adslAtucCurrStatus for potential reasons ***ADSL Failed Fast Retrains Threshold hit*** - This trap indicates that Failed Fast Retrains 15-minute threshold has reached ***ADSL ATUC Severely Errored Seconds 15-Minute Threshold hit*** - This trap indicates that 15-minute interval threshold for ATUC Severely Errored Seconds has reached. ***ADSL ATUC Unavailable Seconds 15-Minute Threshold hit -*** This trap indicates that 15-minute interval threshold for ATUC Unavailable Seconds has reached. ***ADSL Unavailable Seconds Threshold hit*** - This trap indicates that unavailable seconds-line 15-minute threshold has reached ***ADSL Severely Errored Seconds Threshold hit*** - This trap indicates that severely errored seconds-line 15-minute threshold has reached. ***Aggregator Interface Up*** - This trap indicates that the aggregator interface is operationally up. ***Aggregator Interface Down*** - This trap indicates that the aggregator interface is operationally down. The OP state of ADSL line <interface name> has changed from <previous ***status> to <current status>-*** This trap indicates the change in the operational status of the port. ***ADSL ATUR Loss of Frame Threshold hit -*** This trap indicates that Loss of Framing 15-minute interval threshold has reached. ***ADSL ATUR Loss of Frame 15-Minute Threshold hit -*** This trap indicates that 15-minute interval threshold for ATUR Loss of Frame has reached. ***ADSL ATUR Loss of Signal 15-Minute Threshold hit*** - This trap indicates that 15-minute interval threshold for ATUR Loss of Signal has reached. ***ADSL ATUR Loss of Power 15-Minute Threshold hit -*** This trap indicates that 15-minute interval threshold for ATUR Loss of Power has reached

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FIELD	Description
	ADSL ATUR Errored Seconds 15-Minute Threshold hit **-** This trap indicates that 15-minute interval threshold for ATUR Errored Seconds has reached. ***ADSL ATUR Loss of Signal Threshold hit -*** This trap indicates that Loss of Signal 15-minute interval threshold has reached. ***ADSL ATUR Loss of Power Threshold hit -*** This rap indicates that Loss of Power 15-minute interval threshold has reached. ***ADSL ATUR Errored Seconds Threshold hit -*** This trap indicates that Errored Second 15-minute interval threshold has reached. ***ADSL ATUR Rate Changed -*** This trap indicates that the ATUR rate has changed (RADSL mode only). ***Port binding status changed*** - This trap indicates that the port on which the mac address has been learned has changed. ***Port binding status changed*** - This trap indicates that the port on which the tracked MAC address is being received has changed. ***Port binding status learnt*** - This trap indicates that the particular mac address has been received for the first time. This trap will also be received if the tracked MAC address is received from an existing port and the port from which it was earlier received has been deleted by now. ***Failed To Get IP Address*** - This trap indicates that DHCP client could not get an ip address from DHCP server. ***Chip Lockup Detected*** **-** This trap indicates that a chip lockup has occurred. ***Chip Recovery from Lockup OK*** **-** This trap indicates that Chip Recovery from Lockup has occurred. ***Chip Recovery from Lockup Failed*** **-** This trap indicates that Chip Recovery from Lockup has Failed. ***Chip Preinit CheckSum Failed*** - This trap indicates that Preinit Checksum for Chip has Failed ***Xcvr Lockup Detected*** **-** This trap indicates that a transceiver lockup has occurred. ***Xcvr Recovery from Lockup OK -*** This trap indicates that a transceiver Recovery from Lockup has occurred. ***Xcvr Recovery from Lockup Failed*** **-** This trap indicates that a transceiver Recovery from Lockup has Failed ***EHDLC Interface Up -*** This trap indicates that HDLC Interface over EOC is operationally up. Trap Parameter is Interface Index. ***EHDLC Interface Down -*** This trap indicates that HDLC Interface over EOC is operationally down. Trap Parameter is Interface Index.

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FIELD	Description
	Control packet Q congestion start - This trap indicates that Congestion has occurred on data plane to Control plane Packet Queue for the Interface. ***Control packet Q congestion stop -*** This trap indicates that Congestion has stopped on data plane to Control plane Packet Queue for the Interface. ***Statistics Reset -*** This trap indicates that Interface Stats has been reset . ***ADSL ATUC Loss of Frame 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Loss of Frame has reached. ***ADSL ATUC Loss of Signal 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Loss of Signal has reached. ***ADSL ATUC Loss of Link 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Loss of Link has reached. ***ADSL ATUC Loss of Power 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Loss of Power has reached. ***ADSL ATUC Errored Seconds 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Errored Seconds has reached. ***ADSL ATUC Severely Errored Seconds 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Severely Errored Seconds has reached. ***ADSL ATUC Unavailable Seconds 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUC Unavailable Seconds has reached. ***ADSL ATUR Severely Errored Seconds 15-Minute Threshold hit -*** This trap indicates that 15-Minute interval threshold for ATUR Severely Errored Seconds has reached. ***ADSL ATUR Unavailable Seconds 15-Minute Threshold hit -*** This trap indicates that 15-Minute interval threshold for ATUR Unavailable Seconds has reached. ***ADSL ATUR Loss of Frame 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUR Loss of Frame has reached. ***ADSL ATUR Loss of Signal 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUR Loss of Signal has reached. ***ADSL ATUR Loss of Power 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUR Loss of Power has reached ***ADSL ATUR Errored Seconds 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUR Errored Seconds has reached. ***ADSL ATUR Severely Errored Seconds 1-Day Threshold hit -*** This trap indicates that 1-Day interval threshold for ATUR Severely Errored Seconds has reached.

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FIELD	Description
ADSL ATUR Unavailable Seconds 1-Day Threshold hit - This trap indicates that 1-Day interval threshold for ATUR Unavailable Seconds has reached. **PPPOE Interface Up** - This trap indicates that the PPPoE interface is operationally up. The trap parameter is the interface name. **PPPOE Interface Down** - This trap indicates that the PPPoE interface is operationally down. The trap parameter is the interface name. **PPPOE Max Tries in Discovery Stage have exceeded for a PPPoE** - This trap indicates that the maximum tries for initiation of discovery stage for the PPPoE session establishment has exceeded for the PPPoE interface. The Trap parameter is the interface name. **PPPR Interface Up** - This trap indicates that the PPPR interface is operationally up. The trap parameter is the interface name. **PPPR Interface Down** - This trap indicates that the PPPR interface is operationally down. The trap parameter is the interface name.	
Trap parameters	This specifies additional parameters describing the trap. Different traps have different combinations of trap parameters. There are also some traps with no additional parameters. The parameters can be - Module - <module name> Cause - <failure cause> Interface - <interface name> <user name> IP - <IP address> Port - <port number> VPI - <vpi> VCI - <vci> Current - <current value> Threshold - <threshold value> Previous - <previous value>

Caution   None.

References   • reset traps command

• logthresh parameter in `modify system` and `get system` commands.

2.77 Trace Log Statistics Commands

2.77.1 get trace stats

Description Use this command to display trace statistics.

Command Syntax *get trace stats*

Parameters None

Mode Super-User, User.

Example *$ get trace stats*

Output Verbose Mode On/Off

```
Bytes Logged: 2744        Bytes Discarded : 40595
Msgs Logged : 19          Msgs Discarded  : 1045
```

Output Fields

FIELD	Description
Bytes Logged	This specifies the number of bytes logged by the tracing/logging module.
Bytes Discarded	This specifies the number of bytes discarded by the tracing/ logging module due to filtering.
Msgs Logged	This specifies the number of message logged by the tracing/ logging module.
Msgs Discarded	This specifies the number of messages discarded by the tracing/logging module due to filtering.

Caution None

References
- get trace cfg command
- modify trace cfg command.

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2.78 Trace Log Configuration Commands

2.78.1 get trace cfg

Description   Use this command to display the trace configuration for a specific module, or for all modules.

Command Syntax   `get trace cfg [module module-name]`

2.78.2 modify trace cfg

Description   Use this command to modify the trace and log configuration for a specific module

Command Syntax   `modify trace cfg module module-name [flow trace-flow] [level trace-level] [syslog|net|stdout] [dest ip-address] [port port-number]`

Parameters

Name	Description
`module module-name/all`	This specifies the module, for which trace/log configuration is to be modified. **Type** : Modify – Mandatory Get – Optional **Valid values:** *GCOS,OAM, CIN, GAG, CDB, CLI, ATM, EOA, TBG, DSLME, NVM, FFC, DNCD, DATAME, GARP, GVRP, LACP*
`flow trace-flow`	This indicates a Hexadecimal bitmask, which sets the filter for trace flow. **Type** : Optional **Valid values:** *0x0 to 0xffffffff*
`level trace-level`	This indicates a Hexadecimal bitmask, which sets the filter for trace level. **Type** : Optional **Valid values:** *0x0 to 0xffffffff*
`syslog/net/stdout`	This specifies the type of logging to be done. Incase *net* or *syslog* is specified then `dest` and `port` must be specified. **Type:** Optional

Name	Description
dest ip-address	This specifies the IP address for host for logging for trace type *syslog* and *net.* It is invalid incase of trace type *stdout* **Type:** Mandatory when type is modified to *net* or *syslog; e*lse it is invalid **Valid values:** Any valid class A/B/C IP address
port port-number	Port number on which, host is listening for trace info to be logged incase of trace type *syslog* and *net.* It is invalid incase of trace type *stdout* **Type:** Mandatory when type is modified to *net* or *syslog; e*lse it is invalid **Valid values:** *0-4294967295*

Mode   Super-User

Example   *$ modify trace cfg module GAG flow 0x1 level 0x1*

Output   Verbose Mode On

```
Module    Flow        Level       Type      Destn           Port
-------------------------------------------------------------------
GAG       0x0         0x0         Stdout    0.0.0.0         0

Set Done

Module    Flow        Level       Type      Destn           Port
-------------------------------------------------------------------
GAG       0x1         0x1         Stdout    0.0.0.0         0
```

Verbose Mode Off

```
Set Done
```

Output Fields

FIELD	Description
Module	This specifies the module for trace/log config whose information is being displayed: It can be : *GCOS,OAM, CIN, GAG, CDB, CLI, ATM, EOA, TBG, DSLME, NVM, FFC, DNCD, DATAME, GARP, GVRP, LACP*
Flow	This indicates a Hexadecimal bitmask, which sets the filter for trace flow.
Level	This indicates a Hexadecimal bitmask, which sets the filter for trace level.
Type	This specifies the type of logging to be done. It may be: Syslog, Net, Stdout

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FIELD	Description
Destn	This specifies the IP address for host for logging for trace type syslog and net. It is invalid incase of trace type stdout
Port	Port number on which host is listening for trace info to be logged incase of trace type syslog and net. It is invalid incase of trace type stdout

Caution   None.

References
- get trace cfg command
- get trace stats command.

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2.79 Clfr profile info Commands

> **Note**: *Please refer to the Columbia Generic and Classifier Application Note DO-401995-AN for details of Classifier Commands.*

2.79.1 get clfr profile info

Description   Use this command to get.

Command Syntax   `get clfr profile info [ pname pname ]`

2.79.2 create clfr profile info

Description   Use this command to create.

Command Syntax   `create clfr profile info pname pname`

2.79.3 delete clfr profile info

Description   Use this command to delete.

Command Syntax   `delete clfr profile info pname pname`

2.79.4 modify clfr profile info

Description   Use this command to modify.

Command Syntax   `modify clfr profile info pname pname [ descr  descr ] [ rnode  rnode ] [ enable | disable ]`

Parameters

Name	Description
`pname pname`	Name of the classifier profile **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Default value:** -----
`descr   descr`	A brief description can be given with profile, to identify the profile **Type:** Create -- Optional Modify -- Optional **Default value:** 0

Name	Description
rnode rnode	Root node Id of the profile. Each profile can have only one root node id **Type:** Create -- Optional Modify -- Optional **Default value:** 0
enable | disable	A Profile can only be modified, if it is disabled. A tree can only use a profile, if it is enabled. A profile cannot be disabled, if a tree is using it. **Type:** Create -- Optional Modify -- Optional **Default value:** 2

Example   *$ create clfr profile info pname IGMP*

Output   Verbose Mode On

```
Entry Created

Profile Name : IGMP
Root NodeId  : 0              Status :  Enable
Description  : Profile to match the IGMP packet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Name	Name of the classifier profile
Root NodeId	Root node Id of the profile. Each profile can have only one root node id
Status	A Profile can only be modified, if it is disabled. A tree can only use a profile, if it is enabled. A profile cannot be disabled, if a tree is using it.
Description	A brief description can be given with profile, to identify the profile

2.80 Clfr list genentry commands

2.80.1 get clfr list genentry

Description   Use this command to get.

Command Syntax   *get clfr list genentry [ifname ifname] [value value]*

2.80.2 create clfr list genentry

Description   Use this command to create.

Command Syntax   *create clfr list genentry ifname ifname value value [valtype U8|U16|U32]*

2.80.3 delete clfr list genentry

Description   Use this command to delete.

Command Syntax   *delete clfr list genentry ifname ifname value value*

Parameters

Name	Description
ifname ifname	Name of the Ethernet, EoA, or PPPoE interface, for which the classifier generic list is created. **Type**: Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values**: eth-*, eoa-*, pppoe-*
value value	List Entry Value, of the classifier generic list **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
Valtype U8|U16|U32	This field specifies value type of the entry. The value type for all entries on an interface should be same. Value type should match value type of matchingenlist nodes in case a tree attached on same interface. It should be 'U32' in case a rule containing IP subrule or Generic subrule with cmptype as InGenList or NotInGenList is attached on same interface. Currently only 'U32' value is supported.Create -- Optional. **Create** -- Optional

Example   *$ create clfr list genentry Ifname eoa-1 value 0xAC1901AA valtype u8*

Output   Verbose Mode On

```
Entry Created
If Name   : eoa-1
Value     : 0xAC1901AA
Value Type : U32
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
ifname ifname	Name of the Ethernet, EoA, or PPPoE interface, for which the classifier generic list is created.
Value	List Entry Value, of the classifier generic list
Value Type	This field specifies value type of the entry. The value type for all entries on an interface should be same. Value type should match value type of matchingenlist nodes in case a tree attached on same interface. It should be 'U32' in case a rule containing IP subrule or Generic subrule with cmptype as InGenList or NotInGenList is attached on same interface. Currently only 'U32' value is supported.

Caution   None

References   None

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2.81 Clfr profile node Commands

2.81.1 get clfr profile node

Description   Use this command to get.

Command Syntax   `get clfr profile node [ pname pname ] [ nodeid nodeid ]`

2.81.2 create clfr profile node

Description   Use this command to create.

Command Syntax   `create clfr profile node pname pname nodeid nodeid [ descr descr ]`
`[export true|false ] Ntype`
`Leaf|Unary|Binary|Ternary|Linear|NonLinear    modmask`
`Act|ValType|Offset|Mask|Val|ValueEnd|SBType|SBShiftCnt|SBMplr|Desc`
`rip|None [actval Drop|Fwd|FwdToCtl|CpToCtl|Eq|Gt|Lt|InRange|TerCmp|`

`SetPrio|MatchInList|AccDeny|SetBase|Count|Retagprio |`

`MatchIngenlist|GoToNextRule|allow ] [ valuetype`
`U8|U16|U32|U64|AtmIf|Aal5Vc|EoaIf|EthIf|Dir|Prio|Len|VlanId ][`
`offsetval offsetval ] [ maskval maskval ] [ value value ] [ valend`
`valend ] [ sbasetype Abs|Add|Compute|SetFromVar ] [shiftcnt shiftcnt`
`] [ mplr mplr ] [ sbvarindex  l2start|l3start ] [ nodeprio`
`low|high|asintree ]`

2.81.3 delete clfr profile node

Description   Use this command to delete.

Command Syntax   `delete clfr profile node pname pname nodeid nodeid`

2.81.4 modify clfr profile node

Description   Use this command to modify.

Command Syntax   `modfiy clfr profile node pname pname nodeid nodeid [ descr descr ]`
`[export true|false ] modmask  Act|ValType|Offset|Mask|Val`
`|ValueEnd|SBType|SBShiftCnt|SBMplr|Descrip|None  [actval`
`Drop|Fwd|FwdToCtl|CpToCtl|Eq|Gt|Lt|InRange|TerCmp|`

`SetPrio|MatchInList|AccDeny|SetBase|Count|Retagprio |`

`MatchIngenlist|GoToNextRule|allow ] [ valuetype`
`U8|U16|U32|U64|AtmIf|Aal5Vc|EoaIf|EthIf|Dir|Prio|Len|VlanId ][`
`offsetval offsetval ] [ maskval maskval ] [ value value ] [ valend`
`valend ] [ sbasetype Abs|Add|Compute|SetFromVar ] [shiftcnt shiftcnt`
`] [ mplr mplr ] [ sbvarindex  l2start|l3start ] [ nodeprio`
`low|high|asintree ]`

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Parameters

Name	Description
pname pname	Name of the classifier profile **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Default value:** -----
nodeid nodeid	Node Id, should be unique within a profile **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 0xffffffff **Default value:** -----
descr descr	A brief description can be given with node, to identify the node. If the ActVal is FwdToCtl or CpToCtl then this field is mandatory and it can be used by the applications to receive the packets coming from control plane because of this node. **Type:** Create -- Optional Modify -- Optional **Default value:** 0
export true/false	Some of the nodes of a profile can be exported. This flag tells whether this node is exported or not **Type:** Create -- Optional Modify -- Optional **Default value: F**ALSE
Ntype Leaf/Unary/Binary/Ternary/Linear/NonLinear	This specifies the type of the Classifier node. **Type:** Create -- Optional
maskval maskval	Mask, used to select the individual bits to be matched in a packet. If gsvClfrProfileNodeAction is SetBase and gsvClfrProfileNodeSetBaseType is Compute, then this value is used to specify the mask, which shall be used to identify the individual bits of the field of the packet used to compute the new base offset. This field is valid only if the gsvClfrProfileNodeValType is U8, U16, U32 or U64. This field is also valid if the g gsvClfrProfileNodeAction is MatchInGenList. **Type :** Create --Optional **Default Value :** --

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Name	Description
value value	Value,tobematched.ForNonLinearnodetypes, thisfieldisnotvalid.ForLinearnodetypes,this valueisusedtospecifythestartoftherange.If gsvClfrProfileNodeActionisSetBaseand gsvClfrProfileNodeSetBaseTypeisComputethen thisfieldisusedtospecifythevalue,whichistobe addedtobaseoffsettocalculatenewbaseoffset.If the gsvClfrProfileNodeAction is SetPrio or RetagPrio then this field is used to specify the prioritywhichistobeassignedtothepacket.Ifthe gsvClfrProfileNodeAction is MatchInGenList then this field is not valid. If the gsvClfrProfileNodeAction is Count then this field is read only and specifies total number of octets of the packets hitting this node. **Type:** Create -- Optional **Default value:** ---
valend valend	ForLinearnodesthisfieldisusedtospecifytheend oftherange.IfthegsvClfrProfileNodeActionis InRangethenthisfieldisusedtospecifytheendof therange.IfthegsvClfrProfileNodeActioniscount thenthisfieldisusedtospecifythetotalnumberof packet hitting this node. For other actions this field is not valid. **Type:** Create -- Optional **Default value:** -----
sbasetype Abs | Add | Compute |	This field is valid only for the SET_BASE action type. It is used to specify, whether the base off set is to be set to an absolute value, or some value is to be added to existing base offset value to calculate new base offset value, or the new base offset value is to be computed using some value in the packet. **Type:** Create -- Optional Modify -- Optional **Default value:** ---
shiftcnt shiftcnt	ShiftCount,isthenumberoftimestheValueinthe packetistobeshiftedbeforemultiplyingitwiththe gsvClfrProfileNodeMultiplier. This field is valid only if the gsvClfrProfileNodeAction is SetBase. Value 32 is meant for internal purpose and Agents should not pass this value to GAG. GAG may return 32 value to Agent, in which case Agent should treat it as invalid. **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - 31 **Default value:** ---

Name	Description
`mplr mplr`	Multiplier, is used to multiply the value shifted by ShiftCount. It is used to calculate the new base offset. This field is valid only if the gsvClfrProfileNodeAction is SetBase. **Type:** Create -- Optional Modify -- Optional **Valid values:** 1 - 32 **Default value:** ----

`Modmask`
`Act|ValType|Offset|Mask|`
`Val|None|ValueEnd|Sbtype`
`|SBShiftCnt|SBMlpr|Descr`
`ip`
	This specifies what fields of an exported node are modifiable and can be modified while the profile is part of a classifier tree.
	Type: Create -- Optional
	       Modify -- Optional

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Name	Description
Actval *Drop|Fwd|FwdToCtl|CpToCt l|Eq|Gt|Lt|InRange|TerCm p| SetPrio|MatchInList|AccD eny|SetBase|Count| Retagprio | MatchIngenlist |GoToNextRule|allow*	Action tells what is to be done by a node. 'Drop' means drop the packet. 'Fwd' means Forward the packet. 'FwdToCtl' means Forward the packet to control plane. 'CpToCtl' means forward the packet and also send a copy of the packet to control plane.'Allow' means give the packet to the next stage. 'GoToNextRule' means go to the next rule (ruleid) attached on that interface and if no next rule is attached on that interface then forward the packet. 'Eq' means check if value specified in the packet is equal to 'Value'. 'Gt' means check if the value at the location specified in the packet is greater than 'Value'. 'Lt' means check if the value at the location specified in the packet is Less than 'Value'. 'InRange' means check if the value at the location specified in the packet is in the range specified by 'Value' and 'ValEnd'. 'TerCmp' means check if the value at the location specified in the packet is less than, equals to or greater than the 'Value'. 'MatchInList' means take the branch of the node whose value is equals to the value at the location specified in the packet. 'AccDeny' means check if the value at the location specified in the packet is equals to any of the value of the branches of this node. 'SetBase' means set the base address as specified by 'setbase action'. 'SetPrio' means set the internal priority, which is used along with egress port traffic class mapping table, to determine the output queue. 'Count' means count the number of packet and bytes in the packets reaching this nodes. 'RetagPrio' means set the priority in the outgoing packet, which is also used along with egress port traffic class mapping table, to determine the output queue. 'MatchInGenList' means match value in packet with values in genlist. For Leaf node, Drop, Fwd, FwdToCtl, CpToCtl, Allow and GoToNextRule are valid actions. For Unary node, Count, SetPrio and RetagPrio are valid actions. For Binary node, Eq, Gt, Lt, SetBase and MatchInGenList are valid actions. For Ternary node, TerCmp and InRange are valid actions. For Linear node, only MatchInList is a valid action. For NonLinear node, MatchinList and AccDeny are valid actions. **Type:** Create -- Mandatory Modify -- Optional **Default value:** -----
Ntype *Leaf|Unary|Binary|Ternar y|Linear|NonLinear*	This specifies the type of the Classifier node. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** 1 - 0xffffffff **Default value:** -----

Name	Description
Offsetval offsetval	OffSet, in the packet with respect to the base offset, from where we have to take the value, which is to be matched. If gsvClfrProfileNodeAction is SetBase and gsvClfrProfileNodeSetBaseType is Compute then this value is used to specify the offset with respect to the base offset, which shall be used to specify the field of the packet used to compute the new base offset. If the gsvClfrProfileNodeValType is U8 the offset can be odd or even. If the gsvClfrProfileNodeValTypeisU16,U32orU64then theoffsetcanonlybeeven.Thisfieldisnotvalidfor any other value type. **Type:** Create -- Optional Modify -- Optional **Valid values**: 0 - 64 **Default value: -----**
Valuetype valuetype	Valuetypetells,thetypeofvaluewhichistobe matched/set.Forleaftypenodesthisfieldisnot valid.IfgsvClfrProfileNodeActionisSetBaseand gsvClfrProfileNodeSetBaseTypeisComputethen this value is used to specify the value type (U8, U16, U32), which shall be used to compute the new base offset.Thisfieldisnotvalidforothervaluesof gsvClfrProfileNodeSetBaseType. **Type:** Create -- Optional Modify -- Optional **Default value: -----**
sbvarindex L2Start|L3Start	This specifies setbase variable index. This field is valid only if 'SetBaseType' is 'SetFromVar'. 'L2Start' is read-only containing Layer 2 header start offset. 'L3Start' is read-only containing Layer 3 header start offset. It should be ensured that packet is IP packet before using 'L3Start' value .**Type:** Create -- Optional Modify -- Optional **Default value:** Invalid
nodeprio Low|High|AsInTree	This specifies the priority of profile node. Based on this priority value, the profile node is created in fast or slow memory. In case priority is specified as 'AsInTree', node priority will be same as specified in the tree. **Type:** Create -- Optional Modify -- Optional **Default value:** AsInTree

Example   *$ create clfr profile node pname IGMP nodeid 1 ntype binary actval eq valuetype u16 value 0xffff offsetval 12 maskval 0xffff*

Output   Verbose Mode On

```
Entry Created
```

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```
Profile Name     : IGMP
Node Id          : 3
Exported         : true                    Node Type        : Binary
Modification Mask : Act
Action           : eq
Value Type       : u16                     Offset           : 12
Mask             : 0xffff
Value            : 0x800
Value End        : None
Set Base type    : none
Shift Count      : none                    Multiplier       : none
Description      : Node to match the ip address
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Name	Name of the classifier profile
Node Id	Node Id, should be unique within a profile
Exported	This specifies what fields of an exported node are modifiable and can be modified while the profile is part of a classifier tree.
Node Type	This specifies the type of the Classifier node
Modification Mask	This specifies what fields of this nodes can be modified, if this node is an exported node.
Action	Action tells what is to be done by a node.
Value Type	Value type tells the type of value, which is to be matched/set. For leaf type nodes this field is not valid. if ActVal is SetBase and SBaseType is Compute then this value is used to specify the value type (U8, U16, U32), which shall be used to compute the new base offset. This field is not valid for other values of SBaseType.
Offset	OffSet, in the packet with respect to the base offset, from where we have to take the value, which is to be matched. If ActVal is SetBase and SBaseType is Compute then this value is used to specify the offset with respect to the base offset, which shall be used to specify the field of the packet used to compute the new base offset. if the valuetype is U8 the offset can be odd or even. If the ValueType is U16, U32 or U64 then the offset can only be even. This field is not valid for any other value type.
Mask	Mask, used to select the individual bits to be matched in a packet. If ActVal is SetBase and SBaseType is Compute then this value is used to specify the mask, which shall be used to identify the individual bits of the field of the packet used to compute the new base offset. This field is valid only if the ValueType is U8, U16, U32 or U64. This field is also valid if the ActVal is MatchInGenList.

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Field	Description
Value	Value, to be matched. For NonLinear node types, this field is not valid. For Linear node types, this value is used to specify the start of the range. if ActVal is SetBase and SBaseTypeis Compute then this field is used to specify the value, which is to be added to base offset to calculate new base offset. If the ActVal is SetPrio or RetagPrio then this field is used to specify the priority which is to be assigned to the packet. If the ActVal is MatchInGenList then this field is not valid. If the ActVal is Count then this field is read only and specifies total number of octet of the packets hitting this node.
Value End	For Linear nodes this field is used to specify the end of the range. If the ActVal is InRange then this field is used to specify the end of the range. If the ActVal is count then this field is used to specify the total number of packet hitting this node. For other actions this field is not valid.
Set Base type	SetBaseType is used to specify whether the base off set is to be set to an absolute value, or some value is to be added to existing base offset value to calculate new base offset value or the new base offset value is to be computed using some value in the packet. This field is valid only if the ActVal is SetBase.
Shift Count	ShiftCount, is the number of times the Value in the packet is to be shifted before multiplying it with the Mplr. This field is valid only if the ActVal is SetBase. Value 32 is used to set shift count to an invalid value.
Multiplier	Multiplier is used to multiply the value shifted by ShiftCount. It is used to calculate the new base offset. This field is valid only if the ActVal is SetBase.
Description	Description of the profile node. If the ActVal is FwdToCtl or CpToCtl then this field is mandatory and it can be used by the applications to receive the packets coming from control plane because of this node.
SBVar Index	This specifies setbase variable index. This field is valid only if 'SetBaseType' is 'SetFromVar'. 'L2Start' is read-only containing Layer 2 header start offset. 'L3Start' is read-only containing Layer 3 header start offset. It should be ensured that packet is IP packet before using 'L3Start' value
Node Priority	This specifies the priority of profile node. Based on this priority value, the profile node is created in fast or slow memory. In case priority is specified as 'AsInTree', node priority will be same as specified in the tree.

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Caution   None

References   None

2.82 Clfr tree info Commands

2.82.1 get clfr tree info

Description   Use this command to get.

Command Syntax   *get clfr tree info [tname tname]*

2.82.2 create clfr tree info

Description   Use this command to create.

Command Syntax   *create clfr tree info tname tname [descr descr] [enable | disable] [treeprio low | high]*

2.82.3 delete clfr tree info

Description   Use this command to delete.

Command Syntax   *delete clfr tree info tname tname*

2.82.4 modify clfr tree info

Description   Use this command to modify.

Command Syntax   *modify clfr tree info tname tname [descr descr] [enable | disable] [treeprio low | high]*

Parameters

Name	Description
tname tname	Name of the classifier tree which is to be included as subrule of this rule. This classifier tree should exist and be enabled. A classifier tree can be used only in one subrule. The Maximum length of Name should be GS_CLFR_MAX_TREE_NAME_LEN. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Default value:** -----
descr descr	A brief description can be given with tree, to identify the tree **Type:** Create -- Optional Modify -- Optional **Default value:** 0

Name	Description
enable | disable	A tree cannot be deleted or modified, if it is enabled. A tree can only be used, if it is enabled. A tree can not be disabled, if it is being used. **Type:** Create -- Optional Modify -- Optional **Default value:** 2
treeprio low | high	Tells the priority of the tree. Based on this priority value, the tree is created in fast or slow memory. **Type:** Create -- Optional Modify -- Optional **Default value:** low

Example   *$ create clfr tree info tname tree1*

Output   Verbose Mode On

```
Entry Created

Tree Name      : tree1
Status         : disable
Description    : tree1
Tree Priority  : High
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Tree Name	Name of the classifier tree
Status	A tree cannot be deleted or modified, if it is enabled. A tree can only be used, if it is enabled. A tree can not be disabled, if it is being used.
Description	A brief description can be given with tree, to identify the tree
TreePriority	Tells the priority of the tree. Based on this priority value, the tree is created in fast or slow memory.

Caution   None

References   None

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2.83 Clfr tree map Commands

2.83.1 get clfr tree map

Description   Use this command to get.

Command Syntax   `get clfr tree map [ ifname ifname ]`

2.83.2 create clfr tree map

Description   Use this command to create.

Command Syntax   `create clfr tree map ifname ifname tname tname entrypid entrypid`

2.83.3 delete clfr tree map

Description   Use this command to delete.

Command Syntax   `delete clfr tree map ifname ifname`

Parameters

Name	Description
`ifname ifname`	Interface name, with which the tree is to be associated. It can be associated with Ethernet and EOA. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Default value:** -----
`tname tname`	Name of the classifier tree which is to be associated with given interface. **Type:** Create -- Mandatory **Default value:** -----
`entrypid entrypid`	Profile Id of the tree, which shall be treated as an entry point for it. **Type:** Create -- Mandatory **Valid values:** 1 - 0xffffffff **Default value:** -----

Example   `$ create clfr tree map Ifname eoa-0 tname tree1 entryPId 5`

Output   Verbose Mode On

```
 Entry Created

 If Name   : eoa-0
 Tree Name : tree1      Entry Profile Id : 5
```
Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
If Name	Interface name, with which the tree is to be associated. It can be associated with Ethernet and EOA.
Tree Name	Name of the classifier tree which is to be associated with given interface
Entry Profile Id	Profile Id of the tree, which shall be treated as an entry point for it

Caution   The deletion of a tree map may fail if the tree is being used by an application to receive a packet from that tree.

References   None

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2.84 Clfr tree node Commands

2.84.1 get clfr tree node

Description   Use this command to get.

Command Syntax   `get clfr tree node [ tname tname ] [ pid pid ] [ nodeid nodeid ]`

2.84.2 modify clfr tree node

Description   Use this command to modify.

Command Syntax
```
modify clfr tree node tname tname pid pid nodeid nodeid [ descr descr
] [ offset offset ] [ mask mask ] [ value value ] [act
Drop|Fwd|FwdToCtl|CpToCtl|Eq|Gt|Lt|InRange |TerCmp|
SetPrio|MatchInList|AccDeny|SetBase|Count| Retagprio |
MatchIngenlist|GoToNextRule|allow] [valend valend ] [sbasetype Abs
| Add | Compute] [ shiftcnt shiftcnt ] [ mplr mplr ] [valtype
U8|U16|U32|U64|AtmIf|Aal5Vc|EoaIf|EthIf|Dir|Prio|Len|vlanid][
sbvarindex l2start|l3start ] [nodeprio low]
```

Parameters

Name	Description
`tname tname`	Name of the classifier tree **Type:** Modify -- Mandatory Get -- Optional **Default value:** -----
`pid pid`	Profile Id. It should be unique within a tree. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - 0xffffffff **Default value:** -----
`nodeid nodeid`	Node Id, should be unique within a profile **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - 0xffffffff **Default value:** -----
`descr descr`	Description of the tree node. If the ActVal is FwdToCtl or CpToCtl then this field is mandatory and it can be used by the applications to receive the packets coming from control plane because of this node. **Type:** Modify -- Optional **Default value:** -----

Name	Description
offset offset	OffSet, in the packet with respect to the base offset, from where we have to take the value, which is to be matched. If ActVal is SetBase and SBaseType is Compute then this value is used to specify the offset with respect to the base offset, which shall be used to specify the field of the packet used to compute the new base offset. If the ValueType is U8 the offset can be odd or even. If the ValueType is U16, U32 or U64 then the offset can only be even. This field is not valid for any other value type. **Type:** Modify -- Optional **Valid values:** 0 - 65 **Default value:** -----
mask mask	Mask, used to select the individual bits to be matched in a packet. If gsvClfrTreeNodeAction is SetBase and gsvClfrTreeNodeSetBaseType is Compute, then this value is used to specify the mask, which shall be used to identify the individual bits of the field of the packet used to compute the new base offset. This field is valid only if the gsvClfrTreeNodeValType is U8, U16, U32 or U64. This field is also valid if the gsvClfrTreeNodeAction is MatchInGenList. **Type:** Modify -- Optional **Default value:** -----
value value	Value, to be matched. For NonLinear node types, this field is not valid. For Linear node types, this value is used to specify the start of the range. If gsvClfrTreeNodeAction is SetBase and NodeSetBaseType is Compute then this field is used to specify the value, which is to be added to base offset to calculate new base offset. If the gsvClfrTreeNodeAction is SetPrio or RetagPrio then this field is used to specify the priority which is to be assigned to the packet. If the gsvClfrTreeNodeActionisMatchInGenListthenthis field is not valid. If the gsvClfrTreeNodeAction is Count, thenthisfieldisreadonlyandspecifiestotal number of octets of the packets hitting this node. **Type:** Modify -- Optional **Default value:** -----

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Name	Description
`act Drop/Fwd/FwdToCtl/CpToCtl/Eq/Gt/Lt/InRange/TerCmp/ SetPrio/MatchInList/AccDeny/SetBase/Count/ Retagprio / MatchIngenlist/ GoToNextRule/allow`	Action tells what is to be done by a node. 'Drop' means drop the packet. 'Fwd' means Forward the packet. 'FwdToCtl' means Forward the packet to control plane. 'CpToCtl' means forward the packet and also send a copy of the packet to control plane.'Allow' means give the packet to the next stage. 'GoToNextRule' means go to the next rule (ruleid) attached on that interface and if no next rule is attached on that interface then forward the packet. 'Eq' means check if value specified in the packet is equal to 'Value'. 'Gt' means check if the value at the location specified in the packet is greater than 'Value'. 'Lt' means check if the value at the location specified in the packet is Less than 'Value'. 'InRange' means check if the value at the location specified in the packet is in the range specified by 'Value' and 'ValEnd'. 'TerCmp' means check if the value at the location specified in the packet is less than, equals to or greater than the 'Value'. 'MatchInList' means take the branch of the node whose value is equals to the value at the location specified in the packet. 'AccDeny' means check if the value at the location specified in the packet is equals to any of the value of the branches of this node. 'SetBase' means set the base address as specified by setbase action. 'SetPrio' means set the internal priority, which is used along with egress port traffic class mapping table, to determine the output queue. 'Count' means count the number of packet and bytes in the packets reaching this nodes. 'RetagPrio' means set the prirority in the outgoing packet, which is also used along with egress port traffic class mapping table, to determine the output queue. 'MatchInGenList' means match value in packet with values in genlist. For Leaf node, Drop, Fwd, FwdToCtl, CpToCtl, Allow and GoToNextRule are valid actions. For Unary node, Count, SetPrio and RetagPrio are valid actions. For Binary node, Eq, Gt, Lt, SetBase and MatchInGenList are valid actions. For Ternary node, TerCmp and InRange are valid actions. For Linear node, only MatchInList is a valid action. For NonLinear node, MatchinList and AccDeny are valid actions. **Type:** Modify -- Optional
`valend valend`	For Linear nodes this field is used to specify the end of the range. If the gsvClfrTreeNodeAction is InRange then this field is used to specify the end of the range. If the gsvClfrTreeNodeAction is count then this field is used to specify the total number of packets hitting this node. For other actions this field is not valid. **Type:** Modify -- Optional **Default value:** -----

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Name	Description
sbasetype Abs | Add | Compute	SetBaseType, is used to specify, whether the base off set is to be set to an absolute value, or some value is to be added to existing base offset value to calculate new base offset value or the new base offset value is to be computed using some value in the packet.This field is valid only if the ActVal is SetBase. **Type:** Modify -- Optional **Default value:** 4
shiftcnt shiftcnt	ShiftCount, is the number of times the Value in the packetistobeshiftedbeforemultiplyingitwiththe gsvClfrTreeNodeMultiplier. This field is valid only if the gsvClfrTreeNodeAction is SetBase. **Type:** Modify -- Optional **Valid values:** 0 – 31 Default value: ----
mplr mplr	Multiplier, is used to multiply the value shifted by ShiftCount. It is used to calculate the new base offset. This field is valid only if the gsvClfrTreeNodeAction is SetBase. **Type:** Modify -- Optional **Valid values:** 1 - 32 **Default value:** ----
valtype U8|U16|U32|U64|AtmIf|Aal 5Vc|EoaIf|EthIf|Dir|Prio |Len|vlanid	Value type tells the type of value that is to be matched/set.
Sbvarindex l2start|l3start	This specifies the setbase variable index. 'L2Start' is read-only, containing Layer 2 header start offset. 'L3Start' is read-only, containing Layer 3 header start offset.
Nodeprio low|high|asintree	This specifies the priority of the tree node. Based on this priority value, the tree node is created in fast or slow memory.

Example　　*$ get clfr tree node tname tree1 pid 2 nodeid 3*

Output

```
Tree Name          : tree1
Profile Id         : 2            Node Id      : 3
Exported           : true         Node Type    : Binary
Modification Mask  : act offset
Action             : eq
Value Type         : u32          Offset       : 12
Mask               : 0x0000000f
Value              : 0x0000000f
ValueEnd           : NA
Set Base type                : NA
Shift Count        : NA           Multiplier   : NA
Description        : Node to match the ip address
```

Output field description

Field	Description
Tree Name	Name of the classifier tree.
Profile Id	Profile Id. It should be unique within a tree
Node Id	Node Id, should be unique within a profile
Exported	This specifies what fields of an exported node are modifiable and can be modified while the profile is part of a classifier tree.
Node Type	This specifies the type of the Classifier node
Modification Mask	This specifies what fields of this nodes can be modified, if this node is an exported node.
Action	Action tells what is to be done by a node.
Value Type	Value type tells, the type of value which is to be matched/set. For leaf type nodes this field is not valid. If ActVal is SetBase and SBaseType is Compute then this value is used to specify the value type (U8, U16, U32), which shall be used to compute the new base offset. This field is not valid for other values of SBaseType.
Offset	OffSet, in the packet with respect to the base offset, from where we have to take the value, which is to be matched. If ActVal is SetBase and SBaseType is Compute then this value is used to specify the offset with respect to the base offset, which shall be used to specify the field of the packet used to compute the new base offset. If the valuetype is U8 the offset can be odd or even. If the ValueType is U16, U32 or U64 then the offset can only be even. This field is not valid for any other value type.
Mask	Mask, used to select the individual bits to be match in a packet. If ActVal is SetBase and SBaseTypeis Compute then this value is used to specify the mask, which shall be used to identify the individual bits of the field of the packet used to compute the new base offset.This field is valid only if the ValueType is U8, U16, U32 or U64. This field is also valid if the ActVal is MatchInGenList.

Field	Description
Value	Value, to be matched. For NonLinear node types, this field is not valid. For Linear node types, this value is used to specify the start of the range. if ActVal is SetBase and SBaseTypeis Compute then this field is used to specify the value, which is to be added to base offset to calculate new base offset. If the ActVal is SetPrio or RetagPrio then this field is used to specify the priority which is to be assigned to the packet. If the ActVal is MatchInGenList then this field is not valid. If the ActVal is Count then this field is read only and specifies total number of octet of the packets hitting this node.
ValueEnd	For Linear nodes this field is used to specify the end of the range. If the ActVal is InRange then this field is used to specify the end of the range. If the ActVal is count then this field is used to specify the total number of packet hitting this node. For other actions this field is not valid.
Set Base type	SetBaseTyp, is used to specify whether the base off set is to be set to an absolute value, or some value is to be added to existing base offset value to calculate new base offset value or the new base offset value is to be computed using some value in the packet. This field is valid only if the ActVal is SetBase.
Shift Count	ShiftCount is the number of times the Value in the packet is to be shifted before multiplying it with the Mplr. This field is valid only if the ActVal is SetBase. Value 32 is used to set shift count to an invalid value.
Multiplier	Multiplier is used to multiply the value shifted by ShiftCount. It is used to calculate the new base offset. This field is valid only if the ActVal is SetBase.
Description	Description of the profile node. If the ActVal is FwdToCtl or CpToCtl then this field is mandatory and it can be used by the applications to receive the packets coming from control plane because of this node.

Caution   None

References   None

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2.85 Clfr tree profile Commands

2.85.1 get clfr tree profile

Description   Use this command to get.

Command Syntax   `get clfr tree profile [ tname tname ] [ pid pid ]`

2.85.2 create clfr tree profile

Description   Use this command to create.

Command Syntax   `create clfr tree profile tname tname pid pid pname pname [ isroot isroot ]`

2.85.3 delete clfr tree profile

Description   Use this command to delete.

Command Syntax   `delete clfr tree profile tname tname pid pid`

2.85.4 modify clfr tree profile

Description   Use this command to modify.

Command Syntax   `modify clfr tree profile tname tname pid pid [ isroot true|false ]`

Parameters

Name	Description
`tname tname`	Name of the classifier tree **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Default value:** -----
`pid pid`	Profile Id. It should be unique within a tree **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 0xffffffff **Default value:** -----

Name	Description
pname pname	Name of the profile which is to be added **Type:** Create -- Mandatory Delete -- Optional Modify -- Optional Get -- Optional **Default value:** -----
isroot isroot	This specifies whether this profile is exported as a root profile or not. Only root profiles of the nodes can be specified as an entry point on an interface. **Type:** Create -- Optional Delete -- Optional Modify -- Optional Get -- Optional **Valid values:** true, false **Default value:** GS_FALSE

Example *$ create clfr tree profile tname tree1 pid 4 pname srcip*

Output Verbose Mode On

```
Entry Created

Tree Name   : tree1          Profile Id : 4
Profile Name : srcip
Is Root      : false
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Tree Name	Name of the classifier tree
Profile Id	Profile Id. It should be unique within a tree
Profile Name	Name of the profile which is to be added
Is Root	This specifies whether this profile is exported as a root profile or not. Only root profiles of the nodes can be specified as an entry point on an interface.

Caution None

Reference None

2.86 Clfr profile branch Commands

2.86.1 get clfr profile branch

Description   Use this command to get.

Command Syntax   `get clfr profile branch [ pname pname ] [ nodeid nodeid ] [ brtype brtype ]`

2.86.2 create clfr profile branch

Description   Use this command to create.

Command Syntax   `create clfr profile branch pname pname nodeid nodeid brtype brtype [ cnodeid cnodeid ]`

2.86.3 delete clfr profile branch

Description   Use this command to delete.

Command Syntax   `delete clfr profile branch pname pname nodeid nodeid brtype brtype`

Parameters

Name	Description
`pname pname`	Name of the classifier profile **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
`nodeid nodeid`	Node Id of the node, with which the branch is to be attached. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - 4

Name	Description
brtype brtype	This specifies the branch types. For a unary type node, only onlybr(0xfffffffffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffffffffd) and FalseBr(0xfffffffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffffffffc), GtBr (0xfffffffffffffffb), EqBr (0xfffffffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmIf, ethernetIf, aal5vc. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
cnodeid cnodeid	Child Node Id **Type:** Create -- Optional **Default value:** 0

Example　　*$ create clfr profile branch pname IGMP nodeid 3 brtype truebr*

Output　　Verbose Mode On

```
Entry Created

Profile Name : IGMP
Node Id      : 3           Branch type : true
Child NodeId : 5
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Name	Name of the classifier profile
Node Id	Node Id of the node, with which the branch is to be attached.
Branch type	This specifies the branch types. For a unary type node, only onlybr(0xfffffffffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffffffffd) and FalseBr(0xfffffffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffffffffc), GtBr (0xfffffffffffffffb), EqBr (0xfffffffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmIf, ethernetIf, aal5vc.
Child NodeId	Child Node Id

Caution　　None.

References　　None.

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2.87 Clfr tree branch Commands

2.87.1 get clfr tree branch

Description   Use this command to get.

Command Syntax   `get clfr tree branch [ tname tname ] [ pid pid ] [ nodeid nodeid ]`
`[ brtype brtype ]`

2.87.2 create clfr tree branch

Description   Use this command to create.

Command Syntax   `create clfr tree branch tname tname pid pid nodeid nodeid brtype`
`brtype childpid childpid`

2.87.3 delete clfr tree branch

Description   Use this command to delete.

Command Syntax   `delete clfr tree branch tname tname pid pid nodeid nodeid brtype`
`brtype`

Parameters

Name	Description
`tname tname`	Name of the classifier tree **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** ND - ND
`pid pid`	Profile Id. It should be unique within a tree **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - 4
`nodeid nodeid`	Node Id, should be unique within a profile **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - 4

Name	Description
`brtype brtype`	This specifies the branch types. For a unary type node, only onlybr(0xfffffffffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffffffffd) and FalseBr(0xfffffffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffffffffc), GtBr (0xfffffffffffffffb), EqBr (0xfffffffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmIf, ethernetIf, aal5vc. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
`childpid childpid`	This object specifies Child Profile Id. The Child Profile Id value 0, is used to add true and false branches to a AccessDeny type node. **Type:** Create -- Mandatory **Default value:** 0

Example `$ create clfr tree branch tname t1 pid 2 nodeid 1 brtype truebr childpid 1`

Output Verbose Mode On

```
Entry Created

Tree Name   : tree1
Profile Id  : 3          Node Id          : 2
Branch type : eq         Child Profile Id : 4
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
`Tree Name`	Name of the classifier tree
`Profile Id`	Profile Id. It should be unique within a tree
`Node Id`	Node Id, should be unique within a profile
`Branch type`	This specifies the branch types. For a unary type node, only onlybr(0xfffffffffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffffffffd) and FalseBr(0xfffffffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffffffffc), GtBr (0xfffffffffffffffb), EqBr (0xfffffffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmIf, ethernetIf, aal5vc.
`Child Profile Id`	This object specifies Child Profile Id. The Child Profile Id value 0, is used to add true and false branches to a AccessDeny type node.

Caution   None.

References   None.

2.88 IRL Map Commands

2.88.1 get irl map

Description   Use this command to get.

Command Syntax   `get irl map  [ ifname ifname ]`

2.88.2 create irl map

Description   Use this command to create.

Command Syntax   `create irl map  ifname ifname profilename profilename`

2.88.3 delete irl map

Description   Use this command to delete.

Command Syntax   `delete irl map  ifname ifname`

Parameters

Name	Description
`ifname ifname`	Interface Name whose IRL mapping information is to be configured. **Valid Values:** aal5-0 - aal5-* **Type** : Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** ND - ND
`profilename profilename`	Specifies the name of the IRL profile to be associated with the interface. String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ';' **Type:** Create -- Mandatory

Example   `$ create irl map  ifname aal5-0 profilename gold`

Output   Verbose Mode On

```
Entry Created

Interface  Profile Name
-------------------------------------------------------------------------------
aal5-0    gold
```
Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Interface	Interface Name whose IRL mapping information is to be configured. **Valid Values:** aal5-0 - aal5-*
Profile Name	Specifies the name of the IRL profile to be associated with the interface. String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ';'

Caution   None.

References   None

2.89 IRL Profile Commands

2.89.1 get irl profile

Description   Use this command to get.

Command Syntax   `get irl profile  [ profilename profilename ]`

2.89.2 create irl profile

Description   Use this command to create.

Command Syntax   `create irl profile  profilename profilename [ irltype sr2cm | trtcm ] [ cir cir ] [ cbs cbs ] [ pir pir ] [ pbs pbs ] [ conformaction colorgreen ] [ exceedaction drop | coloryellow ] [ violateaction drop | coloryellow ]`

2.89.3 delete irl profile

Description   Use this command to delete.

Command Syntax   `delete irl profile  profilename profilename`

2.89.4 modify irl profile

Description   Use this command to modify.

Command Syntax   `modify irl profile  profilename profilename [ irltype sr2cm | trtcm ] [ cir cir ] [ cbs cbs ] [ pir pir ] [ pbs pbs ] [ conformaction colorgreen ] [ exceedaction drop | coloryellow ] [ violateaction drop | coloryellow ]`

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Parameters

Name	Description
`profilename profilename`	Profile name uniquely identify an IRL profile in the system. String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ';'. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** ND - ND
`irltype sr2cm	trtcm`	This field specifies the type of IRL. Two type of IRLs are supported. Single Rate Two Color Marker (sr2cm) and Two Rate Three Color Marker (trtcm). **Type:** Create -- Optional Modify -- Optional **Default value:** trtcm
`cir cir`	Committed Information Rate of the IRL in kbps. This field is valid for both sr2cm and trtcm type of profiles. The value of this field cannot be more than PIR. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_IRL_MIN_CIR - GS_CFG_IRL_MAX_CIR **Default value:** GS_CFG_IRL_DEF_CIR
`cbs cbs`	Committed Burst Size of the IRL in bytes. This field is valid in both sr2cm and trtcm type of profiles. The value of this field cannot be more than PBS in case of trTcm. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_IRL_MIN_CBS - GS_CFG_IRL_MAX_CBS **Default value:** GS_CFG_IRL_DEF_CBS
`pir pir`	Peak Information Rate of the IRL in kbps. This field is valid only for trtcm type of profile. The value of this field cannot be less than CIR. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_IRL_MIN_PIR - GS_CFG_IRL_MAX_PIR **Default value:** GS_CFG_IRL_DEF_PIR
`pbs pbs`	Peak burst size of the IRL in bytes. This field is valid only for trtcm type of profile. The value of this field cannot be less than CBS. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_IRL_MIN_PBS - GS_CFG_IRL_MAX_PBS **Default value:** GS_CFG_IRL_DEF_PBS

Name	Description
conformaction colorgreen	Color type to be applied for conforming packets. This field is valid in both sr2cm and trtcm type of profiles **Type:** Create -- Optional Modify -- Optional **Default value:** colorgreen
exceedaction drop | coloryellow	Color for exceeding packets. This field is valid only for trtcm type of profiles **Type:** Create -- Optional Modify -- Optional **Default value:** coloryellow
violateaction drop | coloryellow	Color type to be applied for violating packets. This field is valid in both sr2cm and trtcm type of profiles **Type:** Create -- Optional Modify -- Optional **Default value:** drop

Example

```
$ create irl profile profilename gold irltype trtcm cir 1000 cbs 400
pir 2000 pbs 12000 conformaction colorgreen exceedaction coloryellow
violateaction drop
```

Output Verbose Mode On

```
Entry Created

Profile name  : gold
Profile Type  : trtcm        CIR(kbps)      : 1000
CBS(bytes)    : 12000        PIR(kbps)      : 2000
PBS(bytes)    : 12000        Conform action : colorgreen
Exceed action : coloryellow Violate action : drop
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile name	Profile name uniquely identifies an IRL profile in the system. String of up to 64 characters ('A'- 'Z', 'a'-'z', '0'-'9','-','_') and any combination of printable characters excluding ';'.
Profile Type	This field specifies the type of IRL. Two type of IRLs are supported. Single Rate Two Color Marker (sr2cm) and Two Rate Three Color Marker (trtcm).
CIR(kbps)	Committed Information Rate of the IRL in kbps. This field is valid for both sr2cm and trtcm type of profiles. The value of this field cannot be more than PIR.
CBS(bytes)	Committed Burst Size of the IRL in bytes. This field is valid in both sr2cm and trtcm type of profiles. The value of this field cannot be more than PBS in case of trTcm.

Field	Description
PIR(kbps)	Peak Information Rate of the IRL in kbps. This field is valid only for trtcm type of profile. The value of this field cannot be less than CIR.
PBS(bytes)	Peak burst size of the IRL in bytes. This field is valid only for trtcm type of profile. The value of this field cannot be less than CBS.
Conform action	Color type to be applied for conforming packets. This field is valid in both sr2cm and trtcm type of profiles.
Exceed action	Color for exceeding packets. This field is valid only for trtcm type of profiles.
Violate action	Color type to be applied for violating packets. This field is valid in both sr2cm and trtcm type of profiles

Caution   None.

References   • IRL Commands

2.90 IRL Stats Commands

2.90.1 get irl stats

Description   Use this command to get.

Command Syntax   *get irl stats [ifname ifname]*

Parameters

Name	Description
ifname ifname	Interface Name whose IRL statistics are requested. **Valid Values:** aal5-0 - aal5-*. **Type :** Get -- Optional **Valid values :** ND - ND

Example   *$ get irl stats ifname aal5-0*

Output
```
Interface          : aal5-0    Num packets violated  : 100
Num packets exceeded : 300     Num packets conformed : 1000
```

Output field description

Field	Description
Interface	Interface Name whose IRL statistics are requested.
Num packets violated	Number of packets that violated PIR in case of trTcm. In case of crTcm it is the number of packets violating CIR.
Num packets exceeded	Number of packets that exceeded CIR. This field is valid only for trtcm type of profiles.
Num packets conformed	Number of packets that conformed to CIR.

Caution   None.

References   • IRL Commands

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2.91 Bridge port accessprio Commands

2.91.1 get bridge port accessprio

Description   Use this command to get.

Command Syntax   *get bridge port accessprio [portid portid] [regenprio regenprio]*

Parameters

Name	Description
portid portid	Port number of the port for which this entry contains bridge management information. **Type** **:** Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
regenprio regenprio	Regenerated user priority from which the access priority is mapped. **Type** **:** Get -- Optional **Valid values:** 0 - 7

Example   *$ get bridge port accessprio portid 1 regenPrio 1*

Output
```
PortId      : 1            regenPrio : 1
AcessPriority : 0
```

Output field description

Field	Description
PortId	Port number of the port for which this entry contains bridge management information.
regenPrio	Regenerated user priority from which the access priority is mapped.
AcessPriority	The Outbound Access Priority the received frame is mapped to.

Caution   None.

References   • Bridge port commands

2.92 Bridge port prioinfo Commands

2.92.1 get bridge port prioinfo

Description   Use this command to get.

Command Syntax   *get bridge port prioinfo [portid portid]*

2.92.2 modify bridge port prioinfo

Description   Use this command to modify.

Command Syntax   *modify bridge port prioinfo portid portid [defprio defprio] [numtrfclass numtrfclass]*

Parameters

Name	Description
portid portid	Port number of the port for which this entry contains bridge management information. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
defprio defprio	The default ingress User Priority for this port which can be configured by the user. The default user priority can be GS_CFG_DEF_ETH_CREATE_PRIO or GS_CFG_DEF_EOA_CREATE_PRIO depending on whether bridge port is created over ethernet or EOA interface. These values are defined in sys_conf.h **Type** : Modify -- Optional **Valid values:** 0 - GS_CFG_MAX_PRIO
numtrfclass numtrfclass	The number of egress traffic classes supported on this port. It depends on whether bridge port is over EOA, in which case, the max number of queues is value of maxnumeoaprioQs in gsvSystemSizingGroup and default value is also value of maxnumeoaprioQs in nbsize or over ethernet / aggregated interface, in which case, the max number of queues is value of MaxNumEthPrioQs in nbsize and default value is also value of MaxNumEthPrioQs in nbsize. It is modifiable only when the bridge port is in disabled state. **Type:** Modify -- Optional

Example   *$ get bridge port prioinfo portid 1*

Output   PortId   : 1

```
                    DefaultPriority : 1          NumTrafficClass : 3
```

Output field description

Field	Description
PortId	Port number of the port for which this entry contains bridge management information.
DefaultPriority	The default ingress User Priority for this port which can be configured by the user. The default user priority can be GS_CFG_DEF_ETH_CREATE_PRIO or GS_CFG_DEF_EOA_CREATE_PRIO depending on whether bridge port is created over ethernet or EOA interface. These values are defined in sys_conf.h
NumTrafficClass	The number of egress traffic classes supported on this port. It depends on whether bridge port is over EOA, in which case, the max number of queues is value of maxnumeoaprioQs in gsvSystemSizingGroup and default value is also value of maxnumeoaprioQs in nbsize or over ethernet / aggregated interface, in which case, the max number of queues is value of MaxNumEthPrioQs in nbsize and default value is also value of MaxNumEthPrioQs in nbsize. It is modifiable only when the bridge port is in disabled state.

Caution   None.

References   • Bridge port commands

2.93 Bridge port trfclassmap Commands

2.93.1 get bridge port trfclassmap

Description   Use this command to get.

Command Syntax   `get bridge port trfclassmap [ portid portid ] [ regenprio regenprio ]`

2.93.2 modify bridge port trfclassmap

Description   Use this command to modify.

Command Syntax   `modify bridge port trfclassmap portid portid regenprio regenprio [ trfclass trfclass ]`

Parameters

Name	Description
`portid portid`	Port number of the port for which this entry contains bridge management information. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 0 - GS_CFG_MAX_BRIDGE_PORTS
`regenprio regenprio`	The Priority value evaluated for the received frame. In our case, it is the regenerated user priority. This regenerated priority is mapped from user priority determined by a) packet classifier rule indicating user priority for that port b) user priority received in the tag header and c) default source priority of the port, in that order. It lies in the range 0-7 **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 0 - 7
`trfclass trfclass`	The Traffic Class the received frame is mapped to. The maximum value of trafficClass is defined by numTrfClass parameter of Bridge Port PrioInfo. The default value of this field shall be determined according to table 7-2 described in ANSI/IEEE Std 802.1d 1998 Edition Document. This mapping is modifiable only when the bridge port is in disabled state. **Type:** Modify -- Optional

Example   `$ get bridge port trfclassmap portid 1 regenPrio 1`

Output
```
PortId      : 1          regenPrio : 1
TrafficClass : 2
```

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Output field description

Field	Description
PortId	Port number of the port for which this entry contains bridge management information.
regenPrio	The Priority value evaluated for the received frame. In our case, it is the regenerated user priority. This regenerated priority is mapped from user priority determined by a) packet classifier rule indicating user priority for that port b) user priority received in the tag header and c) default source priority of the port, in that order. It lies in the range 0-7
TrafficClass	The Traffic Class the received frame is mapped to. The maximum value of trafficClass is defined by numTrfClass parameter of Bridge Port PrioInfo. The default value of this field shall be determined according to table 7-2 described in ANSI/IEEE Std 802.1d 1998 Edition Document. This mapping is modifiable only when the bridge port is in disabled state.

Caution   None.

References   • Bridge port commands

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2.94 Bridge port priomap Commands

2.94.1 get bridge port priomap

Description   Use this command to get.

Command Syntax   `get bridge port priomap [ portid portid ] [ usrprio usrprio ]`

2.94.2 modify bridge port priomap

Description   Use this command to modify.

Command Syntax   `modify bridge port priomap portid portid usrprio usrprio [ regenprio regenprio ]`

Parameters

Name	Description
`portid portid`	Port number of the port for which this entry contains bridge management information. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
`usrprio usrprio`	The User Priority for a frame received on this port. Since it can arrive in a tag header, it can have range 0-7. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 0 - 7
`regenprio regenprio`	The priority to which the incoming User priority is mapped for this port. **Type:** Modify -- Optional **Valid values:** 0 - 7

Example   `$ get bridge port priomap portid 1 usrPrio 1`

Output
```
PortId       : 1          UserPriority : 1
RegenUserPrio : 1
```

Output field description

Field	Description
`PortId`	Port number of the port for which this entry contains bridge management information.

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Field	Description
UserPriority	The User Priority for a frame received on this port. Since it can arrive in a tag header, it can have range 0-7.
RegenUserPrio	The priority to which the incoming User priority is mapped for this port.

Caution   None.

References   • Bridge port commands

2.95 Filter rule entry Commands

Note: *Please refer to the Columbia Generic Filter and Classifier Application Note DO-401995-AN for details of Generic Filter Commands.*

2.95.1 get filter rule entry

Description   Use this command to get.

Command Syntax   `get filter rule entry [ ruleid ruleid ]`

2.95.2 create filter rule entry

Description   Use this command to create.

Command Syntax   `create filter rule entry ruleid ruleid [ action drop | allow`
`| setprio | sendtocontrol | retagprio | copytocontrol |`
`clfrdef | gotonextrule | forwardexit ] [ description`
`description ] [ priority priority ] [ status enable | disable`
`] [ statsstatus enable | disable ] [ ruleprio low | high ] [`
`ruledir in | out ] [ applywhenreq enable | disable ] [ pkttype`
`Mcast | Bcast | Ucast ] [ snooplevel interface | bridge ]`

2.95.3 delete filter rule entry

Description   Use this command to delete.

Command Syntax   `delete filter rule entry ruleid ruleid`

2.95.4 modify filter rule entry

Description   Use this command to modify.

Command Syntax   `modify filter rule entry ruleid ruleid [ action drop | allow`
`| setprio | sendtocontrol | retagprio | copytocontrol |`
`clfrdef | gotonextrule | forwardexit ] [ description`
`description ] [ priority priority ] [ status enable | disable`
`] [ statsstatus enable | disable ] [ ruleprio low | high ] [`
`applywhenreq enable | disable ] [ pkttype Mcast | Bcast |`
`Ucast ] [ snooplevel interface | bridge ]`

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Parameters

Name	Description
ruleid `ruleid`	Unique identifier of a filter rule. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
action `drop	allow	setprio	sendtocontrol	retagprio	copytocontrol	clfrdef	gotonextrule	forwardexit`	Action to be applied for the packets matching this filter rule. This field can be modified only if 'status' has the value 'disable'.If 'ruleDir' value is 'out', only 'drop', 'allow', gotonextrule' and 'forwardexit' action types are valid. If the action is 'clfrdef', then the rule can have at most one subrule, that too of type 'clfrtree'. **Type:** Create -- Optional Modify -- Optional **Default value:** drop
description `description`	Description of the application that receives packets matching this rule. This field is valid and mandatory only if RuleAction is 'sendtocontrol' or RuleApplyWhenReq is 'enable'. This field can be modified only if 'status' has the value 'disable' **Type:** Create -- Optional Modify -- Optional **Default value:** "\0"
priority `priority`	Priority to be set for packets matching this rule. This field is valid only if RuleAction is 'setprio' or 'retagprio'. If the RuleAction is 'setprio' then this value is internal priority and is used along with egress port traffic class mapping table, to determine the output queue. If the RuleAction is 'retagprio' then this value is priority which is to be tagged into the outgoing packet and it is also used along with egress port traffic class mapping table, to determine the output queue. This field can be modified only if 'status' has the value 'disable'. **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - 7 **Default value:** 0
status `enable	disable`	Admin status of the rule **Type:** Create -- Optional Modify -- Optional **Default value:** disable

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Name	Description
statsstatus enable | disable	Admin status of rule statistics. Statistics of a rule are collected only when this field is set to 'enable'. This field can be modified only if 'status' has the value 'disable'. **NOTE** - Statistics may not reflect the correct number of egress mcast, bcast and unknown unicast packets hitting the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** disable
ruleprio low | high	Tells the priority of the rule. Based on this priority value, the rule is created in fast or slow memory. This field can be modified only if 'status' has the value 'disable'. This field is ignored if the 'ruleAction' has value 'clfrdef' **Type:** Create -- Optional Modify -- Optional **Default value:** high
ruledir in | out	Specifies whether the rule will be applied on incoming interfaces (ingress) or outgoing interfaces (egress). **Type:** Create -- Optional **Default value:** in
applywhenreq enable | disable	This specifies whether this rule is to be applied only when required. Rule description field is mandatory if this field is set to value 'enable'. This field can be modified only if 'status' has the value 'disable'. This field is ignored if the 'ruleAction' has value 'clfrdef'. **Type:** Create -- Optional Modify -- Optional **Default value:** disable
pkttype Mcast | Bcast | Ucast	This field specifies the types of packets on which this rule is to be applied. 'Mcast' means this rule is valid for multicast packets, 'Bcast' means this rule is valid for broadcast packets and 'Ucast' means this rule is valid for unicast packets. This field is valid only if 'ruleDir' is 'out'. This field can be modified only if 'status' has the value 'disable'. **Type:** Create -- Optional Modify -- Optional **Default value:** Ucast
snooplevel interface | bridge	Snoop level indicates whether the packet will be snooped directly from the interface or the bridge after the bridging functionality is applied. If none of the rule actions is 'sendtoControl' or 'copytocontrol', then this field has no significance. This field can be modified only if 'status' has the value 'disable'. **Type**: Create -- Optional Modify -- Optional **Default value**: interface

Example   *$ create filter rule entry ruleid 1 action setprio description lacp*

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```
priority 7 status enable statsstatus disable ruleprio high ruledir
in applywhenreq disable
```

Output   Verbose Mode On

```
Entry Created

Rule Id                : 1          Rule Action  : setprio
Set Priority           : 7          Admin status : enable
Stats admin status     : disable    Rule Priority : high
Rule Direction         : in         ApplyWhenReq : disable
Pkt Type               : Ucast
Application Description : lacp
Snoop Level            : Interface
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
`Rule Id`	Unique identifier of a filter rule.
`Rule Action`	Action to be applied for the packets matching this filter rule. This field can be modified only if 'status' has the value 'disable'.If 'ruleDir' value is 'out', only 'drop','allow','gotonextrule'and 'forwardexit' action types are valid. If the action is 'clfrdef', then the rule can have at most one subrule, that too of type 'clfrtree'.
`Set Priority`	Priority to be set for packets matching this rule. This field is valid only if RuleAction is 'setprio' or 'retagprio'. If the RuleAction is 'setprio' then this value is internal priority and is used along with egress port traffic class mapping table, to determine the output queue. If the RuleAction is 'retagprio' then this value is priority which is to be tagged into the outgoing packet and it is also used along with egress port traffic class mapping table, to determine the output queue. This field can be modified only if 'status' has the value 'disable'.
`Admin status`	Admin status of the rule
`Stats admin status`	Admin status of rule statistics. Statistics of a rule are collected only when this field is set to 'enable'. This field can be modified only if 'status' has the value 'disable'. **NOTE** - Statistics may not reflect the correct number of egress mcast, bcast and unknown unicast packets hitting the rule.
`Rule Priority`	Tells the priority of the rule. Based on this priority value, the rule is created in fast or slow memory. This field can be modified only if 'status' has the value 'disable'. This field is ignored if the 'ruleAction' has value 'clfrdef'

Field	Description
Rule Direction	Specifies whether the rule will be applied on incoming interfaces (ingress) or outgoing interfaces (egress).
ApplyWhenReq	This specifies whether this rule is to be applied only when required. Rule description field is mandatory if this field is set to value 'enable'. This field can be modified only if 'status' has the value 'disable'. This field is ignored if the 'ruleAction' has value 'clfrdef'.
Pkt Type	This field specifies the types of packets on which this rule is to be applied. 'Mcast' means this rule is valid for multicast packets, 'Bcast' means this rule is valid for broadcast packets and 'Ucast' means this rule is valid for unicast packets. This field is valid only if 'ruleDir' is 'out'. This field can be modified only if 'status' has the value 'disable'.
Application Description	Description of the application that receives packets matching this rule. This field is valid and mandatory only if RuleAction is 'sendtocontrol' or RuleApplyWhenReq is 'enable'. This field can be modified only if 'status' has the value 'disable'
Snoop Level	Snoop level indicates whether the packet will be snooped directly from the interface or the bridge after the bridging functionality is applied. If none of the rule actions is 'sendtoControl' or 'copytocontrol', then this field has no significance. This field can be modified only if 'status' has the value 'disable'.

Caution   None.

References   • Generic Filter Commands

2.96 Filter rule map Commands

2.96.1 get filter rule map

Description   Use this command to get.

Command Syntax   `get filter rule map [ ifname ifname ] [ stageid stageid ] [ ruleid ruleid ]`

2.96.2 create filter rule map

Description   Use this command to create.

Command Syntax   `create filter rule map ifname ifname stageid stageid ruleid ruleid [ orderid orderid ]`

2.96.3 delete filter rule map

Description   Use this command to delete.

Command Syntax   `delete filter rule map ifname ifname stageid stageid ruleid ruleid`

2.96.4 modify filter rule map

Description   Use this command to modify.

Command Syntax   `modify filter rule map ifname ifname stageid stageid ruleid ruleid [ orderid orderid ]`

Parameters

Name	Description
ifname ifname	Name of the interface whose mapping is being created. Only EOA, PPPoE, and Ethernet interfaces are allowed. If the value of this field is 'All', it indicates all interfaces. 'AllEoa' indicates all 'eoa' interfaces and 'AllEth' indicates all 'ethernet' interfaces. 'AllPppoe' indicates all 'PPPoE' interfaces and 'AllCpe' indicates all eoa and pppoe interfaces. If a bridge port on the aggregated interface is created, then this field cannot have ifIndex of any specific ethernet interface. **Type**: Create - Mandatory Delete -- Mandatory Get -- Optional **Valid values**: eth-*, eoa-*, pppoe-*
stageid stageid	This field specifies the stage on the interface to which the rule in the mapping belongs **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_STAGE_ID - GS_CFG_MAX_GFLTR_STAGE_ID
ruleid ruleid	Rule Id of the rule in the mapping **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
orderid orderid	This field indicates the order of the rule in the attached sequence. The default value for this field will be same as the ruleid of the entry. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_MIN_GFLTR_ORDERID - GS_CFG_MAX_GFLTR_ORDERID **Default value:** Same As Ruleid

Example   *$ create filter rule map ifname eoa-0 stageid 1 ruleid 1 orderId 1*

Output   Verbose Mode On

```
Entry Created

Interface : eoa-0     Stage Id : 1
Rule Id   : 1         Order Id : 1
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Interface	Name of the interface whose mapping is being created. Only EOA, PPPoE, and Ethernet interfaces are allowed. If the value of this field is 'All', it indicates all interfaces. 'AllEoa' indicates all 'eoa' interfaces and 'AllEth' indicates all 'ethernet' interfaces. 'AllPppoe' indicates all 'PPPoE' interfaces and 'AllCpe' indicates all eoa and pppoe interfaces. If a bridge port on the aggregated interface is created, then this field cannot have ifIndex of any specific ethernet interface.
Stage Id	This field specifies the stage on the interface to which the rule in the mapping belongs
Rule Id	Rule Id of the rule in the mapping
Order Id	This field indicates the order of the rule in the attached sequence. The default value for this field will be same as the ruleid of the entry.

Caution   None.

References   • Generic Filter Commands

2.97 Filter subrule generic Commands

2.97.1 get filter subrule generic

Description   Use this command to get.

Command Syntax   `get filter subrule generic [ ruleid ruleid ] [ subruleid subruleid ]`

2.97.2 create filter subrule generic

Description   Use this command to create.

Command Syntax   `create filter subrule generic ruleid ruleid subruleid`

`subruleid [ offsethdr ethernet | ip | tcp | udp | icmp | igmp`

`| l3hdr | ppp | pppoe] [offset offset] [mask mask] [valuefrom valuefrom] [valueto valueto] [gencmp eq | neq | lt | leq | gt | geq | any | inrange | exrange | ingenlist |notingenlist | innamedlist | notinnamedlist] [subruleprio low | high | asinrule] [namedlistid namedlistid] [transporthdr ethernet | pppoe]`

2.97.3 delete filter subrule generic

Description   Use this command to delete.

Command Syntax   `delete filter subrule generic ruleid ruleid subruleid subruleid`

2.97.4 modify filter subrule generic

Description   Use this command to modify.

Command Syntax   `modify filter subrule generic ruleid ruleid subruleid`

`subruleid [ offsethdr ethernet | ip | tcp | udp | icmp | igmp`

`| l3hdr | ppp | pppoe] [offset offset] [mask mask] [valuefrom valuefrom] [valueto valueto] [gencmp eq | neq | lt | leq | gt | geq | any | inrange | exrange |ingenlist |notingenlist | innamedlist | notinnamedlist] [subruleprio low | high | asinrule] [namedlistid namedlistid] [transporthdr ethernet | pppoe]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule for which this sub rule is being created. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
offsethdr ethernet | ip |tcp | udp | icmp | igmp |l3hdr | ppp | pppoe	Type of the offset header the 'offset' is to be measured from. The value 'ethernet' is invalid if the rule for which this subrule is being created is of direction 'out'. **Type**: Create -- Optional Modify - Optional **Default value**: ethernet
offset offset	Offset value to be added to 'offsethdr' to get the field value **Type:** Create -- Optional Modify -- Optional **Default value:** 0
mask mask	Mask to be applied to the contents of a packet at 'offset' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
valuefrom valuefrom	The starting generic value of the range of generic values. This field is invalid if 'gencmp' is 'any', 'ingenlist' or 'notingenlist', or innamedlist' or 'notinnamedlist'. This field and the next field specify a range of generic values, if 'gencmp' is either 'inrange' or 'exrange'. **Type**: Create -- Optional Modify - Optional **Default value**: 0
valueto valueto	End generic value of the range of generic values. This field and the previous field specify a range of generic values, if 'gencmp' is either 'inrange' or 'exrange'.Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** 0

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Name	Description
gencmp eq | neq | lt | leq| gt | geq | any | inrange| exrange |ingenlist|notingenlist | innamedlist | notinnamedlist]	Generic value comparison type. **Type:** Create -- Optional Modify -- Optional **Default value:** Any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
namedlistid namedlistid	This specifies the list identifier value of the named list that will be used to do the lookup. In case 'gencmp' is 'innamedlist' or 'notinnamedlist', this field is mandatory. Else, it is extra. **Default value**: 1
transporthdr ethernet | pppoe	This specifies the type of transport header in the packet in which the corresponding IP is being transported. If the value of this field is 'ethernet', then the IP is being carried in the ethernet header. If it is 'pppoe', then the corresponding IP is being carried in the PPP header. This field is valid only when the value of 'offsethdr' is any one of ip, tcp, udp, icmp, or igmp. Otherwise, this field is extra. **Type**: Create -- Optional Modify -- Optional **Default value**: ethernet

Example　*$ create filter subrule generic ruleid 1 subruleid 2 offsethdr tcp offset 20 mask 0xFF valuefrom 0x20 valueto 0x40 gencmp inrange subruleprio high*

Output　Verbose Mode On

```
Rule Id                   : 1        Subrule Id  : 2
Offset header             : tcp      Offset      : 20
Generic header comparison : inrange  Mask        : 0xFF
Subrule Priority          : high     Start value : 0x20
End value                 : 0x40
Transport Header          : Ethernet
NamedList Id              : -
```

Verbose Mode Off:　　`Entry Created`

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule for which this sub rule is being created.
Subrule Id	Unique identifier of a filter subrule.
Offset header	Type of offset header from where 'offset' to be measured. Value 'ethernet'(1) can not be specified if the direction of the rule of which this subrule is being created is, 'out'.
Offset	Offset value to be added to 'offsethdr' to get the field value
Start value	The starting generic value of the range of generic values. This field is invalid if 'gencmp' is 'any', 'ingenlist' or 'notingenlist', or 'innamedlist' or 'notinnamedlist'. This field and the next field specify a range of generic values, if 'gencmp' is either 'inrange' or 'exrange'.
End value	End generic value of the range of generic values. This field and the previous field specify a range of generic values, if 'gencmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Generic header comparison	Generic value comparison type.
Mask	Mask to be applied to the contents of a packet at 'offset'
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Namedlist Id	This specifies the list identifier value of the named list that will be used to do the lookup. In case 'gencmp' is 'innamedlist' or 'notinnamedlist', this field is mandatory. Else, it is extra.
Transport Header	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is 'ethernet', then the IP is being carried in the ethernet header. If it is 'pppoe', then the corresponding IP is being carried in the PPP header. This field is valid only when the value of 'offsethdr' is any one of ip, tcp, udp, icmp, or igmp. Otherwise, this field is extra.

Caution   Generic command is not present in case of egress filters.

References   • Generic filter commands

2.98 Filter subrule ICMP Commands

2.98.1 get filter subrule icmp

Description   Use this command to get.

Command Syntax   `get filter subrule icmp [ ruleid ruleid ] [ subruleid subruleid ]`

2.98.2 create filter subrule icmp

Description   Use this command to create.

Command Syntax   `create filter subrule icmp ruleid ruleid subruleid subruleid`
`[ icmptype icmptype ] [ icmpcode icmpcode ] [ icmptypecmp eq`
`| neq | any ] [ icmpcodecmp eq | neq | any ] [ subruleprio low`
`| high | asinrule] [ transporthdr ethernet | pppoe ]`

2.98.3 delete filter subrule icmp

Description   Use this command to delete.

Command Syntax   `delete filter subrule icmp ruleid ruleid subruleid subruleid`

2.98.4 modify filter subrule icmp

Description   Use this command to modify.

Command Syntax   `modify filter subrule icmp ruleid ruleid subruleid subruleid`
`[ icmptype icmptype ] [ icmpcode icmpcode ] [ icmptypecmp eq`
`| neq | any ] [ icmpcodecmp eq | neq | any ] [ subruleprio low`
`| high | asinrule] [ transporthdr ethernet | pppoe ]`

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Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
icmptype icmptype	ICMP type **Type:** Create -- Optional Modify -- Optional **Default value:** 0
icmpcode icmpcode	ICMP code **Type:** Create -- Optional Modify -- Optional **Default value:** 0
icmptypecmp eq | neq | any	ICMP type comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
icmpcodecmp eq | neq | any	ICMP code comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
transporthdr ethernet | pppoe	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is ethernet, then the IP is being carried in the ethernet header. If it is 'pppoe', then the corresponding IP is being carried in the PPP header. **Type**: Create -- Optional Modify -- Optional **Default value**: ethernet

Example   *$ create filter subrule icmp ruleid 1 subruleid 2 icmptype 0 icmpcode 0 icmptypecmp neq icmpcodecmp neq subruleprio high*

Output   Verbose Mode On

```
Entry Created

Rule Id             : 1        Subrule Id           : 2
Icmp type           : 0        Icmp code            : 0
ICMP type comparison : neq     ICMP code comparison : neq
Subrule Priority    : high
Transport Header    : Ethernet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created
Subrule Id	Unique identifier of a filter subrule
Icmp type	ICMP type
Icmp code	ICMP code
ICMP type comparison	ICMP type comparison type
ICMP code comparison	ICMP code comparison type
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Transport Header	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is ethernet, then the IP is being carried in the ethernet header. If it is 'pppoe', then the corresponding IP is being carried in the PPP header.

Caution   None.

References   • Generic Filter commands

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2.99 Filter subrule IGMP Commands

2.99.1 get filter subrule igmp

Description   Use this command to get.

Command Syntax   `get filter subrule igmp [ ruleid ruleid ] [ subruleid subruleid ]`

2.99.2 create filter subrule igmp

Description   Use this command to create.

Command Syntax   `create filter subrule igmp ruleid ruleid subruleid subruleid`
`[ igmptype igmptype ] [ igmpcode igmpcode ] [ groupaddrfrom`
`groupaddrfrom ] [ groupaddrto groupaddrto ] [ igmptypecmp eq`
`| neq | any ] [ igmpcodecmp eq | neq | any ] [ igmpgroupaddrcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`subruleprio low | high | asinrule] [ transporthdr ethernet | pppoe ]`

2.99.3 delete filter subrule igmp

Description   Use this command to delete.

Command Syntax   `delete filter subrule igmp ruleid ruleid subruleid subruleid`

2.99.4 modify filter subrule igmp

Description   Use this command to modify.

Command Syntax   `modify filter subrule igmp ruleid ruleid subruleid subruleid`
`[ igmptype igmptype ] [ igmpcode igmpcode ] [ groupaddrfrom`
`groupaddrfrom ] [ groupaddrto groupaddrto ] [ igmptypecmp eq`
`| neq | any ] [ igmpcodecmp eq | neq | any ] [ igmpgroupaddrcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`subruleprio low | high | asinrule] [ transporthdr ethernet | pppoe ]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
igmptype igmptype	IGMP type **Type:** Create -- Optional Modify -- Optional **Default value:** 0
igmpcode igmpcode	This fields specifies the Max Response Code (time) fields of IGMP packet. This field is invalid if igmphCodeCmpType is any. **Type:** Create -- Optional Modify -- Optional **Default value:** 0
groupaddrfrom groupaddrfrom	Start group address of the range of igmp group addresses.This field is invalid if 'igmpgroupaddrcmp' is 'any'. This field and 'groupaddrto' specify a range of IGMP group addresses, if 'igmpgroupaddrcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
groupaddrto groupaddrto	End group address of the range of igmp group addresses. This field and 'groupaddrfrom' specify a range of IGMP group addresses, if 'igmpgroupaddrcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 4294967295
*igmptypecmp eq	neq	any*	IGMP type comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
*igmpcodecmp eq	neq	any*	IGMP code comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any

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Name	Description
igmpgroupaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	IGMP group address comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
transporthdr ethernet | pppoe	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is Ethernet(0x1), then the IP is being carried in the ethernet header. If it is pppoe(0x2), then the corresponding IP is being carried in the PPP header. **Type**: Create -- Optional Modify -- Optional **Default value**: ethernet

Example

```
$ create filter subrule igmp ruleid 1 subruleid 2 igmptype 0 igmpcode
0 groupaddr from 224.0.2.3 groupaddrto 224.10.20.30 igmptypecmp eq
igmpcodecmp eq igmpgroupaddrcmp inrange subruleprio high
```

Output   Verbose Mode On

```
Entry Created

Rule Id                      : 1          Subrule Id        : 2
Igmp type                    : 0          IGMP type comparison : neq
Igmp code                    : 0          IGMP code comparison : neq
Start group address          : 224.0.2.3    End group address   : 224.10.20.30
IGMP group address comparison : inrange     Subrule Priority    : high
Transport Header             : Ethernet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created
Subrule Id	Unique identifier of a filter subrule
Igmp type	IGMP type
IGMP type comparison	IGMP type comparison type
Igmp code	This field specifies the Max Response Code (time) fields of IGMP packet. This field is invalid if igmphCodeCmpType is any.

Field	Description
IGMP code comparison	IGMP code comparison type
Start group address	Start group address of the range of igmp group addresses.This field is invalid if 'igmpgroupaddrcmp' is 'any'. This field and 'groupaddrto' specify a range of IGMP group addresses, if 'igmpgroupaddrcmp' is either 'inrange' or 'exrange'
End group address	End group address of the range of igmp group addresses. This field and 'groupaddrfrom' specifiy a range of IGMP group addresses, if 'igmpgroupaddrcmp' is either 'inrange' or 'exrange'
IGMP group address comparison	IGMP group address comparison type
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Transport Header	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is Ethernet(0x1), then the IP is being carried in the ethernet header. If it is pppoe(0x2), then the corresponding IP is being carried in the PPP header.

Caution   None.

References   • Generic Filter commands

2.100   Filter subrule IP Commands

2.100.1 get filter subrule ip

Description   Use this command to get.

Command Syntax   `get filter subrule ip [ ruleid ruleid ] [subruleid subruleid ]`

2.100.2 create filter subrule ip

Description   Use this command to create.

Command Syntax   `create filter subrule ip ruleid ruleid subruleid subruleid [srcipaddrfrom srcipaddrfrom] [srcipaddrto srcipaddrto] [dstipaddrfrom dstipaddrfrom] [dstipaddrto dstipaddrto] [prototypefrom prototypefrom] [prototypeto prototypeto] [srcaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange | ingenlist | notingenlist] [dstaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange | ingenlist | notingenlist] [prototypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange] [ipsrcaddrmask ipsrcaddrmask] [ipdstaddrmask ipdstaddrmask] [subruleprio low | high | asinrule] [transporthdr ethernet | pppoe]`

2.100.3 delete filter subrule ip

Description   Use this command to delete.

Command Syntax   `delete filter subrule ip ruleid ruleid subruleid subruleid`

2.100.4 modify filter subrule ip

Description   Use this command to modify.

Command Syntax   `modify filter subrule ip ruleid ruleid subruleid subruleid [srcipaddrfrom srcipaddrfrom] [srcipaddrto srcipaddrto] [dstipaddrfrom dstipaddrfrom] [dstipaddrto dstipaddrto] [prototypefrom prototypefrom] [prototypeto prototypeto] [srcaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange | ingenlist | notingenlist] [dstaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange | ingenlist | notingenlist] [prototypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange] [ipsrcaddrmask ipsrcaddrmask] [`

```
ipdstaddrmask ipdstaddrmask ] [ subruleprio low | high |
asinrule] [ transporthdr ethernet | pppoe ]
```

Parameters

Name	Description
`ruleid ruleid`	Unique identifier of a filter rule of which this sub rule is being created. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
`subruleid subruleid`	Unique identifier of a filter subrule. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
`srcipaddrfrom srcipaddrfrom`	Start source IP address of the range of source IP addresses. This field is invalid if 'srcaddrcmp' is 'any', 'ingenlist' or 'notingenlist'. This field and 'srcipaddrto' specify a range of source IP addresses if 'srcaddrcmp' is either 'inrange' or 'exrange'. **Type:** Create -- Optional Modify -- Optional **Default value:** 0
`srcipaddrto srcipaddrto`	End source IP address of the range of source IP addresses. This field and 'srcipaddrfrom' specify a range of source IP addresses, if 'srcaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid. **Type:** Create -- Optional Modify -- Optional **Default value:** 4294967295
`dstipaddrfrom dstipaddrfrom`	Start destination IP address of the range of destination IP addresses. This field is invalid if 'dstaddrcmp' is 'any', 'ingenlist' or 'notingenlist'. This field and 'dstipaddrto' specify a range of destination IP addresses, if 'dstaddrcmp' is either 'inrange' or 'exrange'. **Type:** Create -- Optional Modify -- Optional **Default value:** 0
`dstipaddrto dstipaddrto`	End destination IP address of the range of destination IP addresses. This field and 'dstipaddrfrom' specify a range of destination IP addresses, if 'dstaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid. **Type:** Create -- Optional Modify -- Optional **Default value:** 4294967295

Name	Description
prototypefrom *prototypefrom*	Start IP protocol type of the range of IP protocol types. This field is invalid if 'prototypecmp' is 'any'.This field and 'prototypeto' specify a range of IP protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'. **Type:** Create -- Optional Modify -- Optional **Default value:** 0
prototypeto prototypeto	End IP protocol type of the range of IP protocol types.This field and 'prototypefrom' specify a range of IP protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid. **Type:** Create -- Optional Modify -- Optional **Default value:** 27
*srcaddrcmp eq	neq	lt	leq	gt	geq	any	inrange	exrange	ingenlist	notingenlist*	Source IP address comparison type. 'ingenlist(10)' means check if source ip address present in interface classifier generic list. 'notingenlist(11)' means check if source ip address not present in interface classifier generic list. 'ingenlist(10)' and 'notingenlist(11)' are invalid if the direction of the rule for which this subrule is being created is 'out'. **Type:** Create -- Optional Modify -- Optional **Default value:** any
*dstaddrcmp eq	neq	lt	leq	gt	geq	any	inrange	exrange	ingenlist	notingenlist*	Destination IP address comparison type. 'ingenlist(10)' means check if destination ip address present in interface classifier generic list. 'notingenlist(11)' means check if destination ip address not present in interface classifier generic list. 'ingenlist(10)' and 'notingenlist(11)' are invalid if the direction of the rule for which this subrule is being created is 'out'. **Type:** Create -- Optional Modify -- Optional **Default value:** any
*prototypecmp eq	neq	lt	leq	gt	geq	any	inrange	exrange*	IP Protocol type comparison type. **Type:** Create -- Optional Modify -- Optional **Default value:** any
ipsrcaddrmask *ipsrcaddrmask*	The mask value for source ip address. The mask is applied over the source ip address before checking against the values in the generic list. **Type:** Create -- Optional Modify -- Optional **Default value:** 0xffffffff

Name	Description
ipdstaddrmask *ipdstaddrmask*	The mask value for destination ip address. The mask is applied over the destination ip address before checking against the values in the generic list. **Type:** Create -- Optional Modify -- Optional **Default value:** 0xffffffff
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
transporthdr ethernet | pppoe	This specifies the type of the transport header in the packet in which the IP is being transported. If the value of this field is Ethernet (1), then the IP is being carried in the Ethernet header. If it is PPPoE(2), then the IP is being carried in the PPP header. **Type**: Create -- Optional Modify -- Optional **Default value**: Ethernet

Example

```
$ create filter subrule ip ruleid 1 subruleid 2 srcipaddrfrom
172.25.1.125 srcipaddrto 172.25.5.125 dstipaddrfrom 172.25.6.125
dstipaddrto 172.25.10.125 prototypefrom 1 prototypeto 6 srcaddrcmp
inrange dstaddrcmp inrange prototypecmp inrange subruleprio high
```

Output   Verbose Mode On

```
Entry Created

Rule Id           : 1               Subrule Id      : 2
Start src Ip addr : 172.25.1.125    End src Ip addr  : 172.25.5.125
Start dest Ip addr : 172.25.6.125   End dest Ip addr : 172.25.10.125
Start Ip Prot type : 1              End IP prot type : 6
IP Src Addr Mask   : 0xffffffff     IP Dest Addr Mask: 0xffffffff
Src Ip addr comp   : inrange        Dest Ip addr comp: inrange
Subrule Priority   : inrange        IP Prot type comp: high
Transport Header   : Ethernet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created.
Subrule Id	Unique identifier of a filter subrule.

Field	Description
Start src Ip addr	Start source IP address of the range of source IP addresses. This field is invalid if 'srcaddrcmp' is 'any', 'ingenlist' or 'notingenlist'. This field and 'srcipaddrto' specify a range of source IP addresses if 'srcaddrcmp' is either 'inrange' or 'exrange'.
End src Ip addr	End source IP address of the range of source IP addresses. This field and 'srcipaddrfrom' specify a range of source IP addresses, if 'srcaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid.
Start dest Ip addr	Start destination IP address of the range of destination IP addresses. This field is invalid if 'dstaddrcmp' is 'any', 'ingenlist' or 'notingenlist'. This field and 'dstipaddrto' specify a range of destination IP addresses, if 'dstaddrcmp' is either 'inrange' or 'exrange'.
End dest Ip addr	End destination IP address of the range of destination IP addresses. This field and 'dstipaddrfrom' specify a range of destination IP addresses, if 'dstaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid.
Start Ip Prot type	Start IP protocol type of the range of IP protocol types. This field is invalid if 'prototypecmp' is 'any'.This field and 'prototypeto' specify a range of IP protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'.
End IP prot type	End IP protocol type of the range of IP protocol types.This field and 'prototypefrom' specify a range of IP protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid.
Src Ip addr comp	Source IP address comparison type. 'ingenlist' means check if source ip address present in interface classifier generic list. 'notingenlist' means check if source ip address not present in interface classifier generic list. 'ingenlist' and 'notingenlist' are invalid if the direction of the rule for which this subrule is being created is 'out'.
Dest Ip addr comp	Destination IP address comparison type. 'ingenlist' means check if destination ip address present in interface classifier generic list. 'notingenlist' means check if destination ip address not present in interface classifier generic list. 'ingenlist' and 'notingenlist' are invalid if the direction of the rule for which this subrule is being created is 'out'.
IP Prot type comp	IP Protocol type comparison type.
IP Src Addr Mask	The mask value for source ip address. The mask is applied over the source ip address before checking against a value.

Field	Description
IP Dest Addr Mask	The mask value for destination ip address. The mask is applied over the destination ip address before checking against a value.
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Transport Header	This specifies the type of Transport header in the packet in which IP is being transported. If value of this field is ethernet (1), then IP is being carried in ethernet header and if it is pppoe (2) then then IP is being carried in PPP header.

Caution   None.

References
- Generic Filter Commands

Conexant Systems, Inc.

2.101 Filter subrule clfrtree Commands

2.101.1 get filter subrule clfrtree

Description   Use this command to get.

Command Syntax   `get filter subrule clfrtree [ ruleid ruleid ] [ subruleid subruleid ]`

2.101.2 create filter subrule clfrtree

Description   Use this command to create.

Command Syntax   `create filter subrule clfrtree ruleid ruleid subruleid subruleid tname tname entrypid entrypid`

2.101.3 delete filter subrule clfrtree

Description   Use this command to delete.

Command Syntax   `delete filter subrule clfrtree ruleid ruleid subruleid subruleid`

2.101.4 modify filter subrule clfrtree

Description   Use this command to modify.

Command Syntax   `modify filter subrule clfrtree ruleid ruleid subruleid subruleid [ tname tname ] [ entrypid entrypid ]`

Parameter

Name	Description
`ruleid` ruleid	Unique identifier of a filter rule of which this sub rule is being created. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
`subruleid` subruleid	Unique identifier of a filter subrule. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295

Name	Description
tname tname	Name of the classifier tree which is to be included as subrule of this rule. This classifier tree should exist and be enabled. A classifier tree can be used only in one subrule. The Maximum length of Name should be GS_CLFR_MAX_TREE_NAME_LEN. **Type:** Create -- Mandatory Modify -- Optional
entrypid entrypid	Profile Id of the tree, which shall be treated as an entry point for it. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** 1 - 0xffffffff

Example   *$ create filter subrule clfrtree ruleid* 1 *subruleid* 2 *tname* igmp
entrypid 2

Output   Verbose Mode On

```
Entry Created

Rule Id        : 1          Subrule Id : 2
Tree Name      : igmp
Entry Profile Id : 2
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created.
Subrule Id	Unique identifier of a filter subrule.
Tree Name	Name of the classifier tree which is to be included as subrule of this rule. This classifier tree should exist and be enabled. A classifier tree can be used only in one subrule. The Maximum length of Name should be GS_CLFR_MAX_TREE_NAME_LEN.
Entry Profile Id	Profile Id of the tree, which shall be treated as an entry point for it.

Caution   None.

References   • see generic filter related commands

Conexant Systems, Inc.

2.102 Filter subrule PPP Commands

2.102.1 get filter subrule ppp

Description   Use this command to get.

Command Syntax   `get filter subrule ppp [ ruleid ruleid ] [ subruleid subruleid ]`

2.102.2 create filter subrule ppp

Description   Use this command to create.

Command Syntax   `create filter subrule ppp ruleid ruleid subruleid subruleid [`
`prototypefrom prototypefrom ] [ prototypeto prototypeto ] [`
`prototypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange`
`] [ subruleprio low | high | asinrule ]`

2.102.3 delete filter subrule ppp

Description   Use this command to delete.

Command Syntax   `delete filter subrule ppp ruleid ruleid subruleid subruleid`

2.102.4 modify filter subrule ppp

Description   Use this command to modify.

Command Syntax   `modify filter subrule ppp ruleid ruleid subruleid subruleid [`
`prototypefrom prototypefrom ] [ prototypeto prototypeto ] [`
`prototypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange`
`] [ subruleprio low | high | asinrule ]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295

Name	Description
prototypefrom prototypefrom	Start of range of PPP protocol types. Invalid if 'prototypecmp' is 'any'. This field and the next field specify a range of protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'. Otherwise only this field is valid **Type:** Create -- Optional Modify -- Optional **Default value:** 0
prototypeto prototypeto	End PPP protocol type of the range of PPP protocol types. This field and 'prototypefrom' specifiy a range of ppp protocol types if 'prototypecmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 65535
prototypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Protocol comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule

Example

$ create filter subrule ppp ruleid 1 subruleid 2 prototypefrom 0x1
prototypeto 0x5 prototypecmp inrange subruleprio high

Output   Verbose Mode On

```
Entry Created

Rule Id             : 1         Subrule Id      : 2
Start ProtoType     : 0x1       End ProtoType   : 0x5
Protocol comparison : inrange   Subrule Priority : high
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created
Subrule Id	Unique identifier of a filter subrule

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Field	Description
Start ProtoType	Start of range of PPP protocol types. Invalid if 'prototypecmp' is 'any'. This field and the next field specify a range of protocol types, if 'prototypecmp' is either 'inrange' or 'exrange'. Otherwise only this field is valid
End ProtoType	End PPP protocol type of the range of PPP protocol types. This field and 'prototypefrom' specifiy a range of ppp protocol types if 'prototypecmp' is either 'inrange' or 'exrange'
Protocol comparison	Protocol comparison type
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.

Cautions   None.

References   • see generic filter related commands

2.103 Filter rule stats Commands

2.103.1 get filter rule stats

Description   Use this command to get.

Command Syntax   *get filter rule stats [ruleid ruleid]*

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule **Type:** Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID

Example   *$ get filter rule stats ruleid 1*

Output   Rule Id : 1   Num Hits : 4354

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule
Num Hits	Number of packets that hit this rule

Caution   None.

References   • Generic Filter Commands

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2.104 Filter subrule TCP Commands

2.104.1 get filter subrule tcp

Description   Use this command to get.

Command Syntax   `get filter subrule tcp [ruleid ruleid ] [subruleid subruleid ]`

2.104.2 create filter subrule tcp

Description   Use this command to create.

Command Syntax   `create filter subrule tcp ruleid ruleid subruleid subruleid [`
`srcportfrom srcportfrom ] [ srcportto srcportto ] [`
`dstportfrom dstportfrom ] [ dstportto dstportto ] [ srcportcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`dstportcmp eq | neq | lt | leq | gt | geq | any | inrange |`
`exrange ] [ subruleprio low | high | asinrule]`
`[ transporthdr ethernet | pppoe ]`

2.104.3 delete filter subrule tcp

Description   Use this command to delete.

Command Syntax   `delete filter subrule tcp ruleid ruleid subruleid subruleid`

2.104.4 modify filter subrule tcp

Description   Use this command to modify.

Command Syntax   `modify filter subrule tcp ruleid ruleid subruleid subruleid [`
`srcportfrom srcportfrom ] [ srcportto srcportto ] [`
`dstportfrom dstportfrom ] [ dstportto dstportto ] [ srcportcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`dstportcmp eq | neq | lt | leq | gt | geq | any | inrange |`
`exrange ] [ subruleprio low | high | asinrule] [ transporthdr`
`ethernet | pppoe ]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
srcportfrom srcportfrom	Start port number of the range of source port numbers. This field is invalid if 'srcportcmp' is 'any'.This field and 'srcportto' specify a range of tcp source port numbers if 'srcportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
srcportto srcportto	End port number of the range of source port numbers. This field and 'srcportfrom' specifiy a range of TCP source port numbers if 'srcportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 65535
dstportfrom dstportfrom	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specifiy a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
dstportto dstportto	End port number of the range of destination port numbers. This field and 'dstportfrom' specifiy a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** 65535
srcportcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Source port comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any

Name	Description
dstportcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Destination port comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
transporthdr ethernet | pppoe	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is 'Ethernet', then the IP is being carried in the Ethernet header. If it is 'PPPoE', then the corresponding IP is being carried in the PPP header. **Type**: Create -- Optional Modify -- Optional **Default value**: Ethernet

Example   *$ create filter subrule tcp ruleid 1 subruleid 2 srcportfrom 21 srcportto 23 dstportfrom 21 dstportto 23 srcportcmp inrange dstportcmp inrange subruleprio high*

Output   Verbose Mode On

```
Entry Created

Rule Id                : 1      Subrule Id                : 2
Start source port      : 21     End source port           : 23
Start destination port : 21     End destination port      : 23
Source port comparison : inrange Destination port comparison : inrange
Subrule Priority       : high
Transport Header       : Ethernet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created.
Subrule Id	Unique identifier of a filter subrule
Start source port	Start port number of the range of source port numbers. This field is invalid if 'srcportcmp' is 'any'. This field and 'srcportto' specifiy a range of tcp source port numbers if 'srcportcmp' is either 'inrange' or 'exrange'

Field	Description
End source port	End port number of the range of source port numbers. This field and 'srcportfrom' specifiy a range of tcp source port numbers if 'srcportcmp' is either 'inrange' or 'exrange'
Start destination port	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specifiy a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange'
End destination port	End port number of the range of destination port numbers. This field and 'dstportfrom' specifiy a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange'.Otherwise this field is invalid
Source port comparison	Source port comparison type
Destination port comparison	Destination port comparison type
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Transport Header	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is 'Ethernet', then the IP is being carried in the Ethernet header. If it is 'PPPoE', then the corresponding IP is being carried in the PPP header.

Caution None.

References • Generic Filter Commands

2.105 Filter subrule UDP Commands

2.105.1 get filter subrule udp

Description   Use this command to get.

Command Syntax   `get filter subrule udp [ ruleid ruleid ] [ubruleid subruleid ]`

2.105.2 create filter subrule udp

Description   Use this command to create.

Command Syntax   `create filter subrule udp ruleid ruleid subruleid subruleid [`
`srcportfrom srcportfrom ] [ srcportto srcportto ] [`
`dstportfrom dstportfrom ] [ dstportto dstportto ] [ srcportcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`dstportcmp eq | neq | lt | leq | gt | geq | any | inrange |`
`exrange ] [ subruleprio low | high | asinrule] [ transporthdr`
`ethernet | pppoe ]`

2.105.3 delete filter subrule udp

Description   Use this command to delete.

Command Syntax   `delete filter subrule udp ruleid ruleid subruleid subruleid`

2.105.4 modify filter subrule udp

Description   Use this command to modify.

Command Syntax   `modify filter subrule udp ruleid ruleid subruleid subruleid [`
`srcportfrom srcportfrom ] [ srcportto srcportto ] [`
`dstportfrom dstportfrom ] [ dstportto dstportto ] [ srcportcmp`
`eq | neq | lt | leq | gt | geq | any | inrange | exrange ] [`
`dstportcmp eq | neq | lt | leq | gt | geq | any | inrange |`
`exrange ] [ subruleprio low | high | asinrule] [ transporthdr`
`ethernet | pppoe ] [ transporthdr ethernet | pppoe ]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
srcportfrom srcportfrom	Start port number of the range of source port numbers. This field is invalid if 'srcportcmp' is 'any'. This field and 'srcportto' specifiy a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
srcportto srcportto	End port number of the range of source port numbers.This field and 'srcportfrom' specifiy a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 65535
dstportfrom dstportfrom	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'.This field and 'dstportto' specifiy a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0
dstportto dstportto	End port number of the range of destination port numbers. This field and 'dstportfrom' specifiy a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange'.Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** 65535
srcportcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Source port comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any

Name	Description
dstportcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Destination port comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule
transporthdr ethernet | pppoe	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is Ethernet, then the IP is being carried in the Ethernet header. If it is PPPoE, then the corresponding IP is being carried in the PPP header. **Type**: Create -- Optional Modify -- Optional **Default value**: Ethernet

Example

```
$ create filter subrule udp ruleid 1 subruleid 2 srcportfrom 21
srcportto 23 dstportfrom 21 dstportto 23 srcportcmp inrange
dstportcmp inrange subruleprio high
```

Output Verbose Mode On

```
Entry Created

Rule Id               : 1        Subrule Id                : 2
Start source port     : 21       End source port           : 23
Start destination port : 21      End destination port      : 23
Source port comparison : inrange Destination port comparison : inrange
Subrule Priority      : high
Transport Header      : Ethernet
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created
Subrule Id	Unique identifier of a filter subrule
Start source port	Start port number of the range of source port numbers. This field is invalid if 'srcportcmp' is 'any'. This field and 'srcportto' specifiy a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange'

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Field	Description
End source port	End port number of the range of source port numbers. This field and 'srcportfrom' specifiy a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange'
Start destination port	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'.This field and 'dstportto' specifiy a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange'
End destination port	End port number of the range of destination port numbers. This field and 'dstportfrom' specifiy a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange'.Otherwise this field is invalid
Source port comparison	Source port comparison type
Destination port comparison	Destination port comparison type
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.
Transport Header	This specifies the type of the transport header in the packet in which the corresponding IP is being transported. If the value of this field is Ethernet, then the IP is being carried in the Ethernet header. If it is PPPoE, then the corresponding IP is being carried in the PPP header.

Caution   None.

References   • Generic Filter Commands

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2.106 Filter seq info Commands

2.106.1 get filter seq info

Description   Use this command to get.

Command Syntax   `get filter seq info [seqid` seqid`]`

2.106.2 create filter seq info

Description   Use this command to create.

Command Syntax   `create filter seq info seqid` seqid

2.106.3 delete filter seq info

Description   Use this command to delete.

Command Syntax   `delete filter seq info seqid` seqid

2.106.4 modify filter seq info

Description   Use this command to modify.

Command Syntax   `modify filter seq info seqid` seqid `[ ifname` ifname `] [ stageid` stageid `] [ seqdir` in | out `]`

Parameters

Name	Description
seqid seqid	Sequence Id of the sequence **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_SEQID - GS_CFG_MAX_GFLTR_SEQID
ifname ifname	The name of the interface whose mapping is being created. Only EoA, PPPoE, and Ethernet interfaces are allowed. If the value of this field is 'alleth', it indicates all 'Ethernet' interfaces. If the bridge port is created over the aggregated interface, then this field cannot have IfIndex of any specific Ethernet interface. If the bridge port over the aggregated interface is not created, then this field cannot have the value 'alleth'. This field should not be specified during creation of an entry in this table and must be specified during modify of an entry in this table. **Type:** Create -- Optional Modify -- Optional **Default value:** IAD_MAX_INTERFACES
stageid stageid	Identifier of the stage on the interface for which the sequence is being applied.This field should not be specified during creation of an entry in this table and must be specified during modify of an entry in this table **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_MIN_GFLTR_STAGE_ID - GS_CFG_MAX_GFLTR_STAGE_ID **Default value:** GS_CFG_MIN_GFLTR_STAGE_ID
seqdir in | out	This field specifies whether the sequence to be applied in ingress direction or egress direction on the interface.This field should not be specified during creation of an entry in this table and must be specified during modify of an entry in this table. **Type:** Create -- Optional Modify -- Optional **Default value:** In

Example   *$ create filter seq info seqid* 1

Output   Verbose Mode On

```
Entry Created
Sequence Id : 1
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Sequence Id	Sequence Id of the sequence

Caution   None.

References   • Generic filter related commands

2.107 Filter seq entry Commands

2.107.1 get filter seq entry

Description   Use this command to get.

Command Syntax   `get filter seq entry [ seqid` seqid `] [ ruleid` ruleid `]`

2.107.2 create filter seq entry

Description   Use this command to create.

Command Syntax   `create filter seq entry seqid` seqid `ruleid` ruleid `[ orderid` orderid `]`

2.107.3 delete filter seq entry

Description   Use this command to delete.

Command Syntax   `delete filter seq entry seqid` seqid `ruleid` ruleid

2.107.4 modify filter seq entry

Description   Use this command to modify.

Command Syntax   `modify filter seq entry seqid` seqid `ruleid` ruleid `[ orderid` orderid `]`

Parameters

Name	Description
`seqid` seqid	Sequence Id of the sequence **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_SEQID - GS_CFG_MAX_GFLTR_SEQID

Name	Description
ruleid ruleid	Rule Id of the rule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
orderid orderid	This field indicates the order of the rule in the sequence. The default value for this field will be same as the ruleid of the entry. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_MIN_GFLTR_ORDERID - GS_CFG_MAX_GFLTR_ORDERID **Default value:** Same As Ruleid

Example   *$ create filter seq entry seqid* 1 *ruleid* 1 *orderId* 1

Output   Verbose Mode On

```
Entry Created

Sequence Id : 1          Rule Id : 1
Order Id    : 1
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Sequence Id	Sequence Id of the sequence
Rule Id	Rule Id of the rule
Order Id	This field indicates the order of the rule in the sequence. The default value for this field will be same as the ruleid of the entry.

Caution   None.

References   • Generic filter related commands

2.108   Filter subrule ether Commands

2.108.1 get filter subrule ether

Description   Use this command to get.

Command Syntax   `get filter subrule ether [ ruleid` ruleid `] [ subruleid` subruleid `]`

2.108.2 create filter subrule ether

Description   Use this command to create.

Command Syntax   `create filter subrule ether ruleid` ruleid `subruleid` subruleid `[ srcmacaddrfrom` srcmacaddrfrom `] [ srcmacaddrto` srcmacaddrto `] [ dstmacaddrfrom` dstmacaddrfrom `] [ dstmacaddrto` dstmacaddrto `] [ ethertypefrom` ethertypefrom `] [ ethertypeto` ethertypeto `] [ vlanidfrom` vlanidfrom `] [ vlanidto` vlanidto `] [ priotagfrom` priotagfrom `] [ priotagto` priotagto `] [ dsapfrom` dsapfrom `] [ dsapto` dsapto `] [ ssapfrom` ssapfrom `] [ ssapto` ssapto `] [ srcmacaddrcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ dstmacaddrcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ ethertypecmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ vlanidcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ priotagcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ dsapcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ ssapcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ subruleprio` low | high | asinrule `]`

2.108.3 delete filter subrule ether

Description   Use this command to delete.

Command Syntax   `delete filter subrule ether ruleid` ruleid `subruleid` subruleid

2.108.4 modify filter subrule ether

Description   Use this command to modify.

Command Syntax   `modify filter subrule ether ruleid` ruleid `subruleid` subruleid `[ srcmacaddrfrom` srcmacaddrfrom `] [ srcmacaddrto` srcmacaddrto `] [ dstmacaddrfrom` dstmacaddrfrom `] [ dstmacaddrto` dstmacaddrto `] [ ethertypefrom` ethertypefrom `] [ ethertypeto` ethertypeto `] [ vlanidfrom` vlanidfrom `] [ vlanidto` vlanidto `] [ priotagfrom` priotagfrom `] [ priotagto` priotagto `] [ dsapfrom` dsapfrom `] [ dsapto` dsapto `] [ ssapfrom` ssapfrom `] [ ssapto` ssapto `] [ srcmacaddrcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ dstmacaddrcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ ethertypecmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ vlanidcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ priotagcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ dsapcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ ssapcmp` eq | neq | lt | leq | gt | geq | any | inrange | exrange `] [ subruleprio` low | high | asinrule `]`

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule of which this sub rule is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
subruleid subruleid	Unique identifier of a filter subrule **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - 4294967295
srcmacaddrfrom srcmacaddrfrom	Start source MAC address of the range of source MAC addresses. This field is invalid if 'srcmacaddrcmp' is 'any'. This field and 'srcmacaddrto' specify a range of source MAC addresses if 'srcmacaddrcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** "\0"
srcmacaddrto srcmacaddrto	End source MAC address of the range of source MAC addresses. This field and 'srcmacaddrfrom' specify a range of source MAC addresses, if 'srcmacaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** "\xff\xff\xff\xff\xff\xff"
dstmacaddrfrom dstmacaddrfrom	Start destination MAC address of the range of destination MAC addresses. This field is invalid if 'dstmacaddrcmp' is 'any'. This field and the next field specify a range of destination MAC addresses if 'dstmacaddrcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** "\0"
dstmacaddrto dstmacaddrto	End destination MAC address of the range of destination MAC addresses. This field and the previous field specify a range of destination MAC addresses if 'dstmacaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** "\xff\xff\xff\xff\xff\xff"

Name	Description
ethertypefrom ethertypefrom	Start ether type of the range of ether types. This field is invalid if 'ethertypecmp' is 'any'. This field and the next field specify a range of ether types, if 'ethertypecmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional 　　　　 Modify -- Optional **Default value:** 0
ethertypeto ethertypeto	End ether type of the range of ether types. This field and the previous field specify a range of ether types, if 'ethertypecmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional 　Modify -- Optional **Default value:** 0xFFFF
vlanidfrom vlanidfrom	Start VLAN Id of the range of VLAN IDs. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field is invalid if 'vlanidcmp' is 'any'. This field and the next field specify a range of VLAN Ids, if 'vlanidcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional 　　　　 Modify -- Optional **Valid values:** 0 - 4095 **Default value:** 1
vlanidto vlanidto	End VLAN Id of the range of VLAN IDs. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field and the previous field specify a range of VLAN Ids, if 'vlanidcmp' is either 'inrange' or 'exrange'. Otherwise, this field is invalid **Type:** Create -- Optional 　　　　 Modify -- Optional **Valid values:** 0 - 4095 **Default value:** 4094
priotagfrom priotagfrom	Start priority tag of the range of priority tags. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field is invalid if 'priotagcmp' is 'any'. This field and the next field specify a range of priority tags, if 'priotagcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional 　　　　 Modify -- Optional **Valid values:** 0 - 7 **Default value:** 0

Name	Description
priotagto priotagto	End priority tag of the range of priority tags. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field and the previous field specify a range of priority tags, if 'priotagcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - 7 **Default value:** 7
dsapfrom dsapfrom	Start DSAP of the range of DSAPs. This object is invalid if 'dsapcmp' is 'any'. This object and the next object specify a range of DSAPs, if 'dsapcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0x00
dsapto dsapto	End DSAP of the range of DSAPs. This object is invalid if 'dsapcmp' is 'any'. This object and the previous object specify a range of DSAPs, if 'dsapcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** 0xff
ssapfrom ssapfrom	Start SSAP of the range of SSAPs. This object is invalid if 'ssapcmp' is 'any'. This object and the next object specify a range of SSAPs, if 'ssapcmp' is either 'inrange' or 'exrange' **Type:** Create -- Optional Modify -- Optional **Default value:** 0x00
ssapto ssapto	End SSAP of the range of SSAPs. This object is invalid if 'ssapcmp' is 'any'. This object and the previous object specify a range of SSAPs, if 'ssapcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid **Type:** Create -- Optional Modify -- Optional **Default value:** 0xff
srcmacaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Source mac address comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
dstmacaddrcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Destination mac address comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any

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Name	Description
ethertypecmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Ether type comparison type **Type:** Create -- Optional Modify -- Optional **Default value:** any
vlanidcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	VLAN Id comparison type. This field must be 'any', if 'priotagcmp' is not equal to 'any' **Type:** Create -- Optional Modify -- Optional **Default value:** any
priotagcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	Priority tag comparison type. This field must be 'any', if 'vlanidcmp' is not equal to 'any'" **Type:** Create -- Optional Modify -- Optional **Default value:** any
dsapcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	DSAP comparison type. **Type:** Create -- Optional Modify -- Optional **Default value:** any
ssapcmp eq | neq | lt | leq | gt | geq | any | inrange | exrange	SSAP comparison type. **Type:** Create -- Optional Modify -- Optional **Default value:** any
subruleprio low | high | asinrule	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule. **Type:** Create -- Optional Modify -- Optional **Default value:** asinrule

Example
```
$ create filter subrule ether ruleid 1 subruleid 2 srcmacaddrfrom
00:01:02:03:04:05 srcmacaddrto 00:01:02:03:04:10 dstmacaddrfrom
00:02:03:04:05:11 dstmacaddrto 00:02:03:04:05:15 ethertypefrom
0x0800 ethertypeto 0x0810 vlanidfrom 2 vlanidto 5 priotagfrom 2
priotagto 5 dsapfrom 0xf0 dsapto 0xff ssapfrom 0xf0 ssapto 0xff
srcmacaddrcmp inrange dstmacaddrcmp exrange ethertypecmp inrange
vlanidcmp exrange priotagcmp inrange dsapcmp inrange ssapcmp inrange
subruleprio high
```

Output   Verbose Mode On

```
Entry Created

Rule Id                    : 1           Subrule Id                  : 2
Start source mac address   : 00:01:02:03:04:05
End source mac address     : 00:01:02:03:04:10
Start destination MAC address : 00:02:03:04:05:11
End destination MAC address   : 00:02:03:04:05:15
Start ethernet type        : 0x0800    End ethernet type             : 0x0810
Start VLAN Id              : 2          End VLAN Id                   : 5
Start priority tag         : 2          End priority tag              : 5
Start DSAP                 : 0xf0       End DSAP                      : 0xf0
Start SSAP                 : 0xf0       End SSAP                      : 0xf0
Source MAC addrees comparison : inrange   Desination MAC addr comparison : exrange
Ether type comparison      : inrange   Vlan Id comparison            : exrange
```

```
Priority tag comparison       : inrange   DSAP comparison              : inrange
SSAP comparison               : inrange   Subrule Priority             : high
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Rule Id	Unique identifier of a filter rule of which this sub rule is being created
Subrule Id	Unique identifier of a filter subrule
Start source mac address	Start source MAC address of the range of source MAC addresses. This field is invalid if 'srcmacaddrcmp' is 'any'. This field and 'srcmacaddrto' specify a range of source MAC addresses if 'srcmacaddrcmp' is either 'inrange' or 'exrange'
End source mac address	End source MAC address of the range of source MAC addresses. This field and 'srcmacaddrfrom' specify a range of source MAC addresses, if 'srcmacaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Start destination MAC address	Start destination MAC address of the range of destination MAC addresses. This field is invalid if 'dstmacaddrcmp' is 'any'. This field and the next field specify a range of destination MAC addresses if 'dstmacaddrcmp' is either 'inrange' or 'exrange'
End destination MAC address	End destination MAC address of the range of destination MAC addresses. This field and the previous field specify a range of destination MAC addresses if 'dstmacaddrcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Start ethernet type	Start ether type of the range of ether types. This field is invalid if 'ethertypecmp' is 'any'. This field and the next field specify a range of ether types, if 'ethertypecmp' is either 'inrange' or 'exrange'
End ethernet type	End ether type of the range of ether types. This field and the previous field specify a range of ether types, if 'ethertypecmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Start VLAN Id	Start VLAN Id of the range of VLAN IDs. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field is invalid if 'vlanidcmp' is 'any'. This field and the next field specify a range of VLAN Ids, if 'vlanidcmp' is either 'inrange' or 'exrange'

Field	Description
End VLAN Id	End VLAN Id of the range of VLAN IDs. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field and the previous field specify a range of VLAN Ids, if 'vlanidcmp' is either 'inrange' or 'exrange'. Otherwise, this field is invalid
Start priority tag	Start priority tag of the range of priority tags. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field is invalid if 'priotagcmp' is 'any'. This field and the next field specify a range of priority tags, if 'priotagcmp' is either 'inrange' or 'exrange'
End priority tag	End priority tag of the range of priority tags. Invalid, if the direction of the rule for which this subrule is being created is 'out'. This field and the previous field specify a range of priority tags, if 'priotagcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Start DSAP	Start DSAP of the range of DSAPs. This object is invalid if 'dsapcmp' is 'any'. This object and the next object specify a range of DSAPs, if 'dsapcmp' is either 'inrange' or 'exrange'
End DSAP	End DSAP of the range of DSAPs. This object is invalid if 'dsapcmp' is 'any'. This object and the previous object specify a range of DSAPs, if 'dsapcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Start SSAP	Start SSAP of the range of SSAPs. This object is invalid if 'ssapcmp' is 'any'. This object and the next object specify a range of SSAPs, if 'ssapcmp' is either 'inrange' or 'exrange'
End SSAP	End SSAP of the range of SSAPs. This object is invalid if 'ssapcmp' is 'any'. This object and the previous object specify a range of SSAPs, if 'ssapcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
Source MAC addrees comparison	Source mac address comparison type
Desination MAC addr comparison	Destination mac address comparison type
Ether type comparison	Ether type comparison type
Vlan Id comparison	VLAN Id comparison type. This field must be 'any', if 'priotagcmp' is not equal to 'any'
Priority tag comparison	Priority tag comparison type. This field must be 'any', if 'vlanidcmp' is not equal to 'any'"
DSAP comparison	DSAP comparison type.

Field	Description
SSAP comparison	SSAP comparison type.
Subrule Priority	This specifies the priority of the subrule. Based on this priority value, the subrule is created in fast or slow memory. In case priority is specified as 'asinrule', subrule priority will be same as specified in the rule.

Caution   None.

References   • Generic filter related commands

2.109 Filter rule actionmap Commands

2.109.1 get filter rule actionmap

Description   Use this command to get.

Command Syntax   *get filter rule actionmap [ruleid* ruleid *] [orderindex* orderindex *]*

2.109.2 create filter rule actionmap

Description   Use this command to create.

Command Syntax   *create filter rule actionmap ruleid* ruleid *orderindex* orderindex
action SetPrio │ RetagPrio │ CopyToControl *[priority* priority *]*

2.109.3 delete filter rule actionmap

Description   Use this command to delete.

Command Syntax   *delete filter rule actionmap ruleid* ruleid *orderindex* orderindex

2.109.4modify filter rule actionmap

Description   Use this command to modify.

Command Syntax   *modify filter rule actionmap ruleid* ruleid *orderindex* orderindex *[
action* SetPrio │ RetagPrio │ CopyToControl *] [priority* priority *]*

Parameters

Name	Description
ruleid ruleid	Unique identifier of a filter rule entry for which this mapping is being created **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULEID - GS_CFG_MAX_GFLTR_RULEID
orderindex orderindex	This is the order index to allow creation of multiple entries in this table with a single rule identified by 'ruleid'. Multiple actions of the rule are applied in the increasing order of this field **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_GFLTR_RULE_ACTION_MAP_ORDER_INDEX - GS_CFG_MAX_GFLTR_RULE_ACTION_MAP_ORDER_INDEX
action SetPrio | RetagPrio | CopyToControl	This field specifies the action of the rule **Type:** Create -- Mandatory Modify -- Optional
priority priority	This field specifies the priority to be set for the matching packets. It is valid only if 'action' is either 'setprio' or 'retagprio' **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - GS_CFG_MAX_PRIO **Default value:** 0

Example

```
$ create filter rule actionmap ruleid 1 orderindex 1 action SetPrio
priority 3
```

Output Verbose Mode On

```
Entry Created

Rule Id : 1          Order Index : 1
Action  : SetPrio    Priority    : 3
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Rule Id	Unique identifier of a filter rule entry for which this mapping is being created
Order Index	This is the order index to allow creation of multiple entries in this table with a single rule identified by 'ruleid'. Multiple actions of the rule are applied in the increasing order of this field
Action	This field specifies the action of the rule
Priority	This field specifies the priority to be set for the matching packets. It is valid only if 'action' is either 'setprio' or 'retagprio'

Caution   None.

References   • Generic filter related commands

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2.110 Igmpsnoop cfg info Commands

2.110.1 get igmpsnoop cfg info

Description   Use this command to get.

Command Syntax   `get igmpsnoop cfg info`

2.110.2 modify igmpsnoop cfg info

Description   Use this command to modify.

Command Syntax   `modify igmpsnoop cfg info [ queryinterval queryinterval ] [ anxioustimer anxioustimer ] [ vlhosttimer vlhosttimer ] [ lastmembqryinterval lastmembqryinterval ] [ robustness robustness ] [ status Enable | Disable ] [ reportsup Enable | Disable ]`

Parameters

Name	Description
queryinterval queryinterval	Query Interval timer (in seconds) used to calculate entry age out timer, when no Reports or Queries are received on that entry. This value, multiplied by 10, should be greater than the Query Interval configured at the Router. The time for which an entry created at Igmpsnoop module exists, if no messages are received for it is approximately (((QueryInterval*10)*Robustness) + Query Response Time received in Last Query) **Type:** Modify -- Optional **Valid values:** 1 - 25
anxioustimer anxioustimer	This is the maximum time (in seconds), before which the IgmpSnoop module will forward all IGMP membership reports received. It is started once, whenever the first membership report is received for a group, to ensure that reports are forwarded for a sufficiently long time, to take care of any lost reports. The unit is seconds. **Type:** Modify -- Optional **Valid values:** 1 - 65535
vlhosttimer vlhosttimer	This is the maximum time (in seconds), for which the IgmpSnooping module can assume that there are Version 1 group members present, for the group for which this timer is running. The unit is seconds. **Type:** Modify -- Optional **Valid values:** 1 - 65535

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Name	Description
lastmembqryinterval lastmembqryinterval	The Last Member Query Interval is the Max Response Time inserted into Group-Specific Queries sent in response to Leave Group messages, and is also the amount of time between Group-Specific Query messages. This value may be tuned to modify the leave latency of the network. A reduced value results in reduced time to detect the loss of the last member of a group. The unit of this timer is one-tenth of second. **Type:** Modify -- Optional **Valid values:** 1 - 255
robustness robustness	This allows tuning for the expected packet loss on a subnet. The IgmpSnooping module is robust to [RobustnessVar] packet losses. **Type:** Modify -- Optional **Valid values:** 2 - 255
status Enable | Disable	Specified whether or not Igmp Snooping is to be enabled in the system. **Type:** Modify -- Optional
reportsup Enable | Disable	Report Suppression is enabled or not. **Type:** Modify -- Optional

Example   `$ get igmpsnoop cfg info`

Output

```
Query Interval          : 12      Anxious Timer            : 125
V1 Host Timer           : 130     Last Member Query Interval : 125
Robustness Variable     : 2       Igmp Snoop Status        : Enable
Report Suppression Status : Enable
```

Output field description

Field	Description
Query Interval	Query Interval timer (in seconds) used to calculate entry age out timer, when no Reports or Queries are received on that entry. This value, multiplied by 10, should be greater than the Query Interval configured at the Router. The time for which an entry created at Igmpsnoop module exists, if no messages are received for it is approximately (QueryInterval*10)*Robustness) + Query Response Time received in Last Query)
Anxious Timer	This is the maximum time (in seconds), before which the IgmpSnoop module will forward all IGMP membership reports received. It is started once, whenever the first membership report is received for a group, to ensure that reports are forwarded for a sufficiently long time, to take care of any lost reports. The unit is seconds.

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Field	Description
V1 Host Timer	This is the maximum time (in seconds), for which the IgmpSnooping module can assume that there are Version 1 group members present, for the group for which this timer is running. The unit is seconds.
Last Member Query Interval	The Last Member Query Interval is the Max Response Time inserted into Group-Specific Queries sent in response to Leave Group messages, and is also the amount of time between Group-Specific Query messages. This value may be tuned to modify the leave latency of the network. A reduced value results in reduced time to detect the loss of the last member of a group. The unit of this timer is one-tenth of second.
Robustness Variable	This allows tuning for the expected packet loss on a subnet. The IgmpSnooping module is robust to [RobustnessVar] packet losses.
Igmp Snoop Status	Specified whether or not Igmp Snooping is to be enabled in the system.
Report Suppression Status	Report Suppression is enabled or not.

Caution   None

References   None

2.111 Igmpsnoop port info Commands

2.111.1 get igmpsnoop port info

Description   Use this command to get.

Command Syntax   `get igmpsnoop port info [ portid portid ]`

2.111.2 modify igmpsnoop port info

Description   Use this command to modify.

Command Syntax   `modify igmpsnoop port info portid portid [status Enable | Disable]`
`[ leavemode Normal|Fast|FastNormal ]`

Parameters

Name	Description
`portid portid`	A Bridge Port, for which IGMP Snooping needs to be enabled or disabled. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - 65535 **Default value:** -----

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Name	Description
status Enable | Disable	Specifies whether or not IGMP Snooping is to be enabled on the port. **Type:** Modify -- Optional Get -- Optional **Default value:** -----
leavemode Normal|Fast|FastNormal	Igmp Snooping Leave message processing mode for the port. If the mode is set to 'Normal', the Leave message is forwarded to the Querier and then based on the Query received from Querier the Leave processing is triggered. If the mode is set to 'Fast', the port is immediately deleted from that multicast group on Leave message reception and then the Leave message is forwarded. The mode should be set to 'Fast' for a port only if there is one host behind the port. This is because if there are multiple hosts behind the port then it will lead to traffic disruption for other hosts who might still be listening to that multicast group. If mode is set to 'FastNormal', the Leave message is forwarded and the Leave processing is triggered immediately without waiting for any trigger from the Querier. 'FastNormal' mode thus saves the delay (equal to the time taken for Leave message to reach router and Querier processing time for it and the time taken for Query to reach IGMP Snoop module) in Leave processing. **Type:** Modify -- Optional **Default value:** - GS_CFG_IGMPSNOOP_DEF_LEAVE_PROC_MODE

Example   *$ get igmpsnoop port info portid 6*

Output
```
Port Index          : 10
Port Igmp Snoop Status : Disable Leave Mode : Normal
```

Output field description

Field	Description
Port Index	A Bridge Port, for which IGMP Snooping needs to be enabled or disabled.

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Field	Description
Port Igmp Snoop Status	Specifies whether or not IGMP Snooping is to be enabled on the port.
Leave Mode	Igmp Snooping Leave message processing mode for the port. If the mode is set to 'Normal', the Leave message is forwarded to the Querier and then based on the Query received from Querier the Leave processing is triggered. If the mode is set to 'Fast', the port is immediately deleted from that multicast group on Leave message reception and then the Leave message is forwarded. The mode should be set to 'Fast' for a port only if there is one host behind the port. This is because if there are multiple hosts behind the port then it will lead to traffic disruption for other hosts who might still be listening to that multicast group. If mode is set to 'FastNormal', the Leave message is forwarded and the Leave processing is triggered immediately without waiting for any trigger from the Querier. 'FastNormal' mode thus saves the delay (equal to the time taken for Leave message to reach router and Querier processing time for it and the time taken for Query to reach IGMP Snoop module) in Leave processing.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   None

2.112 Igmpsnoop querier info Commands

2.112.1 get igmpsnoop querier info

Description   Use this command to get.

Command Syntax   `get igmpsnoop querier info [ vlanid vlanid ] [ portid portid ]`

2.112.2 create igmpsnoop querier info

Description   Use this command to create.

Command Syntax   `create igmpsnoop querier info vlanid vlanid portid portid`

2.112.3 delete igmpsnoop querier info

Description   Use this command to delete.

Command Syntax   `delete igmpsnoop querier info vlanid vlanid portid portid`

Parameters

Name	Description
`vlanid vlanid`	VlanId to uniquely identify the vlanid of the entry for which the IgmpSnooping Querier is configured/ learned. In devices supporting "Shared Vlan formulticast" capability, the information for a Querier port is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a Querier port. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlanid is not required. **Type**: Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values**: 0 - GS_CFG_MAX_VLAN_ID **Default value**: -----
`portid portid`	A Bridge Port, belonging to the Vlan (dot1qVlanIndex), on which the Querier exists. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - 65535 **Default value:** -----

Example   `$ create igmpsnoop querier info vlanid 6 portid 6`

Output   Verbose Mode On

```
Entry Created

VLAN Index        : 6          Port Index : 6
Querier Port Status : Mgmt
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
VLAN Index	VlanId to uniquely identify the vlanid of the entry for which the IgmpSnooping Querier is configured/ learned. In devices supporting "Shared Vlan for multicast" capability, the information for a Querier port is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a Querier port. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required. This Feature is not supported for VLAN with vlanid as GS_UNREGISTERED_VLANID.
Port Index	A Bridge Port, belonging to the Vlan (dot1qVlanIndex), on which the Querier exists.
Querier Port Status	Specifies whether Querier Port has been learned dynamically or configured by the user.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   None

2.113 Igmpsnoop port stats Commands

2.113.1 get igmpsnoop port stats

Description   Use this command to get.

Command Syntax   `get igmpsnoop port stats [ vlanid vlanid ] [ mcastaddr mcastaddr ]`
`[ portid portid ]`

2.113.2 reset igmpsnoop port stats

Description   Use this command to reset.

Command Syntax   `reset igmpsnoop port stats vlanid vlanid mcastaddr mcastaddr portid`
`portid`

Parameters

Name	Description
`vlanid vlanid`	VlanId to uniquely identify the vlanid of the entry, for which the IgmpSnooping statistics are desired. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required. **Type:** Reset -- Optional Get -- Optional **Valid values:** 1 - GS_CFG_MAX_VLAN_ID **Default value:** -----

Name	Description
`mcastaddr mcastaddr`	A multicast MAC Address, learned through Igmp Snooping, within the Vlan (igmpVlanIndex), to uniquely identify the entry, for which the IgmpSnooping statistics are desired. The range of accepted values is 01:00:5E:00:00:00 to 01:00:5E:7F:FF:FF **Type:** Reset -- Optional Get -- Optional **Valid values:** 01:00:5E:00:00:00 - 01:00:5E:7F:FF:FF **Default value:** -----
`portid portid`	A Bridge Port belonging to the Vlan (igmpVlanIndex) and Group (igmpsnoopMcastAddress), for which the IgmpSnooping statistics are desired. **Type:** Reset -- Optional Get -- Optional **Valid values:** 1 - 65535 **Default value:** -----

Example `$ get igmpsnoop port stats vlanid 6 mcastaddr 01:00:5E:0a:00:01`
`portid 6`

Output
```
VLAN Index         : 6
Mcast Group Address : 01:00:5E:0a:00:01
Port Index         : 6
Query Received     : 100        Report Received : 200
```

Output field description

Field	Description
`VLAN Index`	VlanId to uniquely identify the vlanid of the entry, for which the IgmpSnooping statistics are desired. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast MAC address is shared across vlans. Hence vlan id is an optional parameter. In devices supporting "Independent Vlan for multicast" capability, each vlan can have its own information for a multicast MAC address. Hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required.
`Mcast Group Address`	A multicast MAC Address, learned through Igmp Snooping, within the Vlan (igmpVlanIndex), to uniquely identify the entry, for which the IgmpSnooping statistics are desired. The range of accepted values is 01:00:5E:00:00:00 to 01:00:5E:7F:FF:FF
`Port Index`	A Bridge Port belonging to the Vlan (igmpVlanIndex) and Group (igmpsnoopMcastAddress), for which the IgmpSnooping statistics are desired.

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Field	Description
Query Received	The number of Igmp Queries received on the port belonging to a particular multicast group and Vlan.
Report Received	The number of Membership Reports received on the port belonging to a particular multicast group and Vlan.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   None

2.114 ACL Global Macentry Commands

2.114.1 get acl global macentry

Description   Use this command to get.

Command Syntax   `get acl global macentry [ macaddr macaddr ]`

2.114.2 create acl global macentry

Description   Use this command to create.

Command Syntax   `create acl global macentry macaddr macaddr [ deny disable | enable ] [ track disable | enable ]`

2.114.3 modify acl global macentry

Description   Use this command to modify.

Command Syntax   `modify acl global macentry macaddr macaddr [ deny disable | enable ] [ track disable | enable ]`

2.114.4 delete acl global macentry

Description   Use this command to delete.

Command Syntax   `delete acl global macentry macaddr macaddr`

Parameters

Name	Description
`macaddr macaddr`	Unicast Source MAC Address, which needs to be tracked/denied access **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional

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Name	Description
deny disable | enable	This flag specifies if the MAC address is to be denied access. **Type:** Create -- Optional Modify -- Optional **Default value:** enable
track disable | enable	This flag specifies if the MAC address is to be tracked across different ports. A trap is raised when packet from the address comes over a port for the first time and when it changes the port. **Type:** Create -- Optional Modify -- Optional **Default value:** disable

Example

```
$ create acl global macentry macaddr 00:01:34:a0:d1:34 deny enable
track enable
```

Output   Verbose Mode On

```
Entry Created

Mac Address                : 00:01:34:a0:d1:34
Deny                       : enable              Track : enable
Number of times Port changed : 2
```

Verbose Mode Off

```
Entry Created
```

Output field description

Field	Description
Mac Address	Unicast Source MAC Address, which needs to be tracked/denied access
Deny	This flag specifies if the MAC address is to be denied access.
Track	This flag specifies if the MAC address is to be tracked across different ports. A trap is raised in case packet from the address comes over a port for the first time and when it changes the port.
Number of times Port changed	This specifies the number of times port has been changed by the MAC address.

Caution   None

References   None

2.115 ACL Port Macentry Commands

2.115.1 get acl port macentry

Description   Use this command to get.

Command Syntax   `get acl port macentry [ portid portid ] [ macaddr macaddr ]`

2.115.2 create acl port macentry

Description   Use this command to create.

Command Syntax   `create acl port macentry portid portid macaddr macaddr`

2.115.3 delete acl port macentry

Description   Use this command to delete.

Command Syntax   `delete acl port macentry portid portid macaddr macaddr`

Parameters

Name	Description
`portid portid`	Bridge Port Id, for which the port MAC Address entry is created **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_BRIDGE_PORTS
`macaddr macaddr`	Unicast Source MAC Address, which is to be allowed access over the particular port. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional

Example   `$ create acl port macentry portId 2 macaddr 00:01:34:a0:d1:34`

Output   Verbose Mode On

```
Entry Created

PortId     : 2
Mac Address : 00:01:34:a0:d1:34
```
Verbose Mode Off

```
Entry Created
```

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Output field description

Field	Description
PortId	Bridge Port Id, for which the port MAC Address entry is created
Mac Address	Unicast Source MAC Address, which is to be allowed access over the particular port.

Caution   An entry in this table shall not be applicable for a bridge port created over the PPPoE interface.

References   None

2.116 Aggregator Commands

2.116.1 get aggr intf

Description   Use this command to get.

Command Syntax   `get aggr intf [ifname ifname]`

2.116.2 create aggr intf

Description   Use this command to create.

Command Syntax   `create aggr intf ifname ifname [ ip ip ] [mask mask][usedhcp usedhcp]`
`[ mgmtvlanid mgmtvlanid ] [ priority priority ] [enable | disable]`

2.116.3 delete aggr intf

Description   Use this command to delete.

Command Syntax   `delete aggr intf ifname ifname`

2.116.4 modify aggr intf

Description   Use this command to modify.

Command Syntax   `modify aggr intf ifname ifname [ ip ip] [mask mask][usedhcp usedhcp]`
`[ mgmtvlanid mgmtvlanid ] [ priority priority ] [enable | disable]`

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Parameters

Name	Description
ifname ifname	This specifies the interface index used for the Aggregator type of interfaces. Valid Value is aggr-0 **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX
ip ip	This specifies the IP address configured for this interface. This is required to be configured only if this interface is used for management IP traffic.If this is not configured and aggrUseDhcp is 'false', then no management IP traffic will flow through this interface.If 'UseDhcp' is true then 'useDhcp' field should be set to false if 'ip' is being modified to a non null value. Both UseDhcp as true and a non null value for 'Ip Address' shall not be specified together. **Type :** Create - Optional. Modify - Optional **Valid Values:** Any valid class A/B/C / Classless IPaddress. **Default Value:** 0
mask mask	This specifies the network mask configured for the interface. If either of IP address or netmask is non-null the other must also be non-null and vice versa. **Type :** Create - Optional. Modify - Optional **Valid Values :** 255.0.0.0 - 255.255.255.255 **Default Value:** 0
usedhcp usedhcp	This object specifies whether a DHCP client to be triggered to obtain an IP address. If this is configured as false and 'IP Address' is not configured, then management IP traffic will not flow through the interface. If an IP address is configured and modify is done for this field then 'ip' and 'mask' field should be set to Zero (0.0.0.0). Both 'useDhcp' as true and Non null 'ip' shall not be specified together. Either of ('IP Address' and 'Mask' to non null value) or 'useDhcp' to true can be configured. **Type:** Create -- Optional Modify -- Optional **Valid values:** False, True **Default value:** GS_FALSE

Name	Description
mgmtvlanid mgmtvlanid	VLAN for management traffic on this interface. Non-zero value of this field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. If no Management Vlanid is specified (in the create operation) or it's value is set to zero (either in create or modify operation) then the system shall use the value of 'portvlanid' associated with the bridge port created on this interface as the Management Vlan Index. In case the management vlan (i.e. 'mgmtvlanid' or the associated 'portvlanid', if 'mgmtvlanid' is zero) doesn't exist on the system then management shall not happen on this interface till the corresponding VLAN is created with the Net side port as its member. **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - GS_CFG_MAX_VLAN_ID **Default value:** 0
priority priority	Priority to be set in Tagged Ethernet PDUs sent on Management VLAN over this interface. This field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. **Type:** Create -- Optional Modify -- Optional **Valid values:** 0 - GS_CFG_MAX_MGMT_PRIO **Default value:** GS_CFG_DEF_MGMT_PRIO

Example   *$ create aggr intf ifname aggr-0 ip 172.25.100.100 mask 255.255.0.0*
usedhcp false mgmtvlanid 2 priority 2 enable

Output   Verbose Mode On

```
Entry Created

Interface Index     : aggr-0
IP Address          : 172.25.100.100          Mask        : 255.255.0.0
UseDhcp             : False
Mgmt VLAN Index     : 2
Tagged Mgmt PDU Prio : 2
Admin Status        : Up
Operational Status  : Down
```

Verbose Mode Off

```
Entry Created
```

Output field description

Field	Description
IfName	This specifies the interface name used for the aggregator type of interfaces.
Ip Address	This specifies the IP address configured for the interface.

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Field	Description
Mask net-mask	This specifies the network mask configured for the interface.
UseDhcp	This specifies whether a DHCP client is to be triggered to obtain an IP address for this interface from a DHCP server.
Mgmt VLAN Index	VLAN for management traffic on this interface. Non-zero value of this field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true. If no Management Vlanid is specified (in the create operation) or it's value is set to zero (either in create or modify operation) then the system shall use the value of 'portvlanid' associated with the bridge port created on this interface as the Management Vlan Index. In case the management vlan (i.e. 'mgmtvlanid' or the associated 'portvlanid', if 'mgmtvlanid' is zero) doesn't exist on the system then management shall not happen on this interface till the corresponding VLAN is created with the Net side port as its member.
Tagged Mgmt PDU Prio	Priority to be set in Tagged Ethernet PDUs sent on Management VLAN over this interface. This field is valid only if either 'ip' field is non-zero or 'usedhcp' field is true.
Admin Status	The administrative status of the interface.
Operational Status	The operational status of the interface.

Caution   None

References   None

2.117 SNTP Cfg Commands

2.117.1 get sntp cfg

Description   Use this command to get.

Command Syntax   *get sntp cfg*

2.117.2 modify sntp cfg

Description   Use this command to modify.

Command Syntax   *modify sntp cfg [enable | disable]*

Parameters

Name	Description
enable/disable	This specifies whether the SNTP service is enabled or disabled. True means that SNTP is enabled and False means that SNTP is disabled. **Type:** Modify -- Optional **Valid values:** enable, disable

Example   *$ modify sntp cfg enable*

Output   Verbose Mode On/Off

```
Status : Enable
```

Output field description

Field	Description
Status	This specifies whether the SNTP service is enabled or disabled. True means that SNTP is enabled and False means that SNTP is disabled.

Caution   None.

References   None.

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2.118 SNTP Stats Commands

2.118.1 get sntp stats

Description	Use this command to get.
Command Syntax	*get sntp stats*

2.118.2 reset sntp stats

Description	Use this command to reset.
Command Syntax	*reset sntp stats*
Parameters	None
Example	*$ get sntp stats*
Output	Verbose Mode On/Off

```
Requests count        : 0          Response count     : 0
Invalid Response count : 0          Lost Response count : 0
Last Time Stamp [MM/DD/YYYY::HH:MM:SS] : Thu Jan 01 00:00:00 1970
```

Output field description

Field	Description
Requests count	This specifies the number of requests sent to SNTP Server.
Responses count	This specifies the Number of responses received from SNTP Server.
Invalid Responses count	This specifies the Number of invalid responses received from SNTP Server.
Lost Responses count	This specifies the number of responses which do not come within time limit.
Last Time Stamp [MM/DD/ YYYY::HH:MM:SS]	This specifies time at which the local clock was last set or corrected. The display format shall be mm/dd/yyyy:hr:min:sec.

Caution	None.
References	None.

2.119 SNTP servaddr Commands

2.119.1 get sntp servaddr

Description   Use this command to get.

Command Syntax   *get sntp servaddr*

2.119.2 create sntp servaddr

Description   Use this command to create.

Command Syntax   *create sntp servaddr <ip-address>*

Parameters   None

Example   *$ create sntp servaddr   172.23.3.45*

Output   Verbose Mode On

    Entry Created

    Server Addr : 172.23.3.45   Status : Standby

Verbose Mode Off

    Entry Created

Output field description

Field	Description
Server Addr	This specifies the IP Address of the SNTP Server.
Status	Server is in Use. OR Server is in standby mode i.e. not in use.

Caution   None.

References   None.

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2.120 SNMP Comm Commands

2.120.1 get snmp comm

Description   Use this command to get.

Command Syntax   `get snmp comm  [ community community ]`

2.120.2 create snmp comm

Description   Use this command to create.

Command Syntax   `create snmp comm  community community [ access ro | rw ]`

2.120.3 delete snmp comm

Description   Use this command to delete.

Command Syntax   `delete snmp comm  community community`

Parameter

Name	Description
`community community`	This specifies the Community name. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
`access ro	rw`	This specifies the access permissions given to managers with this community name. ro implies Read Only permissions and rw implies Read-Write permissions. **Type:** Create -- Optional **Default value:** ro

Example   `$ create snmp comm community public`

Output   Verbose Mode On

```
Entry Created

Access community
-------------------------------------------------------------------------------
ro    public
```
Verbose Mode Off:
```
Entry Created
```

Output field description

Field	Description
community	This specifies the Community name.
Access	This specifies the access permissions given to managers with this community name. ro implies Read Only permissions and rw implies Read-Write permissions.

Caution   None.

References   • SNMP commands

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2.121 SNMP Host Commands

2.121.1 get snmp host

Description   Use this command to get.

Command Syntax   `get snmp host`

2.121.2 create snmp host

Description   Use this command to create.

Command Syntax   `create snmp host  ip ip community community`

2.121.3 delete snmp host

Description   Use this command to delete.

Command Syntax   `delete snmp host  ip ip community community`

Parameter

Name	Description
`ip ip`	This specifies the IP address of the manager that has access permissions. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional
`community community`	This specifies the Community name. This must be a valid community in the snmp community table. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional

Example   `$ create snmp host  ip 172.25.34.34 community public`

Output   Verbose Mode On

```
Entry Created

Ip Address      Community
--------------------------------------------------------------------------------
172.25.34.34    public
```
Verbose Mode Off:
```
Entry Created
```

Output field description

Field	Description
Ip Address	This specifies the IP address of the manager that has access permissions.
Community	This specifies the Community name. This must be a valid community in the snmp community table.

Caution   None.

References   • SNMP commands

2.122 SNMP Stats Commands

2.122.1 get snmp stats

Description   Use this command to get.

Command Syntax   *get snmp stats*

2.122.2 modify snmp stats

Description   Use this command to modify.

Command Syntax   *modify snmp stats authentraps enable | disable*

Parameter

Field	Description
authentraps enable / disable	Indicates whether the SNMP agent process is permitted to generate authentication-failure traps. The value of this object overrides any configuration information; as such, it provides a means whereby all authentication-failure traps may be disabled. **Type:** Modify -- Optional **Default value:** disable

Example   *$ get snmp stats*

Output
```
InPkts             : 100      OutPkts             : 100
InBadVersions      : 0        InBadCommunityNames : 0
InBadCommunityUses : 0        InASNParseErrs      : 0
InTooBigs          : 0        InNoSuchNames       : 0
InBadValues        : 0        InReadOnlys         : 0
InGenErrs          : 0        InTotalReqVars      : 200
InTotalSetVars     : 0        InGetRequests       : 100
InGetNexts         : 0        InSetRequests       : 0
InGetResponses     : 0        InTraps             : 0
OutTooBigs         : 0        OutNoSuchNames      : 0
OutBadValues       : 0        OutGenErrs          : 0
OutGetRequests     : 0        OutGetNexts         : 0
OutSetRequests     : 0        OutGetResponses     : 100
OutTraps           : 0        AuthenTraps         : disable
SilentDrops        : 0        ProxyDrops          : 0
```

Output field description

Field	Description
InPkts	The total number of Messages delivered to the SNMP entity from the transport service.
OutPkts	The total number of SNMP Messages which were passed from the SNMP protocol entity to the transport service.

Field	Description
InBadVersions	The total number of SNMP Messages which were delivered to the SNMP protocol entity and were for an unsupported SNMP version.
InBadCommunityNames	The total number of SNMP Messages delivered to the SNMP protocol entity which used a SNMP community name not known to said entity.
InBadCommunityUses	The total number of SNMP Messages delivered to the SNMP protocol entity which represented an SNMP operation which was not allowed by the SNMP community named in the Message.
InASNParseErrs	The total number of ASN.1 or BER errors encountered by the SNMP protocol entity when decoding received SNMP Messages.
InTooBigs	The total number of SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is 'tooBig'.
InNoSuchNames	The total number of SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is 'noSuchName'.
InBadValues	The total number of SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is 'badValue'.
InReadOnlys	The total number valid SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is `readOnly'. It should be noted that it is a protocol error to generate an SNMP PDU which contains the value 'readOnly' in the error-status field, as this object is provided as a means of detecting incorrect implementations of the SNMP.
InGenErrs	The total number of SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is 'genErr'.
InTotalReqVars	The total number of MIB objects which have been retrieved successfully by the SNMP protocol entity as the result of receiving valid SNMP Get-Request and Get-Next PDUs.
InTotalSetVars	The total number of MIB objects which have been altered successfully by the SNMP protocol entity as the result of receiving valid SNMP Set-Request PDUs.
InGetRequests	The total number of SNMP Get-Request PDUs which have been accepted and processed by the SNMP protocol entity.
InGetNexts	The total number of SNMP Get-Next PDUs which have been accepted and processed by the SNMP protocol entity.

Field	Description
InSetRequests	The total number of SNMP Set-Request PDUs which have been accepted and processed by the SNMP protocol entity.
InGetResponses	The total number of SNMP Get-Response PDUs which have been accepted and processed by the SNMP protocol entity.
InTraps	The total number of SNMP Trap PDUs which have been accepted and processed by the SNMP protocol entity.
OutTooBigs	The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field is 'tooBig'.
OutNoSuchNames	The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status is 'noSuchName'.
OutBadValues	The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field is 'badValue'.
OutGenErrs	The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field is 'genErr'.
OutGetRequests	The total number of SNMP Get-Request PDUs which have been generated by the SNMP protocol entity.
OutGetNexts	The total number of SNMP Get-Next PDUs which have been generated by the SNMP protocol entity.
OutSetRequests	The total number of SNMP Set-Request PDUs which have been generated by the SNMP protocol entity.
OutGetResponses	The total number of SNMP Get-Response PDUs which have been generated by the SNMP protocol entity.
OutTraps	The total number of SNMP Trap PDUs which have been generated by the SNMP protocol entity.
AuthenTraps	Indicates whether the SNMP agent process is permitted to generate authentication-failure traps. The value of this object overrides any configuration information; as such, it provides a means whereby all authentication-failure traps may be disabled.

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Field	Description
SilentDrops	The total number of GetRequest-PDUs, GetNextRequest-PDUs, GetBulkRequest-PDUs, SetRequest-PDUs, and InformRequest-PDUs delivered to the SNMP entity which were silently dropped because the size of a reply containing an alternate Response-PDU with an empty variable-bindings field, was greater than, either a local constraint, or the maximum message size associated with the originator of the request.
ProxyDrops	The total number of GetRequest-PDUs, GetNextRequest-PDUs, GetBulkRequest-PDUs, SetRequest-PDUs, and InformRequest-PDUs delivered to the SNMP entity, which were silently dropped, because the transmission of the (possibly translated) message to a proxy target failed in a manner (other than a time-out) such that no Response-PDU could be returned.

Caution   None.

References   • SNMP commands.

2.123 SNMP Traphost Commands

2.123.1get snmp traphost

Description   Use this command to get.

Command Syntax   `get snmp traphost  [ ip ip ] [port port]`

2.123.2create snmp traphost

Description   Use this command to create.

Command Syntax   `create snmp traphost  ip ip community community [ port port ]`
`[ version v1 | v2c ]`

2.123.3delete snmp traphost

Description   Use this command to delete.

Command Syntax   `delete snmp traphost  ip ip [port port]`

2.123.4 modify snmp traphost

Description   Use this command to modify

Command Syntax   `modify snmp traphost  ip ip [port port] [ version v1 | v2c ]`

Parameter

Name	Description

`port port`	This specifies the Port at which the trap is to be sent.
	Type: Create -- Optional
	       Get -- Optional
	       Modify – Optional
	       Delete -- Optional
	Default value: 162

`version v1	v2c`	This specifies the Trap version to be sent to the Manager.
		Type: Create -- Optional
		       Get -- Optional
		       Modify -- Optional
		Default value: v2c

Example   `$ create snmp traphost  ip 172.25.34.34 community public`

Output   Verbose Mode On

```
Entry Created
```

```
Ip Address : 172.25.34.34
Community : public
Port      : 162        Version : v2c
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Ip Address	This specifies the IP address of the manager where trap is to be sent.
Community	This specifies the Community name used in the trap.
Port	This specifies the Port at which the trap is to be sent.
Version	This specifies the Trap version to be sent to the Manager.

Caution   None.

References   • SNMP commands

2.124 File Commands

2.124.1apply

Description   Use this command to apply a configuration file stored on the system

Command Syntax   *apply fname file-name [version version] [besteffort*
true|false]

Parameters

Name	Description
fname file-name	This specifies the name of the configuration file (the extension of the file shall be .cfg) to be applied. The file shall contain valid CLI commands. The user shall specify the filename for files present in the system as directories. The directories are /nvram/cfg/factorydef/, /nvram/user/, /sdram/cfg, /sdram/user. **Type:** mandatory **Valid values:** string of up to 128 characters: ('A'-'Z', 'a'-'z', '0'- '9', '-','_')
version version	This specifies the version of the file that needs to be applied. **Type:** Optional **Default Value:** Incase of multiple version files the active copy gets applied. Not valid for single version file.
besteffort true|false	If the besteffort flag is false, command execution (as specified in "file-name"file) stops immediately after a command returns an error. If the besteffort flag is true, command execution (as specified in "file-name"file) continues even if a command returns an error. **Type** : Optional **Default value** : *false*

Mode   Super-User

Example   *$ apply fname /nvram/user/commands.cfg version 2*

Output   The output of the command is dependent on the list of CLI commands in commands.cfg file.

Example 1:   The file commands.*cfg* has the following commands:

Verbose on

create atm port ifname atm-0 lowif dsl-0

```
Entry Created

If-Name      : atm-0      LowIfName    : dsl-0
MaxVccs      : 2                  MaxConfVccs  : 4
MaxVpiBits   : 3          MaxVciBits   : 10
OAMSrc       : 0xffffffffffffffffffffffffffffffff
Oper Status  : Up         Admin Status : Up
```

Example 2: The file commands.*cfg* has the following commands:

`create atm port ifname atm-0 lowif dsl-0`

The output would be:

```
Entry Created
```

Output Fields None

Caution None

References
- upgrade command
- remove command
- list command
- download command

2.124.2download

Description Use this command to download a binary, configuration or user specific file from the remote host.

Command Syntax **`download src src-filename dest dest-filename ip ip-address [mode tftp|ftp]`**

Parameters

Name	Description
src src-filename	This specifies the name of the binary, configuration or user specific file to be downloaded from a remote host. The filename contains the complete path on the host. The filename extension can be *.cfg* or *.bi*n or any other user specified extension. *A cfg* file can contain only valid CLI commands. A *.bin* file must be a valid image file. **Type:** Mandatory **Valid values:** String of up to 128 characters (all characters except ';', ' ', '?')

Name	Description
dest dest-filename	This specifies the name of the binary, configuration or user specific file on the system. The user shall specify the filename for files present in the system, as directories. The directories are **/nvram/bin/control/** - This directory contains control plane zipped image. There can be multiple versions of images. The name of the image file shall be as specified in the configuration file of createfi tool. The files are stored in NVRAM. **/nvram/bin/dataplane/ -** This directory contains data plane zipped image. There can be multiple versions of images. The name of the image file shall be as specified in the configuration file of createfi tool. The files are stored in NVRAM. **/nvram/bin/decompressor/** - This directory contains decompressor image. There can be multiple versions of images. The name of the image file shall be as specified in the configuration file of createfi tool. The files are stored in NVRAM. **/nvram/bin/dslphy/** - This directory contains DSL physical layer image. Only one version of image is possible. The name of the image file shall be as specified in the configuration file of createfi tool. The files are stored in NVRAM. **/nvram/cfg/factorydef/** - This directory contains factory default configuration files. There can be multiple versions of files. The name of the file shall be as specified in the configuration file of createfi tool. The files are stored in NVRAM. **/nvram/user/ -** This directory contains user specific files. There can be multiple versions of files. The files are stored in NVRAM. **/sdram/cfg/ -** This directory contains user specific configuration files with .cfg extension. The files are stored in SDRAM **/sdram/user/ -** This directory contains user specific files. The files are stored in SDRAM. **Type:** Mandatory **Valid values:** String of up to 128 characters (all characters except ';', ' ', '?')

Name	Description
ip ip-address	This specifies the IP address of the remote host from which the file is to be downloaded. **Type:** Mandatory **Valid values:** Any valid IP address.
mode tftp | ftp	This specifies the protocol to be used for downloading the file. Currently only TFTP is supported. **Type:** Optional **Default Value :** TFTP

Example   *$ download src myconfig.cfg dest /nvram/user/myconfig.cfg ip 198.168.1.1*

Output   Verbose Mode On

```
Downloading The Code File. . .
Download Completed
```

Verbose Mode Off

```
Downloading The Code File. . .
Download Completed
```

Output Fields   None

Caution   Ensure that the TFTP server is running on the remote host.

References
- upgrade command
- remove command
- list command
- apply command.

2.124.3list

Description   This command is used to list the Configuration or binary files stored on the unit

Command Syntax   *list name [/nvram | /sdram]*

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Parameters

Name	Description
fname [/nvram | /sdram]	This specifies whether the files of NVRAM or SDRAM are to be listed. **/nvram** – This lists all directories and files stored in NVRAM. **/sdram** - This lists all directories and files stored in SDRAM. **Type:** Optional. **Default Value :** All the files present in the NVRAM or SDRAM will be displayed.

Mode   Super-User.

Example   *$ list fname /nvram*

Output   Verbose Mode On

```
name                version   Time                 size   Access state

/nvram/bin/control

gsv-control.bin.gz   2        Thu Jan 01 00:00:10 1970  68803  RO     Active


/nvram/bin/bootptftp

gsv-boot.bin.gz      3        Fri Feb 12  12:20:10 2000 102    RW     Active


/nvram/bin/dataplane

gsv-data.bin.gz      3        Fri Feb 12  21:20:10 2002 102    RW     Active


/nvram/bin/decompressor

decomp.bin.gz        3        Fri Feb 12  22:20:10 2000 102    RW     Active


/nvram/cfg/factorydef

commands.cfg         3        Fri Feb 12  23:20:10 2000 102    RW     Active


/nvram/user/

gsv-user.tmp         3        Fri Feb 12  12:20:10 2000 102    RW     Active
```

Verbose Mode Off

```
name                version   Time                 size   Access state
/nvram/bin/control
gsv-control.bin.gz   2        Thu Jan 01 00:00:10 1970  68803  RO     Active
```

```
/nvram/bin/bootptftp

gsv-boot.bin.gz      3       Fri Feb 12  12:20:10 2000 102    RW      Active


/nvram/bin/dataplane

gsv-data.bin.gz      3       Fri Feb 12  21:20:10 2002 102    RW      Active


/nvram/bin/decompressor

decomp.bin.gz        3       Fri Feb 12  22:20:10 2000 102    RW      Active


/nvram/cfg/factorydef

commands.cfg         3       Fri Feb 12  23:20:10 2000 102    RW      Active


/nvram/user/

gsv-user.tmp         3       Fri Feb 12  12:20:10 2000 102    RW      Active
```

Output Fields

FIELD	Description
Name	The name of the file present in the directory. Name starting with ì/î indicates directory name.
Version	This specifies the version of the file.
Time	Time at which the file got created. This is displayed in Day Mon DD HH:MM:SS YEAR format.
Size	The size of the file in bytes.
Access	The access of the file. It can be read only, read write or write only.
State	The state of the file. It can be active, inactive, tried, latest.

Caution   None

References   • upgrade command
   • remove command
   • apply command
   • download command.

2.124.4 remove

Description   Use this command to remove a configuration or binary file stored on the unit

Command Syntax   *remove fname file-name [version version]*

Parameters

Name	Description
fname file-name	This specifies the file name, which needs to be removed. The user shall specify the filename for files present in the system, as directories. The directories are /nvram/bin/control/, /nvram/bin/control/, /nvram/bin/dataplane/, /nvram/bin/dslphy, /nvram/cfg/factorydef/, /nvram/user/,/sdram/cfg, /sdram/user. **Type** **:** Mandatory **Valid values:** string of upto 128 characters ('A'-'Z', 'a'-'z', '0'-'9', '-', '_')
version version	This specifies the version of the file that need to be removed. **Type:** Optional for single version file. Mandatory for multiple version file. Default Value:

Example   *$ remove fname /nvram/user/commands.cfg*

Output   Verbose Mode On

```
File removed
```

Verbose Mode Off

```
File removed
```

Output Fields   None

Caution   None.

References
- apply command
- list command
- download command

2.124.5upgrade

Description   Use this command to upgrade a configuration or binary file stored on the system.

Command Syntax   *upgrade fname file-name version version*

Parameters

Name	Description
`fname file-name`	This specifies the file name, which needs to be upgraded. The specified file becomes Active and the present active file is made inactive.The user shall specify the filename for files present in Columbia, as directories. The directories are /nvram/bin/control/, /nvram/bin/dataplane/, /nvram/bin/decompressor, /nvram/bin/dslphy, /nvram/cfg/factorydef/, /nvram/user/, **Type** : Mandatory **Valid values:** string of upto 128 characters ('A'-'Z', 'a'-'z', '0'-'9', '-', '_')
`version version`	This specifies the version of the file that needs to be upgraded **Type** : Mandatory **Valid values:** Decimal number

Mode   Super-User

Example   *$ upgrade fname /nvram/cfg/factorydef/commands.cfg version 2*

Output   Verbose Mode On

    File upgraded

Verbose Mode Off

    File upgraded

Output Fields   None

Caution   None.

References
- apply command
- list command
- download command.

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2.125 Scheduling profile info Commands

2.125.1 get sched profile info

Description   Use this command to get.

Command Syntax   `get sched profile info [ name name ]`

2.125.2 create sched profile info

Description   Use this command to create.

Command Syntax   `create sched profile info name name [ algo pp | custom ] iftype eth | atm`

2.125.3 delete sched profile info

Description   Use this command to delete.

Command Syntax   `delete sched profile info name name`

Parameters

Name	Description
name name	Name of the scheduling profile **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
algo pp | custom	Scheduling algorithm of the profile. Currently only Proabalistic Priority is supported over ethernet and custom is supported over ATM. In Proabalistic Priority algorithm, the traffic class parameter determines the probablity with which its corresponding queue is served when it is polled by the server. In Custom algorithm, user shall have flexibility to assign minimum rate, maximum rate, and excess bandwidth sharing weight for classes and the scheduling shall be done based on these parameters among classes. **Type:** Create -- Optional **Default value:** pp
iftype eth | atm	The type of the interface Ethernet/ATM port for which the scheduling profile is applicable. **Type**: Create -- Mandatory

Example   `$ create sched profile info name gold algo pp iftype atm`

Output   Verbose Mode On

```
Entry Created

Profile Name        : gold
Scheduling Algorithm  : pp                Interface Type : eth
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Name	Name of the scheduling profile
Scheduling Algorithm	Scheduling algorithm of the profile. Currently only Proabalistic Priority is supported over ethernet and custom is supported over ATM. In Proabalistic Priority algorithm, the traffic class parameter determines the probablity with which its corresponding queue is served when it is polled by the server. In Custom algorithm, user shall have flexibility to assign minimum rate, maximum rate, and excess bandwidth sharing weight for classes and the scheduling shall be done based on these parameters among classes.
Interface Type	The type of the interface Ethernet/ATM port for which the scheduling profile is applicable.

Caution   None.

References   • Scheduling profile related commands.

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2.126 Scheduling profile class Commands

2.126.1 get sched profile class

Description   Use this command to get.

Command Syntax   *get sched profile class [name* name *] [classid* classid *]*

2.126.2 modify sched profile class

Description   Use this command to modify.

Command Syntax   *modify sched profile class name* name *classid* classid *[param1* param1 *] [param2* param2 *] [param3* param3 *] [param4* param4*] [param5* param5*]*

Parameters

Name	Description
name name	Name of the scheduling profile. **Type:** Modify -- Mandatory Get -- Optional
classid classid	Scheduling profile class identifier **Type:** Modify -- Mandatory Get -- Optional **Valid values:** GS_CFG_MIN_SCHD_PRFL_CLASS_ID - GS_CFG_MAX_SCHD_PRFL_CLASS_ID
param1 param1	This specifies the first parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, this parameter specifies the weight of the class queue on the scale of 1-100. Value 100 means Strict Priority in PP scheduling profile.This weight will be normalized with the sum of all classId weights. For Custom scheduling algorithm, this parameter specifies the excess bandwidth sharing weight of the class on the scale of 1-100. If for a class, both Minimum bandwidth and the Excess sharing weight are configured as zero, then the queue shall never be scheduled. Default value of this parameter is calculated as (classid * 10). The default value listed is only an indicative value. **Type**: Modify -- Optional

Name	Description
param2 param2	This specifies the second parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, it is ignored. For Custom scheduling algorithm, this parameter specifies the Minimum bandwidth in Kbps. Value zero means no minimum bandwidth guarantee for the class. **Type**: Modify -- Optional
param3 param3	This specifies the third parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, it is ignored. For Custom scheduling algorithm, this parameter specifies the Maximum bandwidth limit in Kbps for the class. Value zero means no maximum bandwidth limit for the class. **Type**: Modify -- Optional
Param4 param4	This specifies the fourth parameter for the class queue that is used in the scheduling algorithm of the profile. For PP and Custom scheduling algorithms, it is ignored. The default value listed is only an indicative value. **Type**: Modify -- Optional
Param5 param5	This specifies the fifth parameter for the class queue that is used in the scheduling algorithm of the profile. For PP and Custom scheduling algorithms, it is ignored. The default value listed is only an indicative value. **Type**: Modify -- Optional

Example

```
$ get sched profile class name gold classid 1
```

Output

```
Profile Name        :gold      Class Id            : 1
Profile Class Param1 : 20       Profile Class Param2 : 25
Profile Class Param3  : 25       Profile Class Param4 : 0
Profile Class Param5  : 25
```

Output field description

Field	Description
Profile Name	Name of the scheduling profile.
Class Id	Scheduling profile class identifier

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Field	Description
Profile Class Param1	This specifies the first parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, this parameter specifies the weight of the class queue on the scale of 1-100. Value 100 means Strict Priority in PP scheduling profile.This weight will be normalized with the sum of all classId weights. For Custom scheduling algorithm, this parameter specifies the excess bandwidth sharing weight of the class on the scale of 1-100. If for a class, both Minimum bandwidth and the Excess sharing weight are configured as zero, then the queue shall never be scheduled. Default value of this parameter is calculated as (classid * 10). The default value listed is only an indicative value.
Profile Class Param2	This specifies the second parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, it is ignored. For Custom scheduling algorithm, this parameter specifies the Minimum bandwidth in Kbps. Value zero means no minimum bandwidth guarantee for the class.
Profile Class Param3	This specifies the third parameter for the class queue that is used in the scheduling algorithm of the profile. For PP scheduling algorithm, it is ignored. For Custom scheduling algorithm, this parameter specifies the Maximum bandwidth limit in Kbps for the class. Value zero means no maximum bandwidth limit for the class.
Profile Class Param4	This specifies the fourth parameter for the class queue that is used in the scheduling algorithm of the profile. For PP and Custom scheduling algorithms, it is ignored. The default value listed is only an indicative value.
Profile Class Param5	This specifies the fifth parameter for the class queue that is used in the scheduling algorithm of the profile. For PP and Custom scheduling algorithms, it is ignored. The default value listed is only an indicative value.

Caution   For a scheduling profile that has **iftype** as *atm*, upto GS_CFG_MAX_EOA_PRIO_QUEUES classes can be configured, while for a scheduling profile that has **iftype** as *eth*, GS_CFG_MAX_ETH_PRIO_QUEUES classes can be configured.

References   • Scheduling profile related commands

2.127 Ehdlc intf Commands

2.127.1 get ehdlc intf

Description   Use this command to get.

Command Syntax   `get ehdlc intf  [ ifname ifname ]`

2.127.2 create ehdlc intf

Description   Use this command to create.

Command Syntax   `create ehdlc intf ifname ifname lowif lowif [ sarstatusEnable | Disable ] [ enable | disable ]`

2.127.3 delete ehdlc intf

Description   Use this command to delete.

Command Syntax   `delete ehdlc intf  ifname ifname`

2.127.4 modify ehdlc intf

Description   Use this command to modify.

Command Syntax   `modify ehdlc intf ifname ifname [sarstatus Enable | Disable ] [ enable | disable ]`

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Parameters

Name	Description
ifname ifname	This parameter specifies the name assigned to this interface. Valid Values starts from ehdlc-0 and continues to ehdlc-* **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** IAD_MIN_EHDLC_IFINDEX - IAD_MAX_EHDLC_IFINDEX
lowif lowif	This specifies the lower interface index. This is the ifindex of the DSL port on which EHDLC is being created. Valid Values start from dsl-0 and continues to dsl-* **Type:** Create -- Mandatory **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
sarstatus Enable | Disable	This defines the segmentation and reassembly status of the hdlc/dsl interface. HDLC supports only 508 as frame size, to support longer snmp messages, it should be turn off. By default, the option taken is 'disable'. **Type:** Create -- Optional Modify -- Optional **Default value:** GS_CFG_EHDLC_DEF_SAR_STATUS
enable | *disable*	Administrative status of the Ehdlc interface **Type:** Optional

Example   *$ create ehdlc intf ifname ehdlc-0 lowif dsl-0 SarStatus*
             Enable enable

Output   Verbose Mode On

```
Entry Created

IfName           : ehdlc-0    LowIfName    : dsl-0
EHDLC Sar Status : enable     Admin Status : Enable
```

Verbose Mode Off:

```
Entry Created
```

Note: *This operation is not supported in this release.*

Output field description

Field	Description
IfName	This parameter specifies the name assigned to this interface. Valid Values starts from ehdlc-0 and continues to ehdlc-*
LowIfName	This specifies the lower interface index. This is the ifindex of the DSL port on which EHDLC is being created. Valid Values start from dsl-0 and continues to dsl-*
EHDLC Sar Status	This defines the segmentation and reassembly status of the hdlc/dsl interface. HDLC supports only 508 as frame size, to support longer snmp messages, it should be turned off. By default, the option taken is 'disable'.
Admin Status	Administrative status of the Ehdlc interface

Caution None.

References None.

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2.128 Active Standby aggr info Commands

2.128.1 get actstdby aggr info

Description   Use this command to get.

Command Syntax   `get actstdby aggr info [ ifname ifname ]`

2.128.2 modify actstdby aggr info

Description   Use this command to modify.

Command Syntax   `modify actstdby aggr info ifname ifname [ status Enable | Disable ]`

Parameters

Name	Description
`ifname` ifname	This specifies the aggregator interface index on which active standby is to be enabled. Valid Value is aggr-0. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX
`status` enable | disable	This specifies whether active standby mode is to be enabled or not. **Type:** Modify -- Optional

Example   `$ get actstdby aggr info IfName aggr-0`

Output
```
Interface Index : aggr-0
Status          : Enable
```

Output field description

Field	Description
Interface Index	This specifies the aggregator interface index on which active standby is to be enabled. Valid Value is aggr-0.
Status	This specifies whether active standby mode is to be enabled or not.

Caution
- Active Standby mode shall not be enabled, if aggregator interface and redundancy aggregator are not created, or if LACP aggregator is created for the aggregator interface.
- If only Active Standby is desired and no load sharing is expected then bridge port shall be created over the aggregator only after Active Standby has been enabled for redundancy aggregator. If the bridge port is created over

aggregator before enabling Active Standby for it, the load sharing shall start and continue till Active Standby is enabled.

References • Redundancy commands.

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2.129 Redundancy aggr info Commands

2.129.1 get rdncy aggr info

Description   Use this command to get.

Command Syntax   *get rdncy aggr info [ifname* ifname *]*

2.129.2 create rdncy aggr info

Description   Use this command to create.

Command Syntax   *create rdncy aggr info ifname* ifname *[revdistrib* Enable | Disable *] [fallback* Enable | Disable *]*

2.129.3 delete rdncy aggr info

Description   Use this command to delete.

Command Syntax   *delete rdncy aggr info ifname* ifname

2.129.4 modify rdncy aggr info

Description   Use this command to modify.

Command Syntax   *modify rdncy aggr info ifname* ifname *[revdistrib* Enable | Disable *] [fallback* Enable | Disable *]*

Parameters

Name	Description
ifname ifname	This specifies the interface index used for the Redundancy Aggregator type of interfaces. Valid Value is aggr-0 **Type:** Create -- Mandatory 　　　　Delete -- Mandatory 　　　　Modify -- Mandatory 　　　　Get -- Optional **Valid values:** IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX
revdistrib Enable | Disable	It denotes whether reverse distribution filtering is to be enforced for traffic in the receiving direction, when both the links are active, for this aggregator interface. If duplicate packets are expected on the redundant links (if uplink aggregating device is layer2 switch), Reverse distribution filtering may be enabled. But if there is no chance of such duplicate packets, or the duplicate packets need not have a special handling, reverse distribution filtering may be disabled. **Type:** Create -- Optional 　　　　Modify -- Optional **Default value:** GS_CFG_DEF_RDNCY_REVDISTRIB_STATUS
fallback Enable | Disable	This specifies whether fallback is to happen for aggregator interface, when a link goes down. As fallback trigger leads to re-propagation of protocol PDUs to the links based on the state of the links, this may be enabled if re-propagation of protocol PDUs is required for immediate restoration of peer protocol state on uplink devices. If such a treatment is not required and Protocol time out may only be triggered for re-propagation, Fallback trigger should be disabled. **Type:** Create -- Optional 　　　　Modify -- Optional **Default value:** GS_CFG_DEF_RDNCY_FALLBACK_STATUS

Example　　*$ create rdncy aggr info IfName* aggr-0 *revdistrib* disable *fallback* disable

Output　　Verbose Mode On

```
Entry Created

Interface Index    : aggr-0
Reverse Distribution : disable        FallBack : disable
```
Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Interface Index	This specifies the interface index used for the Redundancy Aggregator type of interfaces. Valid Value is aggr-0
Reverse Distribution	It denotes whether reverse distribution filtering is to be enforced for traffic in the receiving direction, when both the links are active, for this aggregator interface. If duplicate packets are expected on the redundant links (if uplink aggregating device is layer2 switch) Reverse distribution filtering may be enabled. But if there is no chance of such duplicate packets or the duplicate packets need not have a special handling reverse distribution filtering may be disabled.
FallBack	This specifies whether fallback is to happen for aggregator interface, when a link goes down. As fallback trigger leads to re-propagation of protocol PDUs to the links based on the state of the links, this may be enabled if re-propagation of protocol PDUs is required for immediate restore of peer protocol state on uplink devices. If such a treatment is not required and Protocol time out may only be trigger for re-propagation, Fallback trigger should be disabled.

Caution
- Redundancy aggregator shall not be created, if aggregator interface is not created or if LACP aggregator is created for the aggregator interface.

References
- create aggr intf command
- get aggr intf command

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2.130 Redundancy aggrport list Commands

2.130.1 get rdncy aggrport list

Description   Use this command to get.

Command Syntax   *get rdncy aggrport list [aggrifname* ifname *]*

Parameters

Name	Description
aggrifname ifname	Index of the redundancy aggregator, for which layer2 interfaces are associated. Valid Value is aggr-0 **Type:** Get -- Optional **Valid values:** IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX

Example   *$ get rdncy aggrport list aggrifname* aggr-0

Output
```
Aggr IfName            : aggr-0
PortList               : eth-0 eth-1
Port List Interface type : None
```

Output field description

Field	Description
Aggr IfName	Index of the redundancy aggregator, for which layer2 interfaces are associated. Valid Value is aggr-0
PortList	The complete list of active layer2 interfaces associated with the aggregator interface by virtue of redundancy. Each bit set represents the Ethernet interface, that is actively associated with redundancy based aggregation. An interface is actively associated with aggregator interface, if data for the aggregator interface can be transmitted/received over it.
Port List Interface type	It denotes what type of interfaces (Physical ethernet) are present in Port List. If no interface are present in port list the value shall be None

Caution   None.

References   None.

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2.131 Redundancy aggr stats Commands

2.131.1 get rdncy aggr stats

Description   Use this command to get.

Command Syntax   `get rdncy aggr stats [ ifname ifname ]`

2.131.2 reset rdncy aggr stats

Description   Use this command to reset.

Command Syntax   `reset rdncy aggr stats ifname ifname`

Parameters

Name	Description
`ifname` ifname	This specifies the interface index used for the Aggregator type of interfaces for which the redundancy stats are desired. Valid Value is aggr-0 **Type:** Reset -- Optional Get -- Optional **Valid values:** IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX

Example   `$ get rdncy aggr stats IfName aggr-0`

Output
```
Interface Index     : aggr-0
Collapse Count      : 1
DeCollapse Count    : 1
Last Collapse Time [MM/DD/YYYY::HH:MM:SS]    : 04/21/2003:12:23:34
Last De-Collapse Time [MM/DD/YYYY::HH:MM:SS] : 04/21/2003:12:23:34
```

Output field description

Field	Description
`Interface Index`	This specifies the interface index used for the Aggregator type of interfaces for which the redundancy stats are desired. Valid Value is aggr-0
`Collapse Count`	This specifies the number of times one of the redundant interfaces has gone down and the traffic had to be moved on to the other redundant interface, which is up.
`DeCollapse Count`	This specifies the number of times one of the failed redundant interfaces has come up and the traffic had to be redistributed among mutually redundant interfaces.

Field	Description
Last Collapse Time [MM/ DD/YYYY::HH:MM:SS]	This specifies time at which the last collapse (one of the redundant interface has gone down) occurred. The display format shall be mm/dd/yyyy:hr:min:sec.
Last De-Collapse Time [MM/DD/YYYY::HH:MM:SS]	This specifies time at which the last de-collapse (one of the failed redundant interface has come up) occured. The display format shall be mm/dd/ yyyy:hr:min:sec.

Caution   None.

References   None.

2.132 SNMP Proxy Host Commands

2.132.1 get snmp proxy host

Description   Use this command to get.

Command Syntax   `get snmp proxy host [ ip ip ] [ netcomm netcomm ]`

2.132.2 create snmp proxy host

Description   Use this command to create.

Command Syntax   `create snmp proxy host ip ip netcomm netcomm [ hostport hostport ]`

2.132.3 delete snmp proxy host

Description   Use this command to delete.

Command Syntax   `delete snmp proxy host ip ip netcomm netcomm`

2.132.4 modify snmp proxy host

Description   Use this command to modify.

Command Syntax   `modify snmp proxy host ip ip netcomm netcomm [ hostport hostport ]`

Parameters

Name	Description
`ip` ip	This specifies the IP address of the manager that has access permissions for the CPE for community specified by 'NetCommunity'. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional

Name	Description
netcomm netcomm	This specifies the NET side community. The community configured for Proxy services will be given higher preference over SNMP agent implementation i.e. if a same community is configured in SNMP Host Table and Snmp Proxy Table, SNMP agent processing corresponding to entry in SNMP Host Table will be ignored. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
hostport hostport	This specifies the UDP Port of the manager over which trap will be transmitted by the SNMP Proxy. For SNMP request and response this field not be used. **Type:** Create -- Optional Modify -- Optional **Default value:** 162

Example *$ create snmp proxy host ip* 172.25.2.100 *netcomm* Adsl1 *hostport* 1

Output Verbose Mode On

```
Entry Created

Ip Address   : 172.25.2.100
NET Community : Adsl1
Host Port    : 1
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Ip Address	This specifies the IP address of the manager that has access permissions for the CPE for community specified by 'NetCommunity'.
NET Community	This specifies the NET side community. The community configured for Proxy services will be given higher preference over SNMP agent implementation i.e. if a same community is configured in SNMP Host Table and Snmp Proxy Table, SNMP agent processing corresponding to entry in SNMP Host Table will be ignored.
Host Port	This specifies the UDP Port of the manager over which trap will be transmitted by the SNMP Proxy. For SNMP request and response this field not be used.

Caution None.

References • snmp proxy related commands

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2.133 SNMP Proxy Comm Commands

2.133.1 get snmp proxy comm

Description   Use this command to get.

Command Syntax   `get snmp proxy comm [ netcomm netcomm ]`

2.133.2 create snmp proxy comm

Description   Use this command to create.

Command Syntax   `create snmp proxy comm netcomm netcomm cpecomm cpecomm lowif lowif`

2.133.3 delete snmp proxy comm

Description   Use this command to delete.

Command Syntax   `delete snmp proxy comm netcomm netcomm`

2.133.4 modify snmp proxy comm

Description   Use this command to modify.

Command Syntax   `modify snmp proxy comm netcomm netcomm [ cpecomm cpecomm ]`

Parameters

Name	Description
`netcomm` netcomm	This specifies the NET side community. The community configured for Proxy services will be given higher preference over SNMP agent implementation i.e. if the same community is configured in SNMP Community Table and Snmp Proxy Community Table, SNMP agent processing corresponding to entry in SNMP Community Table will be ignored. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional

Name	Description
cpecomm cpecomm	This specifies the CPE side community. If a SNMP packet is received over UDP intended for any CPE connected over DSL link, the community embedded in the request must be replaced with CPE side community. **Type:** Create -- Mandatory Modify -- Optional
lowif lowif	This specifies the lower interface name over which the packet received with community 'NetCommunity' will be transmitted on the CPE side. **Type:** Create -- Mandatory **Valid values:** 1 - IAD_MAX_INTERFACES

Example   *$ create snmp proxy comm netcomm* Adsl1 *cpecomm* Adsl *lowif* aal5-0

Output   Verbose Mode On

```
Entry Created

NET Community : Adsl1
CPE Community : Adsl
LowIfName    : aal5-0
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
NET Community	This specifies the NET side community. The community configured for Proxy services will be given higher preference over SNMP agent implementation i.e. if the same community is configured in SNMP Community Table and Snmp Proxy Community Table, SNMP agent processing corresponding to entry in SNMP Community Table will be ignored.
CPE Community	This specifies the CPE side community. If a SNMP packet is received over UDP intended for any CPE connected over DSL link, the community embedded in the request must be replaced with CPE side community.
LowIfName	This specifies the lower interface name over which the packet received with community 'NetCommunity' will be transmitted on the CPE side.

Caution   None.

References   • snmp proxy related commands

2.134 SNMP Proxy cfg Commands

2.134.1 get snmp proxy cfg

Description   Use this command to get.

Command Syntax   *get snmp proxy cfg*

2.134.2 modify snmp proxy cfg

Description   Use this command to modify.

Command Syntax   *modify snmp proxy cfg [status* disable | enable *]*

Parameters

Name	Description
status disable | enable	Setting the value 'enable' for this object will activate the SNMP Proxy feature. **Type:** Modify -- Optional

Example   *$ get snmp proxy cfg*

Output   status : disable

Output field description

Field	Description
status	Setting the value 'enable' for this object will activate the SNMP Proxy feature.

Caution   None.

References   • snmp proxy related commands

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2.135 PPPoE Global ACprofile Commands

2.135.1 get pppoe global acprofile

Description   Use this command to get.

Command Syntax   *get pppoe global acprofile [profileid* profileid *]*

2.135.2 create pppoe global acprofile

Description   Use this command to create.

Command Syntax   *create pppoe global acprofile profileid* profileid *acname* acname

2.135.3 delete pppoe global acprofile

Description   Use this command to delete.

Command Syntax   *delete pppoe global acprofile profileid* profileid

Parameters

Name	Description
profileid profileid	Profile Id of the AC Name configured. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_AC_PROFILE
acname acname	AC Name for the Session, based on which, the AC is selected. **Type:** Create -- Mandatory

Example   *$ create pppoe global acprofile profileid* 2 *acname* ABCServer

Output   Verbose Mode On

```
Entry Created

Profile Id AC Name
--------------------------------------------------------------------------------
2         ABCServer
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Profile Id	Profile Id of the AC Name configured.
AC Name	AC Name for the Session, based on which, the AC is selected.

Caution   • None.

References   • PPPoE global ACprofile related commands.

2.136 PPPoE Global Config Commands

2.136.1 get pppoe global config

Description   Use this command to get.

Command Syntax   `get pppoe global config`

2.136.2 modify pppoe global config

Description   Use this command to modify.

Command Syntax   `modify pppoe global config [ padimaxnumretries` padimaxnumretries `]` `[ padrmaxnumretries` padrmaxnumretries `] [ paditxintrvl` paditxintrvl `] [ padrtxintrvl` padrtxintrvl `] [ wandntmrintrvl` wandntmrintrvl `] [` `inactivitytmrintrvl` inactivitytmrintrvl `] [ discmaxnumretries` discmaxnumretries `]`

Input Parameter Description

Name	Description
padimaxnumretries padimaxnumretries	Maximum number of times the PPPoE Client sends a PADI for establishing a PPPoE Session. **Type:** Modify -- Optional **Valid values:** 1 - GS_CFG_PPEC_MAX_PADI_MAX_RETRIES
padrmaxnumretries padrmaxnumretries	Maximum number of times the PPPoE Client sends a PADR for establishing a PPPoE Session. **Type:** Modify -- Optional **Valid values:** 1 - GS_CFG_PPEC_MAX_PADR_MAX_RETRIES
paditxintrvl paditxintrvl	The time, n seconds, between PADI retries from the PPPoE Client. **Type:** Modify -- Optional **Valid values:** 1 - GS_CFG_PPEC_MAX_PADI_TX_INTRVL
padrtxintrvl padrtxintrvl	The time, n seconds, between PADR retries from the PPPoE Client. **Type:** Modify -- Optional **Valid values:** 1 - GS_CFG_PPEC_MAX_PADR_TX_INTRVL
wandntmrintrvl wandntmrintrvl	The time, n seconds, for timeout of the WAN Down Timer. The timer is started when the WAN goes down, and if the timer times out, the session is teared down. A value of zero for this timer means it is not running. **Type:** Modify -- Optional **Valid values:** 0 - GS_CFG_PPEC_MAX_WAN_DN_TMR_INTRVL

Name	Description
inactivitytmrintrvl inactivitytmrintrvl	The time, n seconds, for timeout of the Inactivity Timer. The session can remain inactive for atmost these n seconds after which it is teared down. A value of zero means the timer is not running. **Type:** Modify -- Optional **Valid values:** 0 - GS_CFG_PPEC_MAX_INACTIVITY_TMR_INTRVL
discmaxnumretries discmaxnumretries	The maximum number of times the PPPoE client does a discovery stage for establishing a PPPoE session. A trap is given to GAG on reaching this number. **Type:** Modify -- Optional **Valid values:** 1 - GS_CFG_PPEC_MAX_DISC_MAX_RETRIES

Example   *$ get pppoe global config*

Output
```
Max Total Sessions    : 10      PADI Max Num Retries : 10
PADR Max Num Retries   : 10      PADI Tx Interval     : 5
PADR Tx Interval       : 5       WAN Dn Tmr Interval  : 10
InActivity Tmr Interval : 20     DISC Max Num Retries : 3
```

Output field description

Field	Description
Max Total Sessions	Maximum number of PPPoE sessions supported.
PADI Max Num Retries	Maximum number of times the PPPoE Client sends a PADI for establishing a PPPoE Session.
PADR Max Num Retries	Maximum number of times the PPPoE Client sends a PADR for establishing a PPPoE Session.
PADI Tx Interval	The time, n seconds, between PADI retries from the PPPoE Client.
PADR Tx Interval	The time, n seconds, between PADR retries from the PPPoE Client.
WAN Dn Tmr Interval	The time, n seconds, for timeout of the WAN Down Timer. The timer is started when the WAN goes down, and if the timer times out, the session is teared down. A value of zero for this timer means it is not running.
InActivity Tmr Interval	The time, n seconds, for timeout of the Inactivity Timer. The session can remain inactive for atmost these n seconds after which it is teared down. A value of zero means the timer is not running.
DISC Max Num Retries	The maximum number of times the PPPoE client does a discovery stage for establishing a PPPoE session. A trap is given to GAG on reaching this number.

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Caution   • None.

References   • PPPoE global config related commands.

2.137 PPPoE Global Macprofile Commands

2.137.1 get pppoe global macprofile

Description   Use this command to get.

Command Syntax   *get pppoe global macprofile [profileid* profileid *]*

2.137.2 create pppoe global macprofile

Description   Use this command to create.

Command Syntax   *create pppoe global macprofile profileid* profileid *macaddr* macaddr

2.137.3 delete pppoe global macprofile

Description   Use this command to delete.

Command Syntax   *delete pppoe global macprofile profileid* profileid

Input Parameter Description

Name	Description
profileid profileid	Profile Id of the MAC Address configured. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_MACADDR_PROFILE
macaddr macaddr	MAC Address for the profile. **Type:** Create -- Mandatory

Example   *$ create pppoe global macprofile profileid* 3 *macaddr*
00:0E:7F:61:C1:BE

Output   Verbose Mode On

```
Entry Created

Profile Id MAC Address
--------------------------------------------------------------------------------
3           00:0E:7F:61:C1:BE
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Profile Id	Profile Id of the MAC Address configured.
MAC Address	MAC Address for the profile.

Caution   • None.

References   • PPPoE global macprofile related commands.

2.138 PPPoE Global Serviceprofile Commands

2.138.1get pppoe global serviceprofile

Description   Use this command to get.

Command Syntax   *get pppoe global serviceprofile [profileid* profileid *]*

2.138.2create pppoe global serviceprofile

Description   Use this command to create.

Command Syntax   *create pppoe global serviceprofile profileid* profileid *servicename*
servicename

2.138.3delete pppoe global serviceprofile

Description   Use this command to delete.

Command Syntax   *delete pppoe global serviceprofile profileid* profileid

Input Parameter Description

Name	Description
profileid profileid	Profile Id of the Service Name configured. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_SERVICE_PROFILE
servicename servicename	Service Name for the Session, based on which, the AC is selected. **Type:** Create -- Mandatory

Example   *$ create pppoe global serviceprofile profileid* 1 *servicename* any

Output   Verbose Mode On

```
Entry Created

Profile Id Service Name
--------------------------------------------------------------------------------
1          any
```
Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Profile Id	Profile Id of the Service Name configured.
Service Name	Service Name for the Session, based on which, the AC is selected.

Caution

- None.

References

- PPPoE global serviceprofile related commands.

2.139 PPPoE Interface Commands

2.139.1 get pppoe intf

Description   Use this command to get.

Command Syntax   `get pppoe intf[ ifname ifname ]`

2.139.2 create pppoe intf

Description   Use this command to create.

Command Syntax   `create pppoe intf ifname ifname lowif lowif [ wanbridgeport wanbridgeport ] [ sessionid sessionid ] [ acmacaddr acmacaddr ] macaddrprof macaddrprof [ servicenameprof servicenameprof ] [ acnameprof acnameprof ] [ ethpkttype type2 | 802_3 ] [ nature dynamic | static ] [enable | disable]`

2.139.3 delete pppoe intf

Description   Use this command to delete.

Command Syntax   `delete pppoe intf ifname ifname`

2.139.4 modify pppoe intf

Description   Use this command to modify.

Command Syntax   `modify pppoe intf ifname ifname [ wanbridgeport wanbridgeport ] [ sessionid sessionid ] [ acmacaddr acmacaddr ] [ macaddrprof macaddrprof ] [ servicenameprof servicenameprof ] [ acnameprof acnameprof ] [ ethpkttype Type2 | 802_3 ] [ nature dynamic | static ] [enable|disable]`

Input Parameter Description

Name	Description
ifname ifname	The PPPoE interface. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** IAD_PPPOE_MIN_IFINDEX - IAD_PPPOE_MAX_IFINDEX
lowif lowif	This specifies the lower interface index. It contains the ifindex of the PPP relay interface. **Type:** Create -- Mandatory **Valid values:** IAD_PPPR_MIN_IFINDEX - IAD_PPPR_MAX_IFINDEX

Name	Description
wanbridgeport wanbridgeport	WAN side bridge port. A value of zero means any WAN side port is acceptable. Currently, only value zero is supported. **Type:** Create -- Optional Modify -- Optional **Default value:** 0x0
sessionid sessionid	Session Id for the session, given only in case a static session is being created. **Type:** Create -- Optional Modify -- Optional **Valid values:** 1 - 0xffff **Default value:** 0x0
acmacaddr acmacaddr	MAC address of the remote AC, given only in case a static session is being created. **Type:** Create -- Optional Modify -- Optional **Default value:** GS_CFG_PPEC_DEF_AC_MAC_ADDR
macaddrprof macaddrprof	Profile Id for self MAC addresses. The profile for the same is created using the PPPoEMacAddrProfileTable. **Type:** Create -- Mandatory Modify -- Optional
servicenameprof servicenameprof	Profile Id related to the service name for the session based on which the AC is selected. The profile for the same is created using the PPPoESessionProfileTable. A value of "any" means no specific service is needed to select an AC. A value of "anyconfigured" means any configured service name profile can be used for selecting an AC. **Type:** Create -- Optional Modify -- Optional **Default value:** any
acnameprof acnameprof	Profile Id related to the AC name for the session based on which the AC is selected. The profile for the same is created using the PPPoEAcProfileTable. A value of "any" means no specific AC is needed for establishing a session on the WAN side. A value of "anyconfigured" means any configured AC name profile can be used for selecting an AC. **Type:** Create -- Optional Modify -- Optional **Default value:** any
ethpkttype Type2 | 802_3	This specifies the type of the packet. **Type:** Create -- Optional Modify -- Optional **Default value:** Type2

Name	Description
nature dynamic | static	Specifies if the interface is dynamic or static in nature. The session is assumed to be in an established state when the interface is static in nature. **Type:** Create -- Optional Modify -- Optional **Default value:** Dynamic
enable | *disable*	Administrative status of the interface **Type**: Optional Valid values: *enable or disable* **Default Value**: *enable*

Example   *$ create pppoe intf ifname* pppoe-0 *lowif* ppp-0 *wanbridgeport* 1
sessionid 10 *acmacaddr* 00:0E:7F:61:C1:BE *macaddrprof* 1
servicenameprof 2 *acnameprof* 4 *ethpkttype* Type2 *nature* dynamic

Output   Verbose Mode On

```
Entry Created

Ifname              : pppoe-0          Low If Name   : ppp-0
WAN Bridge Port     : 1                Session Id    : 10
AC Mac Addr         : 00:0E:7F:61:C1:BE Mac Addr Prof : 1
Service Name Profile : 2               AC Name Prof  : 4
Eth Pkt Type        : Type2            Nature        : dynamic
Operational Status  : up               Admin Status  : up
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Ifname	The PPPoE interface.
Low If Name	This specifies the lower interface index. It contains the ifindex of the PPP relay interface.
WAN Bridge Port	WAN side bridge port. A value of zero means any WAN side port is acceptable. Currently, only value zero is supported.
Session Id	Session Id for the session given only in case a static session is being created.
AC Mac Addr	MAC address of the remote AC given only in case a static session is being created.
Mac Addr Prof	Profile Id for self MAC addresses. The profile for the same is created using the PPPoEMacAddrProfileTable.

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Field	Description
Service Name Profile	Profile Id related to Service Name for the Session based on which the AC is selected.The Profile for the same is created using the PPPoESessionProfileTable. A value of "any" means no specific service is needed to select an AC. A value of "anyconfigured"means any configured service name profile can be used for selecting an AC.
AC Name Prof	Profile Id related to AC Name for the Session based on which the AC is selected. The Profile for the same is created using the PPPoEAcProfileTable. A value of "any" means no specific AC is needed for establishing a session on the WAN side. A value of "anyconfigured"means any configured AC name profile can be used for selecting an AC.
Eth Pkt Type	This specifies the type of the packet.
Nature	Specifies if the interface is dynamic or static in nature. The session is assumed to be in established state when the interface is static in nature.
Operational Status	The actual/current state of the interface. It may be either Up or Down.
Admin Status	The desired state of the interface. It may be either Up or Down.

Caution   • None.

References   • PPPoE session config related commands.

2.140 PPPoE Session Stats Commands

2.140.1 get pppoe session stats

Description   Use this command to get.

Command Syntax   *get pppoe session stats [ifname* ifname *]*

Input Parameter Description

Name	Description
ifname ifname	The PPPoE interface. **Type:** Get -- Optional **Valid values:** IAD_PPPOE_MIN_IFINDEX - IAD_PPPOE_MAX_IFINDEX

Example   *$ get pppoe session stats ifname* pppoe-0

Output

```
Ifname                  : pppoe-0
Session Id              : 10        Peer Mac Addr        :   00:0E:7F:61:C1:BE
Num of PADI Tx          : 4         Num of PADI Timeouts :   2
Num of PADR Tx          : 1         Num of PADR Timeouts :   0
Num of PADT Tx          : 1         Num of PADT Rx       :   1
Num of PADT Rejected    : 1         Num of PADO Rx       :   2
Num of PADO Rejected    : 0         Num of Multi PADO Rx :   1
Num of PADS Rx          : 1         Num of PADS Rejected :   0
Num of Malformed Pkts Rx : 5        Num of Generic Err Rx :  1
Version                 : 1         Type                 :   1
Connect Time            : Mon Apr 18 14:00:59 2004
Duration (s)            : 100       AC Cookie : A1659E40766EDBD7214E18095A5E500C
Host Unique             : 0000003E  State                :   sessionStage
Service Name            : dvt       AC Name              :   REDBACK
```

Output field description

Field	Description
Ifname	The PPPoE interface.
Session Id	Session Id.
Peer Mac Addr	MAC address of the remote AC.
Num of PADI Tx	The number of PPPoE PADI transmitted.
Num of PADI Timeouts	The number of PPPoE timeouts waiting for a response to a PADI.
Num of PADR Tx	The number of PPPoE PADR transmitted.
Num of PADR Timeouts	The number of PPPoE timeouts waiting for a response to a PADR.
Num of PADT Tx	The number of PPPoE PADT transmitted.
Num of PADT Rx	The number of PPPoE PADT received.
Num of PADT Rejected	The number of PPPoE PADT discarded.

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Field	Description
Num of PADO Rx	The number of PPPoE PADO received.
Num of PADO Rejected	The number of PPPoE PADO discarded.
Num of Multi PADO Rx	Number of times more than 1 PPPoE PADO was received.
Num of PADS Rx	The number of PPPoE PADS received.
Num of PADS Rejected	The number of PPPoE PADS discarded.
Num of Generic Err Rx	Number of generic errors received.
Version	Version as given in the PPPoE rfc-2516.
Type	Type as given in the PPPoE rfc-2516.
Connect Time	Time when the session was established.
Duration (s)	Number of seconds since the session was established.
AC Cookie	Binary sequence representing the AC cookie given in negotiations.
Host Unique	Binary sequence representing the host unique tag value.
State	State that session is in.
Service Name	Service name with which the session came up.
AC Name	AC name with which the session came up.

Caution   • None.

References   • PPPoE session stats related commands.

2.141 PPPoE Global Stats Commands

2.141.1 get pppoe global stats

Description   Use this command to get.

Command Syntax   `get pppoe global stats`

Input Parameter Description   None.

Example   `$ get pppoe global stats`

Output
```
Active Sessions        : 10       Total Sessions      : 12
Peak Active Sessions   : 12       Num of PADI Tx      : 20
Num of PADI Timeouts   : 3        Num of PADR Tx      : 15
Num of PADR Timeouts   : 2        Num of PADT Tx      : 2
Num of PADT Rx         : 3        Num of PADT Rejected : 1
Num of PADO Rx         : 2        Num of PADO Rejected : 1
Num of PADS Rx         : 12       Num of PADS Rejected : 0
Num of Malformed Pkts Rx : 2
```

Output field description

Field	Description
Active Sessions	The number of active pppoe sessions in the system.
Total Sessions	The total number of PPPoE sessions.
Peak Active Sessions	Peak number of active PPPoE sessions.
Num of PADI Tx	The number of PPPoE PADI transmitted.
Num of PADI Timeouts	The number of PPPoE timeouts waiting for a response to a PADI.
Num of PADR Tx	The number of PPPoE PADR transmitted.
Num of PADR Timeouts	The number of PPPoE timeouts waiting for a response to a PADR.
Num of PADT Tx	The number of PPPoE PADT transmitted.
Num of PADT Rx	The number of PPPoE PADT received.
Num of PADT Rejected	The number of PPPoE PADT discarded.
Num of PADO Rx	The number of PPPoE PADO received.
Num of PADO Rejected	The number of PPPoE PADO discarded.
Num of PADS Rx	The number of PPPoE PADS received.
Num of PADS Rejected	The number of PPPoE PADS discarded.
Num of Malformed Pkts Rx	The number of PPPoE malformed packets received.

Caution   • None.

References   • PPPoE global stats related commands.

2.142 PPPR Interface Commands

2.142.1 get pppr intf

Description   Use this command to get.

Command Syntax   `get pppr intf  [ ifname` ifname `]`

2.142.2 create pppr intf

Description   Use this command to create.

Command Syntax   `create pppr intf  ifname` ifname `lowif` lowif `[ maxpdu` maxpdu `] [ ppprackto` ppprackto `] [ lowiftoggletimerto` lowiftoggletimerto `] [ nature` dynamic `|` static `] [ configstatus` Normal `|` Config `] [enable | disable]`

2.142.3 delete pppr intf

Description   Use this command to delete.

Command Syntax   `delete pppr intf  ifname` ifname

2.142.4 modify pppr intf

Description   Use this command to modify.

Command Syntax   `modify pppr intf  ifname` ifname `[ ppprackto` ppprackto `] [ lowiftoggletimerto` lowiftoggletimerto `] [ nature` dynamic `|` static `] [enable | disable]`

Input Parameter Description

Name	Description
`ifname` ifname	The PPPR interface. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** IAD_PPPR_MIN_IFINDEX - IAD_PPPR_MAX_IFINDEX
`lowif` lowif	This specifies the name of the lower AAL5 interface. **Type:** Create -- Mandatory

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Name	Description
maxpdu maxpdu	This specifies the maximum PDU size on a PPPR interface. **Type:** Create -- Optional **Valid values:** GS_CFG_PPPR_MAXPDUSIZE_MIN - GS_CFG_PPPR_MAXPDUSIZE_MAX **Default value:** GS_CFG_PPPR_MAXPDUSIZE_DEFAULT
ppprackto ppprackto	Time in seconds to wait for LCP terminate Ack, after sending a terminate request. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_PPPR_ACK_TIMER_MIN - GS_CFG_PPPR_ACK_TIMER_MAX **Default value:** GS_CFG_PPR_ACK_TIMER_DEFAULT
lowiftoggletimerto lowiftoggletimerto	Time in seconds to wait for lowif to come up without tearing down the pppr session. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_PPPR_LOW_IF_TOGGLE_TO_MIN - GS_CFG_PPPR_LOW_IF_TOGGLE_TO_MAX **Default value:** GS_CFG_PPR_LOWIF_TOGGLE_TO_DEFAULT
nature dynamic | static	Specifies if the interface is dynamic or static in nature. **Type:** Create -- Optional Modify -- Optional **Default value:** Dynamic
configstatus Normal | Config	This mode describes the configuration status for the interface. If the "config" bit is set, this interface shall be created, but will have a dormant status. Only after the receipt of an pppoa packet from the CPE side, this interface shall become active. **Type:** Create -- Optional Modify -- Optional **Default value:** Normal
enable | disable	Administrative status of the interface **Type**: Optional **Valid values**: enable or disable **Default Value**: enable

Example   *$ create pppr intf ifname* pppr-0 *lowif* aal5-0 *maxPdu* 1484 *ppprAckTO*
10 *lowifToggleTimerTO* 10 *nature* dynamic *configstatus* Normal

Output   Verbose Mode On

```
Entry Created

Ifname               : pppr-0    Low IfName      : aal5-0
Max PDU Size         : 1484      Ter Ack TimeOut : 10
Lowif Toggle TimeOut : 10
```

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```
Nature              : dynamic   Config Status  : Normal
Operational Status  : up        Admin Status   : up
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Ifname	The PPPR interface.
Low IfName	This specifies the name of the lower AAL5 interface.
Max PDU Size	This specifies the maximum PDU size on a PPPR interface.
Ter Ack TimeOut	Time in seconds to wait for LCP terminate Ack, after sending a terminate request.
Lowif Toggle TimeOut	Time in seconds to wait for lowif to come up without tearing down the pppr session.
Nature	Specifies if the interface is dynamic or static in nature.
Config Status	This mode describes the configuration status for the interface. If the "config" bit is set, this interface shall be created, but will have a dormant status. Only after the receipt of an pppoa packet from the CPE side, this interface shall become active. The "In-Use" and "Not-In-Use" bits are read-only bits. The "Not-In-Use" bit indicates that the entry is dormant and "In-Use" bit indicates that the entry is activated.
Operational Status	The actual/current state of the interface. It may be either Up or Down.
Admin Status	The desired state of the interface. It may be either Up or Down.

Cautions   None.

References   None.

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2.143 Shdsl interval 1day Commands

2.143.1 get shdsl interval 1day

Description   Use this command to get.

Command Syntax

```
get shdsl interval 1day ifname ifname [ unitid stuc | stur | sru1 |
sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8 ] [ side network |
customer ] [ wirepair one | two ] [ intrvlnumber intrvlnumber ]
```

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Mandatory **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'. **Type:** Get -- Optional
side network | customer	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'. **Type:** Get -- Optional
wirepair one | two	This is the referenced pair of wires in an SHDSL Segment. **Type:** Get -- Optional
intrvlnumber intrvlnumber	Performance Data Interval number. 1 is the most recent previous interval. In the current implementation, only 1 value is supported. **Type:** Get -- Optional **Valid values:** 1 - 30

Example
```
$ get shdsl interval 1day ifname dsl-0 unitid stuc side customer
wirepair one intrvlnumber 1
```

Output
```
Ifname          : dsl-0      Unit Index       : stuc
EndPointSide    : customer   EndPointWirePair : one
Interval Number : 1          MonitoredSecs    : 200
ES Count        : 12         SES Count        : 11
CRC Anom        : 12         LOSWS Count      : 10
UAS Count       : 8
```

Output field description

Field	Description
Ifname	The interface name of the DSL Port
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'.
EndPointSide	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'.
EndPointWirePair	This is the referenced pair of wires in an SHDSL Segment.
Interval Number	Performance Data Interval number. 1 is the most recent previous interval. In the current implementation, only 1 value is supported.
MonitoredSecs	The amount of time in the 1-day interval over which the performance monitoring information is actually counted.
ES Count	Count of Errored Seconds (ES) during the interval.
SES Count	Count of Severely Errored Seconds (SES) during the interval.
CRC Anom	Count of CRC anomalies during the interval.
LOSWS Count	Count of Loss of Sync Word (LOSW) Seconds during the interval.
UAS Count	Count of Unavailable Seconds (UAS) during the interval.

Cautions
- None

References
- DSL Commands

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2.144 Shdsl interval 15min Commands

2.144.1 get shdsl interval 15min

Description   Use this command to get.

Command Syntax   *get shdsl interval 15min ifname* ifname *[unitid* stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8 *] [side* network | customer *] [wirepair* one | two *] [intrvlnumber* intrvlnumber *]*

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Mandatory **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc │ stur │ sru1 │ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'. **Type:** Get -- Optional
side network │ customer	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'. **Type:** Get -- Optional
wirepair one │ two	This is the referenced pair of wires in an SHDSL Segment. **Type:** Get -- Optional
intrvlnumber intrvlnumber	Performance Data Interval number. 1 is the most recent previous interval. In the current implementation, only 1 value is supported. **Type:** Get -- Optional **Valid values:** 1 - 96

Example   *$ get shdsl interval 15min ifname* dsl-0 *unitid* stuc *side* customer *wirepair* one *intrvlnumber* 1

Output
```
Ifname         : dsl-0      Unit Index       : stuc
EndPointSide   : customer   EndPointWirePair : one
IntervalNumber : 1          ES Count         : 22
SES Count      : 15         CRC AnomCount    : 12
LOSWS Count    : 16         UAS Count        : 5
```

Output field description

Field	Description
Ifname	The interface name of the DSL Port
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'.
EndPointSide	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'.
EndPointWirePair	This is the referenced pair of wires in an SHDSL Segment.
IntervalNumber	Performance Data Interval number. 1 is the most recent previous interval. In the current implementation, only 1 value is supported.
ES Count	Count of Errored Seconds (ES) during the interval.
SES Count	Count of Severely Errored Seconds (SES) during the interval.
CRC AnomCount	Count of CRC anomalies during the interval.
LOSWS Count	Count of Loss of Sync Word (LOSW) Seconds during the interval.
UAS Count	Count of Unavailable Seconds (UAS) during the interval.

Cautions
- None

References
- DSL Commands

2.145 Shdsl endpoint alarmprofile Commands

2.145.1 get shdsl endpoint alarmprofile

Description   Use this command to get.

Command Syntax   `get shdsl endpoint alarmprofile [ ifname ifname ]`

2.145.2 modify shdsl endpoint alarmprofile

Description   Use this command to modify.

Command Syntax   `modify shdsl endpoint alarmprofile ifname ifname [ threshloopattn threshloopattn ] [ threshsnrmargin threshsnrmargin ] [ threshes threshes ] [ threshses threshses ] [ threshcrcanom threshcrcanom ] [ threshlosws threshlosws ] [ threshuas threshuas ]`

Input Parameter Description

Name	Description
ifname ifname	Name of the end point alarm configuration profile. **Type:** Modify -- Mandatory Get -- Optional
threshloopattn threshloopattn	This object configures the loop attenuation alarm threshold.The only range supported is 1 to 127. **Type:** Modify -- Optional **Valid values:** (-127) - 128
threshsnrmargin threshsnrmargin	This object configures the SNR margin alarm threshold.The only range supported is 0 to 15. **Type:** Modify -- Optional **Valid values:** (-127) - 128
threshes threshes	This object configures the threshold for the number of errored seconds (ES) within any given 15-minute performance data collection interval. **Type:** Modify -- Optional **Valid values:** 0 - 900
threshses threshses	This object configures the threshold for the number of severely errored seconds (SES) within any given 15-minute performance data collection interval. **Type:** Modify -- Optional **Valid values:** 0 - 900
threshcrcanom threshcrcanom	This object configures the threshold for the number of CRC anomalies within any given 15-minute performance data collection interval. **Type:** Modify -- Optional **Valid values:** 0 - 0xFFFFFFFF

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Name	Description
threshlosws threshlosws	This object configures the threshold for the number of Loss of Sync Word (LOSW) Seconds within any given 15-minute performance data collection interval. **Type:** Modify -- Optional **Valid values:** 0 - 900
threshuas threshuas	This object configures the threshold for the number of unavailable seconds (UAS) within any given 15-minute performance data collection interval. **Type:** Modify -- Optional **Valid values:** 0 - 900

Example　　*$ get shdsl endpoint alarmprofile ifname* dsl-0

Output

```
IfName       : dsl-0      ThreshLoopAttn : 10
ThreshSNRMrgn : 10        ThreshES       : 2
ThreshSES    : 10         ThreshCRCAnom  : 10
ThreshLOSWS  : 10         ThreshUAS      : 10
```

Output field description

Field	Description
IfName	Name of the end point alarm configuration profile.
ThreshLoopAttn	This object configures the loop attenuation alarm threshold.The only range supported is 1 to 127.
ThreshSNRMrgn	This object configures the SNR margin alarm threshold.The only range supported is 0 to 15.
ThreshES	This object configures the threshold for the number of errored seconds (ES) within any given 15-minute performance data collection interval.
ThreshSES	This object configures the threshold for the number of severely errored seconds (SES) within any given 15-minute performance data collection interval.
ThreshCRCAnom	This object configures the threshold for the number of CRC anomalies within any given 15-minute performance data collection interval.
ThreshLOSWS	This object configures the threshold for the number of Loss of Sync Word (LOSW) Seconds within any given 15-minute performance data collection interval.
ThreshUAS	This object configures the threshold for the number of unavailable seconds (UAS) within any given 15-minute performance data collection interval.

Cautions　　• None

References　　• DSL Commands

2.146 Shdsl endpoint currentry Commands

2.146.1get shdsl endpoint currentry

Description   Use this command to get.

Command Syntax `get shdsl endpoint currentry [ ifname` ifname `] [ unitid` stuc `|` stur
`|` sru1 `|` sru2 `|` sru3 `|` sru4 `|` sru5 `|` sru6 `|` sru7 `|` sru8 `] [ side`
network `|` customer `] [ wirepair` one `|` two `]`

**Input Parameter
Description**

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'. **Type:** Get -- Optional
side network | customer	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'. **Type:** Get -- Optional
wirepair one | two	This is the referenced pair of wires in an SHDSL Segment. **Type:** Get -- Optional

Example   `$ get shdsl endpoint currentry ifname` dsl-0 `unitid` stuc `side` customer
`wirepair` one

Output
```
IfName              : dsl-0      Unit Index        : stuc
EndPointSide        : customer   EndPointWirePair  : one
Curr Attenuation    : 10         Curr SNRMargin    : 6
Curr Status         : LoopbackActive NoDefect
Curr ES             : 12
Curr SES            : 22         Curr CRCAnom      : 11
Curr LOSWS          : 8          Curr UAS          : 12
Curr 15minTimeElapsed : 10       Curr 15minES      : 16
Curr 15minSES       : 15         Curr 15minCRCAnom : 14
Curr 15minLOSWS     : 11         Curr 15minUAS     : 11
Curr 1DayTimeElapsed : 2500      Curr 1DayES       : 12
Curr 1DaySES        : 1          Curr 1DayCRCAnom  : 18
Curr 1DayLOSWS      : 20         Curr 1DayUAS      : 9
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'.
EndPointSide	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'.
EndPointWirePair	This is the referenced pair of wires in an SHDSL Segment.
Curr Attenuation	The current loop attenuation for this endpoint as reported in a Network or Customer Side Performance Status message.The only range supported is 1 to 127.
Curr SNRMargin	The current SNR margin for this endpoint as reported in a Status Response/SNR message.The only range supported is 0 to 15.
Curr Status	Contains the current state of this endpoint.
Curr ES	Count of Errored Seconds (ES) on this endpoint since the xU was last restarted.
Curr SES	Count of Severely Errored Seconds (SES) on this endpoint since the xU was last restarted.
Curr CRCAnom	Count of CRC anomalies on this endpoint since the xU was last restarted.
Curr LOSWS	Count of Loss of Sync Word (LOSW) Seconds on this endpoint since the xU was last restarted.
Curr UAS	Count of Unavailable Seconds (UAS) on this endpoint since the xU was last restarted.
Curr 15minTimeElapsed	Total elapsed seconds in the current 15-minute interval.
Curr 15minES	Count of Errored Seconds (ES) in the current 15-minute interval.
Curr 15minSES	Count of Severely Errored Seconds (SES) in the current 15-minute interval.
Curr 15minCRCAnom	Count of CRC anomalies in the current 15-minute interval.

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Field	Description
Curr 15minLOSWS	Count of Loss of Sync Word (LOSW) Seconds in the current 15-minute interval.
Curr 15minUAS	Count of Unavailable Seconds (UAS) in the current 15-minute Interval.
Curr 1DayTimeElapsed	Number of seconds that have elapsed since the beginning of the current 1-day interval.
Curr 1DayES	Count of Errored Seconds (ES) in the current 1-Day interval.
Curr 1DaySES	Count of Severely Errored Seconds (SES) in the current 1-Day interval.
Curr 1DayCRCAnom	Count of CRC anomalies in the current 1-Day interval.
Curr 1DayLOSWS	Count of Loss of Sync Word (LOSW) Seconds in the current 1-Day interval.
Curr 1DayUAS	Count of Unavailable Seconds (UAS) in the current 1-Day Interval.

Cautions   • None

References   • DSL Commands

2.147 Shdsl line intf Commands

2.147.1 get shdsl line intf

Description   Use this command to get.

Command Syntax   `get shdsl line intf [ ifname` ifname `]`

2.147.2 modify shdsl line intf

Description   Use this command to modify.

Command Syntax   `modify shdsl line intf [ enable | disable ] ifname` ifname `[ action`
StartUp | AbortReq | GearShiftReq | DownloadReq | BertStartTxReq |
BertStartRxReq | BertStopReq | HybridLossTestReq | SpectrumDownReq
| SpectrumUpReq | SpectrumTxRxReq | ResidualEchoReq | TotalEchoReq
NextPsdReq | AutoRetrainOnReq | AutoRetrainOffReq | PropEocOnReq
PropEocOffReq | RmtAtmCellStatusReq | RmtFullStatusReq `] [ mode` Co
| Cpe `] [ powerscale` DefaultScale `] [ encodecoeffa` Default `] [`
encodecoeffb Default `] [ txeocbufferlen` 5 | 10 | 15 | 20 | 25 | 30
| 35 | 40 | 45 | 50 | 55 | 60 `] [ rxeocbufferlen` 5 | 10 | 15 | 20 |
25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 `] [ ntr` Disable | RefClkIp8k
| RefClkOp4096k `] [ rxupstrmfrmsync` rxupstrmfrmsync `] [`
rxdwnstrmfrmsync rxdwnstrmfrmsync `] [ rxupstrmstuffbits`
rxupstrmstuffbits `] [ rxdwnstrmstuffbits` rxdwnstrmstuffbits `] [`
initiate default | co | cpe `] [ frmrrxclkmode` Slave | Internal `] [`
frmrrxpllmode Disable | Enable `] [ serialatmciubuffsz` 24 | 53 `] [`
txfrmrpulsedelay 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 `] [ rxfrmrpulsedelay`
0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 `] [ multifrmmode` Enable | Disable `] [`
4_6mbpsbitrate Disable | Enable `] [ tomdata1` tomdata1 `] [ tomdata2`
tomdata2 `] [ tomdata3` tomdata3 `] [ tomdata4` tomdata4 `] [`
setreqsilencemode Enable | Disable `] [ individualrates1`
individualrates1 `] [ individualrates2` individualrates2 `] [`
individualrates3 individualrates3 `] [ atmcelldelineation` Disable |
Enable `] [ frmrcelldroponerr` Enable | Disable `] [ gearshifttype` 0 |
1 `] [ hsnsf` Disable | Enable `] [ hsmaxbitsperbaud` default | 2bits |
1bits `] [ hscustid` hscustid `] [ hscustdata0` hscustdata0 `] [`
hscustdata1 hscustdata1 `] [ hsannexbtype` Default | Anfp |
AnnexbOrAnfp `] [ autoretrain` disable | enable `] [ arcrcchk` disable
| enable `] [ arfrmrsynchk` disable | enable `] [ arsnrmarginchk` disable
| enable `] [ arcrcthresh` arcrcthresh `] [ arsnrmarginthresh` 1 | 2 |
3 | 4 | 5 | 6 `] [ artime` 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 `] [`
opstatetrap enable | disable `] [ txfrmrdataclkedge` Negative |
Positive `] [ rxfrmrdataclkedge` Negative | Positive `] [`
txfrmrpulseclkedge Negative | Positive `] [ rxfrmrpulseclkedge`
Negative | Positive `] [ txfrmrpulselvl` Low | High `] [ rxfrmrpulselvl`
Low | High `] [ frmroh` frmroh `] [ latrapenable` enable | disable `] [`
snrmgntrapenable enable | disable `] [ frmrohtrapenable` enable |
disable `] [ gsparamtestinputfile` gsparamtestinputfile `] [`
paramhybridlossteststart paramhybridlossteststart `] [`
paramhybridlosstestend paramhybridlosstestend `]`

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**Input Parameter
Description**

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Modify -- Mandatory Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
[enable | disable]	Administrative status of the interface. **Type**: Optional **Valid values**: enable or disable
action StartUp | AbortReq | GearShiftReq | DownloadReq | BertStartTxReq | BertStartRxReq | BertStopReq | HybridLossTestReq | SpectrumDownReq | SpectrumUpReq | SpectrumTxRxReq | ResidualEchoReq | TotalEchoReq | NextPsdReq | AutoRetrainOnReq | AutoRetrainOffReq | PropEocOnReq | PropEocOffReq | RmtAtmCellStatusReq | RmtFullStatusReq	This object specifies actions that are used to control transceiver operation, including abort, startup and tests. **Type:** Modify -- Optional
mode Co | Cpe	This object specifies the operational mode of the transceiver. **Type:** Modify -- Optional
powerscale DefaultScale	This object is used to compensate for minor differences in transmit power between designs. **Type:** Modify -- Optional
encodecoeffa Default	This object determines the value of encoder coefficient A, as defined in ITU-T G.991.2. **Type:** Modify -- Optional
encodecoeffb Default	This object determines the value of encoder coefficient B, as defined in ITU-T G.991.2 **Type:** Modify -- Optional
txeocbufferlen 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60	This object determines the number of bytes of EOC data that is buffered by the DSP in the transmit direction. **Type:** Modify -- Optional
rxeocbufferlen 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60	This object determines the number of bytes of EOC data that is buffered by the DSP in the receive direction. **Type:** Modify -- Optional

Name	Description
ntr `Disable` | `RefClkIp8k` | `RefClkOp4096k`	This object defines how network-timing recovery is performed. **Type:** Modify -- Optional
rxupstrmfrmsync `rxupstrmfrmsync`	Customer-defined value. This object defines the upstream frame sync word. **Type:** Modify -- Optional
rxdwnstrmfrmsync `rxdwnstrmfrmsync`	This object defines the downstream frame sync word. **Type:** Modify -- Optional
rxupstrmstuffbits `rxupstrmstuffbits`	Customer-defined value. This object defines the upstream. **Type:** Modify -- Optional
rxdwnstrmstuffbits `rxdwnstrmstuffbits`	This object defines the downstream stuff bits. **Type:** Modify -- Optional
initiate `default` | `co` | `cpe`	This object defines which STU initiates a startup. The default is STU-R initiates and STU-C waits. **Type:** Modify -- Optional
frmrrxclkmode `Slave` | `Internal`	This object determines the source of the receive clock. **Type:** Modify -- Optional
frmrrxpllmode `Disable` | `Enable`	This object enables or disables the internal PLL. **Type:** Modify -- Optional
serialatmciubuffsz `24` | `53`	This object enables the user to set the size of the framer buffer for serial ATM operation. **Type:** Modify -- Optional
txfrmrpulsedelay `0` | `1` | `2` | `3` | `4` | `5` | `6` | `7`	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, a delay of up to 7 clock cycles can be specified for the transmit frame pulse. **Type:** Modify -- Optional
rxfrmrpulsedelay `0` | `1` | `2` | `3` | `4` | `5` | `6` | `7`	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, a delay of up to 7 clock cycles can be specified for the receive frame pulse. **Type:** Modify -- Optional
multifrmmode `Enable` | `Disable`	This object specifies the multi frame operational mode of the transceiver. **Type:** Modify -- Optional
4_6mbpsbitrate `Disable` | `Enable`	This object specifies the operational state of the 4_6Mbps bit rate. **Type:** Modify -- Optional

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Name	Description
tomdata1 tomdata1	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis. **Type:** Modify -- Optional
tomdata2 tomdata2	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis. **Type:** Modify -- Optional
tomdata3 tomdata3	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis. **Type:** Modify -- Optional
tomdata4 tomdata4	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis. **Type:** Modify -- Optional
setreqsilencemode Enable | Disable	This object enables a silent mode for the STU at the opposite end of the loop for approximately one minute. During the silent period, the STU that requested the silent mode could perform whatever operations it wants and the STU at the opposite end will remain in handshake. **Type:** Modify -- Optional
individualrates1 individualrates1	This item enables the user to individually enable or disable base rates for N=1 through N=16. The default is all rates enabled. **Type:** Modify -- Optional
individualrates2 individualrates2	This item enables the user to individually enable or disable base rates for N=17 through N=32. The default is all rates enabled. **Type:** Modify -- Optional
individualrates3 individualrates3	This item enables the user to individually enable or disable base rates for N=33 through N=36. The default is all rates enabled. **Type:** Modify -- Optional
atmcelldelineation Disable | Enable	This object enables the user to enable or disable cell delineation for serial ATM operation. This parameter should be set before a startup. **Type:** Modify -- Optional
frmrcelldroponerr Enable | Disable	This object determines whether cells are dropped, i.e., not passed to the host, or not dropped, i.e., passed to the host. This object must be set prior to startup. **Type:** Modify -- Optional
gearshifttype 0 | 1	This object specifies the Gear Shift Type. **Type:** Modify -- Optional

Name	Description
hsnsf Disable | Enable	This object enables or disables nonstandard Information fields for MP, MS, CL, and CLR messages, as defined in ITU-T G.994.1.bis. **Type:** Modify -- Optional
hsmaxbitsperbaud default | 2bits | 1bits	This object specifies the maximum bit per baud. **Type:** Modify -- Optional
hscustid hscustid	This object identifies the customer identification during handshaking, as described in ITU-T G.994.1.bis. **Type:** Modify -- Optional
hscustdata0 hscustdata0	This object identifies two words of customer data during handshaking, as defined in ITU-T G.994.1.bis. **Type:** Modify -- Optional
hscustdata1 hscustdata1	This object identifies two words of customer data during handshaking, as defined in ITU-T G.994.1.bis. **Type:** Modify -- Optional
hsannexbtype Default | Anfp | AnnexbOrAnfp	This object allows the customer to choose between support for Annex B, Annex B with Access Network Frequency Plan (ANFP), or both. **Type:** Modify -- Optional
autoretrain disable | enable	Enables or disables auto-retrain. **Type:** Modify -- Optional
arcrcchk disable | enable	Enables or disables auto-retrain based on CRC errors **Type:** Modify -- Optional
arfrmrsynchk disable | enable	Enables or disables auto-retrain based on framer synchronization. **Type:** Modify -- Optional
arsnrmarginchk disable | enable	Enables or disables auto-retrain based on whether the S/N margin falls below a preset threshold. **Type:** Modify -- Optional
arcrcthresh arcrcthresh	Sets the threshold for the number of frames with CRC errors for autoretrain. **Type:** Modify -- Optional **Valid values:** 0 - 0x400
arsnrmarginthresh 1 | 2 | 3 | 4 | 5 | 6	Set the margin threshold for autoretrain. **Type:** Modify -- Optional
artime 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10	Sets the time over which the autoretrain parameters must be outside their normal ranges, so that an auto-retrain occurs. **Type:** Modify -- Optional
opstatetrap enable | disable	Enables/disables trap indicating a change in op state. **Type:** Modify -- Optional

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Name	Description
txfrmrdataclkedge Negative | Positive	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, transmit data can be sampled upon either rising or falling edge of the transmit clock. **Type:** Modify -- Optional
rxfrmrdataclkedge Negative | Positive	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, receive data can be valid upon either rising or falling edge of the receive clock. **Type:** Modify -- Optional
txfrmrpulseclkedge Negative | Positive	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be active upon either rising or falling edge. **Type:** Modify -- Optional
rxfrmrpulseclkedge Negative | Positive	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be active upon either rising or falling edge. **Type:** Modify -- Optional
txfrmrpulselvl Low | High	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be either active high (1) or active low (0). **Type:** Modify -- Optional
rxfrmrpulselvl Low | High	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be either active high (1) or active low (0). **Type:** Modify -- Optional
frmroh frmroh	This object specifies framer OverHead Channel.Once the Port goes into Data mode and user sets this OH bits even without bringing line down, these bits will directly get transmitted to the end user. **Type:** Modify -- Optional **Valid values:** 0 - 0xFFFF
latrapenable enable | disable	This Parameter enables or disables the Trap for Loop Attenuation Threshold crossing. **Type:** Modify -- Optional
snrmgntrapenable enable | disable	This Parameter enables or disables the Trap for SNR Margin Threshold crossing. **Type:** Modify -- Optional

Name	Description
frmrohtrapenable enable | disable	This Parameter enables or disables the Trap for Framer Overhead and Defects. **Type:** Modify -- Optional
gsparamtestinputfile gsparamtestinputfile	Indicates Name of the Input file from which to take the Mask Array Size, lower and upper mask Array. Null string means no file is specified **Type:** Modify -- Optional
paramhybridlossteststart paramhybridlossteststart	Start bin for range of bins to be measured. The default value mentioned is an indicative value only. **Type:** Modify -- Optional **Valid values:** 0x0 - GS_CFG_MAX_SHDSL_HYBRID_TEST_START_BIN
paramhybridlosstestend paramhybridlosstestend	End bin for range of bins to be measured. The default value mentioned is an indicative value only. **Type:** Modify -- Optional **Valid values:** 0x0 - GS_CFG_MAX_SHDSL_HYBRID_TEST_END_BIN

Example `$ get shdsl line intf ifname` dsl-0

Output

```
IfName                : dsl-0           Action                : StartUp
Mode                  : Co              PowerScale            : DefaultScale
Frmr Type             : unframed        AFE Type              : Saturn
Encode CoeffA         : Default         Encode CoeffB         : Default
TxEOCBufferLen        : 5               RxEOCBufferLen        : 5
NTR                   : Disable         RxUSFrameSync         : 0x359f
RxDSFrameSync         : 0x359f          RxUSStuffBits         : 0x0f
RxDSStuffBits         : 0x0f            Initiate              : default
FrmRxClkMode          : Slave           FrmrRxPllMode         : Disable
SrlAtmCiuBuffSize     : 53              UL2TxAddr             : 10
UL2RxAddr             : 10              TxFrmrPulseDelay      : 5
RxFrmrPulseDelay      : 5               Multi Frame Mode      : Enable
4_6Mbps Bit Rate      : Enable          Tom Data Word1        : 0x00000000
Tom Data Word2        : 0x00000000      Tom Data Word3        : 0x00000000
Tom Data Word4        : 0x00000000      ReqSilenceMode        : Enable
Individual Rates1     : 0xffff          Individual Rates2     : 0xffff
IndividualRates3      : 0x000f          SrlAtmCellDelineation : Disable
FrmrCellDropOnErr     : Disable         Gear Shift Type       : 1
Hs Nsf                : Disable         Hs Max Bits Per Baud  : default
Hs Customer Id        : 0               Hs Customer Data0     : 0
Hs Customer Data1     : 0               Hs AnnexB Type        : Default
Auto Retrain          : disable         AR CRCChk             : disable
AR FrmrSyncChk        : disable         AR SNRMarginChk       : disable
AR CRCThresh          : 1               AR SNRMrgnThresh(dB)  : 1
AR Time (sec)         : 3               Op State Trap         : enable
Tx FrmrDataClkEdge    : Negative        Rx FrmrDataClkEdge    : Positive
Tx FrmrPulseClkEdge   : Negative        RxFrmrPulseClk        : Negative
Tx Frmr Pulse Level   : High            Rx Frmr Pulse Level   : High
Utopia Data Bus Width : Tx16Rx16        Frmr OH               : 0x0f
LoopAttenTrap         : enable
SNRMarginTrap         : enable
FrmrOH-DefectsTrap    : enable
ParamTestInputFile    : TestFile
ParamHybrdLossTstStrt : 0x10            ParamHybrdLossTstEnd  : 0x23
Oper Status           : Down            Admin Status          : Up
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Action	This object specifies actions that are used to control transceiver operation, including abort, startup and tests.
Mode	This object specifies the operational mode of the transceiver.
PowerScale	This object is used to compensate for minor differences in transmit power between designs.
Frmr Type	This object defines which type of data interface type is used. Note that the non-default values only apply to Conexant chips that support serial interfaces.
AFE Type	This objects defines which AFE is being used.
Encode CoeffA	This object determines the value of encoder coefficient A, as defined in ITU-T G.991.2.
Encode CoeffB	This object determines the value of encoder coefficient B, as defined in ITU-T G.991.2
TxEOCBufferLen	This object determines the number of bytes of EOC data that is buffered by the DSP in the transmit direction.
RxEOCBufferLen	This object determines the number of bytes of EOC data that is buffered by the DSP in the receive direction.
NTR	This object defines how network-timing recovery is performed.
RxUSFrameSync	Customer-defined value. This object defines the upstream frame sync word.
RxDSFrameSync	This object defines the downstream frame sync word.
RxUSStuffBits	Customer-defined value. This object defines the upstream.
RxDSStuffBits	This object defines the downstream stuff bits.
Initiate	This object defines which STU initiates a startup. The default is STU-R initiates and STU-C waits.
FrmRxClkMode	This object determines the source of the receive clock.
FrmrRxPllMode	This object enables or disables the internal PLL.
SrlAtmCiuBuffSize	This object enables the user to set the size of the framer buffer for serial ATM operation.
UL2TxAddr	This object selects the appropriate UTOPIA Level 2 address for the transmit interface.

Field	Description
UL2RxAddr	This object selects the appropriate UTOPIA Level 2 address for the receive interface.
TxFrmrPulseDelay	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, a delay of up to 7 clock cycles can be specified for the transmit frame pulse.
RxFrmrPulseDelay	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, a delay of up to 7 clock cycles can be specified for the receive frame pulse.
Multi Frame Mode	This object specifies the multi frame operational mode of the transceiver.
4_6Mbps Bit Rate	This object specifies the operational state of the 4_6Mbps bit rate.
Tom Data Word1	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis.
Tom Data Word2	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis.
Tom Data Word3	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis.
Tom Data Word4	This object identifies one of four words of proprietary vendor data, as described in the Vendor Data section of ITU-T G.994.1.bis.
ReqSilenceMode	This object enables a silent mode for the STU at the opposite end of the loop for approximately one minute. During the silent period, the STU that requested the silent mode could perform whatever operations it wants and the STU at the opposite end will remain in handshake.
Individual Rates1	This item enables the user to individually enable or disable base rates for N=1 through N=16. The default is all rates enabled.
Individual Rates2	This item enables the user to individually enable or disable base rates for N=17 through N=32. The default is all rates enabled.
IndividualRates3	This item enables the user to individually enable or disable base rates for N=33 through N=36. The default is all rates enabled.
SrlAtmCellDelineation	This object enables the user to enable or disable cell delineation for serial ATM operation. This parameter should be set before a startup.

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Field	Description
FrmrCellDropOnErr	This object determines whether cells are dropped, i.e., not passed to the host, or not dropped, i.e., passed to the host. This object must be set prior to startup.
Gear Shift Type	This object specifies the Gear Shift Type.
Hs Nsf	This object enables or disables nonstandard Information fields for MP, MS, CL, and CLR messages, as defined in ITU-T G.994.1.bis.
Hs Max Bits Per Baud	This object specifies the maximum bit per baud.
Hs Customer Id	This object identifies the customer identification during handshaking, as described in ITU-T G.994.1.bis.
Hs Customer Data0	This object identifies two words of customer data during handshaking, as defined in ITU-T G.994.1.bis.
Hs Customer Data1	This object identifies two words of customer data during handshaking, as defined in ITU-T G.994.1.bis.
Hs AnnexB Type	This object allows the customer to choose between support for Annex B, Annex B with Access Network Frequency Plan (ANFP), or both.
Auto Retrain	Enables or disables auto-retrain.
AR CRCChk	Enables or disables auto-retrain based on CRC errors
AR FrmrSyncChk	Enables or disables auto-retrain based on framer synchronization.
AR SNRMarginChk	Enables or disables auto-retrain based on whether the S/N margin falls below a preset threshold.
AR CRCThresh	Sets the threshold for the number of frames with CRC errors for autoretrain.
AR SNRMrgnThresh(dB)	Set the margin threshold for autoretrain.
AR Time (sec)	Sets the time over which the autoretrain parameters must be outside their normal ranges, so that an auto-retrain occurs.
Op State Trap	Enables/disables trap indicating a change in op state.
Tx FrmrDataClkEdge	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, transmit data can be sampled upon either rising or falling edge of the transmit clock.

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Field	Description
Rx FrmrDataClkEdge	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, receive data can be valid upon either rising or falling edge of the receive clock.
Tx FrmrPulseClkEdge	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be active upon either rising or falling edge.
RxFrmrPulseClk	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be active upon either rising or falling edge.
Tx Frmr Pulse Level	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be either active high (1) or active low (0).
Rx Frmr Pulse Level	This parameter is for Serial ATM applications only. It is recommended that the default value be used. For special customer configurations, the transmit frame pulse can be either active high (1) or active low (0).
Utopia Data Bus Width	This parameter is used to specify width of UTOPIA data bus.
Frmr OH	This object specifies framer OverHead Channel.Once the Port goes into Data mode and user sets this OH bits even without bringing line down, these bits will directly get transmitted to the end user.
LoopAttenTrap	This Parameter enables or disables the Trap for Loop Attenuation Threshold crossing.
SNRMarginTrap	This Parameter enables or disables the Trap for SNR Margin Threshold crossing.
FrmrOH-DefectsTrap	This Parameter enables or disables the Trap for Framer Overhead and Defects.
ParamTestInputFile	Indicates Name of the Input file from which to take the Mask Array Size, lower and upper mask Array. Null string means no file is specified
ParamHybrdLossTstStrt	Start bin for range of bins to be measured. The default value mentioned is an indicative value only.
ParamHybrdLossTstEnd	End bin for range of bins to be measured. The default value mentioned is an indicative value only.

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Field	Description
Oper Status	The actual/current state of the interface. It can be either up or down.
Admin Status	The desired state of the interface. It may be either Up or Down.

Cautions   • None

References   • DSL Commands

2.148 Shdsl span confprofile Commands

2.148.1 get shdsl span confprofile

Description   Use this command to get.

Command Syntax   `get shdsl span confprofile [ ifname ifname ]`

2.148.2 modify shdsl span confprofile

Description   Use this command to modify.

Command Syntax   `modify shdsl span confprofile ifname` ifname `[ wireintf` TwoWire │ FourWire │ FourWireBitInterleave │ FourWireByteInterleaveEnhanced │ FourWireBitInterleaveEnhanced `] [ minlinerate` minlinerate `] [ maxlinerate` maxlinerate `] [ psd` Symmetric │ Asymmetric │ R1asymmetric │ R2asymmetric `] [ txmode {` Region1 │ Region2 `}+ ] [ rmtenabled` Enabled │ Disabled `] [ currcondtgtmgndown` currcondtgtmgndown `] [ worstcasetgtmgndown` worstcasetgtmgndown `] [ currcondtgtmgnup` currcondtgtmgnup `] [ worstcasetgtmgnup` worstcasetgtmgnup `] [ usedtgtmgns {` CurrentCondDown │ WorstCaseDown │ CurrentCondUp │ WorstCaseUp `}+ ] [ lineprobe` Disable │ Enable `]`

Input Parameter Description

Name	Description
`ifname` ifname	Name of the span configuration profile. **Type:** Modify -- Mandatory Get -- Optional
`wireintf` TwoWire │ FourWire │ FourWireBitInterleave │ FourWireByteInterleaveEnhanced │ FourWireBitInterleaveEnhanced	This object configures the two-wire or optional four-wire operation for SHDSL Lines. FourWireBitInterleave are extension over standard RFC. **Type:** Modify -- Optional
`minlinerate` minlinerate	This object configures the minimum transmission rate for the associated SHDSL Line in bits-per-second (bps). If the 'minlinerate' equals the 'maxlinerate', the line rate is considered 'fixed'. If the 'minlinerate' is less than the 'maxlinerate', the line rate is considered 'rate-adaptive'. **Type:** Modify -- Optional **Valid values:** 0 - 4112000
`maxlinerate` maxlinerate	This object configures the maximum transmission rate for the associated SHDSL Line in bits-per-second (bps).If the 'minlinerate' equals the 'maxlinerate', the line rate is considered 'fixed'. If the 'minlinerate' is less than the 'maxlinerate', the line rate is considered 'rate-adaptive'. **Type:** Modify -- Optional **Valid values:** 0 - 4112000

Name	Description
psd Symmetric | Asymmetric | R1asymmetric | R2asymmetric	This object configures use of symmetric/asymmetric PSD (PowerSpectral Density) Mask for the associated SHDSL Line. **Type:** Modify -- Optional
txmode { Region1 | Region2 ***}+***	This object specifies the regional setting for the SHDSL line. **Type:** Modify -- Optional
rmtenabled Enabled | Disabled	This object enables/disables support for remote management of the units in an SHDSL line from the STU-R via the EOC. Default value supported is the deviation from standard RFC. **Type:** Modify -- Optional
currcondtgtmgndown currcondtgtmgndown	This object specifies the downstream current condition target SNR margin for an SHDSL line.The Only range supported is 0 to 10. Default value supported is also deviation from standard RFC. **Type:** Modify -- Optional **Valid values:** (-10) - 21
worstcasetgtmgndown worstcasetgtmgndown	This object specifies the downstream worst case target SNR margin for an SHDSL line.The Only range supported is -10 to 10. Default value supported is also deviation from standard RFC. **Type:** Modify -- Optional **Valid values:** (-10) - 21
currcondtgtmgnup currcondtgtmgnup	This object specifies the upstream current condition target SNR margin for an SHDSL line.The Only range supported is 0 to 10. Default value supported is also deviation from standard RFC. **Type:** Modify -- Optional **Valid values:** (-10) - 21
worstcasetgtmgnup worstcasetgtmgnup	This object specifies the upstream worst case target SNR margin for an SHDSL line.The Only range supported is -10 to 10. Default value supported is also deviation from standard RFC. **Type:** Modify -- Optional **Valid values:** (-10) - 21
usedtgtmgns { CurrentCondDown | WorstCaseDown | CurrentCondUp | WorstCaseUp ***}+***	Indicates whether a target SNR margin is enabled or disabled. This is a bit-map of possible settings **Type:** Modify -- Optional
lineprobe Disable | Enable	This object enables/disables support for Line Probe of the units in an SHDSL line. When Line Probe is enabled, the system performs Line Probing to find the best possible rate. If Line probe is disabled, the rate adaptation phase is skipped to shorten set up time. **Type:** Modify -- Optional

Example   *$ get shdsl span confprofile ifname* dsl-0

Output

```
IfName          : dsl-0     Wire Interface   : TwoWire
Min Line Rate   : 1552000   Max Line Rate    : 1552000
PSD             : Symmetric
TxMode          : Region1 Region2
Remote Enabled  : Disabled
Power Feeding   : NoPower
CurrTrgtMrgnDown : 6           WorstTrgtMrgnDown : 8
CurrTrgtMrgnUp  : 5           WorstTrgtMrgnUp  : 7
UsedTrgtMrgns   : CurrentCondDown WorstCaseDown
RefClock        : LocalClock
Line Probe      : Disable
```

Output field description

Field	Description
IfName	Name of the span configuration profile.
Wire Interface	This object configures the two-wire or optional four-wire operation for SHDSL Lines. FourWireBitInterleave are extension over standard RFC.
Min Line Rate	This object configures the minimum transmission rate for the associated SHDSL Line in bits-per-second (bps). If the 'minlinerate' equals the 'maxlinerate', the line rate is considered 'fixed'. If the 'minlinerate' is less than the 'maxlinerate', the line rate is considered 'rate-adaptive'.
Max Line Rate	This object configures the maximum transmission rate for the associated SHDSL Line in bits-per-second (bps).If the 'minlinerate' equals the 'maxlinerate', the line rate is considered 'fixed'. If the 'minlinerate' is less than the 'maxlinerate', the line rate is considered 'rate-adaptive'.
PSD	This object configures use of symmetric/asymmetric PSD (PowerSpectral Density) Mask for the associated SHDSL Line.
TxMode	This object specifies the regional setting for the SHDSL line.
Remote Enabled	This object enables/disables support for remote management of the units in an SHDSL line from the STU-R via the EOC. Default value supported is the deviation from standard RFC.
Power Feeding	This object enables/disables support for optional powerfeeding in an SHDSL line. This is NON-Modifiable Parameter, only default value is supported. This is the deviation from standard RFC.
CurrTrgtMrgnDown	This object specifies the downstream current condition target SNR margin for an SHDSL line.The Only range supported is 0 to 10. Default value supported is also deviation from standard RFC.

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Field	Description
WorstTrgtMrgnDown	This object specifies the downstream worst case target SNR margin for an SHDSL line.The Only range supported is -10 to 10. Default value supported is also deviation from standard RFC.
CurrTrgtMrgnUp	This object specifies the upstream current condition target SNR margin for an SHDSL line.The Only range supported is 0 to 10. Default value supported is also deviation from standard RFC.
WorstTrgtMrgnUp	This object specifies the upstream worst case target SNR margin for an SHDSL line.The Only range supported is -10 to 10. Default value supported is also deviation from standard RFC.
UsedTrgtMrgns	Indicates whether a target SNR margin is enabled or disabled. This is a bit-map of possible settings
RefClock	This object configures the clock reference for the STU-Cin an SHDSL Line.This is NON-Modifiable parameter. Only default value is supported, deviation from standard RFC.
Line Probe	This object enables/disables support for Line Probe of the units in an SHDSL line. When Line Probe is enabled, the system performs Line Probing to find the best possible rate. If Line probe is disabled, the rate adaptation phase is skipped to shorten set up time.

Cautions   • NONE

References   • DSL Commands

2.149 Shdsl span conf Commands

2.149.1 get shdsl span conf

Description Use this command to get.

Command Syntax *get shdsl span conf [ifname* ifname *]*

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID

Example *$ get shdsl span conf ifname* dsl-0

Output
```
IfName        : dsl-0      Repeaters : 0
SpanConfProfile : dsl-0
AlarmProfile   : dsl-0
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Repeaters	This object provisions the number of repeaters/ regenerators in the HDSL2/SHDSL Span. This Parameter is currently NOT supported and only value it can have is 0, deviation from standard RFC.
SpanConfProfile	This object is a pointer to 'ifname' (span configuration profile) in the 'shdsl span confprofile' command, which applies to this span. The value of this object is the index of the referenced profile in the 'shdsl span confprofile' command. This parameter is RO because dynamic profiles are not supported right now and only value supported is DEFVAL, deviation from standard RFC.
AlarmProfile	This object is a pointer to 'ifname' (Alarm configuration profile) in the 'shdsl endpoint alarmprofile' command. This parameter is RO because dynamic profiles are not supported right now and only value supported is DEFVAL, deviation from standard RFC.

Cautions • None

References • DSL Commands

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2.150 Shdsl span status Commands

2.150.1 get shdsl span status

Description   Use this command to get.

Command Syntax   *get shdsl span status [ifname* ifname *]*

**Input Parameter
Description**

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID

Example   *$ get shdsl span status ifname* dsl-0

Output
```
IfName               : dsl-0      Repeaters     : 2
MaxAttainLineRate    : 2111000    ActualLineRate : 1552000
MaxAttainPMMSLineRate : 2111000   FourWireHSMode : Standard
CurrentTxMode        : Region1 Region2
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Repeaters	Contains the actual number of repeaters/ regenerators discovered in this HDSL2/SHDSL span
MaxAttainLineRate	This object provides the maximum rate the line is capable of achieving.
ActualLineRate	Contains the actual line rate in this HDSL2/SHDSL span. This should equal ifSpeed.
MaxAttainPMMSLineRate	This object provides the maximum PMMS rate the line is capable of achieving.
FourWireHSMode	Contains the current Four Wire Handshake Mode Configured
CurrentTxMode	Contains the current Power Spectral Density (PSD) regional setting of the HDSL2/SHDSL span.

Cautions   • None

References   • DSL Commands

2.151 Shdsl cap Commands

2.151.1 get shdsl cap

Description	Use this command to get.
Command Syntax	*get shdsl cap*
Input Parameter Description	None
Example	*$ get shdsl cap*
Output	Tx Cap : Region1

Output field description

Field	Description
Tx Cap	Annexure Type, specifies the regional settings for the SHDSL line.

Cautions	None.
References	None.

2.152 Shdsl unit inventory Commands

2.152.1 get shdsl unit inventory

Description Use this command to get.

Command Syntax
get shdsl unit inventory [ifname ifname *] [unitid* stuc │ stur │
sru1 │ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8 *]*

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc │ stur │ sru1 │ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. **Type:** Get -- Optional

Example *$ get shdsl unit inventory ifname* dsl-0 *unitid* stuc

Output

```
IfName         : dsl-0     Unit Index : stuc
Vendor Id      : FFB5GSPN
VendorModel Num : Z3219
VendorSerialNum : <co-0123456
VendorEOCSW Ver : 250
InvenStd Ver   : 181
VendorList Num : C252
VendorIssue Num : 6261
VendorSW Ver   : E252
Equipment Code : CNXT-12345
InvVendor Other : CNXT-250ABCD
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC.
Vendor Id	Vendor ID as reported in an Inventory Response message.
VendorModel Num	Vendor model number as reported in an Inventory Response message.
VendorSerialNum	Vendor serial number as reported in an Inventory Response message.

Field	Description
VendorEOCSW Ver	Vendor EOC version as reported in a Discovery Response message.
InvenStd Ver	Version of the HDSL2/SHDSL standard implemented, as reported in an Inventory Response message.
VendorList Num	Vendor list number as reported in an Inventory Response message.
VendorIssue Num	Vendor issue number as reported in an Inventory Response message.
VendorSW Ver	Vendor software version as reported in an Inventory Response message.
Equipment Code	Equipment code conforming to ANSI T1.213, Coded Identification of Equipment Entities.
InvVendor Other	Other vendor information as reported in an Inventory Response message.

Cautions   • None

References   • DSL Commands

2.153 Shdsl unit maintinfo Commands

2.153.1 get shdsl unit maintinfo

Description   Use this command to get.

Command Syntax *get shdsl unit maintinfo [ifname* ifname *] [unitid* stuc │ stur │
sru1 │ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8 *]*

2.153.2 modify shdsl unit maintinfo

Description   Use this command to modify.

Command Syntax *modify shdsl unit maintinfo ifname* ifname *unitid* stuc │ stur │ sru1
│ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8 *[loopbacktimeout*
loopbacktimeout *]*

**Input Parameter
Description**

Name	Description
ifname ifname	The interface name of the DSL Port **Type:** Modify -- Mandatory Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc │ stur │ sru1 │ sru2 │ sru3 │ sru4 │ sru5 │ sru6 │ sru7 │ sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. **Type:** Modify -- Mandatory Get -- Optional
loopbacktimeout loopbacktimeout	This object configures the timeout value for loopbacks initiated at segments endpoints contained in the associated unit. A value of 0 disables the timeout. **Type:** Modify -- Optional **Valid values:** 0 - 4095

Example   *$ get shdsl unit maintinfo ifname* dsl-0 *unitid* stuc

Output
```
IfName          : dsl-0       Unit Index   : stuc
Loopback Timeout : 10          Power Source : Local
```

Output field description

Field	Description
IfName	The interface name of the DSL Port
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC.

Field	Description
Loopback Timeout	This object configures the timeout value for loopbacks initiated at segments endpoints contained in the associated unit. A value of 0 disables the timeout.
Power Source	This object indicates the DC power source being used by the associated unit.This parameter is NOT supported.

Cautions • None

References • DSL Commands

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2.154 Dot3 stats Commands

2.154.1 get dot3 stats

Description   Use this command to get.

Command Syntax   *get dot3 stats [ifname* ifname *]*

Input Parameter Description

Name	Description
ifname ifname	An index name that uniquely identifies an interface to an ethernet-like medium. **Type:** Get -- Optional **Valid values:** IAD_PHY_ETH_MIN_PORT_ID - IAD_PHY_ETH_MAX_PORT_ID

Example   *$ get dot3 stats Ifname* eth-0

Output
```
IfName                  : eth-0
Alignment Errors        : 11      FCS Errors               : 12
Single Collision Frames : 13      Multiple Collision Frames : 14
Deferred Tx Frames      : 15      Late Collisions          : 16
Excess Collisions Frames : 17     Mac Tx Errors Frames     : 18
Carrier Sense Errors    : 18      Too Long Frames          : 19
Mac Rx Error Frames     : 20      Duplex Status            : FullDuplex
```

Output field description

Field	Description
IfName	An index name that uniquely identifies an interface to an ethernet-like medium.
Alignment Errors	A count of frames received on a particular interface that are not an integral number of octets in length and do not pass the FCS check. The count represented by an instance of this object is incremented when the alignmentError status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions pertain are, according to the conventions of IEEE 802.3 Layer Management, counted exclusively according to the error status presented to the LLC. This counter does not increment for group encoding schemes greater than 4 bits per group. For interfaces operating at 10 Gb/s, this counter can roll over in less than 5 minutes if it is incrementing at its maximum rate. Since that amount of time could be less than a management station's poll cycle time, in order to avoid a loss of information, a management station is advised to poll the dot3HCStatsAlignmentErrors object for 10 Gb/s or faster interfaces. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
FCS Errors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check. This count does not include frames received with frame-too-long or frame-too-short error. The count represented by an instance of this object is incremented when the frameCheckError status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions pertain are, according to the conventions of IEEE 802.3 Layer Management, counted exclusively according to the error status presented to the LLC. For interfaces operating at 10 Gb/s, this counter can roll over in less than 5 minutes if it is incrementing at its maximum rate. Since that amount of time could be less than a management station's poll cycle time, in order to avoid a loss of information, a management station is advised to poll the dot3HCStatsFCSErrors object for 10 Gb/s or faster interfaces. Discontinuities in the value of this counter can occur at e-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.

Field	Description
Single Collision Frames	A count of frames that are involved in a single collision, and are subsequently transmitted successfully. A frame that is counted by an instance of this object is also counted by the corresponding instance of either the ifOutUcastPkts, ifOutMulticastPkts, or ifOutBroadcastPkts, and is not counted by the corresponding instance of the dot3StatsMultipleCollisionFrames object. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Multiple Collision Frames	A count of frames that are involved in more than one collision and are subsequently transmitted successfully. A frame that is counted by an instance of this object is also counted by the corresponding instance of either the ifOutUcastPkts, ifOutMulticastPkts, or ifOutBroadcastPkts, and is not counted by the corresponding instance of the dot3StatsSingleCollisionFrames object. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Deferred Tx Frames	A count of frames for which the first transmission attempt on a particular interface is delayed because the medium is busy. The count represented by an instance of this object does not include frames involved in collisions. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Late Collisions	The number of times that a collision is detected on a particular interface later than one slotTime into the transmission of a packet. A (late) collision included in a count represented by an instance of this object is also considered as a (generic) collision for purposes of other collision-related statistics. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.

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Field	Description
Excess Collisions Frames	A count of frames for which transmission on a particular interface fails due to excessive collisions. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Mac Tx Errors Frames	A count of frames for which transmission on a particular interface fails due to an internal MAC sublayer transmit error. A frame is only counted by an instance of this object if it is not counted by the corresponding instance of either the dot3StatsLateCollisions object, the dot3StatsExcessiveCollisions object, or the dot3StatsCarrierSenseErrors object. The precise meaning of the count represented by an instance of this object is implementation-specific. In particular, an instance of this object may represent a count of transmission errors on a particular interface that are not otherwise counted. For interfaces operating at 10 Gb/s, this counter can roll over in less than 5 minutes if it is incrementing at its maximum rate. Since that amount of time could be less than a management station's poll cycle time, in order to avoid a loss of information, a management station is advised to poll the dot3HCStatsInternalMacTransmitErrors object for 10 Gb/s or faster interfaces. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Carrier Sense Errors	The number of times that the carrier sense condition was lost or never asserted when attempting to transmit a frame on a particular interface. The count represented by an instance of this object is incremented at most once per transmission attempt, even if the carrier sense condition fluctuates during a transmission attempt. This counter does not increment when the interface is operating in full-duplex mode. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.

Field	Description
Too Long Frames	A count of frames received on a particular interface that exceed the maximum permitted frame size. The count represented by an instance of this object is incremented when the frameTooLong status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions pertain are, according to the conventions of IEEE 802.3 Layer Management, counted exclusively according to the error status presented to the LLC. For interfaces operating at 10 Gb/s, this counter can roll over in less than 80 minutes if it is incrementing at its maximum rate. Since that amount of time could be less than management station's poll cycle time, in order to avoid a loss of information, a management station is advised to poll the dot3HCStatsFrameTooLongs object for 10 Gb/s or faster interfaces. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Mac Rx Error Frames	A count of frames for which reception on a particular interface fails due to an internal MAC sublayer receive error. A frame is only counted by an instance of this object if it is not counted by the corresponding instance of either the dot3StatsFrameTooLongs object, the dot3StatsAlignmentErrors object, or the dot3StatsFCSErrors object. The precise meaning of the count represented by an instance of this object is implementation-specific. In particular, an instance of this object may represent a count of receive errors on a particular interface that are not otherwise counted. For interfaces operating at 10 Gb/s, this counter can roll over in less than 5 minutes if it is incrementing at its maximum rate. Since that amount of time could be less than a management station's poll cycle time, in order to avoid a loss of information, a management station is advised to poll the dot3HCStatsInternalMacReceiveErrors object for 10 Gb/s or faster interfaces. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.
Duplex Status	The current mode of operation of the MAC entity.'unknown' indicates that the current duplex mode could not be determined. Management control of the duplex mode is accomplished thrugh 'duplexmode' in ethernet command. Note that this object provides redundant information with etherActualDuplexMode inetherIfTable.

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Cautions   None.

References   None.

2.155 Shdsl line status Commands

2.155.1 get shdsl line status

Description   Use this command to get.

Command Syntax   *get shdsl line status [ifname* ifname *]*

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port. **Type:** Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID

Example   *$ get shdsl line status ifname* dsl-0

Output

```
IfName           : dsl-0          Op State          : Data
Start Progress   : PreActivation  Line Swap         : Unswapped
FwRelease        : E250
Rem CountryCode  : USA
RemEncoderA      : 366            RemEncoderB       : 817
RemProviderCode  : GSPN
Loc Detect       : 21
Tx Power         : 75             FrmrSync          : InSync
RemTomData       : 0              Drift Alarm       : 34816
RecvGain         : 12             Bert Error        : OutOfSync
RemFwVer         : 0025           Utopia CD         : InSync
UtopiaRxCellCnt  : 0              UtopiaCellDropCnt : 10
UtopiaRxHECErrCnt : 8             UtopiaTxCellCnt   : 220
RemNsfCusId      : 23             RemTxPower        : 0
RemPowerBackoff  : Enable         AutoRetrainCnt    : 3
Eoc State        : Online         Ntr Fault         : Absent
Cpe Master Core  : NoMasterCore   ParamTestResult   : Pass


RemNsfCusData
-------------
[0 ]       24       0        0        0
FrmrOH-Defects
--------------
[0 ]       30768    12336    70       0         0
LocalHS
-------
[0 ]       30768    17990    17990    17990     17990    0    0    0
[8 ]       0        0        0        0         3        0    0    0
[16]       0        0        0        0         1        0    0    0
[24]       0        0
RemoteHS
--------
[0 ]       30768    17990    17990    17990     17990    0    1    0
[8 ]       3        0        2        0         0        0    1    0
[16]       0        0        1        0         1        0    0    0
[24]       15       0
ActualHS
--------
[0 ]       30768    17990    17990    17990     17990    0    3    0
[8 ]       3        0        20       0         20       0    2    0
[16]       0        0        0        0         0        0    0    0
[24]       0        0
Frmr1SecCnt
-----------
```

```
[0 ]        30768    70       0
ParamInfo
---------
[0 ]        0           0           0           0
[4 ]        0           0           0           0
[8 ]        0           0           0           0
[12]        0           0           0           0
[16]        0           0           0           0
[20]        0           0           0           0
[24]        0           0           0           0
[28]        0           0           0           0
[32]        0           0           0           0
[36]        0           0           0           0
[40]        0           0           0           0
[44]        0           0           0           0
[48]        0           0           0           0
[52]        0           0           0           0
[56]        0           0           0           0
[60]        0           0           0           0
[64]        0           0           0           0
[68]        0           0           0           0
[72]        0           0           0           0
[76]        0           0           0           0
[80]        0           0           0           0
[84]        0           0           0           0
[88]        0           0           0           0
[92]        0           0           0           0
[96]        0           0           0           0
[100]        0           0           0           0
[104]        0           0           0           0
[108]        0           0           0           0
[112]        0           0           0           0
[116]        0           0           0           0
[120]        0           0           0           0
[124]        0           0           0           0
[128]        0           0           0           0
[132]        0           0           0           0
[136]        0           0           0           0
[140]        0           0           0           0
[144]        0           0           0           0
[148]        0           0           0           0
[152]        0           0           0           0
[156]        0           0           0           0
[160]        0           0           0           0
[164]        0           0           0           0
[168]        0           0           0           0
[172]        0           0           0           0
[176]        0           0           0           0
[180]        0           0           0           0
[184]        0           0           0           0
[188]        0           0           0           0
[192]        0           0           0           0
[196]        0           0           0           0
[200]        0           0           0           0
[204]        0           0           0           0
[208]        0           0           0           0
[212]        0           0           0           0
[216]        0           0           0           0
[220]        0           0           0           0
[224]        0           0           0           0
[228]        0           0           0           0
[232]        0           0           0           0
[236]        0           0           0           0
[240]        0           0           0           0
[244]        0           0           0           0
[248]        0           0           0           0
[252]        0           0           0           0
```

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Output field description

Field	Description
IfName	The interface name of the DSL Port.
Op State	This object identifies the high level operational state for the STU.
Start Progress	This object identifies the current detailed operational state of the STU.
Line Swap	This object indicates if the physical lines are swapped, i.e., logical channel A is connected to physical channel B. This applies to 4-wire operation only.
FwRelease	Transceiver firmware release number.
Rem CountryCode	This object provides the country code word, as defined in ITU-T G.991.2, for the STU at the other end of the loop. GlobespanVirata sets this to USA.
RemEncoderA	This object identifies the 21-bit value corresponding to encoder coefficient A, as defined in ITU-T G.991.2, for the STU at the other end of the loop.
RemEncoderB	This object identifies the 21-bit value corresponding to encoder coefficient B, as defined in ITU-T G.991.2, for the STU at the other end of the loop.
RemProviderCode	This object identifies the provider code word, as defined in ITU-T G.991.2, for the STU at the other end of the loop.
Loc Detect	This object is used to determine if carrier has been lost.
Tx Power	This object identifies the local STU transmit power in tenths of a dBm.
FrmrSync	This object returns information regarding the framer synchronization status.
RemTomData	This object provides vendor-provided data, as defined in ITU-T G.991.2, for the STU at the other end of the loop.
Drift Alarm	This object identifies if the receive clock is in or out of range.
RecvGain	This object provides the total receiver gain in dB.
Bert Error	This object provides the count of bit errors since the last time the object was read, as well as the type of synchronization.
RemFwVer	This object provides the transceiver firmware release number of the STU at the other end of the loop.
Utopia CD	This object indicates whether cell delineation has been found.

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Field	Description
UtopiaRxCellCnt	This object indicates the number of UTOPIA cells received since the last time the object has been called. The maximum value is 0xFFFF.
UtopiaCellDropCnt	This object indicates the number of UTOPIA cells dropped since the last time the object has been called. The maximum value is 0xFF.
UtopiaRxHECErrCnt	This object indicates the number of UTOPIA cells with HEC errors since the last time the object has been called. The maximum value is 0xFF.
UtopiaTxCellCnt	This object indicates the number of UTOPIA cells transmitted since the last time the object has been called. The maximum value is 0xFFFF.
RemNsfCusId	This object returns the customer identification that was sent by the STU at the other end of the loop.
RemTxPower	This object provides the transmit power of the STU at the other end of the loop.
RemPowerBackoff	This object indicates whether power backoff is enabled or disabled at the STU at the other end of the loop.
AutoRetrainCnt	This object indicates the number of automatic retrains. This counter is only reset when a startup is initiated.
Eoc State	This object provides status information about the eoc stage.
Ntr Fault	This object identifies the Network Timing Recovery Fault.
Cpe Master Core	Determines the Master Core of 4 Wire Mode.
ParamTestResult	Indicates the Result of the Parametric Test conducted on the Xcvr.
RemNsfCusData	This object returns non-standard format customer data that was sent by the STU at the other end of the loop.
FrmrOH-Defects	This object returns overhead data. The four least significant bits contain the overhead data in the following format: bit 0 is losd, bit 1 is sega, bit 2 is ps, and bit 3 is segd.
LocalHS	This object provides a way to see what capabilities are supported by the local STU. A total of 26 handshake parameters are supported.
RemoteHS	This object provides a way to see what capabilities are supported by the STU at the other end of the loop. A total of 26 handshake parameters are supported.

Field	Description
ActualHS	This object provides the results of capabilities exchanged during handshake. A total of 26 handshake parameters are supported.
Frmr1SecCnt	This object provides CRC, SEGA, and LOSW defect one second error counts, and should be called every second.
ParamInfo	Conexant parameter that indicates the Parametric Test Array.

Cautions

- None

References

- DSL Commands

2.156 RI profile info Commands

2.156.1get rl profile info

Description   Use this command to get.

Command Syntax   `get rl profile info [ profileid profileid ]`

2.156.2create rl profile info

Description   Use this command to create.

Command Syntax   `create rl profile info profileid profileid [ rate rate ] [ mbs mbs ]`

2.156.3delete rl profile info

Description   Use this command to delete.

Command Syntax   `delete rl profile info profileid profileid`

2.156.4modify rl profile info

Description   Use this command to modify.

Command Syntax   `modify rl profile info profileid profileid [ rate rate ] [ mbs mbs ]`

Input Parameter Description

Name	Description
profileid profileid	Rate limiter's profile identifier, which uniquely identifies the profile. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_RL_PROFILES

Name	Description
rate rate	The maximum rate at which data is allowed per second. Its unit is packets/second. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_MIN_RL_RATE - GS_CFG_MAX_RL_RATE **Default value:** GS_CFG_DEF_RL_RATE
mbs mbs	The maximum burst size in terms of packets. **Type:** Create -- Optional Modify -- Optional **Valid values:** GS_CFG_MIN_RL_MAX_BURST_SIZE - GS_CFG_MAX_RL_MAX_BURST_SIZE **Default value:** GS_CFG_DEF_RL_MAX_BURST_SIZE

Example   *$ create rl profile info profileid* 1 *rate* 24 *mbs* 24

Output   Verbose Mode On

```
Entry Created

Profile Id : 1
Rate      : 24        Max Burst Size : 24
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Id	Rate limiter's profile identifier, which uniquely identifies the profile.
Rate	The maximum rate at which data is allowed per second. Its unit is packets/second.
Max Burst Size	The maximum burst size in terms of packets.

Cautions   None.

References   None.

2.157 RI instance info Commands

2.157.1 get rl instance info

Description   Use this command to get.

Command Syntax   `get rl instance info [ instanceid instanceid ]`

2.157.2 create rl instance info

Description   Use this command to create.

Command Syntax   `create rl instance info instanceid instanceid profileid profileid`

2.157.3 delete rl instance info

Description   Use this command to delete.

Command Syntax   `delete rl instance info instanceid instanceid`

Input Parameter Description

Name	Description
`instanceid` instanceid	Rate limiter's instance identifier, which uniquely identifies a profile instance. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_RL_INSTANCE
`profileid` profileid	This field identifies the Rate limiting profile whose instance is being created. **Type:** Create -- Mandatory **Valid values:** 1 - GS_CFG_MAX_RL_PROFILES

Example   `$ create rl instance info instanceid 3 profileid 2`

Output   Verbose Mode On

```
Entry Created

Instance Id : 3
Profile Id  : 2
```

Verbose Mode Off:

```
Entry Created
```

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Output field description

Field	Description
Instance Id	Rate limiter's instance identifier, which uniquely identifies a profile instance.
Profile Id	This field identifies the Rate limiting profile whose instance is being created.

Cautions   None.

References   None.

2.158 Bridge rlinstance map Commands

2.158.1 get bridge rlinstance map

Description   Use this command to get.

Command Syntax   `get bridge rlinstance map [ portid all | portid ] [ flowtype bcast | unregmcast | unknownucast ]`

2.158.2 create bridge rlinstance map

Description   Use this command to create.

Command Syntax   `create bridge rlinstance map portid all | portid flowtype bcast | unregmcast | unknownucast instanceid instanceid`

2.158.3 delete bridge rlinstance map

Description   Use this command to delete.

Command Syntax   `delete bridge rlinstance map portid all | portid flowtype bcast | unregmcast | unknownucast`

2.158.4 modify bridge rlinstance map

Description   Use this command to modify.

Command Syntax   `modify bridge rlinstance map portid all | portid flowtype bcast | unregmcast | unknownucast [ instanceid instanceid ]`

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**Input Parameter
Description**

Name	Description
portid all	Bridge Port Identifier with which an instance is associated. If the value of this field is 'All', it indicates all bridge ports. For a particular flow, instance map cannot be created both for a specific port as well as for 'all' the bridge ports. **Type**: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
portid portid	Bridge Port Identifier with which an instance is associated. If the value of this field is 'All', it indicates all bridge ports. For a particular flow, instance map cannot be created both for a specific port as well as for 'all' the bridge ports. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
flowtype bcast | unregmcast | unknownucast	Flow for which this instance is applied. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
instanceid instanceid	This field identifies the Rate limiting instance. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** 1 - GS_CFG_MAX_RL_PROFILES

Example   *$ create bridge rlinstance map portid* 6 *flowtype* Bcast *instanceid* 1

Output   Verbose Mode On

```
Entry Created

Port Id    : 6          Flow Type : Bcast
Instance Id : 1
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Port Id	Bridge Port Identifier with which an instance is associated. If the value of this field is 'All', it indicates all bridge ports. For a particular flow, instance map cannot be created both for a specific port as well as for 'all' the bridge ports.

Field	Description
Flow Type	Flow for which this instance is applied.
Instance Id	This field identifies the Rate limiting instance.

Cautions
- An entry in this table shall not be applicable for a bridge port created over PPPOE interface.

References None.

2.159 Ctlpkt profile info Commands

2.159.1 get ctlpkt profile info

Description   Use this command to get.

Command Syntax   `get ctlpkt profile info [ profileid profileid ]`

2.159.2 create ctlpkt profile info

Description   Use this command to create.

Command Syntax   `create ctlpkt profile info profileid profileid maxctlpkts maxctlpkts thrshld1 thrshld1`

2.159.3 delete ctlpkt profile info

Description   Use this command to delete.

Command Syntax   `delete ctlpkt profile info profileid profileid`

2.159.4 modify ctlpkt profile info

Description   Use this command to modify.

Command Syntax   `modify ctlpkt profile info profileid profileid [ maxctlpkts maxctlpkts ] [ thrshld1 thrshld1 ]`

Input Parameter Description

Name	Description
profileid profileid	The control packet's profile id. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_CTRL_PKTS_PROF

Name	Description
maxctlpkts maxctlpkts	This specifies the maximum control packets that can be pending for an instance of this profile. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** GS_CFG_CPPR_MIN_CTRL_PKTS - GS_CFG_CPPR_MAX_CTRL_PKTS
thrshld1 thrshld1	This specifies the number of outstanding control packets for each instance, when control plane is congested. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** GS_CFG_CPPR_MIN_THRESHOLD1 - GS_CFG_CPPR_MAX_THRESHOLD1

Example   *$ create ctlpkt profile info profileid* 1 *maxctlpkts* 32 *thrshld1* 32

Output   Verbose Mode On

```
Entry Created

Profile Id  : 1
Max Ctl Pkts : 32          Threshold1 : 32
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Profile Id	The control packet's profile id.
Max Ctl Pkts	This specifies the maximum control packets that can be pending for an instance of this profile.
Threshold1	This specifies the number of outstanding control packets for each instance, when control plane is congested.

Cautions   None.

References   • See control packet profiles related commands.

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2.160 Ctlpkt instance info Commands

2.160.1 get ctlpkt instance info

Description   Use this command to get.

Command Syntax   *get ctlpkt instance info [instanceid* instanceid *]*

2.160.2 create ctlpkt instance info

Description   Use this command to create.

Command Syntax   *create ctlpkt instance info instanceid* instanceid *profileid*
profileid

2.160.3 delete ctlpkt instance info

Description   Use this command to delete.

Command Syntax   *delete ctlpkt instance info instanceid* instanceid

2.160.4 modify ctlpkt instance info

Description   Use this command to modify.

Command Syntax   *modify ctlpkt instance info instanceid* instanceid *[profileid*
profileid *]*

**Input Parameter
Description**

Name	Description
instanceid instanceid	The control packet's instance id. **Type:** Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_CPPR_INSTANCES
profileid profileid	This field identifies the control packet profile whose instance is being created. **Type:** Create -- Mandatory Modify -- Optional **Valid values:** 1 - GS_CFG_MAX_CTRL_PKTS_PROF

Example   *$ create ctlpkt instance info instanceid* 1 *profileid* 1

Output   Verbose Mode On

```
Entry Created

Instance Id : 1
Profile Id  : 1
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
Instance Id	The control packet's instance id.
Profile Id	This field identifies the control packet profile whose instance is being created.

Cautions   None.

References   • See control packet profile instance related commands.

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2.161 Trfclass profile class Commands

2.161.1 get trfclass profile class

Description   Use this command to get.

Command Syntax   *get trfclass profile class [profileid* profileid *] [classid* classid *]*

2.161.2 modify trfclass profile class

Description   Use this command to modify.

Command Syntax   *modify trfclass profile class profileid* profileid *classid* classid *[size* size *] [thrshld1* thrshld1 *]*

Input Parameter Description

Name	Description
profileid profileid	Traffic class profile identifier. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_TRFCLASS_PRFLS
classid classid	Traffic class profile class identifier. **Type:** Modify -- Mandatory Get -- Optional
size size	This parameter specifies the size of the Traffic class. **Type:** Modify -- Optional
thrshld1 thrshld1	This parameter specifies the low threshold of the queue, as a percentage of the queue size. When the queue is full beyond this threshold, only conforming frames are passed and non-conforming frames are dropped. Conformance of frames is determined as per IRL configured on input the ATM port. **Type:** Modify -- Optional **Valid values:** 0 - 100

Example   *$ get trfclass profile class profileid* 1 *classid* 1

Output
```
Profile Identifier     : 1        Class Id                 : 1
Traffic Class Param Size : 32      Traffic Class Param Thresh : 50
```

Output field description

Field	Description
Profile Identifier	Traffic class profile identifier.
Class Id	Traffic class profile class identifier.
Traffic Class Param Size	This parameter specifies the size of the Traffic class.
Traffic Class Param Thresh	This parameter specifies the low threshold of the queue, as a percentage of the queue size. When the queue is full beyond this threshold, only conforming frames are passed and non-conforming frames are dropped. Conformance of frames is determined as per IRL configured on input the ATM port.

Cautions   None.

References   • See traffic class profile related commands.

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2.162 Trfclass profile info Commands

2.162.1 get trfclass profile info

Description   Use this command to get.

Command Syntax   `get trfclass profile info [ profileid` profileid `]`

2.162.2 create trfclass profile info

Description   Use this command to create.

Command Syntax   `create trfclass profile info profileid` profileid `iftype` eth | atm

2.162.3 delete trfclass profile info

Description   Use this command to delete.

Command Syntax   `delete trfclass profile info profileid` profileid

Input Parameter Description

Name	Description
`profileid` profileid	Traffic class profile identifier. **Type:** Create -- Mandatory Delete -- Mandatory Get -- Optional **Valid values:** 1 - GS_CFG_MAX_TRFCLASS_PRFLS
`iftype` eth | atm	Interface type. **Type:** Create -- Mandatory

Example   `$ create trfclass profile info profileid` 3 `iftype` eth

Output   Verbose Mode On

```
Entry Created

Profile identifier : 3        Interface Type : eth
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
`Profile identifier`	Traffic class profile identifier.
`Interface Type`	Interface type.

Cautions   None.

References   • See traffic class profile related commands

2.163 Trfclass stats Commands

2.163.1 get trfclass stats

Description   Use this command to get.

Command Syntax   `get trfclass stats  [ ifname ifname ] [ classid classid ]`

2.163.2 reset trfclass stats

Description   Use this command to reset.

Command Syntax   `reset trfclass stats  ifname ifname classid classid`

Input Parameter Description

Name	Description
ifname ifname	Interface name **Type:** Reset -- Mandatory Get -- Optional
classid classid	Traffic class identifier **Type:** Reset -- Mandatory Get -- Optional

Example   `$ get trfclass stats  ifname 149 classid 1`

Output
```
Interface Name : 149        Class Id : 1
NumDiscardPkts : 10
```

Output field description

Field	Description
Interface Name	Interface name
Class Id	Traffic class identifier
NumDiscardPkts	Number of packets discarded

Cautions   None.

References   None.

2.164 Shdsl endpoint maint Commands

2.164.1 get shdsl endpoint maint

Description   Use this command to get.

Command Syntax   *get shdsl endpoint maint [ifname* ifname *] [unitid* stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8 *] [side* network | customer *]*

2.164.2 modify shdsl endpoint maint

Description   Use this command to modify.

Command Syntax   *modify shdsl endpoint maint ifname* ifname *unitid* stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8 *side* network | customer *[loopbackconfig* NoLoopback | NormalLoopback | SpecialLoopback | DigitalLoopback | AnalogLoopback | InterfaceLoopback | LocalFramerLoopback | NormalLoopbackEocId9 | SpecialLoopbackEocId9 *] [powerbackoff* Default | Enhanced | Disable *] [softrestart* Ready | Restart *]*

Input Parameter Description

Name	Description
ifname ifname	The interface name of the DSL Port. **Type:** Modify -- Mandatory Get -- Optional **Valid values:** IAD_DSL_MIN_PORT_ID - IAD_DSL_MAX_PORT_ID
unitid stuc | stur | sru1 | sru2 | sru3 | sru4 | sru5 | sru6 | sru7 | sru8	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'. **Type:** Modify -- Mandatory Get -- Optional
side network | customer	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'. **Type:** Modify -- Mandatory Get -- Optional

Name	Description
loopbackconfig NoLoopback | NormalLoopback | SpecialLoopback | DigitalLoopback | AnalogLoopback | InterfaceLoopback | LocalFramerLoopback | NormalLoopbackEocId9 | SpecialLoopbackEocId9	This object controls configuration of loopbacks for the associated segment endpoint. Additional values are DigitalLoopback, AnalogLoopback, InterfaceLoopback and LocalFramerLoopback. **Type:** Modify -- Optional
powerbackoff Default | Enhanced | Disable	This object configures the receiver at the associated segment endpoint to operate in default or enhanced power backoff mode. Enhanced power backoff is not supported for CO. Additional value supported is Disable. **Type:** Modify -- Optional
softrestart Ready | Restart	This object enables the manager to trigger a soft restart of the modem at the associated segment endpoint. Value 'Restart' is NOT supported at CP side. **Type:** Modify -- Optional

Example   *$ get shdsl endpoint maint ifname* dsl-0 *unitid* stuc *side* customer

Output

```
IfName             : dsl-0              Unit Index     : stuc
EndPointSide       : customer           Loopback Config : NoLoopback
Tip Ring Reversal : Normal              Power Backoff   : Disable
Soft Restart       : Ready
```

Output field description

Field	Description
IfName	The interface name of the DSL Port.
Unit Index	This is the unique identification for all units in an SHDSL Span. It is based on the EOC unit addressing scheme with reference to the xtuC. If the unitid is 'stuc' then side index can't take the value 'Network', and if the unitid is 'stur' then side index can't take the value 'Customer'.
EndPointSide	This is the referenced side of an SHDSL unit - Network or Customer side. The side facing the Network is the Network side, while the side facing the Customer is the Customer side. If the endpoint side is 'network' then unitid can't have the value 'stuc', and if the endpoint side is 'customer' then unitid can't have the value 'stur'.
Loopback Config	This object controls configuration of loopbacks for the associated segment endpoint. Additional values are DigitalLoopback, AnalogLoopback, InterfaceLoopback and LocalFramerLoopback.

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Field	Description
Tip Ring Reversal	This object indicates the state of the tip/ring pair at the associated segment endpoint. This object is supported for CO only.
Power Backoff	This object configures the receiver at the associated segment endpoint to operate in default or enhanced power backoff mode. Enhanced power backoff is not supported for CO. Additional value supported is Disable.
Soft Restart	This object enables the manager to trigger a soft restart of the modem at the associated segment endpoint. Value 'Restart' is NOT supported at CP side.

Cautions   • None

References   • DSL Commands

2.165 Other Commands

2.165.1 alias

Description   Use this command to create an alias for any CLI command. You can later call this command by using the alias-string along with any additional parameters, which you need to specify. It will display a list of all the aliases currently defined if no parameter is given.

Command Syntax   *alias [alias-string = aliased-command]*

Parameters

Name	Description
alias-string	The string, which you will use to refer to the aliased command, henceforth. It should not match any CLI keyword. **Type:** Optional **Valid values:** string of up to 14 characters ('A'-'Z', 'a'-'z', '0'-'9', '-', '_')
aliased-command	This is the total CLI command length (512 characters). **Type:** Mandatory **Valid values:** Any string (all printable characters except ';') as long as the total CLI Command length is not exceeded.

Mode   Super-User, User

Output   With Parameters

```
$alias abc = modify nbsize
Set Done
$abc maxatmport 48
Set Done
```

Without Parameters

```
$alias
Alias              Command
--------------------------
abc                modify nbsize
```

Output Fields

FIELD	Description
Alias	This is the new abbreviated command, which you may use in place of the string specified in Command.
Command	The command string which has been aliased.

Caution	None.
References	• unalias command.

2.165.2 unalias

Description	Use this command to delete an alias. Either a particular alias or all aliases can be removed using this command.
Command Syntax	`unalias [all	<name>]`
Parameters	

Name	Description
all	Using this option all the aliases defined in the system will be removed. **Type:** Optional **Valid values:** String ìALL.î
Name	Name of the alias defined for a command. **Type:** Optional. **Valid values:** Any valid alias defined in the system.

Mode	Super-User, User
Example	Unalias abc
Output	Entry Deleted
Output Fields	None

2.165.3 help

Description	Use this command for a listing of all the user inputs permissible at the point. In case Help is asked for, as a parameter of any incomplete command, then it displays a list of all the pending/Extra parameters input by the user. In all other cases, the next set of permissible keywords required in order to shortlist a command, is displayed. The Incomplete Command keyed in by the user is made available again, after help is displayed.
Command Syntax	`help	?` or `<Any Incomplete Command> ?`
Parameters	None
Mode	Super-User, User.
Example	An example session is shown.

```
$help
Command        Description
```

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```
          -------        -----------
          alias          To Alias a command
          commit         Commit the active config to the flash
          create         Create a new entry of specified type
          delete         Delete the specified entry
          .
          .


          $delete ?
          Command        Description
          -------        -----------
          arp            IP Net To Media Table
          atm            ATM Commands
          bridge         Bridge Commands
          dhcp           DHCP Commands
          .
          .
          $delete atm ?
          Command        Description
          -------        -----------
          port          ATM port commands
          vc intf        ATM VC Interface commands
```

Output Fields   None

Caution   Currently help is not available between a parameter name and its value.

References   None.

2.165.4logout

Description   Use this command to exit from the CLI shell.

Command Syntax   *logout | quit | exit*

Parameters   None

Mode   Super-User, User

Example   *$ logout*

Output   None

Output Fields   None

Caution   None.

References   None.

2.165.5prompt

Description   Use this command to set the new CLI prompt.

Command Syntax   *prompt new-prompt*

Parameters

Name	Description
prompt new-prompt	The new prompt string. **Type**: Mandatory **Valid values** : String of up to 19 characters (All characters except ';', ' ', '?')

Mode User, Super-User.

Example *$ prompt $$$*

Output Set Done
$$$

Output Fields None

Caution None. The modified prompt is not saved across a reboot.

References None.

2.165.6 traceroute

Description This command is used to trace the route to the specified destination.

Command Syntax *traceroute {<ip-address> | dname <domain>} {ping | udp} [-m num-of-hops] [-w wait-time] [-p udp-port-number] [-q num-of-probes]*

Parameters

Name	Description
<ip-address> | dname <domain>	This specifies the Destination address to be pinged. **Type**: Mandatory **Valid values** : Any Valid IP Address (*0.0.0.0 – 255.255.255.255*) or Domain Name (String of Max 63 characters ('a'-'z', 'A'- 'Z', '0'-'9', '-', '_'and '.')
Ping | udp	Traceroute probe message type **Type**: Mandatory
-m num-of-hops	Maximum number of hops to search for ip-address **Type**: Optional **Valid Values:** *0-255* **Default Value :** *30*
-w wait-time	This specifies the timeout in seconds **Type**: Optional **Valid values** : *0-65535* **Default Value :** *5*

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Name	Description
-p udp-port-number	Destination UDP port to be used, only when Probe is Udp **Type**: Optional. **Valid Values:** *0-65535* **Default Value :** *32768*
-q num-of-probes	Number of probes to be sent for each TTL value **Type**: Optional **Valid Values:** *0-255* **Default Value :** *3*

Mode Super-User, User

Example *$ traceroute 192.168.1.13 ping*

Output
```
Tracing route to [192.168.1.13]
Over a maximum of 30 hops
  1    0.000000 ms  0.000000 ms  0.000000 ms   192.168.1.13
Trace complete.
```

Output Fields

FIELD	Description
1	This denotes the hop counter value.
2-4	These are the Round trip timings of the 3 probe packets sent. A * denotes that this probe was missed.
5	This is the ip address of the intermediate/destination node.

Caution None.

References • ping command.

2.165.7verbose

Description Using this command, a user can view the status of entries before and after the execution of a command (create, delete, modify, get). However if this mode is turned off, then display only shows the final result of execution of command, i.e. whether it was successful or failure.

Command Syntax *Verbose [on | off]*

Parameters

Name	Description
On	Used for switching on the verbose mode. **Type:** Optional **Valid values:** On.
Off	Used for switching off the verbose mode. **Type:** Optional. **Valid values:** Off

Mode   Super-User, User

Output   Set Done

Output Fields   None

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