

Vigor3600 IP DSLAM

CLI Reference Manual

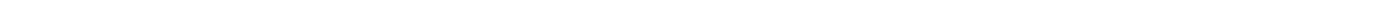


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1 About This Manual

Welcome to the Vigor3600 IP DSLAM CLI Reference Manual.
The commands and parameters of the Command Line Interface (CLI) to the Vigor3600 are documented in this manual.

1.1 Revision History

Revision	Date	Description
Issue 1	Oct, 10, 2004	Initial release

1.2 Related Documents

You may want to refer to the following related documents:

- [Vigor3600 User Installation Guide](#)

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 | 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 "modify". For example, "modify bridge port intf portid portid status enable" and "bridge port intf portid portid status enable" 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.

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.

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
<i>Ifname interface-name</i>	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-*, dsllf-*, dsli-*, aggr-*, ehdlc-*, pppr*, pppoe*

Example `$ get interface stats ifname eth-0`

Output Verbose Mode On

Entry Created

```

Interface           : eth-0           Description       : eth0
Type                : Ethernet        Mtu              : 1500
Bandwidth           : 10000          Phy Addr         : 00:10:4B:22:84:AF
Last Change(sec)    : 0              Unknown Prot Pkts : 0
Admin Status        : Up             Operational Status : Down
In Octets            : 0              Out Octets       : 42
In Discards         : 0              Out Discards     : 0
In Errors            : 0              Out Errors       : 0
In Ucast Pkts       : 0              Out Ucast Pkts   : 1
HC In Octets        : 100            HC OutOctets     : 100
In Mcast Pkts       : 200            Out Mcast Pkts   : 100
In Bcast Pkts       : 100            Out Bcast Pkts   : 100
LinkUpDnTrapEnable : Enable          Promiscuous Mode  : True
Connector Present   : True           CounterDiscontTime : 100
HC In Octets        : 100
HC OutOctets        : 100

```

Output Fields

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

Field	Description
<i>Type</i>	The type of interface, distinguished according the physical/link/network protocol, immediately below the IP layer. It may be: <i>ATM, ETHERNET, AAL5, EOA, DSL, FAST, INTERLEAVED, AGGR. EHDLC.</i>
<i>Mtu</i>	The size (in bytes) of the largest packet, which can be sent/received on this interface in octets.
<i>Bandwidth</i>	The current bandwidth of the interface, in bps.
<i>Phy Addr</i>	Interface's address, at its protocol sublayer.
<i>Admin Status</i>	This is the desired state of the interface. It may be: <i>Up, Down.</i>
<i>Operational Status</i>	This is the current operational state of the interface. It may be: <i>Up, Down.</i>
<i>Last Change</i>	Value of System UpTime (in seconds) at the time the interface entered its current operational state.
<i>Unknown Prot Pkts</i>	The number of packets received via the interface, which were discarded because of an unknown or unsupported protocol.
<i>In Octets</i>	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 <i>atm-*, eoa-*, aal5-*, eth-0, eth-1, dsl-*, dslf-*, dsli-*, aggr-*</i> .
<i>Out Octets</i>	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 <i>atm-*, eoa-*, aal5-*, eth-0, eth-1, dsl-*, dslf-*, dsli-*, aggr-*</i> .
<i>In Discards</i>	The number of inbound packets, which were discarded, though no errors were detected.
<i>Out Discards</i>	The number of outbound packets chosen to be discarded even though there were no errors.
<i>In Errors</i>	The number of inbound packets, which were not delivered to upper layers because of errors.
<i>Out Errors</i>	The number of outbound packets chosen to be discarded because there were errors.
<i>In Ucast Pkts</i>	The number of unicast packets delivered to a higher layer protocol.
<i>Out Ucast Pkts</i>	The total number of packets requested to be sent to unicast addresses, by upper layer protocols.

Field	Description
<i>HC In Octets</i>	The total number of octets received on the interface, including framing characters. This object is a 64-bit version of ifInOctets . Valid for <i>eth-*</i> .
<i>HC OutOctets</i>	The total number of octets transmitted out of the interface, including framing characters. This object is a 64-bit version of ifOutOctets . Valid for <i>eth-*</i> .
<i>In Mcast Pkts</i>	The number of multicast packets delivered to a higher layer protocol.
<i>Out Mcast Pkts</i>	The total number of packets requested to be sent to multicast addresses, by upper layer protocols.
<i>In Bcast Pkts</i>	The number of broadcast packets delivered to a higher layer protocol.
<i>Out Bcast Pkts</i>	The total number of packets requested to be sent to broadcast addresses, by upper layer protocols.
<i>LinkUpDnTrapEnable</i>	Indicates whether <i>linkUp/ linkDown</i> traps should be generated for this interface.
<i>Promiscuous Mode</i>	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.
<i>Connector Present</i>	This indicates whether the interface sublayer has a physical connector or not. This is true only for physical Ethernet interfaces.
<i>CounterDiscontTime</i>	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
<i>Ifname interface-name</i>	Interface name, for which configuration is to be modified or viewed. Type: Get - Optional Modify - Mandatory Valid values : <i>eth-*, atm-*, aal5-*, eoa-*, dsl-*, dsif-*, dsli-*, aggr-*, ehdlc-*</i>
<i>trap enable/disable</i>	Indicates whether <i>linkUp/linkDown</i> 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
<i>IfName</i>	Interface name, for which configuration is to be viewed.
<i>LinkUp/DnTrap</i>	Indicates whether <i>linkUp/linkDown</i> traps shall be generated for this interface.

Caution None

- 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]`

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]`

Parameters

Name	Description
<i>ifname interface-name</i>	This specifies the name of the ATM port Type: Create - Mandatory Delete - Mandatory Get - Optional Modify - Mandatory Valid values : <i>atm-0 - *</i>
<i>maxvc max-num-vccs</i>	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
<i>oamsrc oam-src-id</i>	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 : <i>0xffff ffff ffff ffff ffff ffff ffff ffff</i>
<i>Maxvpibits max-vpi-bits</i>	Maximum number of VPI bits configured for use at this ATM interface. Type : Optional Valid values : 1 to 8. Default Value :
<i>maxvcibits max-vci-bits</i>	Maximum number of VCI bits configured for use at this ATM interface. Type : Optional Valid values : 1 to 16. Default Value: 16.
<i>enable/disable</i>	Administrative status of the ATM port Type : Optional Valid values : <i>enable</i> or <i>disable</i> Default Value: <i>enable</i>
<i>lowif dsl-port-interface-name</i>	This identifies the lower DSL interface, on which this ATM interface is configured. Type : Mandatory. Valid values : <i>dsl-*</i>
<i>Orl orl</i>	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
<i>Class0Thrshld</i> <i>class0thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 0 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS0_PKT_THRESHOLD to GS_CFG_MAX_CLASS0_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS0_PKT_THRESHOLD
<i>Class1Thrshld</i> <i>class1thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 1 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS1_PKT_THRESHOLD to GS_CFG_MAX_CLASS1_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS1_PKT_THRESHOLD
<i>Class2Thrshld</i> <i>class2thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 2 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS2_PKT_THRESHOLD to GS_CFG_MAX_CLASS2_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS2_PKT_THRESHOLD
<i>Class3Thrshld</i> <i>class3thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 3 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS3_PKT_THRESHOLD to GS_CFG_MAX_CLASS3_PKT_THRESHOLD Default Value : GS_CFG_DEF_CLASS3_PKT_THRESHOLD
<i>ProfileName profilename</i>	This specifies the scheduling profile to be associated with the ATM port. This has the default value "SPPROFILE" which indicates that Strict Priority (SP) scheduling is applied to the class queues of this port. Type : Optional. Valid values : Default Value : "SPROFILE"

Example `$ create atm port ifname atm-0 lowif ds1-0 maxvc 4 Class0Thrshld 2 Class1Thrshld 3 Class2Thrshld 2 Class3Thrshld 3 profilename gold`

Output Verbose Mode On

```

IfName       : atm-0
MaxVccs      : 4
MaxVpiBits   : 9
OAMSrc       : 0xffffffffffffffffffffffffffff
ORL (kbps)   : 640
Class0thrshld : 2
Class2thrshld : 2
UnknownVPI   : 2
ProfileName  : gold
Oper Status  : Up

LowIfName    : dsl-0
MaxConfVccs  : 0
MaxVciBits   : 10
RowStatus    : Active
Class1thrshld : 3
Class3thrshld : 3
UnknownVCI   : 3
Admin Status : Up
    
```

Output Fields

FIELD	Description
<i>IfName</i>	This specifies the name of the ATM port. It can be: atm-0, atm-1, etc.
<i>LowIfName</i>	This specifies the name of the lower interface. It can be: dsl-0, dsl-1 etc.,.
<i>Max Vccs</i>	The maximum number of VCCs (PVCCs) supported at this ATM interface.
<i>MaxConfVccs</i>	This specifies the current number of VCCs configured on this port. It may be : 0 - Value defined in MaxVccs
<i>MaxVpiBits</i>	The maximum number of active VPI bits configured for use at the ATM interface.
<i>MaxVciBits</i>	This specifies the maximum number of active VCI bits configured for use at this ATM interface.
<i>OAMSrc</i>	This specifies the loop back source id used for the OAM loop back testing
<i>Oper Status</i>	The actual/current state of the interface. It can be either Up or Down
<i>Admin Status</i>	The desired state of the interface. It may either be Up or Down
<i>Orl (kbps)</i>	This parameter specifies the output rate limiting value in Kbps to be applied on this interface.
<i>RowStatus</i>	This defines the row-status of the interface entry.
<i>Class0Thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 0 queue, as a percentage of the queue size.
<i>Class1Thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 1 queue, as a percentage of the queue size.
<i>Class2Thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 2 queue, as a percentage of the queue size.
<i>Class3Thrshld</i>	This parameter specifies the low threshold of the ATM port Tx class 3 queue, as a percentage of the queue size.

FIELD	Description
<i>UnknownVPI</i>	This parameter specifies the last seen unknown VPI on this ATM interface.
<i>UnknownVCI</i>	This parameter specifies the last seen unknown VCI on this ATM interface.
<i>ProfileName</i>	This specifies the scheduling profile to be associated with the ATM port. This has the default value 'SPPROFILE', which indicates that Strict Priority (SP) scheduling is applied to the class queues of this port.

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`.

- 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] [pvc] [channel fast|interleaved] [mgmtmode data|mgmt|DataAndMgmt| raw] [maxnumproto maxnumproto] [autostatus Enable|Disable]`

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] [mgmtmode data | mgmt | DataAndMgmt | raw]`

Parameters

Name	Description
<code>ifname interface-name</code>	This specifies name of VC Interface. Type: Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory Valid values : aal5-0 - *
<code>lowif atm-port-interface-name</code>	Interface Index of the ATM port, on which this VC is getting configured. Type : Mandatory Valid values : atm-0 - *

Name	Description
<i>vpi vpi</i>	<p>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.</p> <p>Type : Create – Mandatory Modify – Optional</p> <p>Valid values : 0-2⁸</p>
<i>vci vci</i>	<p>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.</p> <p>Type : Create – Mandatory Modify – Optional</p> <p>Valid values : 1-2¹⁶</p>
<i>mgmtmode Data Mgmt DataAndMgmt Raw</i>	<p>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 only acceptable value for atmVCCAAL5EncapType is llc. 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 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).</p> <p>Type : Create -- Optional</p> <p>Default value: Data</p>
<i>enable / disable</i>	<p>This specifies the Admin Status of the VC.</p> <p>Type : Optional</p> <p>Default Value: <i>enable</i></p>

Name	Description
<i>aal5</i>	<p>This specifies the AAL type in use for this VC. The only type of AAL supported in Columbia Packet is AAL5.</p> <p>Type: The only value to be supported is <i>aal5</i>. Default value : <i>aal5</i></p>
<i>a5txsize aal5-cpcs-tx-sdu-size</i>	<p>This specifies the maximum transmit CPCS SDU size to be used.</p> <p>Type : Optional Valid values : 1- <i>GS_CFG_ATM_VC_MAX_RX_PDU_SIZE</i> Default Value: <i>GS_CFG_ATM_VC_DEF_TX_PDU_SIZE</i></p>
<i>a5rxsize aal5-cpcs-rx-sdu-size</i>	<p>This specifies the maximum receive CPCS SDU size to be used</p> <p>Type : Optional Valid values : 1- <i>GS_CFG_ATM_VC_MAX_TX_PDU_SIZE</i> Default Value: <i>GS_CFG_ATM_VC_DEF_TX_PDU_SIZE</i></p>
<i>vcmux / llcmux</i>	<p>This specifies the data multiplexing method to be used over the AAL5 SSCS layer.</p> <p>Type : Optional Default Value: <i>llcmux</i></p>
<i>Pvc</i>	<p>This specifies the type of VC. The only value supported is PVC.</p> <p>Type : Optional Default Value: <i>pvc</i></p>
<i>channel fast/interleaved</i>	<p>This extension specifies the type of channel, on which the ATM VC's cells have to be transmitted/ received. 'fast' means fast channel and 'inter' means interleaved channel.</p> <p>Type : Optional Default Value: <i>Interleaved</i></p>

Name	Description
<i>Maxnumproto maxnumproto</i>	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
<i>Autostatus Enable/Disable</i>	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

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`

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
MgmtMode       : Data      Last Change    : 18/06/2002::09:10:23
VC Type        : PVC       Row Status     : active
Max simultaneous protocol : 3
VC Topology    : Point to Point
Auto Status    : Enable
```

Output Fields

FIELD	Description
<i>VC IfName</i>	VC Interface Name. It can be : <i>aal5-0 - *</i>
<i>Low IfName</i>	Interface Index of the ATM port, on which this VC is getting configured.
<i>VPI</i>	It is the Virtual Path Identifier.
<i>VCI</i>	It is the Virtual Circuit Identifier.
<i>Oper Status</i>	The actual/current state of the interface. It can be either <i>Up</i> or <i>Down</i>
<i>Admin Status</i>	The desired state of the interface. It may be either <i>Up/Down</i> .

FIELD	Description
<i>Aal5 Tx Size</i>	This specifies the transmit CPCS SDU size to be used.
<i>Aal5 Rx Size</i>	This specifies the receive CPCS SDU size to be used.
<i>Aal Type</i>	This specifies the AAL type in use for this VC. The only type of AAL supported in Columbia Packet is AAL5.
<i>Aal5 Encap</i>	This specifies the data multiplexing method to be used on the VC.
<i>channel</i>	This extension specifies the type of channel, on which the ATM VC's cells have to be transmitted/received. 'fast(1)' means fast channel and 'inter(2)' means interleaved channel.
<i>Last Change</i>	The value of sysUpTime at the time this VC entered its current operational state.
<i>MgmtMode</i>	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 only acceptable value for atmVCCAAL5EncapType is llc. 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 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).
<i>RowStatus</i>	This defines the row-status of the interface entry
<i>VC Type</i>	This field specifies whether VC type is PVC or SVC.
<i>VC Topology</i>	This field specifies the VC connection topology type.

FIELD	Description
<i>Max simultaneous protocol</i>	This field specifies the maximum number of simultaneous active protocol stacks supported on this interface. Currently, only one protocol stack is supported.
<i>Auto Status</i>	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.

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

- 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
<code>vc ifname interface-name</code>	This parameter specifies the interface, for which information is desired. Type : Create - Mandatory Get - Mandatory Valid values : aal5-0 - *
<code>lbid oam-loopback-location-id</code>	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
<code>e2e seg</code>	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
    
```

Output Fields

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

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
<i>ifname interface-name</i>	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-*
<i>mode auto manual</i>	This specifies the activation/deactivation capability at a VCC. Type : Optional Valid values : auto, manual Default Value : auto
<i>action act deact</i>	This field specifies the CC action to be taken. This is used along with <i>dir</i> field. Type : Optional Valid values : act, deact. Default Value : deact
<i>dir src/sink/both</i>	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
-----
```

```

aa15-0 manual activated LOC Self
Set Done
-----
Ifname Mode SourceOperStatus SinkOperStatus Initiator
-----
aa15-0 auto activated LOC Self

```

Output Fields

Name	Description
<i>Ifname</i>	This parameter specifies the interface, for which information is desired.
<i>Mode</i>	This specifies the Activation/Deactivation capability of a VCC.
<i>SourceOperStatus</i>	This field specifies the current operational state of the source point of the VCC.
<i>SinkOperStatus</i>	This field specifies the current operational state of the sink point of the VCC.
<i>Initiator</i>	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
<i>ifname interface-name</i>	This parameter specifies the interface for which information is desired Type : Get - Optional Valid values : <i>aal5-0 - *</i>

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

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

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

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]`

Parameters

Name	Description
<i>ifname interface-name</i>	<p>This specifies the interface index used for the Ethernet type of interfaces.</p> <p>Type : Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory</p> <p>Valid values : <i>eth-0 - *</i></p>
<i>ip ip-address</i>	<p>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</p> <p>Type : Create - Optional. Modify - Optional</p> <p>Valid Values: Any valid class A/B/C / Classless IP address.</p> <p>Default Value: None</p>
<i>Mask net-mask</i>	<p>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.</p> <p>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.</p> <p>Valid Values : 255.0.0.0 - 255.255.255.255</p> <p>Default Value: None</p>

Name	Description
<i>usedhcp true / false</i>	<p>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 lftype is slave then this field cannot be set to GS_TRUE.</p> <p>Type : Optional Valid value : true or false Default value: false</p>
<i>speed {auto /100 BT/1000BT}+</i>	<p>This specifies the port speed for the net side interfaces. Auto specifies that the interface will determine the line speed using auto-negotiation.</p> <p>Type : Optional. Valid Values : <i>auto, 100BT, 1000BT.</i> Default Value : <i>auto.</i></p>
<i>type uplink/downlink</i>	<p>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.</p> <p>Type : Optional. Valid Values : <i>uplink, downlink.</i> Default Value : <i>uplink.</i></p>
<i>enable/disable</i>	<p>Administrative status of the Ethernet interface.</p> <p>Type : Modify - Mandatory Valid values : enable or disable Default value: enable</p>
<i>Duplex auto/half/full</i>	<p>This defines the duplex mode to be used.</p> <p>Type : optional Valid values: <i>auto, half, full</i> Default value: <i>auto</i></p>
<i>Pktype Mcast/Bcast/UnknownUcast / All/None</i>	<p>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.</p> <p>Type: Create - optional Modify - optional Valid values : Mcast, Ucast, UnknownUcast, All Default Value: All</p>

Name	Description
<i>Orl decvalue</i>	<p>This parameter specifies the output rate limiting value to be applied on this Interface. The unit for the same is in Mbits/sec.</p> <p>Type: Create - Optional Modify - Optional</p> <p>Valid Values: GS_CFG_MIN_ORL_ETH_RATE_MBPS - GS_CFG_MAX_ORL_ETH_RATE_MBPS</p> <p>Default Value: GS_CFG_DEF_ORL_ETH_RATE_MBPS</p>
<i>Class0Thrshld</i> <i>class0thrshld</i>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 0 queue, as a percentage of the queue size.</p> <p>Type : Optional.</p> <p>Valid values : GS_CFG_MIN_CLASS0_PKT_THRESHOLD to GS_CFG_MAX_CLASS0_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS0_PKT_THRESHOLD</p>
<i>Class1Thrshld</i> <i>class1thrshld</i>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 1 queue, as a percentage of the queue size.</p> <p>Type : Optional.</p> <p>Valid values : GS_CFG_MIN_CLASS1_PKT_THRESHOLD to GS_CFG_MAX_CLASS1_PKT_THRESHOLD Default Value : GS_CFG_DEF_CLASS1_PKT_THRESHOLD</p>
<i>Class2Thrshld</i> <i>class2thrshld</i>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 2 queue, as a percentage of the queue size.</p> <p>Type : Optional.</p> <p>Valid values : GS_CFG_MIN_CLASS2_PKT_THRESHOLD to GS_CFG_MAX_CLASS2_PKT_THRESHOLD Default Value : GS_CFG_DEF_CLASS2_PKT_THRESHOLD</p>
<i>Class3Thrshld</i> <i>class3thrshld</i>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 3 queue, as a percentage of the queue size.</p> <p>Type : Optional.</p> <p>Valid values : GS_CFG_MIN_CLASS3_PKT_THRESHOLD to GS_CFG_MAX_CLASS3_PKT_THRESHOLD Default Value : GS_CFG_DEF_CLASS3_PKT_THRESHOLD</p>

Name	Description
<p><i>Class4Thrshld</i> <i>class4thrshld</i></p>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 4 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS4_PKT_THRESHOLD to GS_CFG_MAX_CLASS4_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS4_PKT_THRESHOLD</p>
<p><i>Class5Thrshld</i> <i>class5thrshld</i></p>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 5 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS5_PKT_THRESHOLD to GS_CFG_MAX_CLASS5_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS5_PKT_THRESHOLD</p>
<p><i>Class6Thrshld</i> <i>class6thrshld</i></p>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 5 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS5_PKT_THRESHOLD to GS_CFG_MAX_CLASS5_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS5_PKT_THRESHOLD</p>
<p><i>Class7Thrshld</i> <i>class7thrshld</i></p>	<p>This parameter specifies the low threshold of the Ethernet interface Tx class 7 queue, as a percentage of the queue size. Type : Optional. Valid values : GS_CFG_MIN_CLASS7_PKT_THRESHOLD to GS_CFG_MAX_CLASS7_PKT_THRESHOLD Default Value: GS_CFG_DEF_CLASS7_PKT_THRESHOLD</p>
<p><i>ProfileNameprofilename</i></p>	<p>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</p>

Name	Description
<i>mgmtvlanid mgmtvlanid</i>	<p>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.</p> <p>Type : Create - optional Modify - optional</p> <p>Valid values: 0 -GS_CFG_MAX_VLAN_ID</p>
<i>priority priority</i>	<p>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.</p> <p>Type: Create - optional Modify - optional</p> <p>Valid values: 0 -GS_CFG_MAX_MGMT_PRIO</p>

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`

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
Class0thrshld       : 1             Class1thrshld     : 2
Class2thrshld       : 1             Class3thrshld     : 2
Class4thrshld       : 1             Class5thrshld     : 2
Class6thrshld       : 1             Class7thrshld     : 2
Profile Name        : SPPROFILE
Mgmt VLAN Index     : 2
Tagged Mgmt PDU Prio: 2
Speed               : -
Operational Status  : Down           Admin Status      : Up
    
```

Verbose Mode Off:

Entry Created

Output Fields

FIELD	Description
<i>If-Name</i>	The name of the interface, which has been created.
<i>Type</i>	The type of Ethernet interface - <i>uplink</i> or <i>downlink</i> .
<i>UseDhcp</i>	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 lftype is slave then this field cannot be set to GS_TRUE.
<i>Ip Address</i>	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
<i>Mask</i>	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.
<i>pkttype</i>	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.
<i>Orl</i>	This parameter specifies the output rate limiting value to be applied on this Interface. The units for the same is in Mbits/sec
<i>Configured Duplex</i>	The duplex mode to be used by the interface, as configured by the user.
<i>Duplex</i>	The duplex mode used by the interface.

FIELD	Description
<i>Configured Speed</i>	The configured speed of the interface.
<i>Class0Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 0 queue, as a percentage of the queue size.
<i>Class1Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 0 queue, as a percentage of the queue size.
<i>Class2Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 2 queue, as a percentage of the queue size.
<i>Class3Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 2 queue, as a percentage of the queue size.
<i>Class4Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 4 queue, as a percentage of the queue size.
<i>Class5Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 5 queue, as a percentage of the queue size.
<i>Class6Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 6 queue, as a percentage of the queue size.
<i>Class7Thrshld</i>	This parameter specifies the low threshold of the Ethernet interface Tx class 7 queue, as a percentage of the queue size.
<i>Mgmt VLAN Index</i>	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.
<i>Tagged Mgmt PDU Prio</i>	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.

FIELD	Description
<i>ProfileName</i>	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.
<i>Speed</i>	The actual speed of the interface.
<i>Operational Status</i>	The operational status of the interface.
<i>Admin Status</i>	The administrative status of the interface.

Caution None

References

- Ethernet stats commands.

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
<i>Ifname interface-name</i>	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: <i>eth-0-*</i> .

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
<i>If Name</i>	The interface name
<i>Align Error count</i>	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.
<i>FCS Error count</i>	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
<i>Single Collision Frame count</i>	This is a count of successfully transmitted frames on the interface, for which transmission is inhibited by exactly one collision.
<i>Multi Collisn Frame Count</i>	This is a count of successfully transmitted frames on the interface, for which transmission is inhibited by more than one collision.
<i>SQE Test Errors count</i>	This is a count of times that the SQE TEST ERROR message is generated by the PLS sub layer, for the interface.
<i>Deferred Transactions count</i>	This is a count of frames, for which the first transmission attempt on the interface is delayed because the medium is busy.
<i>Late Collisions count</i>	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
<i>Excess Collisions count</i>	This is a count of frames for which transmission on the interface fails, due to excessive collisions.
<i>Internal MAC Rx Errors count</i>	This is a count of frames, for which reception on the interface fails, due to an internal MAC sub layer receive error.
<i>Internal MAC Tx Errors count</i>	This is a count of frames, for which transmission on the interface fails due to an internal MAC sub layer transmit error.
<i>Carrier Sense Errors count</i>	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
<i>Frame Too Long</i>	This is a count of frames received on the interface, that exceeds the maximum permitted frame size.
<i>Symbol errors</i>	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
<code>ifname interface-name</code>	This parameter specifies the name assigned to this interface. Type : Create – Mandatory Delete – Mandatory Get – Optional Modify – Mandatory Valid values : eoa-0, eoa-1,...
<code>lowif low-interface-name</code>	This parameter specifies the lower interface of an EoA interface. Type : Mandatory Valid Values : aal5-0 - *

Name	Description
<code>pktttype {multicast broadcast unknown- unicast}+ all none</code>	<p>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.</p> <p>Type : Optional. Valid Values : {multicast broadcast unknown-unicast}+ all Default Value : all.</p>
<code>fcs false true</code>	<p>This specifies whether Ethernet FCS needs to be computed. Currently only false is supported.</p> <p>Type : Optional Valid Values : false or true Default Value: false.</p>
<code>Enable/disable</code>	<p>Administrative status of the interface</p> <p>Type : Optional Valid values : enable or disable Default Values: enable</p>
<code>inactivitytmrintrvl inactivitytmrintrvl</code>	<p>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.</p> <p>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</p>
<code>configstatus normal config</code>	<p>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.</p> <p>Type: Optional Valid Values: normal config Default Value: GS_CFG_EOA_DEF_SENSE_MODE</p>

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

```

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

```

Output Fields

Name	Description
<i>IfName</i>	The name of the interface that has been created.
<i>LowIfName</i>	Specifies the lower interface.
<i>FCS</i>	Whether FCS is true or false.
<i>Pkt Type</i>	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.
<i>Admin Status</i>	The desired state of the interface. It may be either <i>Up</i> or <i>Down</i>
<i>Oper Status</i>	The actual/current state of the interface. It can be either <i>up</i> or <i>down</i> .
<i>InActivity Tmr Interval</i>	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.
<i>Config Status</i>	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.

2.11 LACP AGGR Commands

2.11.1 create lacp agg

Description Use this command to create an LACP aggregator.

Command Syntax `create lacp agg aggrifname aggrifname [actorsystemprio actorsystemprio] [actoradminkey actoradminkey] [collectormaxdelay collectormaxdelay] [agrtype static | lacp]`

2.11.2 delete lacp aggr

Description Use this command to delete an LACP aggregator.

Command Syntax `delete lacp agg aggrifname aggrifname`

2.11.3 get lacp aggr

Description Use this command to get a LACP aggregator.

Command Syntax `get lacp agg [aggrifname aggrifname]`

2.11.4 modify lacp aggr

Description Use this command to modify a LACP aggregator.

Command Syntax `modify lacp agg aggrifname aggrifname [actorsystemprio actorsystemprio] [actoradminkey actoradminkey] [collectormaxdelay collectormaxdelay] [agrtype static | lacp]`

Parameter

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

Name	Description
<i>collectormaxdelay</i> <i>collectormaxdelay</i>	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
<i>aggrtype</i> <i>Static</i> / <i>Lacp</i>	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
<i>Aggr IfName</i>	The Aggregator interface name.
<i>Mac Address</i>	A 6-octet read-only value carrying the individual MAC address assigned to the Aggregator.
<i>Aggregate</i>	A read-only Boolean value indicating whether the Aggregator represents an Aggregate (TRUE) or an Individual link (FALSE).
<i>Actor Sys Priority</i>	A 2-octet read-write value indicating the priority value associated with the Actor's System ID.
<i>Partner Sys Priority</i>	A 2-octet read-only value that indicates the priority value associated with the Partner's SystemID.
<i>Actor Sys ID</i>	A 6-octet read-write MAC address value used as a unique identifier for the System that contains this Aggregator.
<i>Partner Sys ID</i>	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.
<i>Actor Oper Key</i>	The current operational value of the Key for the Aggregator.
<i>Partner Oper Key</i>	The current operational value of the Key for the Aggregator is current protocol Partner.
<i>Actor Admin Key</i>	The current administrative value of the Key for the Aggregator.

FIELD	Description
<i>Collector Max Delay</i>	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.
<i>Aggregation Type</i>	Aggregation type done over the aggregator.

Caution None

References

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

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
<code>ifname ifname</code>	The IfName of the Ethernet interface for the aggregator. Type : Modify – Mandatory Get - Optional Valid values : <i>eth-*, eoa-*</i>
<code>actoradminkey actoradminkey</code>	The current administrative value of the Key for the Aggregator. Type : Optional Valid values : $1 - 2^{16} - 1$
<code>partadminkey partadminkey</code>	The current administrative value of the Key for the Aggregator's current protocol Partner. Type : Optional Valid values : $1 - 2^{16} - 1$
<code>actorportprio actorportprio</code>	The priority value assigned to this Aggregation Port Type : Optional Valid values : $0 - 2^8 - 1$
<code>partadminportprio partadminportprio</code>	The current administrative value of the port priority, for the protocol Partner. Type : Optional Valid values : $0 - 255$
<code>actorsysprio actorsysprio</code>	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
<i>partadminsysprio</i> <i>partadminsysprio</i>	A 2-octet read-only value that indicates the priority value associated with the Partner's System ID. Type : Optional Valid values: 0 - 255
<i>partadminsysid</i> <i>partadminsysid</i>	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
<i>partadminport</i> <i>partadminport</i>	The current administrative value of the port number for the protocol Partner. Type : Optional Valid values: 0 - 65535
<i>actoradminstate activity</i> <i> timeout aggr</i>	Administrative state of actor Type: Optional
<i>partadminstate activity</i> <i> timeout aggr</i>	Administrative state of Partner. Type: Optional
<i>aggrstatus</i> <i>enable/disable</i>	Specifies whether aggregation(bonding) is to be enabled over this Aggregation Port. Type : Optional Valid values: <i>enable/disable</i>

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

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

FIELD	Description
<i>Selected Agg ID</i>	The identifier value of the Aggregator that this Aggregation Port has currently selected.
<i>Aggregation Status</i>	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
<i>Aggrifname aggrifname</i>	The Aggregator interface name. Type : Optional Valid values: <i>aggr-*</i>

Mode Super-User, User

Example `$ get lacp aggrport list`

Output

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

Output Fields

FIELD	Description
<i>Aggr IfName</i>	The Aggregator interface name.
<i>Port List</i>	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 agrport stats

Description Use this command to get LACP aggregator port statistics.

Command Syntax `get lacp agrport stats [ifname ifname]`

2.14.2 reset lacp agrport stats

Description Use this command to reset LACP aggregator port statistics.

Command Syntax `reset lacp agrport stats ifname ifname`

Parameter

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

Example `$ get lacp agrport 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
    
```

Output Fields

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

FIELD	Description
<i>Marker Response PDUs Tx</i>	The number of Marker Response PDUs transmitted on this Aggregation Port.
<i>Unknown Rx</i>	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.
<i>Illegal Rx</i>	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
<code>portid portid</code>	Index of the Bridge Port Type : Get - Optional Modify - Mandatory Valid values: 1 - GS_CFG_MAX_BRIDGE_PORTS
<code>jointimer jointimer</code>	The GARP Join time, in centiseconds. Join time value should be less than half the Leave time value Type : Optional Valid values: 10-255
<code>leavetimer leavetimer</code>	The GARP Leave time, in centiseconds. Leave time value should be greater than 2 times Join time value. Type : Optional Valid values: 10-255
<code>leavealltimer leavealltimer</code>	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
<i>PortId</i>	Index of the Bridge Port.
<i>Join Timer</i>	The GARP Join time, in centiseconds. Join time value should be less than half the Leave time value.
<i>Leave Timer</i>	The GARP Leave time, in centiseconds. Leave time value should be greater than 2 times Join time value.
<i>LeaveAll Timer</i>	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

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
<code>gvrpstatus enable / disable</code>	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
<code>VLAN Version Number</code>	Version Number of IEEE802.1Q, that device supports.
<code>Current VLANS</code>	The current number of IEEE 802.1Q VLANs that are configured on this device.
<code>GVRP Status</code>	The administrative status requested by management for GVRP.

Caution None

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

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
<code>portid portid</code>	The bridge port id. Type :Optional for all commands Valid values: 1 - GS_CFG_MAX_BRIDGE_PORTS
<code>portvlanid portvlanid</code>	The VLAN Identifier. Type :Optional for all commands Valid values: 1 - GS_CFG_MAX_VLANID
<code>acceptframetypes all tagged</code>	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
<code>ingressfiltering true false</code>	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
<i>gvrpstatus enable / disable</i>	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
<i>restrictedvlanreg restrictedvlanregtrue/false</i>	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
<i>Port Id</i>	The bridge port id.
<i>Port VLAN Index</i>	The VLAN Identifier.
<i>Accept Frame Types</i>	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.
<i>Ingress Filtering</i>	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.

Field	Description
<i>Gvrp Status</i>	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.
<i>Failed Registrations</i>	The total number of failed GVRP registrations, for any reason, on this port.
<i>Last Pdu Origin</i>	The Source MAC Address of the last GVRP message received on this port.
<i>Restricted Vlan Registration</i>	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
<i>portid portid</i>	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
<i>PortId</i>	Index of the Bridge Port.
<i>Recv Join Empty</i>	Counter for the number of Join Empty Messages received.
<i>Send Join Empty</i>	Counter for the number of Join Empty Messages sent.
<i>Recv Join In</i>	Counter for the number of Join In Messages received.
<i>Send Join In</i>	Counter for the number of Join In Messages sent.
<i>Recv Empty</i>	Counter for the number of Empty Messages received.

Field	Description
<i>Send Empty</i>	Counter for the number of Empty Messages sent.
<i>Recv Leave</i>	Counter for the number of Leave Messages received.
<i>Send Leave</i>	Counter for the number of Leave Messages sent.
<i>Recv Leave All</i>	Counter for the number of Leave All Messages received.
<i>Send Leave All</i>	Counter for the number of Leave All Messages sent.
<i>Leave Empty Rx</i>	Counter for the number of Leave Empty Rx received.
<i>Leave Empty Tx</i>	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 will be supported in future releases.

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
<code>portid portid</code>	The bridge port identifier Type: Mandatory Valid values: eth-* - eoa-*
<code>gmrpstatus enable / disable</code>	The administrative state of GMRP operation on this port Type: Optional
<code>restrictedgrpreg true/false</code>	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

```

Output Fields

Field	Description
<i>Port Id</i>	The bridge port identifier
<i>Gmrp Status</i>	The administrative state of GMRP operation on this port
<i>Failed Registrations</i>	The total number of failed GMRP registrations, for any reason, in all VLANs, on this port
<i>Last Pdu Origin</i>	The Source MAC Address of the last GMRP message received on this port
<i>Restricted Group Registration</i>	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 will be available with future releases of the product.*

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
<i>Port Id</i>	The bridge port identifier
<i>Recv Join Empty</i>	Counter for the number of Join Empty Messages received
<i>Send Join Empty</i>	Counter for the number of Join Empty Messages sent
<i>Recv Join In</i>	Counter for the number of Join In Messages received
<i>Send Join In</i>	Counter for the number of Join In Messages sent

Field	Description
<i>Recv Empty</i>	Counter for the number of Empty Messages received
<i>Send Empty</i>	Counter for the number of Empty Messages sent
<i>Recv Leave</i>	Counter for the number of Leave Messages received
<i>Send Leave</i>	Counter for the number of Leave Messages sent
<i>Recv Leave All</i>	Counter for the number of Leave All Messages received
<i>Send Leave All</i>	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 vlnname vlnname vlanid vlanid [egressports egressports/none] [forbidegressports forbidegressports/none] [untaggedports untaggedports/none] [bridgingmode bridgingmode] [floodsupport enable/disable] [bcacstsupport enable/disable]`

2.21.2 modify vlan static

Description Use this command to modify.

Command Syntax `modify vlan static (vlnname vlnname | vlanid vlanid) [egressports egressports/none] [forbidegressports forbidegressports/none] [untaggedports untaggedports/none] [bridgingmode bridgingmode] [floodsupport enable/disable] [bcacstsupport enable/disable]`

2.21.3 delete vlan static

Description Use this command to delete.

Command Syntax `delete vlan static (vlnname vlnname | vlanid vlanid)`

2.21.4 get vlan static

Description Use this command to get.

Command Syntax `get vlan static [vlnname vlnname | vlanid vlanid]`

Parameters

Name	Description
<i>vlanname vlanname</i>	An administratively assigned string, which may be used to identify the VLAN. This is mandatory in the case of create cmdnd. In case of get/modify/delete - either vlan name or vlan id can be given. Type: Create – Mandatory Delete – Optional Get – Optional Modify – Optional For delete , get , modify , specify either vlanname or vlanid . Valid values: Any string having characters, of size GS_MAX_VLAN_NAME_SZ, that can be displayed.
<i>vlanid vlanid</i>	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
<i>egressports egressports</i> / <i>none</i>	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
<i>forbidegressports</i> <i>forbidegressports</i> / <i>none</i>	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
<i>untaggedports</i> <i>untaggedports</i> / <i>none</i>	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
<p><i>bridgingmode</i> <i>bridgingmode</i></p>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: Restricted, Unrestricted, Residential</p> <p>Default value: residential</p>

Name	Description
<p><i>floodsupport</i> <i>enable/disable</i></p>	<p>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 Dot1dTplnfo) is enable or throttle, and the value per vlan is also enable or drop.</p> <p>Type: Create -- Optional Modify -- Optional Valid values: GS_STATE_ENABLE, GS_STATE_DISABLE Default value: GS_CFG_DEF_VLAN_FLOOD</p>
<p><i>bcastsupport</i> <i>enable/disable</i></p>	<p>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 Dot1dTplnfo) and the value per vlan are both enable else dropped.</p> <p>Type: Create -- Optional Modify -- Optional Valid values: GS_STATE_ENABLE, GS_STATE_DISABLE Default value: GS_CFG_DEF_VLAN_BCAST</p>

Example `$ create vlan static vlanname gsvlan vlanid 1 egressports 1 2 20 forbidgressports 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
<i>VLAN Name</i>	An administratively assigned string, which may be used to identify the VLAN. This is mandatory in the case of create cmdnd. In case of get/modify/delete - either vlan name or vlan id can be given.
<i>VLAN Index</i>	The VLAN Identifier.
<i>Egress ports</i>	The set of ports, which are permanently assigned to the egress list for this VLAN by management
<i>Forbidden Egress Ports</i>	The set of ports which are prohibited by management from being included in the egress list for this VLAN.
<i>Untagged Ports</i>	The set of ports, which should transmit egress packets for this VLAN, as untagged.
<i>Bridging Mode</i>	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
<i>Flood Support Status</i>	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 from <code>GS_CFG_DEF_VLAN_FLOOD</code> when vlan is created. The unknown unicast packets shall be flooded on all ports for a vlan if global value (present in <code>Dot1dTpInfo</code>) is enabled or throttle, and the value per vlan is also enabled else dropped.
<i>Broadcast Support Status</i>	This specifies if the broadcast has to be done for this vlan or not. The default value for this shall be taken from <code>GS_CFG_DEF_VLAN_BCAST</code> when vlan is created. The broadcast packets shall be flooded on all ports for a vlan if global value (present in <code>Dot1dTpInfo</code>) 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
<code>vlanid</code> vlanid	The VLAN identifier 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
<i>VLAN Index</i>	The VLAN identifier
<i>VLAN Status</i>	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.
<i>Egress Ports</i>	The set of ports, which are transmitting traffic for this VLAN, as either tagged or untagged frames.
<i>Untagged Ports</i>	The set of ports, which are transmitting traffic for this VLAN as untagged frames.

Field	Description
<i>Bridging Mode</i>	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 over the PPPoE interface even though the VLAN may be unrestricted..
<i>Flood support Status</i>	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.
<i>Broadcast support Status</i>	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
<i>portid portid</i>	Index of the Bridge Port Type : Get – Optional Reset - Mandatory Valid values: 1 - GS_CFG_MAX_BRIDGE_PORTS
<i>vlanid vlanid</i>	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
    
```

Output Fields

Field	Description
<i>PortId</i>	Index of the Bridge Port.
<i>VLAN Index</i>	The VLAN identifier.
<i>Vlan In Frames</i>	Number of valid frames received by this port.
<i>Vlan Out Frames</i>	Number of valid frames transmitted by this port.
<i>Vlan In Discards</i>	Number of valid frames discarded by this port.
<i>Vlan In Overflow</i>	Count of Inframes counter overflow.
<i>Vlan Out Overflow</i>	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 aging-timeout][netaging aging-timeout] [floodsupport enable | disable | throttle] [bcastsupport enable | disable] [mcastsupport enable | disable] [mcastdrop enable | disable][throttlingrate throttlingrate] [pollinterval pollinterval]][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
<i>aging aging-timeout</i>	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
<i>slaveaging aging - timeout</i>	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.
<i>netaging aging - timeout</i>	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 <code>aging</code> parameter. The value 0 can be configured when aging is to be stopped.

Name	Description
floodsupport <i>enable/disable/throttle</i>	This is used to specify whether the unknown unicast packets are to be flooded or not. The value 'throttle' specifies that throttling using the 'throttling rate' and 'polling interval' parameters, configured by the user, shall control the flooding. The fields 'throttleRate' and 'pollInterval' are valid only when the floodsupport is set to 'throttle'. 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 <i>enable/disable</i>	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 <i>enable/disable</i>	Used to specify whether the multicast is supported or not. Type : Optional Valid Values: <i>enable/disable</i>
mcastdrop <i>enable/disable</i>	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: <i>enable/disable</i>
throttlingrate <i>throttlingrate</i>	Defines the throttling Rate i.e. maximum number of FDB lookup failures resulting in flooding per second, beyond which, the flooding shall be throttled in the system. The value of this field is valid only if the ifloodsupport parameter in the system is set to value Throttle.
pollinterval <i>pollinterval</i>	This indicates, in milliseconds, the polling interval. User can modify the polling interval at run time. The polling interval is defined in milliseconds with granularity of 100 ms. This interval allows user to have finer granularity and control over flooding in the system. The value of this field is valid only if the floodsupport parameter is set to value Throttle.

Name	Description
<p><i>dropiffdbfull enable / disable</i></p>	<p>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.</p> <p>Type : Optional Valid Values: <i>enable or disable</i> Default value: GS_CFG_DEF_BRIDGE_IFFDBFULLDROP</p>
<p><i>resnetlearning enable / disable</i></p>	<p>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.</p> <p>Type : Optional Valid Values: <i>enable or disable</i> Default value: GS_CFG_DEF_NET_LEARNING_RSDNTL</p>

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
Netaging TimeOut(sec) : 600
BroadCast Support    : Enable
MultiCast Drop       : Disable
Throttling Rate      : 100
Drop If FDB full status : Enable

Slaveaging TimeOut(sec) : 600
Flood Support           : Disable
MultiCast Support       : Enable
Bridging Mode           : Unrestricted
Polling Interval (ms)   : 25
ResidentialNetLearning : Enable

Set Done
    
```

```

MacAddress           : 00:BB:CC:DD:EE:FF
No. of Ports         : 0
Base Type            : Transparent
Aging Timeout(sec)   : 20
Netaging TimeOut(sec) : 600
BroadCast Support    : Enable
MultiCast Drop       : Disable
Throttling Rate      : 100
Drop If FDB full status : Enable

Slaveaging TimeOut(sec) : 100
Flood Support           : Disable
MultiCast Support       : Enable
Bridging Mode           : Unrestricted
Polling Interval (ms)   : 25
ResidentialNetLearning : Enable
    
```

Output Fields

Field	Description
<i>MacAddress</i>	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.
<i>No. of Ports</i>	The maximum number of ports that can be controlled by this bridge.
<i>Base Type</i>	Indicates what type of bridging this bridge can perform. It is always Transparent Bridging or STP.
<i>Aging TimeOut</i>	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.
<i>Slaveaging TimeOut</i>	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.
<i>Floodsupport</i>	This is used to specify whether the unknown unicast packets are to be flooded or not. The value 'throttle' specifies that throttling using the 'throttling rate' and 'polling interval' parameters, configured by the user, shall control the flooding. The fields 'throttleRate' and 'pollInterval' are valid only when the floodsupport is set to 'throttle'. 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.
<i>Bcastsupport</i>	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.
<i>Mcastsupport</i>	Used to specify whether the multicast is supported or not.
<i>Mcastdrop</i>	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 .
<i>NetAgingTimeout</i>	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.
<i>Bridging Mode</i>	This specifies the current state of full bridging on the bridge. The bridge 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.
<i>Throttling rate</i>	Defines the throttling Rate i.e. maximum number of FDB lookup failures resulting in flooding per second, beyond which, the flooding shall be throttled in the system. The value of this field is valid only if the ifloodsupport parameter in the system is set to value Throttle.

Field	Description
<i>Polling Interval (milliseconds)</i>	This indicates, in milliseconds the polling interval. User can modify the polling interval at run time. The polling interval is defined in milliseconds with granularity of 100 ms. This interval allows user to have finer granularity and control over flooding in the system. The value of this field is valid only if the ifloodsupport parameter is set to value Throttle.
<i>Drop If FDB full status</i>	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.
<i>ResidentialNetLearning</i>	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
<i>Priority</i> 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.
<i>Maxage</i> 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
<i>htime</i> 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
<i>Fdelay</i> 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
<i>Enable/disable</i>	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
<i>Protocol Spec</i>	An indication of what version of the Spanning Tree Protocol is being run.
<i>Priority</i>	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.
<i>Top. Changes</i>	The total number of topology changes detected by this bridge since the management entity was last reset or initialized.
<i>Curr Top. Age (Sec)</i>	The time (in second) since the last time a topology change was detected by the bridge entity.
<i>Desig Root</i>	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.
<i>Root Cost</i>	The cost of the path to the root as seen from this bridge.
<i>Root Port</i>	The port number of the port which offers the lowest cost path from this bridge to the root bridge.
<i>Hold Time (Sec)</i>	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.
<i>Br Max Age (Sec)</i>	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.
<i>Curr Max Age (Sec)</i>	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.
<i>Br Hello Time (Sec)</i>	The value that all bridges use for HelloTime when this bridge is acting as the root.
<i>Curr Hello Time (Sec)</i>	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.

Field	Description
<i>Br Fwd Delay (Sec)</i>	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.
<i>Curr Fwd Delay (Sec)</i>	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.
<i>STP status</i>	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 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 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
<code>portid portid</code>	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;
<code>enable/disable</code>	Spanning Tree Protocol to be enabled on the Port or not Type : Optional Valid values: enable, disable

Name	Description
<i>pcost path-cost</i>	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
<i>priority priority-value</i>	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
    
```

Set Done

```

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
<i>Port Id</i>	The port number of the port for which this entry contains Spanning Tree Protocol management information.
<i>Priority</i>	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.

Field	Description
<i>State</i>	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.
<i>Port Status</i>	The enabled/disabled status of the port.
<i>Path Cost</i>	The contribution of this port to the path cost of paths towards the spanning tree root which include this port.
<i>Desig Cost</i>	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.
<i>Desig Root</i>	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.
<i>Desig Bridge</i>	The Bridge Identifier of the bridge which this port considers to be the Designated Bridge for this port's segment.
<i>Desig Port</i>	The Port Identifier of the port on the Designated Bridge for this port's segment.
<i>Fwd Transitions</i>	The number of times this port has transitioned from the Learning state to the Forwarding state.
<i>STP status</i>	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.

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
<code>ip dest-ip-address</code>	Destination IP address of this route. Type: Mandatory Valid Values : Any valid class A/B/C IP
<code>Gwyip gwy-ip-address</code>	The IP address of the next hop for this route. Type: Mandatory Valid Values : Any valid class A/B/C IP_
<code>mask net-mask</code>	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
<i>Destination</i>	Destination IP address of this route.
<i>Mask</i>	The Mask of the destination IP Address.
<i>Gateway</i>	The IP address of the next hop for this route.
<i>If-Name</i>	The local interface, through which the next hop of this route will be reached.
<i>Route Type</i>	The type of route. It may be : <i>dir</i> (for Direct) or <i>ind</i> (for Indirect).
<i>Route Orig</i>	The routing mechanism, through which this route was learned. It may be: <i>NET</i> (for Network Management), <i>LCL</i> (for Local), <i>RIP</i> , <i>ICMP</i> , <i>DYI</i> (Dynamic through Interface creation).
<i>Age</i>	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.

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
<code>ip ip-address</code>	IP address corresponding to the media-dependent physical address Type: Mandatory Valid values: Any valid class A/B/C IP address
<code>macaddr mac-address</code>	The media-dependent physical address Type: Mandatory Valid values: 0:0:0:0:0:1 - 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: <i>eth-0 - *</i> . This entry contains bridge management information.
Type	This defines the type of mapping in use. The value <i>Invalid</i> has the effect that this entry is not used. It may be: <i>Static, Dynamic, Other</i>
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.

2.29 Bridge Mode Commands

2.29.1 get bridge mode

Description	Use this command to get the current bridging mode.
Command Syntax	<code>get bridge mode</code>
Parameters	None
Example	<code>\$ get bridge mode</code>
Output	Bridging Mode is Enabled
Output Fields	None
Caution	None.
References	<ul style="list-style-type: none">• 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
<i>Ifname interface-name</i>	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
<i>If-Name</i>	This is an interface on which DHCP is running; It can be : <i>eth-*</i> , <i>aggr-*</i>
<i>Server</i>	This specifies the address of the DHCP server with whom the client has obtained the IP address and other configurations
<i>Status</i>	This specifies the current state of the client. It may be: <i>Init</i> , <i>Selecting</i> , <i>Bound</i> , <i>Requesting</i> , <i>Renew</i> or <i>Bind</i> .
<i>Lease Start Date</i>	This signifies the date on which the DHCP server leased out the IP address to the client.
<i>Lease Time</i>	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

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
<i>Ifname interface-name</i>	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 : <i>eth-0- *</i>

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

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

Caution None.

References

- dhcp client info related commands.

2.31 Forwarding Table Commands

2.31.1 get bridge forwarding

Description Use this command to get.

Command Syntax `get bridge forwarding [vlanid vlanid] [mac-address mac-address]`

Parameters

Name	Description
<code>vlanid vlanid</code>	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learnt entry or all learnt entries, the VlanId should be set to a valid value in case of IVL. In SVL case, this value is ignored. In Vlan unaware case, it should have INVALID value set. Type: Delete -- Mandatory Get -- Optional Valid values: 0 - GS_CFG_MAX_VLAN_ID
<code>mac-address mac-address</code>	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 mac-address mac-address`

Mode Super-User, User

Example `$ get bridge forwarding vlanid 10 mac-address 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
<i>MAC Addr</i>	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.
<i>PortId</i>	Vlan Id to uniquely identify the entry for which the bridge has forwarding and/or filtering information. To delete an individual learnt entry or all learnt entries, the VlanId should be set to a valid value in case of IVL.
<i>VlanId</i>	Port number of the port on which a frame having a source address equal to the value of the corresponding instance of mac-address, has been seen.
<i>Status</i>	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]`

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
<i>portid portid</i>	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
<i>vlanid vlanid</i>	To delete all the entries per port, the value of Fdbld should be Invalid. In case of deletion of all entries per port per VlanId, the value of Fdbld shall be a valid one. Type: Delete -- Optional Get -- Optional Valid values: 0 - GS_CFG_MAX_VLAN_ID
<i>macaddr macaddr</i>	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
<i>Port Id</i>	Port ID identifying the entries learnt on this port and entries statically configured on this port in FDB.
<i>vlan id</i>	To delete all the entries per port, the value of Fdbld should be Invalid. In case of deletion of all entries per port per VlanId, the value of Fdbld shall be a valid one.

FIELD	Description
<i>Mac Addr</i>	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.
<i>Status</i>	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] [macaddress macaddress]`

Parameter

Name	Description
<i>vlanid vlanid</i>	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
<i>macaddress macaddress</i>	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:FF. Type: Optional Valid values:

Example `$ get bridge mcast forwarding vlanid 1 macaddress 01:00:5E:00:08:01`

Output

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

Output Fields

Field	Description
<i>Vlan Index</i>	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.
<i>Mac Address</i>	The destination Group MAC address in a frame, to which this entry's filtering information applies.

Field	Description
<i>Egress Ports</i>	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.
<i>Group Learnt</i>	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
<code>vlanid vlanid</code>	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: 1-GS_CFG_MAX_VLAN_ID

Name	Description
<i>ucastaddr ucastaddr</i>	The Destination unicast Mac Address, to which filtering info applies Type: Mandatory Valid values:
<i>portid portid</i>	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- <i>GS_CFG_MAX_BRIDGE_PORT</i>

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
<i>Vlan Index</i>	The VLAN index referring to this VLAN.
<i>Ucast Address</i>	The Destination unicast Mac Address, to which filtering information applies.
<i>Port Id</i>	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
<p><i>vlanid</i> <i>vlanid</i></p>	<p>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.</p> <p>Type: Optional for all commands Valid values: 0 - GS_CFG_MAX_VLAN_ID Default value:</p>
<p><i>mcastaddr</i> <i>mcastaddr</i></p>	<p>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: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.</p> <p>Type : Create – Mandatory Modify – Mandatory Delete – Mandatory Get - Optional</p> <p>Default value:</p>
<p><i>egressports</i> <i>egressports</i> / <i>none</i></p>	<p>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.</p> <p>Type :Optional for all commands Valid values: 1 – GS_CFG_MAX_BRIDGE_PORTS Default value: none</p>
<p><i>forbidegressports</i> <i>forbidegressports</i> / <i>none</i></p>	<p>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.</p> <p>Type :Optional for all commands Valid values : 1 – GS_CFG_MAX_BRIDGE_PORTS Default value: none</p>

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
<i>Vlan Index</i>	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.
<i>Mcast Address</i>	The destination multicast MAC address in a frame, to which the filtering information of this entry applies.
<i>Egress ports</i>	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.
<i>Forbidden Egress ports</i>	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
<code>vlanid vlanid</code>	<p>The VLAN id for this VLAN. In devices supporting "Shared Vlan for multicast" capability, the information for a multicast mac addr 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 addr hence vlanid is a mandatory parameter in all the commands other than - get. For No Vlan case vlan id is not required.</p> <p>Type : Get – Optional Modify - Optional</p> <p>Valid values: 0 - GS_CFG_MAX_VLAN_ID</p> <p>Default value:</p>
<code>Egressports egressports none</code>	<p>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.</p> <p>Type : Modify - Optional</p> <p>Valid values: 1-386</p>
<code>forbidegressports forbidegressports none</code>	<p>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.</p> <p>Type : Modify - Optional</p> <p>Valid values: 1-386</p>

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
<i>VLAN Index</i>	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, VLAN id is a mandatory parameter in all the commands other than - get. For No Vlan case, VLAN id is not required.
<i>Forward All Ports</i>	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.
<i>Forward All Static Ports</i>	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.
<i>Forward All Forbidden Ports</i>	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
<code>vlanid vlanid</code>	<p>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, VLAN id is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required.</p> <p>Type : Modify – Optional Get - Optional</p> <p>Valid values: 0 - GS_CFG_MAX_VLAN_ID Default value:</p>
<code>Egressports egressports/none</code>	<p>These 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.</p> <p>Type : Modify - Optional</p> <p>Valid values: 1-386</p>
<code>forbidegressports forbidegressports /none</code>	<p>These set of ports configured by management in this VLAN for which the Service Requirement attribute ForwardUnregisteredMulticastGroups may not be dynamically registered by GMRP. More than one value can be given separated by spaces.</p> <p>Type : Modify - Optional</p> <p>Valid values: 1-386</p>

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
```

Output Fields

Field	Description
<i>VLAN Index</i>	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, VLAN id is a mandatory parameter in all the commands other than - get. For No Vlan case, vlan id is not required
<i>Forward Unregistered Ports</i>	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.
<i>Forward Unregistered Static Ports</i>	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.
<i>Forward Unregistered Forbidden Ports</i>	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
<code>bindingstatus enable / disable</code>	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
<code>Binding Status Changed Trap</code>	This allows the user to enable or disable the generation of 'binding status changed' trap.

Caution None

References • Bridge Commands.

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

Name	Description
<i>maxucast maxucast</i>	<p>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.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the CPE side is <i>GS_CFG_MAX_NUM_CPE_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a CPE side bridge port is <i>GS_CFG_DEF_NUM_CPE_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the NET side is <i>GS_CFG_MAX_NUM_NET_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a bridge port is <i>GS_CFG_DEF_NUM_NET_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the downlink side is <i>GS_CFG_MAX_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a bridge port is <i>GS_CFG_DEF_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>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.</p> <p>Type: Create -- Optional Modify -- Optional Default value: 256</p>

Name	Description
<i>learning enable/disable</i>	<p>The <i>State of Learning</i> 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 <i>GS_CFG_DEF_PORT_LEARNING_STATUS</i> and for a NET side bridge port, the default value shall be <i>GS_CFG_DEF_NET_PORT_LEARNING_STATUS</i>. 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.</p> <p>Type: Create -- Optional Modify -- Optional Valid Values: <i>enable or disable</i> Default value: <i>enable</i></p>
<i>status enable/disable</i>	<p>The desired state of the bridge port. On creation, the bridge port shall be created in enabled AdminStatus by default.</p> <p>Type: Create -- Optional Modify -- Optional Valid Values: <i>enable or disable</i> Default value: <i>disable</i></p>
<i>stickystatus enable/disable</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional Valid Values: <i>enable or disable</i> Default value: <i>enable</i></p>
<i>FdbModify enable/disable</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional Valid Values: <i>enable or disable</i> Default value: <i>enable</i></p>

Name	Description
<i>acfglbdenyapply Enable /Disable</i>	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 <i>GS_CFG_DEF_NET_PORT_ACL_GLB_DENY_STATUS</i> . For CPE side ports, the default value shall be <i>GS_CFG_DEF_CPE_PORT_ACL_GLB_DENY_STATUS</i> . 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
<i>acfglbtrackapply Enable /Disable</i>	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 <i>GS_CFG_DEF_NET_PORT_ACL_GLB_TRACK_STATUS</i> . For CPE side ports, the default value shall be <i>GS_CFG_DEF_CPE_PORT_ACL_GLB_TRACK_STATUS</i> . 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 enable fdbmodify disable acfglbdenyapply Disable acfglbtrackapply Disable`

Output

```
Entry Created

Port Id           : 10                IfName           : eth-0
Max Unicast Addresses : 200          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
<i>Port Id</i>	The bridge port identifier
<i>If Name</i>	The interface name associated with the given port.

FIELD	Description
<p><i>Max Unicast Addresses</i></p>	<p>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.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the CPE side is <i>GS_CFG_MAX_NUM_CPE_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a CPE side bridge port is <i>GS_CFG_DEF_NUM_CPE_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the NET side is <i>GS_CFG_MAX_NUM_NET_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a bridge port is <i>GS_CFG_DEF_NUM_NET_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The maximum number of unicast entries that can be learned or configured on a bridge port on the downlink side is <i>GS_CFG_MAX_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>The default value for the number of unicast entries that can be learned or configured on a bridge port is <i>GS_CFG_DEF_NUM_DNLINK_PORT_UCAST_MAC_ENTRIES</i>.</p> <p>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.</p>
<p><i>Learning status</i></p>	<p>The <i>State of Learning</i> 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 <i>GS_CFG_DEF_PORT_LEARNING_STATUS</i> and for a NET side bridge port, the default value shall be <i>GS_CFG_DEF_NET_PORT_LEARNING_STATUS</i> . 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.</p>

FIELD	Description
<i>Port oper status</i>	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.
<i>Port admin status</i>	The desired state of the bridge port. On creation the bridge port shall be created in enabled AdminStatus by default.
<i>Sticky Status</i>	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.
<i>FDB Modify</i>	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.
<i>Acl Global Deny Apply</i>	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 <i>GS_CFG_DEF_NET_PORT_ACL_GLB_DENY_S TATUS</i> . For CPE side ports, the default value shall be <i>GS_CFG_DEF_CPE_PORT_ACL_GLB_DENY_S TATUS</i> . 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
<i>Acl Global Track Apply</i>	<p>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 <i>GS_CFG_DEF_NET_PORT_ACL_GLB_TRACK_STATUS</i>. For CPE side ports, the default value shall be <i>GS_CFG_DEF_CPE_PORT_ACL_GLB_TRACK_STATUS</i>. 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.</p>
<i>Sensed IfIndex</i>	<p>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 cannot 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..</p>

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

FIELD	Description
<i>HC In Frames</i>	Number of frames that have been received by this port from its segment. This is valid only for Ethernet interfaces.
<i>HC Out Frames</i>	Number of frames that have been transmitted by this port to its segment. This is valid only for Ethernet interfaces.
<i>HC In Discards</i>	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
<i>portid portid</i>	The index of base port Type :Optional Valid values: 1 - <i>GS_CFG_MAX_BRIDGE_PORTS</i> Default value: None

Mode Super-User, User

Example `get bridge port cap`

Output

```
portid          : 45
Port Capabilities : Tagging Frame Types
```

Output Fields

Field	Description
<i>portid</i>	The index of base port.
<i>Port Capabilites</i>	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
<code>portid portid</code>	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
<code>ifname ifname</code>	'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
<i>Port Id</i>	The bridge port with which a lower interface is being associated in the autosensing scenario.
<i>Interface Index</i>	'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
<i>ip-address domain-name</i>	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 '.')
<i>-t</i>	This indicates continuous ping to host, until the user interrupts. Type : Optional
<i>-n number</i>	This specifies the number of pings to send to host. Type : Optional Valid values : 1-65535 Default Value : 4
<i>-w seconds</i>	This specifies the time interval between successive ping requests Type : Optional Valid values : 0-65535 Default Value : 2
<i>-I time-to-live</i>	This specifies the time-to-live, to be filled in the ping request Type : Optional Valid values : 0 – 255 Default Value : 64
<i>-s size</i>	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
<i>64 bytes of...</i>	This denotes the number of bytes in the ping packet and the source IP Address.
<i>Seq</i>	This denotes the ping attempt counter value.
<i>Ttl</i>	This is the Time to live for the packet.
<i>Rtt</i>	This denotes the Round trip Time for the packet. A value less than <i>10ms</i> is shown as <i>0</i> .

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
<i>rindex rindex</i>	Unique identifier of the probe. Type : Create – Mandatory Delete – Mandatory Get - Optional Valid values : 0-20
<i>Ifname interface-name</i>	This specifies the Interface name. Type : Create – Mandatory Valid values : eoa-0 - *, eth-0-*
<i>Owner owner-string</i>	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
    
```

Output Fields

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

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] [gsparmtestinputfile gsparmtestinputfile] [atuctargetsnr atuctargetsnr] [atucmaxsnrmargin atucmaxsnrmargin] [atucgsrcsintcorrectionup 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] [atucgsmxbitsperbin atucgsmxbitsperbin] [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] [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] [atucgscodinggain Auto | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7] [atucgsrcsfastovrhddn 50 | 25 | 12 | 6 | 3 | 1 | Disable] [atucgsrcsintcorrectiondn 125Us | 250Us | 500Us | 1Ms | 2Ms | 4Ms | Disable] [atucgsrcsfastovrhdup 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 | Hsads1M1 | Hsads1M2] [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 pmstatal3enable | pmstatal2enable] [atucconfpml0time atucconfpml0time] [atucconfpml2time atucconfpml2time] [atucconfpml2atpr atucconfpml2atpr] [atucconfpml2rate atucconfpml2rate] [atucconfgsreads12enable disable | enable]`

Parameters

Name	Description
<i>ifname ifname</i>	The ADSL line interface name, whose profile is to be modified or viewed Type : Modify -- Mandatory Get -- Optional Valid values: dsl-0 - dsl-*
<i>atucrateadaptation fixed</i> <i>adaptAtStartup</i> <i>adaptAtRuntime</i>	Defines what form of transmit rate adaptation is configured, on this modem. Refer to ADSL Forum TR- 005 for more information. Type : Modify -- Optional
<i>gsparamtestinputfile</i> <i>gsparamtestinputfile</i>	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
<i>atuctargetsnr</i> <i>atuctargetsnr</i>	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
<i>atucmaxsnrmargin</i> <i>atucmaxsnrmargin</i>	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
<i>atucgrsintcorrectionup</i> <i>125us</i> <i>250us</i> <i>500us</i> <i>1ms</i> <i>2ms</i> <i>4ms</i> <i>disable</i>	Sets the correction time for the upstream interleaved buffer. RS can also be disabled. Type : Modify -- Optional
<i>atucdnshiftsnrmargin</i> <i>atucdnshiftsnrmargin</i>	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
<i>atucupshiftsnrmargin</i> <i>atucupshiftsnrmargin</i>	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

Name	Description
<p><i>atucminupshifftime</i> <i>atucminupshifftime</i></p>	<p>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</p>
<p><i>atucmindnshifftime</i> <i>atucmindnshifftime</i></p>	<p>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</p>
<p><i>atucfastmintxrate</i> <i>atucfastmintxrate</i></p>	<p>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</p>
<p><i>atucintlmintxrate</i> <i>atucintlmintxrate</i></p>	<p>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</p>
<p><i>atucfastmaxtxrate</i> <i>atucfastmaxtxrate</i></p>	<p>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</p>
<p><i>atucintlmaxtxrate</i> <i>atucintlmaxtxrate</i></p>	<p>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</p>

Name	Description
<i>atucmaxintldelay</i> <i>atucmaxintldelay</i>	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
<i>type noChannel fastOnly</i> <i> interleavedOnly </i> <i>fastOrInterleaved </i> <i>fastAndInterleaved</i>	This object is used to configure the ADSL physical line mode Type : Modify -- Optional
<i>atucgstxendbin</i> <i>atucgstxendbin</i>	The highest bin number allowed for Tx signal. Type : Modify -- Optional Valid values: 0x06 - GS_CFG_MAX_ATUC_TX_END_BIN
<i>atucgstxstartbin</i> <i>atucgstxstartbin</i>	The lowest bin number allowed for Tx signal. Type : Modify -- Optional Valid values: 0x06 - GS_CFG_MAX_ATUC_TX_START_BIN
<i>atucgsmxbitsperbin</i> <i>atucgsmxbitsperbin</i>	The maximum Rx number of bits per bin. Type : Modify -- Optional Valid values: 0 - 15
<i>atucgsrxstartbin</i> <i>atucgsrxstartbin</i>	The lowest bin number allowed for Rx signal. Type : Modify -- Optional Valid values: 0x01 - GS_CFG_MAX_ATUC_RX_START_BIN
<i>atucgsrxendbin</i> <i>atucgsrxendbin</i>	The highest bin number allowed for Rx signal. Type : Modify -- Optional Valid values: 0x06 - GS_CFG_MAX_ATUC_RX_END_BIN
<i>atucgsrxbinadjust</i> <i>disable</i>	This parameter employs Rx Start/End bin settings Type : Modify -- Optional
<i>atucgsltriggermode</i> <i>disable {locCrc </i> <i>rmtCrc snrInc </i> <i>snrDec}+</i>	The type of event that triggers a fast retrain Type: Modify -- Optional
<i>atucgsadi2x standard</i>	For non-standard compliant ADI CPE Type: Modify -- Optional

Name	Description
<code>atucgsstandard t1413 / gLite / gDmt / alct114 / multimode / adi / alct1 / t1413Auto / adslPlus / GspanPlus / adsl2 / adsl2Plus</code>	Preferred standard compliance. Outcome is dependent upon standard support of the remote unit. Conexant High Speed ADSL DMT (ADSL+) applications only Type: Modify -- Optional
<code>atucgsinitiate waitPn / ctone / initiatePn</code>	Specifies which end initiates startup. It is also used to send a C-tone to the remote unit. Type: Modify -- Optional
<code>atucgstxpoweratten 0 / .1 / .2 / .3 / .4 / .5 / .6 / .7 / .8 / .9 / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12</code>	The value in dB of Tx power attenuation Type: Modify -- Optional
<code>atucgscodinggain Auto / 0 / 1 / 2 / 3 / 4 / 5 / 6 / 7</code>	Sets the coding gain in dB increments Type: Modify -- Optional
<code>atucgsrcfastovrhddn 50 / 25 / 12 / 6 / 3 / 1 / Disable</code>	This parameter sets the percentage overhead for the downstream fast buffer. RS can also be disabled. Type: Modify -- Optional
<code>atucgsrcsintcorrectiondn 125Us / 250Us / 500Us / 1Ms / 2Ms / 4Ms / Disable</code>	This parameter sets the correction time for the downstream interleaved buffer. RS can also be disabled. Type: Modify -- Optional
<code>atucgsrcfastovrhdup 50 / 25 / 12 / 6 / 3 / 1 / Disable</code>	This parameter sets the percentage overhead for the upstream fast buffer. RS can also be disabled. Type: Modify -- Optional
<code>atucgsdrstby Disable / Enable</code>	This parameter provides the ability to disable power to the line driver Type: Modify -- Optional
<code>atucgsexpexch Expanded / Short</code>	T1.413 parameter that Enables/Disables EES Type: Modify -- Optional
<code>atucgsescfastretrain Enable / Disable</code>	This parameter enables/disables escape to the fast retrain capability Type: Modify -- Optional
<code>atucgsfastretrain Enable / Disable</code>	This parameter enables/disables the fast retrain capability. Currently supported only in G.lite mode. Type: Modify -- Optional
<code>atucgsbitswap Disable / Enable</code>	This parameter enables/disables bit swapping Type: Modify -- Optional
<code>atucgsntr LocalOcs / Refck8K</code>	This parameter enables/disables NTR on a per chip basis Type: Modify -- Optional

Name	Description
<code>atucgsannextype AnnexA / AnnexB HighSpeed GspanPlus V1010 Adsl2</code>	This parameter is set as per annex compliance of the code release. Conexant High Speed ADSL DMT (ADSL+) applications only Type: Modify -- Optional
<code>atucgsalctlusver Unknown</code>	For T1.413 demo purposes only Type: Modify -- Optional
<code>atucgsusecustombin Enable Disable</code>	This parameter enables/disables user selection of any of the 511 bins that will be enabled for upstream and downstream transmission. Type: Modify -- Optional
<code>atucgsdnbinusage atucgsdnbinusage</code>	'1' in bit position indicates usage of corresponding bin. '0' disables usage of corresponding bin. Type: Modify -- Optional
<code>atucgsmaxdco 64 128 256</code>	Maximum interleaving depth supported by the customer's hardware Type: Modify -- Optional
<code>atucgsfullretrain Enable Disable</code>	Indicates enable/disable of auto retrain capability Type: Modify -- Optional
<code>atucgsadvcap disable / {annexa annexb adslplus gspanplus}+</code>	This parameter controls if the CO will attempt to startup using alternate standards if the CPE does not support ADSL+. Type: Modify -- Optional
<code>atucgspsdmasktype Adsl / Hsads1M1 Hsads1M2</code>	This parameter selects the PSD mask option to be used Type: Modify -- Optional
<code>dmtconfmode ecMode fdmMode</code>	Indicates whether there is overlap or no overlap of bins Type: Modify -- Optional
<code>atucgseraseprofs enable disable</code>	This parameter enables/disables the ability to erase all fast retrain profiles at startup Type: Modify -- Optional
<code>atucgsextrsmemory present notpresent</code>	Indicates whether customer's Hardware uses external RS RAM Type: Modify -- Optional
<code>paramhybridlossteststart paramhybridlossteststart</code>	Start bin for range of bins to be measured Type : Modify -- Optional Valid values: 0x0 - GS_CFG_MAX_ATUC_HYBRID_TEST_START_BIN
<code>paramhybridlosstestend paramhybridlosstestend</code>	End bin for range of bins to be measured Type : Modify -- Optional Valid values: 0x0 - GS_CFG_MAX_ATUC_HYBRID_TEST_END_BIN

Name	Description
<i>dmptrellis on off</i>	<p>This parameter enables/disables trellis coding. Trellis coding should always be enabled for its clear performance advantage.</p> <p>Type : Modify -- Optional</p>
<i>aturtargetsnrmargin</i> <i>aturtargetsnrmargin</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 310</p>
<i>aturdnshiftnrmargin</i> <i>aturdnshiftnrmargin</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 310</p>
<i>aturupshiftnrmargin</i> <i>aturupshiftnrmargin</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 310</p>
<i>aturminupshifftime</i> <i>aturminupshifftime</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 16383</p>
<i>aturmindnshifftime</i> <i>aturmindnshifftime</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 16383</p>
<i>aturfastmintxrate</i> <i>aturfastmintxrate</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 0xffff</p>
<i>aturintlmintxrate</i> <i>aturintlmintxrate</i>	<p>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.</p> <p>Type : Modify -- Optional</p> <p>Valid values: 0 - 0xffff</p>

Name	Description
<i>aturfastmaxtxrate</i> <i>aturfastmaxtxrate</i>	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
<i>aturintlmactxrate</i> <i>aturintlmactxrate</i>	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
<i>aturmaxintldelay</i> <i>aturmaxintldelay</i>	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
<i>databoost Enable/Disable</i>	Conexant parameter that enables/disables DataBoost option Type : Modify -- Optional Valid values: Enable Disable
<i>upstreampsd</i> <i>Extended/Standard</i>	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
<i>atucconfpmmode</i> <i>pmstate13enable/pmstate12enable</i>	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
<i>atucconfpml0time</i> <i>atucconfpml0time</i>	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

Name	Description
<i>atucconfpml2time</i> <i>atucconfpml2time</i>	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
<i>atucconfpml2atpr</i> <i>atucconfpml2atpr</i>	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
<i>atucconfpml2rate</i> <i>atucconfpml2rate</i>	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
<i>atucconfgsreads12enable</i> <i>disable/enable</i>	This READSL2 configuration parameter defines whether or not downstream READSL2 operation should be forced by ATU-C. Type: Modify -- Optional

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 Rate(bps)      : 0xFA00
Conf GsREADSL2 Enable    : disable

```

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

```

Output Fields

Field	Description
<i>IfName</i>	The ADSL line interface name, whose profile is to be modified or viewed.
<i>Rate Adaptation</i>	Defines what form of transmit rate adaptation is configured on this modem. Refer to ADSL Forum TR- 005 for more information.
<i>Target Snr Margin (dB/10)</i>	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.
<i>Max Snr Margin (dB/10)</i>	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.
<i>GsRsIntCorrectionUp</i>	Sets the correction time for the upstream interleaved buffer. RS can also be disabled.
<i>Dnshift SnrMargin (dB/10)</i>	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.
<i>Upshift SnrMargin (dB/10)</i>	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.
<i>Min Upshift Time (sec)</i>	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.
<i>Min Dnshift Time (sec)</i>	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.

Field	Description
<i>Fast Min Tx Rate (bps)</i>	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.
<i>Intl Min Tx Rate (bps)</i>	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.
<i>Fast Max Tx Rate (bps)</i>	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.
<i>Intl Max Tx Rate (bps)</i>	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.
<i>Max Intl Delay (ms)</i>	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.
<i>GsTxStartBin</i>	The lowest bin number allowed for Tx signal.
<i>GsTxEndBin</i>	The highest bin number allowed for Tx signal.
<i>GsRxStartBin</i>	The lowest bin number allowed for Rx signal.
<i>GsRxEndBin</i>	The highest bin number allowed for Rx signal.
<i>GsMaxBitsPerBin</i>	The maximum Rx number of bits per bin.
<i>GsMaxDCo</i>	Maximum interleaving depth supported by the customer's hardware.
<i>GsRxBinAdjust</i>	This parameter employs Rx Start/End bin settings.
<i>GsEraseProfiles</i>	This parameter enables/disables the ability to erase all fast retrain profiles at startup.
<i>GsAdi2x</i>	For non-standard compliant ADI CPE.
<i>GsStandard</i>	Preferred standard compliance. Outcome is dependent upon standard support of the remote unit. Conexant High Speed ADSL DMT (ADSL+) applications only.

Field	Description
<i>GsInitiate</i>	Specifies which end initiates startup. It is also used to send a C-tone to the remote unit.
<i>GsTxPowerAtten</i>	The value in dB of Tx power attenuation.
<i>GsCodingGain</i>	Sets the coding gain in dB increments.
<i>GsRsFastOvrhdDown</i>	This parameters sets the percentage overhead for the downstream fast buffer. RS can also be disabled.
<i>GsRsIntCorrectionDown</i>	This parameter sets the correction time for the downstream interleaved buffer. RS can also be disabled.
<i>GsRsFastOvrhdUp</i>	This parameter sets the percentage overhead for the upstream fast buffer. RS can also be disabled.
<i>GsDrStby</i>	This parameter provides the ability to disable power to the line driver.
<i>GsExpandedExchange</i>	T1.413 parameter that Enables/Disables EES.
<i>GsEscapeFastRetrain</i>	This parameter enables/disables escape to the fast retrain capability.
<i>GsFastRetrain</i>	This parameter enables/disables the fast retrain capability. Currently supported only in G.lite mode.
<i>GsBitSwap</i>	This parameter enables/disables bit swapping.
<i>GsNtr</i>	This parameter enables/disables NTR on a per chip basis.
<i>GsAnnexType</i>	This parameter is set as per Annex compliance of the code release. Conexant High Speed ADSL DMT (ADSL+) applications only
<i>GsAlctlUsVer</i>	For T1.413 demo purposes only.
<i>GsUseCustomBin</i>	This parameter enables/disables user selection of some of those 511 bins, that will be enabled for upstream and downstream transmission.
<i>GsFullRetrain</i>	Indicates enable/disable of auto retrain capability.
<i>GsPsdMaskType</i>	This parameter selects the PSD mask option to be used
<i>DmtConfMode</i>	Indicates whether there is overlap or no overlap of bins.
<i>GsExtRsMemory</i>	Indicates whether customer's Hardware uses external RS RAM.
<i>GsParamHybridLossTestStart</i>	Start bin for range of bins to be measured.
<i>GsParamHybridLossTestEnd</i>	End bin for range of bins to be measured.

Field	Description
<i>GsDmtTrellis</i>	This parameter enables/disables trellis coding. Trellis coding should always be enabled for its clear performance advantage.
<i>GsAdvertisedCapabilities</i>	This parameter controls if the CO will attempt to startup using alternate standards if the CPE does not support ADSL+.
<i>GslTriggerMode</i>	The type of event that triggers a fast retrain.
<i>Type</i>	This object is used to configure the ADSL physical line mode.
<i>GsDnBinUsage</i>	'1' in bit position indicates usage of corresponding bin, whereas a '0' disables usage of corresponding bin.
<i>ParametricTestInputFile</i>	Indicates Name of the Input file that contains the Mask Array Size, lower and upper mask Array. Null string means no file is specified.
<i>Target Snr Margin (dB/10)</i>	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.
<i>Dnshift SnrMargin (dB/10)</i>	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.
<i>Upshift SnrMargin (dB/10)</i>	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.
<i>Min Upshift Time (sec)</i>	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.
<i>Min Dnshift Time (sec)</i>	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.
<i>Fast Min Tx Rate (bps)</i>	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.
<i>Intl Min Tx Rate (bps)</i>	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.

Field	Description
<i>Fast Max Tx Rate (bps)</i>	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.
<i>Intl Max Tx Rate (bps)</i>	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.
<i>Max Intl Delay (ms)</i>	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.
<i>Data Boost</i>	Conexant parameter that enables/disables DataBoost option.
<i>Upstream PSD</i>	Conexant parameter that sets the upstream PSD to be either extended or standard. Used for GSpan Plus only.
<i>Conf PM Mode</i>	PM-related parameter used by ATU-C to set the allowed link states. Both bit values can be given simultaneously in the input.
<i>Conf PML0 Time (sec)</i>	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.
<i>Conf PML2 Time (sec)</i>	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.
<i>Conf PML2 ATPR (dB/10)</i>	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.

Field	Description
<i>Conf PML2 Rate (bps)</i>	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.
<i>Conf GsREADSL2 Enable</i>	This READSL2 configuration parameter defines whether or not downstream READSL2 operation should be forced by ATU-C.

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] [linepconfpmsf idleop/dataop/l2op] [linedeltconfldsf inhibit/force] [enable | disable]`

Parameters

Name	Description
<code>ifname ifname</code>	The Interface name of DSL port. Type : Modify – Mandatory Get - Optional Valid values: <i>dsl-*</i>
<code>lineconfgsaction startup spectrumReverb analogLb digitalLb atmLp spectrumMedley spectrumPilot spectrumCMtpr spectrumRMtpr hybridLossTest rcvLinearityTest rcvFilterTest rcvPowerPerBinTest idleNoisePerBinTest totalIdleNoiseTest selt shutdown wakeup</code>	Allows action on per-line basis. Type : Optional
<code>Enable/disable</code>	Administrative Status of the interface. Type : Optional Valid values: <i>enable</i> or <i>disable</i>

Name	Description
<i>linepmconfpmsf</i> <i>idleop/dataop/l2op</i>	PM-related parameter used by ATU-C to force a change in the line state. (Not available for ADSL/ADSL2Plus) Type: Modify -- Optional
<i>linedeltconfldsf</i> <i>inhibit/force</i>	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

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

Output Verbose Mode On

```

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

Output Fields

Field	Description
<i>IfName</i>	The interface name of the DSL port.
<i>Line Type</i>	Line type used by the DSL port.
<i>Coding Type</i>	Line coding type used by the port.
<i>GsUtopia L2TxAddr</i>	UTOPIA Level 2 Tx address for a line.
<i>GsUtopia L2RxAddr</i>	UTOPIA Level 2 Rx address.
<i>Gs Clock Type</i>	Indicates use of crystal or oscillator.
<i>Gs Action</i>	Allows action on per-line basis.
<i>Admin Status</i>	Administrative Status of the interface.
<i>Oper Status</i>	Operational Status of the interface.
<i>Trans Atuc Cap</i>	Transmission modes that ATU-C is capable of.
<i>Trans Atuc Actual</i>	Transmission modes
<i>GsDmtTrellis</i>	Indicates whether trellis coding has been enabled or not.
<i>Trans Atur Cap</i>	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).

Field	Description
<i>PM Conf PMSF</i>	PM-related parameter used by ATU-C to force a change in the line state. (Not available for ADSL/ADSL2Plus)
<i>Line DELT Conf LDSF</i>	The DELT-related parameter used by ATU-C to force the line into the loop diagnostics mode. (Not available for ADSL and ADSL2plus)

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 [ dsctype Adsl | Sdsl | Shdsl ] [ linecoding
Other/Dmt/Cap/Qam ] [ txcfg {ansit1413 | etsi |
q9921PotsNonOverlapped | q9921PotsOverlapped |
q9921IsdnNonOverlapped | q9921IsdnOverlapped
|q9921TcmIsdnNonOverlapped | q9921TcmIsdnOverlapped |
q9922PotsNonOverlapped | q9922PotsOverlapped |
q9922TcmIsdnNonOverlapped |q9922TcmIsdnOverlapped |
q9921TcmIsdnSymmetric | adslPlusPotsNonOverlapped |
q9921GspanPlusPotsNonOverlapped |q9921GspanPlusPotsOverlapped |
vdslNonOverlapped | vdslOverlapped | q9922Adsl2PotsOverlapped |
q9922Adsl2PotsNonOverlapped | q9922Adsl2PlusPotsOverlapped |
q9922Adsl2PlusPotsNonOverlapped }+ ]
```

Parameters

Name	Description
<code>dsctype Adsl Sdsl Shdsl</code>	Identifies the firmware to be downloaded. Type :Optional for all commands Default value: <code>adsl</code>

Name	Description
<i>linecoding Other Dmt Cap Qam</i>	ADSL line code type. Type :Optional for all commands Default value: <i>Dmt</i>
<i>txcfg {ansit1413 etsi q9921PotsNonOverlapped q9921PotsOverlapped q9921IsdnNonOverlapped q9921IsdnOverlapped q9921TcmIsdnNonOverlapped q9921TcmIsdnOverlapped q9922PotsNonOverlapped q9922PotsOverlapped q9922TcmIsdnNonOverlapped q9922TcmIsdnOverlapped q9921TcmIsdnSymmetric q9921GspanPlusPotsNonOverlapped q9921GspanPlusPotsOverlapped vdslNonOverlapped vdslOverlapped }+ adslPlusPotsNonOverlapped q9922Adsl2PotsOverlapped q9922Adsl2PotsNonOverlapped q9922Adsl2PlusPotsOverlapped q9922Adsl2PlusPotsNonOverlapped }+</i>	Transmission capabilities with which the DSL system is configured. Type : Optional for all commands Default value: <i>q9921PotsNonOverlapped q9921PotsOverlapped</i>

Example `$ create dsl system txcfg q9921potsNonOverlapped`

Output Verbose Mode On

```
DSL Type : Adsl Line coding : Dmt
Tx Config : q9921potsNonOverlapped
```

Output Fields

Field	Description
<i>DSL Type</i>	Identifies the firmware to be downloaded.
<i>Line coding</i>	ADSL line code type.
<i>Tx Config</i>	Transmission capabilities with which the DSL system is configured.

Caution None.

References • DSL commands.

2.47 ADSL Cap Commands

2.47.1 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
<i>Tx Capability</i>	Transmission capabilities of the DSL system.

Caution None

- References**
- create dsl system
 - get dsl system.

2.48 ADSL Alarm Profile Commands

2.48.1 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]`

2.48.2 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] [atucthresh15minness atucthresh15minness] [atucthreshfastrateup atucthreshfastrateup] [atucthreshhintlrateup atucthreshhintlrateup] [atucthreshfastratedn atucthreshfastratedn] [atucthreshhintlratedn atucthreshhintlratedn] [atucinitfailtrap atucinitfailtrap] [atucoptrapenable atucoptrapenable] [aturthresh15minlofs aturthresh15minlofs] [aturthresh15minloss aturthresh15minloss] [aturthresh15minlprs aturthresh15minlprs] [aturthresh15minness aturthresh15minness] [aturthreshfastrateup aturthreshfastrateup] [aturthreshhintlrateup aturthreshhintlrateup] [aturthreshfastratedn aturthreshfastratedn] [aturthreshhintlratedn aturthreshhintlratedn]`

Parameters

Name	Description
<code>ifname ifname</code>	The ADSL alarm interface name, whose profile is to be modified or viewed Type : Modify -- Mandatory Get -- Optional Valid values: dsl-0 - dsl-*
<code>atucthresh15minlofs atucthresh15minlofs</code>	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
<p><i>atucthresh15minloss</i> <i>atucthresh15minloss</i></p>	<p>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</p>
<p><i>atucthresh15minlols</i> <i>atucthresh15minlols</i></p>	<p>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</p>
<p><i>atucthresh15minlprs</i> <i>atucthresh15minlprs</i></p>	<p>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</p>
<p><i>atucthresh15miness</i> <i>atucthresh15miness</i></p>	<p>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</p>
<p><i>atucthreshfastrateup</i> <i>atucthreshfastrateup</i></p>	<p>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</p>
<p><i>atucthreshintlrateup</i> <i>atucthreshintlrateup</i></p>	<p>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</p>
<p><i>atucthreshfastratedn</i> <i>atucthreshfastratedn</i></p>	<p>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</p>

Name	Description
<i>atucthreshintlratedn</i> <i>atucthreshintlratedn</i>	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. Type : Modify -- Optional Valid values: 0 - 0xffff
<i>atucinitfailtrap</i> <i>atucinitfailtrap</i>	Enables and disables the InitFailureTrap. This object is defaulted disable. Type : Modify -- Optional Valid values: true, false
<i>atucoptrapeable</i> <i>atucoptrapeable</i>	Enables/disables the OpStateChangeTrap. Type : Modify -- Optional Valid values: true, false
<i>aturthresh15minlofs</i> <i>aturthresh15minlofs</i>	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
<i>aturthresh15minloss</i> <i>aturthresh15minloss</i>	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
<i>aturthresh15minlprs</i> <i>aturthresh15minlprs</i>	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
<i>aturthresh15miness</i> <i>aturthresh15miness</i>	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". Type : Modify -- Optional Valid values: 0 - 900
<i>aturthreshfastrateup</i> <i>aturthreshfastrateup</i>	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

Name	Description
<i>aturthreshintlrateup</i> <i>aturthreshintlrateup</i>	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. Type : Modify -- Optional Valid values: 0 - 900
<i>aturthreshfastratedn</i> <i>aturthreshfastratedn</i>	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
<i>aturthreshintlratedn</i> <i>aturthreshintlratedn</i>	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. Type : Modify -- Optional Valid values: 0 - 900

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
ADSL ATUR Configuration :
-----
Thresh 15Min Lofs(sec) : 10          Thresh 15Min Loss(sec) : 10
Thresh 15Min Lprs(sec) : 10          Thresh 15Min Ess(sec)  : 10
Thresh Fast Rate Up(bps) : 10        Thresh Intl Rate Up(bps) : 10
Thresh Fast Rate Down(bps) : 10      Thresh Intl Rate Down(bps) : 10
    
```

Output Fields

Field	Description
<i>IfName</i>	The ADSL alarm interface name, whose profile is to be modified or viewed.
<i>Thresh 15Min Lofs(sec)</i>	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'.

Field	Description
<i>Thresh 15Min Loss(sec)</i>	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'.
<i>Thresh 15Min Lols(sec)</i>	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'.
<i>Thresh 15Min Lprs(sec)</i>	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'.
<i>Thresh 15Min Ess(sec)</i>	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'.
<i>Thresh Fast Rate Up(bps)</i>	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.
<i>Thresh Intl Rate Up(bps)</i>	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.
<i>Thresh Fast Rate Down(bps)</i>	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.
<i>Thresh Intl Rate Down(bps)</i>	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.
<i>Init Fail Trap</i>	Enables and disables the InitFailureTrap. This object is, by default disable .
<i>OpStateTrapEnable</i>	Enables/disables the OpStateChangeTrap.
<i>Thresh 15Min Lofs(sec)</i>	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'.

Field	Description
<i>Thresh 15Min Loss (sec)</i>	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'.
<i>Thresh 15Min Lprs (sec)</i>	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'.
<i>Thresh 15Min Ess (sec)</i>	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'.
<i>Thresh Fast Rate Up (bps)</i>	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.
<i>Thresh Intl Rate Up (bps)</i>	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.
<i>Thresh Fast Rate Down (bps)</i>	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.
<i>Thresh Intl Rate Down (bps)</i>	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.

Caution None

References • ADSL commands.

2.49 ADSL ATUR Trapsext Commands

2.49.1 get adsl atur trapsext

Description Use this command to get.

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

Parameters

Name	Description
<code>ifname ifname</code>	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
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

```

Output field description

Field	Description
<code>Ifname</code>	The ADSL Interface Name
<code>SesL Thresh 15Min Trap</code>	Severely Error Seconds 15-minute interval threshold reached
<code>UasL Thresh 15Min Trap</code>	Unavailable Error Seconds 15-minute interval threshold reached
<code>Lofs Thresh 1Day Trap</code>	Loss of Frames 1-day interval threshold reached
<code>Loss Thresh 1Day Trap</code>	Loss of Signal 1-day interval threshold reached
<code>Lprs Thresh 1Day Trap</code>	Loss of Power 1-day interval threshold reached
<code>ESs Thresh 1Day Trap</code>	Error Seconds 1-day interval threshold reached
<code>SesL Thresh 1Day Trap</code>	Severely Error Seconds 1-day interval threshold reached
<code>UasL Thresh 1Day Trap</code>	Unavailable Error Seconds 1-day interval threshold reached

Caution • None

References • ADSL Commands

2.50 ADSL ATUC Trapsext Commands

2.50.1 get adsl atuc trapsext

Description Use this command to get.

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

Parameter

Name	Description
<i>ifname</i> 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              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
    
```

Output field description

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

Caution None.

References None.

2.51 ADSL Alarm Profilext Commands

2.51.1 get adsl alarm profilext

Description Use this command to get.

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

2.51.2 modify adsl alarm profilext

Description Use this command to modify.

Command Syntax `modify adsl alarm profilext ifname ifname [atucthresh15minffstr atucthresh15minffstr] [atucthresh15minsesl atucthresh15minsesl] [atucthresh15minuasl atucthresh15minuasl] [atucthresh1daylofs atucthresh1daylofs] [atucthresh1dayloss atucthresh1dayloss] [atucthresh1daylois atucthresh1daylois] [atucthresh1daylprs atucthresh1daylprs] [atucthresh1dayess atucthresh1dayess] [atucthresh1dayesl atucthresh1dayesl] [atucthresh1dayuasl atucthresh1dayuasl] [aturthresh15minsesl aturthresh15minsesl] [aturthresh15minuasl aturthresh15minuasl] [aturthresh1daylofs aturthresh1daylofs] [aturthresh1dayloss aturthresh1dayloss] [aturthresh1daylprs aturthresh1daylprs] [aturthresh1dayess aturthresh1dayess] [aturthresh1dayesl aturthresh1dayesl] [aturthresh1dayuasl aturthresh1dayuasl]`

Parameters

Name	Description
<code>ifname ifname</code>	The ADSL alarm interface name, whose profile is to be modified or viewed Type: Modify -- Mandatory Get -- Optional
<code>atucthresh15minffstr atucthresh15minffstr</code>	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
<code>atucthresh15minsesl atucthresh15minsesl</code>	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
<code>atucthresh15minuasl</code>	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

Name	Description
<i>atucthresh1daylofs</i> 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
<i>atucthresh1dayloss</i> 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
<i>atucthresh1daylols</i> 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
<i>atucthresh1daylprs</i> 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
<i>atucthresh1dayess</i> 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
<i>atucthresh1dayesesl</i> atucthresh1dayesesl	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
<i>atucthresh1dayuasl</i> 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

Name	Description
<i>aturthresh15minsesl</i> 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
<i>aturthresh15minuasl</i> 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
<i>aturthresh1daylofs</i> 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
<i>aturthresh1dayloss</i> 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
<i>aturthresh1daylprs</i> 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
<i>aturthresh1dayess</i> 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

Name	Description
aturthresh1dayesl aturthresh1dayesl	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

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

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 giving 15 minute performance data collection period, which cause the SNMP agent to send an adslAtucFailedFastRTrap.
Atuc Thresh 15Min SesL(sec)	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.

Field	Description
<i>Atuc Thresh 15Min UasL(sec)</i>	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 <i>adslAtucUasLThreshTrap</i>
<i>Atuc Thresh 1 Day Lofs(sec)</i>	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 <i>'adslAtucPerfLofsThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day Loss(sec)</i>	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 <i>'adslAtucPerfLossThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day Lols(sec)</i>	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 <i>'adslAtucPerfLolsThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day Lprs(sec)</i>	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 <i>'adslAtucPerfLprsThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day ESs(sec)</i>	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 <i>'adslAtucPerfESsThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day SesL(sec)</i>	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 <i>'adslAtucPerfSesLThresh1DayTrap'</i> .
<i>Atuc Thresh 1 Day UasL(sec)</i>	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 <i>adslAtucPerfUasLThresh1DayTrap</i>
<i>Atur Thresh 15Min Sesl(sec)</i>	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 <i>adslAturPerfSesLThresh15MinTrap</i> .

Field	Description
<i>Atur Thresh 15Min UasL(sec)</i>	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 <code>adslAturPerfUasLThresh1DayTrap</code>
<i>Atur Thresh 1 Day Lofs(sec)</i>	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 <code>'adslAturPerfLofsThresh1DayTrap'</code> .
<i>Atur Thresh 1 Day Loss(sec)</i>	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 <code>'adslAturPerfLossThresh1DayTrap'</code> .
<i>Atur Thresh 1 Day Lprs(sec)</i>	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 <code>'adslAturPerfLprsThresh1DayTrap'</code> .
<i>Atur Thresh 1 Day ESs(sec)</i>	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 <code>'adslAturPerfESsThresh1DayTrap'</code> .
<i>Atur Thresh 1 Day SesL(sec)</i>	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 <code>'adslAturPerfSesLThresh1DayTrap'</code> .
<i>Atur Thresh 1 Day UasL(sec)</i>	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 <code>adslAturPerfUasLThresh1DayTrap</code>

Caution • None

References • ADSL Commands

2.52 ADSL ATUC Physical Commands

2.52.1 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
<code>ifname interface-name</code>	The ADSL ATUC physical interface name, for which configuration is to be viewed. Type : Get – Optional Valid values : <code>dsl-0-*</code>

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
CurrAttainable Rate(bps) : 40
GsOpState             : Data
GsTxAtmCellCounter   : 214
GsStartProgress       : 213
GsIdleBertError       : 200
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
Delt HLINSCus         : 2
Delt QLNMtUs          : 2
PM State              : idleop
Extended PSD Status   : Jj100
Curr Atn(dB/10)       : 80
Curr Output Pwr(dB/10) : 90
GsActualStandard      : T1_413
GsRxAtmCellCounter   : 215
GsIdleBertCells       : 100
Chan Perf BE          : 5
Delt HLOGMTus         : 2
DELT Last Tx State    : dmtatucg9941
Chan Perf CU          : 10
Chip Version          : 2

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
[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	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	44	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

Delt HLOGpsus
[0 ]      0      0      28227     102
[4 ]      4      0      41      0
[8 ]      0      0      4      0
[12]     42      0      0      0
[16]      0      0      0      0
[20]      0      0      0      0
[24]      0      0      0      0
[28]      0      0      0      0

Delt QLNpsus
[0 ]      0      0      0      0
[4 ]      0      0      0      0
[8 ]      0      0      0      0
[12]      0      0      0      0

Delt DMT Bin SNR
[0 ]      0      0      0      0
[4 ]      0      0      0      0
[8 ]      0      0      0      0
[12]      0      0      0      0
    
```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL ATUC physical interface name.
<i>Serial Number</i>	The vendor specific string that identifies the vendor equipment.
<i>Vendor ID</i>	Vendor ID code.
<i>Version Number</i>	The vendor specific version number sent by this ATU as part of the initialization messages.
<i>Curr Status</i>	Indicates current state of the ATUC line. This is a bit-map of possible conditions.
<i>Curr Snr Margin(dB/10)</i>	Noise Margin as seen by this ATU with respect to its received signal in tenth dB.
<i>Curr Atn(dB/10)</i>	Measured difference in the total power transmitted by the peer ATU and the total power received by this ATU.
<i>CurrAttainable Rate(bps)</i>	Indicates the maximum currently attainable data rate by the ATU. This value will be equal to, or greater than the current line rate.
<i>Curr Output Pwr(dB/10)</i>	Measured total output power transmitted by this ATU. This is the measurement that was reported during the last activation sequence.
<i>GsOpState</i>	Operational state of the Xcvr.
<i>GsActualStandard</i>	Actual standard used for connection, based on the outcome of the negotiation with the Remote Unit.

FIELD	Description
<i>GsTxAtmCellCounter</i>	Provides Tx ATM cell counter.
<i>GsRxAtmCellCounter</i>	Provides Rx ATM cell counter.
<i>GsStartProgress</i>	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
<i>GsBertError</i>	Provides the number of bit errors detected during BERT.
<i>Bin Number</i>	Bin index.
<i>Number of bits/bin</i>	Number of bits/ bin for the bin indexed by this element of the string. The 0 th element contains the number of bits per bin for 0, through the 31 st element, which contains the number bits for bin 31.
<i>GsIdleBertError</i>	Number of bit errors.
<i>GsIdleBertCell</i>	Number of idle cells.
<i>GsBertSync</i>	Indicates whether the Signal is in Sync or not.
<i>GsParametricTestResult</i>	Indicates the Result of the Parametric Test conducted on the Xcvr.
<i>GsSeltInfoValid</i>	Indicates the information validity for the SELT operation conducted on the Xcvr.
<i>GsSeltLoopLen (in Feet)</i>	Indicates the LOOP Length in Feet once when the SELT information is valid on the Xcvr.
<i>GsSeltLoopEnd</i>	Indicates whether the loop is short or open once when the SELT information is valid on the Xcvr.
<i>GsSeltLoopGauge</i>	Indicates the LOOP wire gauge information once, when the SELT information is valid on the Xcvr.
<i>GsSeltUpShannonCap (in bps)</i>	Indicates the upstream shannon capacity once, when the SELT information is valid on the Xcvr.
<i>GsSeltDownShannonCap (in bps)</i>	Indicates the downstream shannon capacity once, when the SELT information is valid on the Xcvr.
<i>Data Boost Status</i>	Conexant parameter that indicates whether DataBoost is utilized for the connection.
<i>Parametric Info</i>	Conexant parameter that indicates the Parametric Test Array.
<i>Chan Perf CD</i>	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)

FIELD	Description
<i>Chan Perf BE</i>	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)
<i>Delt HLINSCus</i>	The DELT-related parameter that provides the scale factor to be applied to the upstream Hlin (f) values. (Not available for ADSL and ADSL2plus)
<i>Delt HLINpsus</i>	The DELT-related parameter that provides an array of complex upstream Hlin (f) values in linear scale. (Not available for ADSL and ADSL2plus)
<i>Delt HLOGMTus</i>	The DELT-related parameter that provides the number of symbols used to measure the upstream Hlog (f). (Not available for ADSL and ADSL2plus)
<i>Delt HLOGpsus</i>	The DELT-related parameter that provides an array of real upstream Hlog (f) values in dB. (Not available for ADSL and ADSL2plus)
<i>Delt QLNMTus</i>	The DELT-related parameter that provides the number of symbols used to measure the upstream QLN (f) values. (Not available for ADSL and ADSL2plus)
<i>Delt QLNpsus</i>	The DELT-related parameter that provides an array of real upstream QLN (f) values in dB. (Not available for ADSL and ADSL2plus)
<i>Delt DMT Bin SNR</i>	The DELT-related parameter that provides an array of real upstream SNR (f) values in dB. (Not available for ADSL and ADSL2plus)
<i>DELT Last Tx State</i>	The DELT-related parameter that provides the last successful transmitted initialization state by the ATU-C. (Not available for ADSL and ADSL2plus)
<i>PM State</i>	The Line Power Management state. (Not available for ADSL)
<i>Chan Perf CU</i>	The total number of data-only cells received by ATU-C.
<i>Extended PSD Status</i>	The used upstream PSD status.
<i>Chip Version</i>	The DSP version number.

Caution None

References • ADSL commands.

2.53 ADSL ATUC Channel Commands

2.53.1 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
<i>ifname interface-name</i>	The ADSL ATUC channel interface name for which configuration is to be viewed. Type : Get – Optional Valid values : <i>dslf-*</i> , <i>dslj-*</i>

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

Output Verbose Mode On

```

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

Caution None

References • ADSL commands.

2.53.2 get adsl atuc chanperf

Description Use this command to get.

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

Parameters

Name	Description
<i>ifname interface-name</i>	The ADSL ATUC channel interface name, for which performance is to be viewed. Type : Get – Optional Valid values : <i>dsl1-0 - *, dslf-0 - *</i>

Example `$ get adsl atuc chanperf ifname dsl1-0`

Output Verbose Mode On

```

Ifname                : dsl1-0
Perf Valid Intervals  : 20
Perf Invalid Intervals : 30

Time Elapsed/Monitored(sec) PerfData  Curr15Min  Curr1Day  Prev1Day
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
<i>Ifname</i>	The ADSL ATUC channel interface name.
<i>Perf Valid Intervals</i>	Number of previous 15-minute intervals, for which the data was collected.
<i>Perf Invalid Intervals</i>	Number of previous 15-min intervals for which no data is available
<i>Time Elapsed/Monitored(sec)</i>	Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day.
<i>Rx Blocks</i>	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
<i>Tx Blocks</i>	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.
<i>Corrected Blocks</i>	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.
<i>Uncorrected Blocks</i>	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.
<i>NCD Count</i>	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.
<i>OCD Count</i>	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.
<i>HEC Count</i>	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.

2.54 ADSL ATUC Channel Interval Commands

2.54.1 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
<i>ifname interface-name</i>	The ADSL atuc channel interface name whose performance data collection interval is to be viewed Type: Get – Mandatory Valid values : <i>dsli-0 - *</i> , <i>dslf-0 - *</i>
<i>sintrvl start-interval-number</i>	Start interval number Type: Get – Optional Valid values : 1- 96 Default Value : 1
<i>nintrvl num-of-intervals</i>	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
<i>Ifname</i>	The ADSL ATUC channel interface name.
<i>IntervalNumber</i>	Performance Data Interval number.
<i>Rx Blocks</i>	Count of all encoded blocks received on this channel during this interval.
<i>Tx Blocks</i>	Count of all encoded blocks transmitted on this channel during this interval.
<i>Corrected Blocks</i>	Count of all encoded blocks received with errors that were corrected on this channel during this interval.
<i>Uncorrected Blocks</i>	Count of all encoded blocks received with uncorrected errors on this channel during this interval.

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

Caution None

References

- ADSL Commands.

2.55 ADSL ATUC Trap Commands

2.55.1 get adsl atuc traps

Description Use this command to get.

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

Parameters

Name	Description
<i>ifname interface-name</i>	The ADSL interface name Type : Get – Optional Valid values : <i>dsl-0 - *</i>

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
```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL interface name.
<i>Lofs Thresh Trap</i>	Loss of Framing 15 minute threshold reached.
<i>Loss Thresh Trap</i>	Loss of Signal 15 minute threshold reached.
<i>Lols Thresh Trap</i>	Loss of Link 15 minute threshold reached.
<i>Lprs Thresh Trap</i>	Loss of Power 15 minute threshold reached.
<i>ESs Thresh Trap</i>	Errored Second 15 minute threshold reached.
<i>Init Failure Trap</i>	ATUC initialization failed.
<i>Rate Change Trap</i>	ATUC transmit rate has changed.
<i>Gs OpState Trap</i>	Op State change of Line.

Caution None

References • ADSL commands.

2.56 ADSL ATUC Perf Commands

2.56.1 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
<i>ifname interface-name</i>	The ADSL ATUC interface name, for which performance is to be viewed. Type : Get – Optional Valid values : <i>dsl-0 - dsl-*</i>

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

```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL ATUC interface name.
<i>Perf Valid Intervals</i>	The number of previous 15-minute intervals in the interval table, for which data was collected.
<i>Perf Invalid Intervals</i>	The number of intervals in the range of 0 to the value of <code>iadslAtucPerfValid-Intervalsi</code> , for which no data is available.
<i>AtucPerfStatLossL</i>	Count of 1-second intervals containing one or more loss of signal (LOS) defects. (Not available for ADSL)
<i>Time Elapsed/Monitored(sec)</i>	Performance Data : Total time elapsed in seconds Total elapsed seconds in the intervals – Curr15Min, Curr1Day and Monitored seconds in Prev1Day

FIELD	Description
<i>LOFS (sec)</i>	<p>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.</p>
<i>LOSS (sec)</i>	<p>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.</p>
<i>LOLS (sec)</i>	<p>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.</p>
<i>LPRS (sec)</i>	<p>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.</p>
<i>ES (sec)</i>	<p>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.</p>
<i>INITS</i>	<p>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.</p>
<i>Perf Stat FastR</i>	<p>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.</p>
<i>Perf Stat Failed FastR</i>	<p>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.</p>
<i>Perf Stat SESL</i>	<p>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.</p>

FIELD	Description
<i>Perf Stat UASL</i>	<p>Performance Data : Count of unavailable errored seconds.</p> <p>Curr15Min/Curr1Day/Prev1Day : Count of seconds in the current 15-minute/ current 1-day/ previous 1-day interval when there was unavailable errored seconds.</p>
<i>Perf Stat Fecsl</i>	<p>Performance Data: Count of 1-second intervals, with one or more forward error correction (FEC) anomalies, since agent reset. (Not available for ADSL)</p> <p>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)</p>

Caution None

References • ADSL commands.

2.57 ADSL ATUC Interval Commands

2.57.1 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
<i>ifname interface-name</i>	The ADSL ATUC channel interface name, for which performance data collection interval is to be viewed. Type : Get – Mandatory Valid values : <i>dsl-0, dsl-1</i> Ö
<i>sintrvl start-interval-number</i>	Start interval number. Type : Get – Optional Valid values : 1- 96 Default Value : 1
<i>nintrvl num-of-intervals</i>	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
GsTimeElapsed(sec) : 1001
```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL ATUC channel interface name.
<i>IntervalNumber</i>	Performance Data Interval number.
<i>IntervalValidData</i>	This indicates if the data for this interval is valid.
<i>IntervalLofs</i>	Count of seconds in the interval when there was Loss of Framing.
<i>IntervalLoss</i>	Count of seconds in the interval when there was Loss of Signal.

FIELD	Description
<i>IntervalLols</i>	Count of seconds in the interval when there was Loss of Link.
<i>IntervalLprs</i>	Count of seconds in the interval when there was Loss of Power.
<i>IntervalESs</i>	Count of Errored Seconds in the interval.
<i>IntervalInits</i>	Count of the line initialization attempts during the interval.
<i>IntervalFastR</i>	Count of seconds in the interval when there was Fast Retrans.
<i>IntervalFailedFastR</i>	Count of seconds in the interval when there was Failed Fast Retrans.
<i>IntervalSesL</i>	Count of seconds in the interval when there was severely errored seconds.
<i>IntervalUasL</i>	Count of seconds in the interval when there was unavailable errored seconds.
<i>GsTimeElapsed(sec)</i>	Total Elapsed time in this interval.

Caution None

References

- ADSL commands

2.58 ADSL ATUR Physical Commands

2.58.1 get adsl atur physical

Description This command is used to get.

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

Parameters

Name	Description
<code>ifname ifname</code>	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

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 0 15 0 0 0 0 0 0 0 128 0 0
[32]          0 0 0 0 0 0 128 0 0 0 128 0 0 0 0 0 0
[48]          0 0 0 0 0 2 0 0 0 0 0 0 0 0 32 0 0
[64]          0 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 0 2 0 0 0 64 0 0 0
[96]          1 0 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 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 0 2 3 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 0
[176]         0 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 0
[208]         0 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 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 0 0
[304]         0 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 0
[336]         0 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 0
[368]         0 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 0
[400]         0 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 0
[432]         0 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 0
    
```

```

[464]      0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
[480]      0  0  0  0  0  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          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          44         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
.
.

```

upto [512] and all with value 0

Delt HLOGpsds

```

[0 ]      0          0          28227       102
[4 ]      4          0          41          0
[8 ]      0          0          4          0
[12]      42         0          0          0
[16]      0          0          0          0
[20]      0          0          0          0
[24]      0          0          0          0
[28]      0          0          0          0
.
.

```

upto [256] and all with value 0

Delt QLNspsds

```

[0 ]      0      0      0      0
[4 ]      0      0      0      0
[8 ]      0      0      0      0
[12]     0      0      0      0
.
.
upto [256] and all with value 0

Delt DMT Bin SNR
[0 ]      0      0      0      0
[4 ]      0      0      0      0
[8 ]      0      0      0      0
[12]     0      0      0      0
.
.
upto [256] and all with value 0
    
```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL Interface Name
<i>Serial Number</i>	The vendor specific string that identifies the vendor equipment (EOC - read 5 seconds after data mode).
<i>Vendor ID</i>	Vendor ID code (EOC - read 5 seconds after data mode).
<i>Version Number</i>	The vendor specific version number sent by this ATU, as part of the initialization messages (EOC - read 5 seconds after data mode).
<i>Curr Status</i>	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.
<i>Curr Snr Margin(dB/10)</i>	Noise Margin as seen by this ATU, with respect to its received signal, in tenth dB.
<i>Curr Atn(dB/10)</i>	Measured difference in the total power transmitted by the peer ATU, and the total power received by this ATU.
<i>CurrAttainable Rate(bps)</i>	Indicates the maximum currently attainable data rate by the ATU. This value will be equal to, or greater than, the current line rate.
<i>Curr Output Pwr(dB/10)</i>	Measured total output power transmitted by this ATU. This is the measurement that was reported during the last activation sequence.
<i>AturGsConfig</i>	The upstream and downstream ATU-R configuration data (EOC - read 5 second after data mode).
<i>Bin Number</i>	Bin index.

FIELD	Description
<i>Number of bits/bin</i>	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+).
<i>Chan Perf CD</i>	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)
<i>Chan Perf CU</i>	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)
<i>Chan Perf BE</i>	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)
<i>Delt HLINSCds</i>	The DELT-related parameter that provides the scale factor to be applied to the downstream Hlin (f) values. (Not available for ADSL and ADSL2plus)
<i>Delt HLINpsds</i>	The DELT-related parameter that provides an array of complex downstream Hlin (f) values in linear scale. (Not available for ADSL and ADSL2plus)
<i>Delt HLOGMTds</i>	The DELT-related parameter that provides the number of symbols used to measure the downstream Hlog (f). (Not available for ADSL and ADSL2plus)
<i>Delt HLOGpsds</i>	The DELT-related parameter that provides an array of real downstream Hlog (f) values in dB. (Not available for ADSL and ADSL2plus)
<i>Delt QLNMtds</i>	The DELT-related parameter that provides the number of symbols used to measure the downstream QLN (f) values. (Not available for ADSL and ADSL2plus)
<i>Delt QLNpsds</i>	The DELT-related parameter that provides an array of real downstream QLN (f) values in dB. (Not available for ADSL and ADSL2plus)
<i>DMT Bin SNR</i>	The DELT-related parameter that provides an array of real downstream SNR (f) values in dB (Not available for ADSL and ADSL2plus)
<i>DELT Last Tx State</i>	The DELT-related parameter that provides the last successful transmitted initialization state by ATU-R. (Not available for ADSL and ADSL2plus)

Caution None.

References None.

2.59 ADSL ATUR Channel Commands

2.59.1 get adsl atur channel

Description This command is used to get.

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

Parameters

Name	Description
<i>ifname ifname</i>	The ADSL Interface Name Type : Get -- Optional Valid values: <i>dsli-0 - dsli-*</i> , <i>dslf-0 - dslf-*</i>

Example `$ get adsl atur channel ifname dslf-0`

Output Verbose Mode On

```

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

```

Output Fields

FIELD	Description
<i>Ifname</i>	The ADSL Interface Name
<i>Interleave Delay(ms)</i>	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.
<i>Curr Tx Rate(bps)</i>	Actual transmit rate on this channel
<i>Prev Tx Rate(bps)</i>	The rate at the time of the last Adsl Atur Rate Change Trap event.
<i>Crc Block Length(byte)</i>	Indicates the length of the channel data-block on which the CRC operates.
<i>Gs Curr Atm Status</i>	Indicates an ncd or lcd failure if the counter surpasses 127. If neither ATM counter surpasses 127, the return value will be NoAtmDefect.

FIELD	Description
<i>GsSymbolsPerRsWord</i>	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.
<i>GsRsDepth</i>	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.
<i>GsRedundantBytesPerRsCode</i>	Indicates number of redundant bytes (R) per Reed-Solomon code in the upstream direction.

Caution None

References None

2.60 ADSL ATUR Trap Commands

2.60.1 get adsl atur traps

Description This command is used to get.

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

Parameters

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

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

Caution None

References None

2.61 ADSL ATUR Perf Commands

2.61.1 get adsl atur perf

Description This command is used to get.

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

Parameters

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

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

FIELD	Description
<i>LOFS (sec)</i>	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.
<i>LOSS (sec)</i>	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.
<i>LPRS (sec)</i>	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.
<i>ES (sec)</i>	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.
<i>Perf Stat SESL</i>	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.
<i>Perf Stat UASL</i>	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.
<i>Perf Stat Fecsl</i>	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

2.62 ADSL ATUR Interval Commands

2.62.1 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
<i>ifname ifname</i>	The ADSL interface name. Type : Get – Mandatory Valid values : <i>dsl-0 – dsl-*</i> .
<i>sintrvl sintrvl</i>	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
<i>nintrvl nintrvl</i>	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
```

Output Fields

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

FIELD	Description
<i>IntervalESs(sec)</i>	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.
<i>IntervalSes1(sec)</i>	Count of seconds in the interval when there was severely errored seconds.
<i>IntervalUasL(sec)</i>	Count of seconds in the interval when there was unavailable errored seconds.

Caution None

References • ADSL commands

2.63 ADSL ATUR Chanperf Commands

2.63.1 get adsl atur chanperf

Description This command is used to get.

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

Parameters

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

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

Output Verbose Mode On

```

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

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

FIELD	Description
<i>Rx Blocks</i>	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.
<i>Tx Blocks</i>	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.
<i>Corrected Blocks</i>	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.
<i>Uncorrected Blocks</i>	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.
<i>NCD Count</i>	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.
<i>HEC Count</i>	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

2.64 ADSL ATUR Chanintrvl Commands

2.64.1 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
<i>ifname ifname</i>	The ADSL interface name. Type : Get – Mandatory Valid values : <i>dsli-0 – dsli-*</i> , <i>dslj-0 – dslj-*</i> .
<i>sintrvl sintrvl</i>	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
<i>nintrvl nintrvl</i>	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
<i>Ifname</i>	The ADSL interface name
<i>IntervalNumber</i>	Count from 1 through 96, of 15 minute intervals.
<i>Rx Blocks</i>	Count of all encoded blocks received on this channel, during this interval.
<i>Tx Blocks</i>	Count of all encoded blocks transmitted on this channel, during this interval.
<i>Corrected Blocks</i>	Count of all encoded blocks received with errors that were corrected on this channel, during this interval.

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

Caution None

References

- ADSL commands

2.65 System Configuration Save And Restore Commands

2.65.1 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.

2.65.2 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
<code>control <nvram/network></code>	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
<p><i>dataplane</i> <nvr network></p>	<p>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.</p>
<p><i>config</i> <network default last backup clean minimum safe></p>	<p>This specifies the boot configuration – the <i>last/backup/clean/minimum/safe</i> source, from which to boot up. The boot configuration is set to <i>last</i> automatically, whenever a <i>commit</i> command is given. The boot configuration being an optional parameter, if it is not specified, it retains the previous value. So giving <i>reboot</i> after a <i>commit</i> will result in a reboot from the committed configuration.</p> <p><i>Default:</i> Use Default factory configuration while booting up.</p> <p><i>Backup:</i> Use the Backup configuration to boot the system.</p> <p><i>Last :</i> Use last committed configuration to boot the system.</p> <p><i>Minimum:</i> Use a configuration in which:</p> <ul style="list-style-type: none"> • the <i>size</i> 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. <p><i>Clean:</i> The system comes up with nothing configured.</p> <p><i>Network:</i> The system fetches the default configuration file from the remote host and system comes up with this default configuration.</p> <p><i>Safe:</i> The system comes up with safe configuration.</p> <p>Type: Optional Default value: If a reboot is being given for the first time, then the default value is <i>default</i>. Otherwise, the default value is the same as what was given the last time.</p>

Mode Super-User.

Example \$ *reboot*

Output None

Output Fields None

Caution None.

References • commit command.

2.66 System Control Table Commands

2.66.1 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]`

2.66.2 delete user

Description Use this command to delete a user login.

Command Syntax `delete user name user-name`

2.66.3 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
<i>Name user-name</i>	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 “;”
<i>passwd password</i>	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 “;”.
<i>Root /user</i>	This indicates the privilege level of the user. Type : Optional Default value: <i>user</i>

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
<i>UserName</i>	This shows the new user login, which has been created.
<i>Privilege</i>	This represents the privilege level associated with the user name shown. It may be: <i>user, root</i>

Caution None.

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

2.66.4 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 [user-id]*

Parameters

Name	Description
<i>User-id</i>	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
New Password:
Confirm New Password:
Set Done.
```

Output None

Caution None.

References • user command

2.67 System Info Commands

2.67.1 get system info

Description This command to get system parameters.

Command Syntax `get system info`

2.67.2 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
<code>contact sys-contact</code>	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
<code>name sys-name</code>	This specifies the name of the modem Type : Optional Valid values: String of up to 63 ASCII Characters
<code>Location sys-location</code>	This specifies the physical location of this modem Type : Optional Valid values: String of up to 63 ASCII Characters
<code>vendor sys-vendor-info</code>	This contains the vendor-specific information Type : Optional Valid values: String of up to 63 ASCII Characters
<code>logthresh sys-log-threshold</code>	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
<code>Systime systime</code>	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
<i>dst</i> <on / off>	This specifies if the Daylight Savings Time has been enabled or not. Type: Optional Valid values: on off

Name	Description
<p><code>timezone <timezone></code></p>	<p>Time zone</p> <p>Type: Optional Valid values: Given below, are the valid values within <code>ì</code>, followed by their descriptions.</p> <p>"IDLW" - International Date Line West "NT" - Nome "HST" - Hawaii Standard "CAT" - 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 "WAT" - 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: <code>ìIDLWì</code>, that stands for International Date Line West</p>

Example `$ get system info`

Output Verbose Mode On

```

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
<i>Crash Id</i>	Crash Number
<i>Crash IU</i>	Internal processor Number
<i>Time of Crash</i>	This specifies the time at which the crash occurred.

Field	Description
<i>Crash Cause</i>	This specifies 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
<i>PSR Reg</i>	This specifies the value of Processor state register at the time of crash.
<i>Wim Reg</i>	Window Invalid Mask register
<i>PC</i>	This specifies the value of Program counter at the time of crash.
<i>NPC</i>	This specifies the value of next Program Counter at the time of crash.
<i>Y Reg MSW</i>	This specifies the value of MSW of Y Register at the time of crash.
<i>Y Reg LSW</i>	This specifies the value of LSW of Y Register at the time of crash.
<i>Trap Num</i>	This specifies number of trap that caused the crash.
<i>Trap Base Reg</i>	This specifies the value of Trap Base register at the time of crash.
<i>Fault Status Reg</i>	This specifies the value of Fault Status Register at the time of crash.
<i>Double Fault Reg</i>	This specifies the value of Double Fault Register at the time of crash.
<i>IER</i>	This specifies the value of Implementation Extension Register at the time of crash.
<i>Alternate Window Capture</i>	For crashes involving Alternate Windows, This Capture specifies of all local and input register capture for Alternate Windows # 0x1f to 0x18.
<i>Current Standard Window Dump</i>	This specifies all global, input, local and output registers of standard window at the time of capture.
<i>CCP Register Dump</i>	This specifies proprietary CCP register dump
<i>Stack at the time of the Crash</i>	This specifies the stack trace at the time of the crash. Display contains Return address and the caller function address, along with the Stack and the Frame pointer values.

Caution None

References • Get/modify nbsize

- Get system stats

2.67.3 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
<i>Numentries numentries</i>	This specifies last <i>numentries</i> idle time records to be displayed Type: Optional Valid values : 1 to <i>GS_CFG_MAX_IDLE_TIME_RECORDS</i> 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
<i>Start Time</i>	This specifies the starting time of the period for which the idle time was recorded
<i>End Time</i>	This specifies the end time of the period for which the idle time was recorded
<i>Total Time</i>	This specifies the total time (in seconds) elapsed in this period.
<i>Idle Time</i>	This specifies the time (in seconds) for which the system was idle during this period.
<i>Util %</i>	This specifies the Utilization (in percentage) of the system during this period

Caution None.

References None

2.68 System manuf info Commands

2.68.1 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
<i>CpeUtopiaMode</i>	Mode of operation of CPE side Utopia interface
<i>NetUtopiaMode</i>	Mode of operation of NET side Utopia interface
<i>CpeUtopiaMaster</i>	This specifies whether CPE side Utopia interface is master
<i>NetUtopiaMaster</i>	This specifies whether NET side Utopia interface is master
<i>MaxEthMacPhy</i>	This specifies the maximum number of MACs that can be configured
<i>ColumbiaIdSel</i>	Specifies the address bit in the PCI bus, which is connected to IDSEL pin of the Columbia
<i>CpeUtopiaFreq</i>	CPE Frequency for Utopia Interface
<i>Eth Speed</i>	This specifies the speed of operation. Supported speeds are – 10 Mbps, 100 Mbps, 1000 Mbps. It is a bitmask.
<i>SelfMacAddr</i>	This specifies the self MAC address
<i>EthPortIdSel</i>	This specifies the address bit in the PCI bus, which is connected to IDSEL pin of the Ethernet device
<i>EthType</i>	This specifies the Defines the ethernet types – data , mgmt, or both. It is a bitmask.
<i>Num of LBRams</i>	This specifies the number of LBRams in the system.
<i>Num of Chips</i>	This specifies the number of Chips in the system.
<i>Num of Ports</i>	This specifies the number of Ports per Chip in the system.
<i>Interface Type</i>	This specifies the InterfaceType. Following are the values it can take – Host Bus, PCI, Utopia
<i>Chip Type</i>	This specifies the Type of Chip – G24, G16, Octane.
<i>Serial Number</i>	This specifies the vendor specific string that identifies the vendor equipment .
<i>Vendor Id</i>	This specifies the binary vendor identification field.
<i>Version Number</i>	This specifies the vendor specific version number sent by this ATU as part of the initialization message
<i>Base Addr</i>	This specifies the base address of the chip.
<i>LBRam</i>	This specifies the LBRam associated with the chip
<i>Logical To Physical Port Mapping</i>	This specifies the Logical To Physical Port Mapping.
<i>No of UARTs</i>	This specifies the number of UARTs configured.
<i>HSSL Port Id</i>	This specifies the HSSL port to be used for UART.

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

Caution None.

References None

2.69 System crash info commands

2.69.1 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
<i>Numentries numentries</i>	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      : 0x471fd4    : 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     : 0x9bb2eccc

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
<i>Crash Id</i>	The crash number.
<i>Crash IU</i>	The internal processor number.
<i>Time of Crash</i>	This specifies the time of the crash.
<i>Crash Cause</i>	This specifies the crash cause. Following are the possible causes: <ul style="list-style-type: none"> - 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
<i>PSR Reg</i>	This specifies the value of the processor state register at the time of the crash.
<i>Wim Reg</i>	The window invalid mask register.
<i>PC</i>	This specifies the value of the program counter at the time of the crash.
<i>nPC</i>	This specifies the value of the next program counter at the time of the crash.
<i>Y Reg MSW</i>	This specifies the value of MSW of the Y Register at the time of the crash.
<i>Y Reg LSW</i>	This specifies the value of LSW of the Y Register at the time of the crash.
<i>Trap Num</i>	This specifies the number of traps that caused the crash.

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

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

Caution None.

References None.

2.70 System version commands

2.70.1 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
<i>Control Plane Binary</i>	This tells about the version of the control plane binary with which the system has come up.
<i>Data Plane Binary</i>	This tells about the version of the data plane binary with which the system has come up.

Caution None

References None.

2.71 System reboot info command

2.71.1 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
<i>numentries</i>	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
<i>Control Plane Version</i>	The control Plane Version with which the system could not come up.
<i>Data Plane Version</i>	The data Plane Version with which the system could not come up.
<i>Time of Reboot</i>	Time at which the reboot failure occurred.

FIELD	Description
<i>Type of Reboot</i>	<p>Its tells the type of reboot with which the system is trying to come up. The various possible values are :-</p> <p>Last, Back Up, Default, Minimum, Clean.</p>
<i>Failure Cause</i>	<p>This tells the various causes of failure that system encountered while rebooting. It can be :-</p> <p>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</p>

2.72 System Size Commands

2.72.1 get nbsize

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

Command Syntax `get nbsize`

2.72.2 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 maxnummacency] [devcap devcap] [maxnumeoaprioQs
maxnumeoaprioQs] [bridgingmode bridgingmode ] [maxhpriotreenodes
maxhpriotreenodes] [maxlpriotreenodes maxlpriotreenodes] [
maxClfrTrees maxClfrTrees ] [maxClfrProfiles maxClfrProfiles ]

[maxinrules maxinrules] [maxoutrules maxoutrules]
[maxinhpriosubrulers maxinhpriosubrulers] [maxinlpriosubrulers
maxinlpriosubrulers] [maxouthpriosubrulers maxouthpriosubrulers]
[maxoutlpriosubrulers maxoutlpriosubrulers] [mcastcap ivmcapable |
svmcapable | none] [maxnumac maxnumac] [maxnumsrcmac maxnumsrcmac]
    
```

Parameters

Name	Description
<code>maxatmport max-atm-port</code>	Maximum number of ATM ports. Type: Modify – Optional Valid values : 1- GS_CFG_MAX_ATM_PORT.
<code>maxvcperport max-vc-per-port</code>	Maximum number of VCs possible per ATM port. Type: Modify – Optional Valid values : 1- GS_CFG_MAX_ATM_VC_PER_PORT.
<code>maxvc max-vc</code>	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)
<code>maxatmoam max-atm-oam-activities</code>	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
<i>maxrmon max-rmon</i>	Maximum number RMON probes that can be applied simultaneously in the system. Type: Modify – Optional Valid values : 1 - <i>GS_CFG_MAX_RMON_PROBES</i>
<i>MaxnumethprioQs maxnumethprioQs</i>	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 – <i>GS_CFG_MAX_ETH_PRIO</i>
<i>maxmulticast max-multicast</i>	Maximum number of multicast groups that can be configured in the system. Type: Modify – Optional Valid values : 1 – <i>GS_CFG_MAX_MCAST_GROUPS</i>
<i>maxmac max-mac</i>	Maximum number of MAC addresses that can be learned by the system. This should be multiples of 32. Type: Modify – Optional Valid values : 1 – <i>GS_CFG_MAX_MAC_ADDRS</i>
<i>maxhashbuck max-hash-bucket</i>	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 - <i>GS_CFG_MAX_HASH_BKTS</i>
<i>maxnumvlan max-num-vlans</i>	This specifies the maximum number of Vlans Supported. Type: Modify – Optional Valid values : 1 - <i>GS_CFG_MAX_VLAN</i>
<i>maxvlanidval max-vlan-id-val</i>	This specifies the maximum value of Vlan Id that a bridge can support. Type: Modify – Optional Valid values : 1 - <i>GS_CFG_MAX_VLAN_ID</i>
<i>maxnumacentry max-num-mac-entry</i>	This specifies the maximum number of Static Ucast Entries Supported. Type: Modify – Optional Valid values : 1 – <i>GS_CFG_MAX_STATIC_ENTRIES</i>
<i>devcap devcap</i>	This specifies the capabilities of the device. Type: Modify – Optional Valid values : IVL, SVL, none
<i>maxnumeoaprioQs maxnumeoaprioQs</i>	This specifies the max number of priority queues that can be configured on a bridge port created on EOA interface Type: Modify – Optional Valid values : 1 – <i>GS_CFG_MAX_EOA_PRIO_QUEUES</i>

Name	Description
<p><i>bridgingmode</i> <i>bridgingmode</i></p>	<p>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</p>
<p><i>maxhpriotreenodes</i> <i>maxhpriotreenodes</i></p>	<p>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</p>
<p><i>maxlpriotreenodes</i> <i>maxlpriotreenodes</i></p>	<p>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</p>
<p><i>maxClfrTrees</i> <i>maxClfrTrees</i></p>	<p>Maximum number of classifier trees that can be created Type: Modify – Optional Valid values : 1 – GS_CFG_MAX_CLFR_TREE</p>
<p><i>maxClfrProfiles</i> <i>maxClfrProfiles</i></p>	<p>Maximum number of classifier profiles that can be created Type: Modify – Optional Valid values : 1 – GS_CFG_MAX_CLFR_PROFILES</p>
<p><i>maxinrules</i> <i>maxinrules</i></p>	<p>Maximum number of generic filter ingress rules that can be created. Type: Modify - Optional Valid values : 1- GS_CFG_MAX_GFLTR_RULES_INGRESS</p>
<p><i>maxoutrules</i> <i>maxoutrules</i></p>	<p>Maximum number of generic filter egress rules that can be created. Type: Modify - Optional Valid values : 1- GS_CFG_MAX_GFLTR_RULES_EGRESS</p>
<p><i>maxinhpriosubrulers</i> <i>maxinhpriosubrulers</i></p>	<p>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</p>

Name	Description
<i>maxinlpriosubrulers</i> <i>maxinlpriosubrulers</i>	Maximum number of generic filter ingress subrules of low access priority that can be created. Type: Modify - Optional Valid values : 1- <i>GS_CFG_MAX_GFLTR_SUBRULES_INGRESS_LPRIO</i>
<i>maxouthpriosubrulers</i> <i>maxouthpriosubrulers</i>	Maximum number of generic filter egress subrules of high access priority that can be created. Type: Modify - Optional Valid values : 1- <i>GS_CFG_MAX_GFLTR_SUBRULES_EGRESS_MPRIO</i>
<i>maxoutlpriosubrulers</i> <i>maxoutlpriosubrulers</i>	Maximum number of generic filter egress subrules of low access priority that can be created. Type: Modify - Optional Valid values : 1- <i>GS_CFG_MAX_GFLTR_SUBRULES_EGRESS_LPRIO</i>
<i>mcastcap ivmcapable / svmcapable / none</i>	It denotes the Multicast Device Capability Type: Modify – Optional Valid values : ivmcapable, svmcapable
<i>Maxnumac maxnumac</i>	It denotes the maximum number of Access Concentrators supported. Type: Modify -- Optional Valid values: <i>GS_CFG_MIN_NUM_AC_SUPPORTED - GS_CFG_MAX_NUM_AC_SUPPORTED</i>
<i>Maxnumsrcmac</i> <i>maxnumsrcmac</i>	It denotes the maximum number of Source MAC addresses that can be used across the different PPPoE interfaces. Type: Modify -- Optional Valid values: <i>GS_CFG_MIN_NUM_SRCMAC_SUPPORTED - GS_CFG_MAX_NUM_SRCMAC_SUPPORTED</i>

Example `$ get nbsize`

Output Verbose Mode On

```

Max ATM Ports      : 80
Max VCs            : 200
Max RMON probes   : 30
Max Multicast groups : 50
Max Hash buckets  : 40
Max VlanId Value  : 10
Dev Capabilities  : IVL
Max Num EOA Prio Qs : 1
Max Tree Nodes    : 2
Max Clfr Trees    : 2
Mcast Capabilities : Svmcapable
Max PPPoE Src MAC : 4
Max VC per Port   : 2
Max OAM activities : 5
Bridging Mode     : Residential
Max MAC addresses : 256
Max VLANs         : 10
Max Num Static Mac Entries : 5
Max Num Eth Prio Qs : 2
Max Tree Branches : 3
Max Tree Trees    : 3
Max Access Concentrators : 2
    
```

Output Fields

FIELD	Description
<i>Max ATM Ports</i>	Maximum number of ATM ports.
<i>Max VC per Port</i>	Maximum number of VCs possible per ATM port
<i>Max VCs</i>	Maximum number of VCs possible in the system.
<i>Max OAM activities</i>	Maximum number of OAM activities that are active at a time.
<i>Max RMON probes</i>	Maximum number RMON probes that can be applied simultaneously in the system.
<i>Max Multicast groups</i>	Maximum number of multicast groups that are configured in the system.
<i>Max MAC addresses</i>	Maximum number of MAC addresses that are learned by the system.
<i>Max Hash buckets</i>	Maximum number of hash buckets for the Forwarding table. This value should be a power of 2. (1, 2, 4, 8 ,...)
<i>Max VLANs</i>	Maximum number of Vlans Supported.
<i>Max VlanId Value</i>	Maximum value of VLANID that the bridge can support.
<i>Max Num Static Mac Entries</i>	Maximum number of static Unicast entries.
<i>Dev Capabilities</i>	Device Capabilities of the bridge.
<i>Max Num Eth Prio Qs</i>	This specifies the max number of priority queues that can be configured on a bridge port created over an ethernet interface.
<i>Max Num EOA Prio Qs</i>	This specifies the max number of priority queues that can be configured on a bridge port created on EOA interface
<i>Bridging Mode</i>	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.
<i>Max Tree Nodes</i>	Maximum number of classifier tree nodes that can be created
<i>Max Tree Branches</i>	Maximum number of classifier tree branches that can be created
<i>Max Clfr Trees</i>	Maximum number of classifier trees that can be created

FIELD	Description
<i>Mcast Capabilities</i>	It denotes the Multicast Device Capability
<i>Max Access Concentrators</i>	It denotes the maximum number of Access Concentrators supported.
<i>Max PPPOE Src MAC</i>	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.

2.73 System Stats Commands

2.73.1 get system stats

Description Use this command to view System Statistics.

Command Syntax `get system stats`

2.73.2 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
<i>CPE Ucast Addr Count</i>	Number of unicast addresses, which were learned from the CPE ports.
<i>DnLink Ucast Addr Count</i>	Number of unicast addresses which were learned from the Downlink port.
<i>Learn Entry Discards</i>	Number of addresses that were not learned from the CPE ports, due to any reason.
<i>DnLink Learn Entry Discards</i>	Number of addresses that were not learned from the Downlink ports, due to any reason.
<i>Dyn Addr Conflicts Static</i>	Number of times a learned address conflicted with a static address.
<i>Moved Dyn Addrs Count</i>	Number of times a learned address moved from one port to another.
<i>Ucast Lookup Fail Count</i>	Number of times Unicast address lookup failed.
<i>Mcast Lookup Fail Count</i>	Number of times Multicast address lookup failed.
<i>Tx Ctl Pkts Count</i>	Number of packets sent to the Control module.

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

Caution None

References

- get/modify system info
- get/modify nbsize

2.74 System Traps Commands

2.74.1 reset traps

Description	Use this command to delete all trap logs.
Command Syntax	<i>reset traps</i>
Parameters	None
Mode	Super-User
Example	<i>\$ reset traps</i>
Output	Set Done
Output Fields	None
Caution	None.
References	<ul style="list-style-type: none">• get traps command.

2.75 System Trap Log Table Commands

2.75.1 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
<i>Num-of-traps</i>	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
<i>Trap time</i>	This specifies the time at which the trap was logged.
<i>Trap severity</i>	This specifies the severity level of the trap. It can be - CRITICAL ALARM MAJOR ALARM WARNING STATUS ALARM

FIELD	Description
<p><i>Trap name</i></p>	<p>This specifies the name of the trap. It can be –</p> <p>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 <i>Module</i> and <i>Cause</i>.</p> <p>System Up - This trap is originated after the unit boots up successfully.</p> <p>ADSL ATUC Up - This trap indicates that the DSL port is in data mode.</p> <p>ADSL ATUC Down - This trap indicates that the DSL port is no longer in data mode.</p> <p>ATM Interface Up - This trap indicates that the ATM port is operationally up. Trap parameter is <i>Interface No</i>.</p> <p>ATM Interface Down - This trap indicates that the ATM port is operationally down. Trap parameter is <i>Interface No</i>.</p> <p>ETHER Interface Up - This trap indicates that the Ethernet port is operationally up. Trap parameter is <i>Interface No</i>.</p> <p>ETHER Interface Down - This trap indicates that the Ethernet port is operationally down. Trap parameter is <i>Interface No</i>.</p> <p>ATM VC Up - This trap indicates that the ATM VC is operationally up. Trap parameter is <i>Interface Name</i>.</p> <p>ATM VC Down - This trap indicates that the ATM VC is operationally down. Trap parameter is <i>Interface Name</i>.</p> <p>ADSL ATUC Loss of Frame 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Loss of Frame has reached.</p> <p>ADSL ATUC Loss of Signal 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Loss of Signal has reached.</p> <p>ADSL ATUC Loss of Link 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Loss of Link has reached.</p> <p>ADSL ATUC Loss of Power 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Loss of Power has reached.</p> <p>ADSL ATUC Errored Seconds 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Errored Seconds has reached.</p> <p>EoA Interface Up – This trap indicates that the EOA interface is operationally up. Trap parameter is <i>Interface name</i></p> <p>EoA Interface Down - This trap indicates that the EOA Interface is operationally down. Trap parameter is <i>Interface Name</i>.</p> <p>ADSL Loss of Frame Threshold hit - This trap indicates that Loss of Framing 15-minute interval threshold has reached.</p>

FIELD	Description
	<p>ADSL Loss of Signal Threshold hit - This trap indicates that Loss of Signal 15-minute interval threshold has reached</p> <p>ADSL Loss of Power Threshold hit - This trap indicates that Loss of Power 15-minute interval threshold has reached.</p> <p>ADSL Errored Seconds Threshold hit - This trap indicates that Errored Second 15-minute interval threshold has reached</p> <p>ADSL ADUC Tx Rate changed - This trap indicates that the ATUCs transmit rate has changed (RADSL mode only).</p> <p>ADSL Loss of Link Threshold hit - This trap indicates that Loss of Link 15-minute interval threshold has reached</p> <p>ADSL ATUC Init failed - This trap indicates that ATUC initialization failed. See adslAtucCurrStatus for potential reasons</p> <p>ADSL Failed Fast Retrains Threshold hit - This trap indicates that Failed Fast Retrains 15-minute threshold has reached</p> <p>ADSL ATUC Severely Errored Seconds 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Severely Errored Seconds has reached.</p> <p>ADSL ATUC Unavailable Seconds 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUC Unavailable Seconds has reached.</p> <p>ADSL Unavailable Seconds Threshold hit - This trap indicates that unavailable seconds-line 15-minute threshold has reached</p> <p>ADSL Severely Errored Seconds Threshold hit - This trap indicates that severely errored seconds-line 15-minute threshold has reached.</p> <p>Aggregator Interface Up - This trap indicates that the aggregator interface is operationally up.</p> <p>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.</p> <p>ADSL ATUR Loss of Frame Threshold hit - This trap indicates that Loss of Framing 15-minute interval threshold has reached.</p> <p>ADSL ATUR Loss of Frame 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUR Loss of Frame has reached.</p> <p>ADSL ATUR Loss of Signal 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUR Loss of Signal has reached.</p> <p>ADSL ATUR Loss of Power 15-Minute Threshold hit - This trap indicates that 15-minute interval threshold for ATUR Loss of Power has reached</p>

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

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

FIELD	Description
	<p>ADSL ATUR Unavailable Seconds 1-Day Threshold hit - This trap indicates that 1-Day interval threshold for ATUR Unavailable Seconds has reached.</p> <p>PPPOE Interface Up - This trap indicates that the PPPoE interface is operationally up. The trap parameter is the interface name.</p> <p>PPPOE Interface Down - This trap indicates that the PPPoE interface is operationally down. The trap parameter is the interface name.</p> <p>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.</p> <p>PPPR Interface Up - This trap indicates that the PPPR interface is operationally up. The trap parameter is the interface name.</p> <p>PPPR Interface Down - This trap indicates that the PPPR interface is operationally down. The trap parameter is the interface name.</p>
<i>Trap parameters</i>	<p>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 -</p> <ul style="list-style-type: none"> 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.

2.76 Trace Log Statistics Commands

2.76.1 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
<i>Bytes Logged</i>	This specifies the number of bytes logged by the tracing/logging module.
<i>Bytes Discarded</i>	This specifies the number of bytes discarded by the tracing/ logging module due to filtering.
<i>Msgs Logged</i>	This specifies the number of message logged by the tracing/ logging module.
<i>Msgs Discarded</i>	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.

2.77 Trace Log Configuration Commands

2.77.1 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]`

2.77.2 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
<code>module module-name/all</code>	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
<code>flow trace-flow</code>	This indicates a Hexadecimal bitmask, which sets the filter for trace flow. Type : Optional Valid values: 0x0 to 0xffffffff
<code>level trace-level</code>	This indicates a Hexadecimal bitmask, which sets the filter for trace level. Type : Optional Valid values: 0x0 to 0xffffffff
<code>syslog/net/stdout</code>	This specifies the type of logging to be done. In case <code>net</code> or <code>syslog</code> is specified then <code>dest</code> and <code>port</code> must be specified. Type: Optional

Name	Description
<i>dest ip-address</i>	This specifies the IP address for host for logging for trace type <i>syslog</i> and <i>net</i> . It is invalid incase of trace type <i>stdout</i> Type: Mandatory when type is modified to <i>net</i> or <i>syslog</i> ; else it is invalid Valid values: Any valid class A/B/C IP address
<i>port port-number</i>	Port number on which, host is listening for trace info to be logged incase of trace type <i>syslog</i> and <i>net</i> . It is invalid incase of trace type <i>stdout</i> Type: Mandatory when type is modified to <i>net</i> or <i>syslog</i> ; else 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 : <i>GCOS, OAM, CIN, GAG, CDB, CLI, ATM, EOA, TBG, DSLME, NVM, FFC, DNCD, DATAME, GARP, GVRP, LACP</i>
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

FIELD	Description
<i>Destn</i>	This specifies the IP address for host for logging for trace type syslog and net. It is invalid incase of trace type stdout
<i>Port</i>	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.

2.78 Clfr profile info Commands

2.78.1 get clfr profile info

Description Use this command to get.

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

2.78.2 create clfr profile info

Description Use this command to create.

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

2.78.3 delete clfr profile info

Description Use this command to delete.

Command Syntax `delete clfr profile info pname pname`

2.78.4 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
<code>pname pname</code>	Name of the classifier profile Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Default value: -----
<code>descr descr</code>	A brief description can be given with profile, to identify the profile Type: Create -- Optional Modify -- Optional Default value: 0

Name	Description
<i>rnode rnode</i>	Root node Id of the profile. Each profile can have only one root node id Type: Create -- Optional Modify -- Optional Default value: 0
<i>enable / disable</i>	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
<i>Profile Name</i>	Name of the classifier profile
<i>Root NodeId</i>	Root node Id of the profile. Each profile can have only one root node id
<i>Status</i>	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.
<i>Description</i>	A brief description can be given with profile, to identify the profile

2.79 Clfr list genentry commands

2.79.1 get clfr list genentry

Description Use this command to get.

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

2.79.2 create clfr list genentry

Description Use this command to create.

Command Syntax `create clfr list genentry ifname ifname value value [valtype U8/U16/U32]`

2.79.3 delete clfr list genentry

Description Use this command to delete.

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

Parameters

Name	Description
<code>ifname ifname</code>	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-*
<code>value value</code>	List Entry Value, of the classifier generic list Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<code>Valtype U8/U16/U32</code>	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  : U8
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
<i>ifname ifname</i>	Name of the Ethernet, EoA, or PPPoE interface, for which the classifier generic list is created.
<i>Value</i>	List Entry Value, of the classifier generic list
<i>Value Type</i>	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

2.80 Clfr profile node Commands

2.80.1 get clfr profile node

Description Use this command to get.

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

2.80.2 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/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]`

2.80.3 delete clfr profile node

Description Use this command to delete.

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

2.80.4 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]`

Parameters

Name	Description
<i>pname pname</i>	Name of the classifier profile Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Default value: ----
<i>nodeid nodeid</i>	Node Id, should be unique within a profile Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 0xffffffff Default value: ----
<i>descr descr</i>	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
<i>export true/false</i>	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: FALSE
<i>Ntype</i> <i>Leaf/Unary/Binary/Ternary/Linear/NonLinear</i>	This specifies the type of the Classifier node. Type: Create -- Optional
<i>maskval maskval</i>	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 gsvClfrProfileNodeAction is MatchInGenList. Type : Create --Optional Default Value : --

Name	Description
<i>value value</i>	<p>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 gsvClfrProfileNodeAction is SetBase and gsvClfrProfileNodeSetBaseType 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 gsvClfrProfileNodeAction is SetPrio or RetagPrio then this field is used to specify the priority which is to be assigned to the packet. If the 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.</p> <p>Type: Create -- Optional Default value: ---</p>
<i>valend valend</i>	<p>For Linear nodes this field is used to specify the end of the range. If the gsvClfrProfileNodeAction is InRange then this field is used to specify the end of the range. If the gsvClfrProfileNodeAction 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.</p> <p>Type: Create -- Optional Default value: -----</p>
<i>sbase type Abs Add Compute </i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional Default value: ---</p>
<i>shiftcnt shiftcnt</i>	<p>ShiftCount, is the number of times the Value in the packet is to be shifted before multiplying it with the 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.</p> <p>Type: Create -- Optional Modify -- Optional Valid values: 0 - 31 Default value: ---</p>

Name	Description
<p><i>mplr mplr</i></p>	<p>Multiplier, is used to multiply the values 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: ----</p>
<p><i>Modmask</i> <i>Act/ValType/Offset/Mask/</i> <i>Val/None/ValueEnd/Sbtype</i> <i>/SBShiftCnt/SBMLpr/Descr</i> <i>ip</i></p>	<p>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</p>

Name	Description
<p><i>Actval</i> <i>Drop</i> / <i>Fwd</i> / <i>FwdToCtl</i> / <i>CpToCtl</i> / <i>Eq</i> / <i>Gt</i> / <i>Lt</i> / <i>InRange</i> / <i>TerCmp</i> / <i>SetPrio</i> / <i>MatchInList</i> / <i>AccDeny</i> / <i>SetBase</i> / <i>Count</i> / <i>Retagprio</i> / <i>MatchInGenlist</i> / <i>GoToNextRule</i> / <i>allow</i></p>	<p>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: -----</p>
<p><i>Ntype</i> <i>Leaf</i> / <i>Unary</i> / <i>Binary</i> / <i>Ternary</i> / <i>Linear</i> / <i>NonLinear</i></p>	<p>This specifies the type of the Classifier node. Type: Create -- Mandatory Modify -- Optional Valid values: 1 - 0xffffffff Default value: -----</p>

Name	Description
<p><i>Offsetval offsetval</i></p>	<p>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 gsvClfrProfileNodeValType is U16, U32 or U64 then the offset can only be even. This field is not valid for any other value type.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - 64</p> <p>Default value: -----</p>
<p><i>Valuetype valuetype</i></p>	<p>Valuetype tells, the type of value which is to be matched/set. For leaf type nodes this field is not valid. If gsvClfrProfileNodeAction is SetBase and gsvClfrProfileNodeSetBaseType 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 gsvClfrProfileNodeSetBaseType.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: -----</p>
<p><i>sbvarindex</i> <i>L2Start/L3Start</i></p>	<p>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</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: Invalid</p>
<p><i>nodeprio</i> <i>Low/High/AsInTree</i></p>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: AsInTree</p>

Example `$ create clfr profile node pname IGMP nodeid 3 c modmask Act offset 12 valtype 16 value 0x800 mask 0xffff`

Output Verbose Mode On

Entry Created

```

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
<i>Profile Name</i>	Name of the classifier profile
<i>Node Id</i>	Node Id, should be unique within a profile
<i>Exported</i>	This specifies what fields of an exported node are modifiable and can be modified while the profile is part of a classifier tree.
<i>Node Type</i>	This specifies the type of the Classifier node
<i>Modification Mask</i>	This specifies what fields of this nodes can be modified, if this node is an exported node.
<i>Action</i>	Action tells what is to be done by a node.
<i>Value Type</i>	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.
<i>Offset</i>	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.
<i>Mask</i>	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.

Field	Description
<i>Value</i>	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 SBaseType 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 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.
<i>Value End</i>	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.
<i>Set Base type</i>	SetBaseType is used to specify whether the base offset 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.
<i>Shift Count</i>	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.
<i>Multiplier</i>	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.
<i>Description</i>	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.
<i>SbVar Index</i>	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
<i>Node Priority</i>	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.

Caution None

References None

2.81 Clfr tree info Commands

2.81.1 get clfr tree info

Description Use this command to get.

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

2.81.2 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]`

2.81.3 delete clfr tree info

Description Use this command to delete.

Command Syntax `delete clfr tree info tname tname`

2.81.4 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
<i>tname tname</i>	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: -----
<i>descr descr</i>	A brief description can be given with tree, to identify the tree Type: Create -- Optional Modify -- Optional Default value: 0

Name	Description
<i>enable / disable</i>	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
<i>treeprio low / high</i>	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
<i>Tree Name</i>	Name of the classifier tree
<i>Status</i>	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.
<i>Description</i>	A brief description can be given with tree, to identify the tree
<i>TreePriority</i>	Tells the priority of the tree. Based on this priority value, the tree is created in fast or slow memory.

Caution None

References None

2.82 Clfr tree map Commands

2.82.1 get clfr tree map

Description Use this command to get.

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

2.82.2 create clfr tree map

Description Use this command to create.

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

2.82.3 delete clfr tree map

Description Use this command to delete.

Command Syntax `delete clfr tree map ifname ifname`

Parameters

Name	Description
<code>ifname ifname</code>	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: -----
<code>tname tname</code>	Name of the classifier tree which is to be associated with given interface. Type: Create -- Mandatory Default value: -----
<code>entrypid entrypid</code>	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
<i>If Name</i>	Interface name, with which the tree is to be associated. It can be associated with Ethernet and EOA.
<i>Tree Name</i>	Name of the classifier tree which is to be associated with given interface
<i>Entry Profile Id</i>	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

2.83 Clfr tree node Commands

2.83.1 get clfr tree node

Description Use this command to get.

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

2.83.2 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]`

Parameters

Name	Description
<code>tname tname</code>	Name of the classifier tree Type: Modify -- Mandatory Get -- Optional Default value: -----
<code>pid pid</code>	Profile Id. It should be unique within a tree. Type: Modify -- Mandatory Get -- Optional Valid values: 1 - 0xffffffff Default value: -----
<code>nodeid nodeid</code>	Node Id, should be unique within a profile Type: Modify -- Mandatory Get -- Optional Valid values: 1 - 0xffffffff Default value: -----
<code>descr descr</code>	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
<i>offset offset</i>	<p>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.</p> <p>Type: Modify -- Optional Valid values: 0 - 65 Default value: -----</p>
<i>mask mask</i>	<p>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.</p> <p>Type: Modify -- Optional Default value: -----</p>
<i>value value</i>	<p>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 gsvClfrTreeNodeAction is MatchInGenList then this field is not valid. If the gsvClfrTreeNodeAction is Count, then this field is read only and specifies total number of octets of the packets hitting this node.</p> <p>Type: Modify -- Optional Default value: -----</p>

Name	Description
<p><i>act</i> <i>Drop / Fwd / FwdToCtl / CpToCtl / Eq / Gt / Lt / InRange / TerCmp / SetPrio / MatchInList / AccDeny / SetBase / Count / Retagprio / MatchInGenlist / GoToNextRule / allow</i></p>	<p>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: Modify -- Optional</p>
<p><i>valend valend</i></p>	<p>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: -----</p>

Name	Description
<i>sbase</i> type 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
<i>shift</i> cnt shiftcnt	ShiftCount, is the number of times the Value in the packet is to be shifted before multiplying it with the gsvClfrTreeNodeMultiplier. This field is valid only if the gsvClfrTreeNodeAction is SetBase. Type: Modify -- Optional Valid values: 0 – 31 Default value: ----
<i>mplr</i> 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: ----
<i>Offset</i> offset	OffSet, in the packet from where we have to take the value, which is to be matched. For SET_BASE action nodes, this value is used to specify the offset, which shall be used to specify the field of the packet used to compute the new base offset. For U8 type, we can specify odd or even value. For U16, U32 and U64, we can specify only even offset value. This field should not be specified for any other Valtype. Type: Modify -- Optional

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
<i>Tree Name</i>	Name of the classifier tree.
<i>Profile Id</i>	Profile Id. It should be unique within a tree

Field	Description
<i>Node Id</i>	Node Id, should be unique within a profile
<i>Exported</i>	This specifies what fields of an exported node are modifiable and can be modified while the profile is part of a classifier tree.
<i>Node Type</i>	This specifies the type of the Classifier node
<i>Modification Mask</i>	This specifies what fields of this nodes can be modified, if this node is an exported node.
<i>Action</i>	Action tells what is to be done by a node.
<i>Value Type</i>	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.
<i>Offset</i>	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.
<i>Mask</i>	Mask, used to select the individual bits to be match 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.
<i>Value</i>	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 SBaseType 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 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.

Field	Description
<i>ValueEnd</i>	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.
<i>Set Base type</i>	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.
<i>Shift Count</i>	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.
<i>Multiplier</i>	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.
<i>Description</i>	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

2.84 Clfr tree profile Commands

2.84.1 get clfr tree profile

Description Use this command to get.

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

2.84.2 create clfr tree profile

Description Use this command to create.

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

2.84.3 delete clfr tree profile

Description Use this command to delete.

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

2.84.4 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
<code>tname tname</code>	Name of the classifier tree Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Default value: -----
<code>pid pid</code>	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
<i>pname pname</i>	Name of the profile which is to be added Type: Create -- Mandatory Delete -- Optional Modify -- Optional Get -- Optional Default value: -----
<i>isroot isroot</i>	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
<i>Tree Name</i>	Name of the classifier tree
<i>Profile Id</i>	Profile Id. It should be unique within a tree
<i>Profile Name</i>	Name of the profile which is to be added
<i>Is Root</i>	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

2.85 Clfr profile branch Commands

2.85.1 get clfr profile branch

Description Use this command to get.

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

2.85.2 create clfr profile branch

Description Use this command to create.

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

2.85.3 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
<code>pname pname</code>	Name of the classifier profile Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<code>nodeid nodeid</code>	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
<i>brtype brtype</i>	This specifies the branch types. For a unary type node, only onlybr(0xffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffd) and FalseBr(0xfffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffc), GtBr (0xfffffffffb), EqBr (0xfffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmlf, ethernetlf, aal5vc. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<i>cnodeid cnodeid</i>	Child Node Id Type: Create -- Optional Default value: 0

Example `$ create clfr profile branch pname IGMP nodeid 3 brtype true`

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
<i>Profile Name</i>	Name of the classifier profile
<i>Node Id</i>	Node Id of the node, with which the branch is to be attached.
<i>Branch type</i>	This specifies the branch types. For a unary type node, only onlybr(0xffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffd) and FalseBr(0xfffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffc), GtBr (0xfffffffffb), EqBr (0xfffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmlf, ethernetlf, aal5vc.
<i>Child NodeId</i>	Child Node Id

Caution None.

References None.

2.86 Clfr tree branch Commands

2.86.1 get clfr tree branch

Description Use this command to get.

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

2.86.2 create clfr tree branch

Description Use this command to create.

Command Syntax `create clfr tree branch tname tname pid pid nodeid nodeid btype btype [childpid childpid]`

2.86.3 delete clfr tree branch

Description Use this command to delete.

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

Parameters

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

Name	Description
<i>btype btype</i>	This specifies the branch types. For a unary type node, only onlybr(0xffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffd) and FalseBr(0xffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffc), GtBr (0xfffffffffb), EqBr (0xfffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmlf, ethernetlf, aal5vc. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<i>childpid childpid</i>	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 -- Optional Default value: 0

Example `$ create clfr tree branch tname tree1 pid 3 nodeid 2 btype eq childpid 2`

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
<i>Tree Name</i>	Name of the classifier tree
<i>Profile Id</i>	Profile Id. It should be unique within a tree
<i>Node Id</i>	Node Id, should be unique within a profile
<i>Branch type</i>	This specifies the branch types. For a unary type node, only onlybr(0xffffffff9) branch type is allowed. For binary type and Linear/Non-Linear(Access Deny only) type, TrueBr(0xfffffffffd) and FalseBr(0xffffffffffe) are allowed. For ternary type nodes LtBr(0xfffffffffc), GtBr (0xfffffffffb), EqBr (0xfffffffffffa) are allowed. For Linear, Non-Linear (match in list) the actual value is allowed. The actual value can be U8, U16, U32, U64, atmlf, ethernetlf, aal5vc.
<i>Child Profile Id</i>	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.

2.87 IRL Map Commands

2.87.1 get irl map

Description Use this command to get.

Command Syntax `get irl map [ifname ifname]`

2.87.2 create irl map

Description Use this command to create.

Command Syntax `create irl map ifname ifname profilename profilename`

2.87.3 delete irl map

Description Use this command to delete.

Command Syntax `delete irl map ifname ifname`

Parameters

Name	Description
<i>ifname ifname</i>	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
<i>profilename profilename</i>	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
```

Output field description

Field	Description
<i>Interface</i>	Interface Name whose IRL mapping information is to be configured. Valid Values: aal5-0 - aal5-*
<i>Profile Name</i>	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

2.88 IRL Profile Commands

2.88.1 get irl profile

Description Use this command to get.

Command Syntax `get irl profile [profilename profilename]`

2.88.2 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] [conformation colorgreen] [exceedaction drop | coloryellow] [violateaction drop | coloryellow]`

2.88.3 delete irl profile

Description Use this command to delete.

Command Syntax `delete irl profile profilename profilename`

2.88.4 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] [conformation colorgreen] [exceedaction drop | coloryellow] [violateaction drop | coloryellow]`

Parameters

Name	Description
<i>profilename profilename</i>	<p>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 ','.</p> <p>Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional</p> <p>Valid values: ND - ND</p>
<i>irltype sr2cm trtcm</i>	<p>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).</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: trtcm</p>
<i>cir cir</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: GS_CFG_IRL_MIN_CIR - GS_CFG_IRL_MAX_CIR</p> <p>Default value: GS_CFG_IRL_DEF_CIR</p>
<i>cbs cbs</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: GS_CFG_IRL_MIN_CBS - GS_CFG_IRL_MAX_CBS</p> <p>Default value: GS_CFG_IRL_DEF_CBS</p>
<i>pir pir</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: GS_CFG_IRL_MIN_PIR - GS_CFG_IRL_MAX_PIR</p> <p>Default value: GS_CFG_IRL_DEF_PIR</p>
<i>pbs pbs</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: GS_CFG_IRL_MIN_PBS - GS_CFG_IRL_MAX_PBS</p> <p>Default value: GS_CFG_IRL_DEF_PBS</p>

Name	Description
<i>conformation colorgreen</i>	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
<i>exceedaction drop / coloryellow</i>	Color for exceeding packets. This field is valid only for trtcm type of profiles Type: Create -- Optional Modify -- Optional Default value: coloryellow
<i>violateaction drop / coloryellow</i>	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 12000 pir 2000 pbs 12000 conformation 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
<i>Profile name</i>	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 ';'.
<i>Profile Type</i>	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).
<i>CIR (kbps)</i>	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.
<i>CBS (bytes)</i>	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
<i>PIR (kbps)</i>	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.
<i>PBS (bytes)</i>	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.
<i>Conform action</i>	Color type to be applied for conforming packets. This field is valid in both sr2cm and trtcm type of profiles.
<i>Exceed action</i>	Color for exceeding packets. This field is valid only for trtcm type of profiles.
<i>Violate action</i>	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

2.89 IRL Stats Commands

2.89.1 get irl stats

Description Use this command to get.

Command Syntax `get irl stats [ifname ifname]`

Parameters

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

Caution None.

References

- IRL Commands

2.90 Bridge port accessprio Commands

2.90.1 get bridge port accessprio

Description Use this command to get.

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

Parameters

Name	Description
<i>portid portid</i>	Port number of the port for which this entry contains bridge management information. Type : Get -- Optional Valid values: 1 - GS_CFG_MAX_BRIDGE_PORTS
<i>regenprio regenprio</i>	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
AccessPriority : 0
```

Output field description

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

Caution None.

References

- Bridge port commands

2.91 Bridge port prioinfo Commands

2.91.1 get bridge port prioinfo

Description Use this command to get.

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

2.91.2 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
<code>portid portid</code>	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
<code>defprio defprio</code>	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
<code>numtrfclass numtrfclass</code>	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
<i>PortId</i>	Port number of the port for which this entry contains bridge management information.
<i>DefaultPriority</i>	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
<i>NumTrafficClass</i>	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

2.92 Bridge port trfclassmap Commands

2.92.1 get bridge port trfclassmap

Description Use this command to get.

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

2.92.2 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
<code>portid portid</code>	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
<code>regenprio regenprio</code>	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
<code>trfclass trfclass</code>	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
```

Output field description

Field	Description
<i>PortId</i>	Port number of the port for which this entry contains bridge management information.
<i>regenPrio</i>	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
<i>TrafficClass</i>	The Traffic Class the received frame is mapped to. The maximum value of trafficClass is defined by numTrfClass parameter of Bridge Port PriInfo. 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

2.93 Bridge port priomap Commands

2.93.1 get bridge port priomap

Description Use this command to get.

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

2.93.2 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
<code>portid portid</code>	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
<code>usrprio usrprio</code>	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
<code>regenprio regenprio</code>	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
<code>PortId</code>	Port number of the port for which this entry contains bridge management information.

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

Caution None.

References

- Bridge port commands

2.94 Filter rule entry Commands

2.94.1 get filter rule entry

Description Use this command to get.

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

2.94.2 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]`

2.94.3 delete filter rule entry

Description Use this command to delete.

Command Syntax `delete filter rule entry ruleid ruleid`

2.94.4 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]`

Parameters

Name	Description
<p>ruleid ruleid</p>	<p>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</p>
<p>action drop allow setprio sendtocontrol retagprio copytocontrol clfrdef gotonextrule forwardexit</p>	<p>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</p>
<p>description description</p>	<p>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"</p>
<p>priority priority</p>	<p>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</p>
<p>status enable disable</p>	<p>Admin status of the rule Type: Create -- Optional Modify -- Optional Default value: disable</p>

Name	Description
<code>statsstatus</code> 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
<code>ruleprio</code> 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
<code>ruledir</code> in out	Specifies whether the rule will be applied on incoming interfaces (ingress) or outgoing interfaces (egress). Type: Create -- Optional Default value: in
<code>applywhenreq</code> 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
<code>pkttype</code> 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
<code>snooplevel</code> 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`

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

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
<i>Rule Id</i>	Unique identifier of a filter rule.
<i>Rule Action</i>	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','gotonexrule'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'.
<i>Set Priority</i>	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'.
<i>Admin status</i>	Admin status of the rule
<i>Stats admin status</i>	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.
<i>Rule Priority</i>	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
<i>Rule Direction</i>	Specifies whether the rule will be applied on incoming interfaces (ingress) or outgoing interfaces (egress).
<i>ApplyWhenReq</i>	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'.
<i>Pkt Type</i>	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'.
<i>Application Description</i>	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'.
<i>Snoop Level</i>	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

2.95 Filter rule map Commands

2.95.1 get filter rule map

Description Use this command to get.

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

2.95.2 create filter rule map

Description Use this command to create.

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

2.95.3 delete filter rule map

Description Use this command to delete.

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

2.95.4 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
<i>ifname ifname</i>	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-*
<i>stageid stageid</i>	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
<i>ruleid ruleid</i>	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
<i>orderid orderid</i>	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
    
```

Output field description

Field	Description
<i>Interface</i>	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.
<i>Stage Id</i>	This field specifies the stage on the interface to which the rule in the mapping belongs
<i>Rule Id</i>	Rule Id of the rule in the mapping
<i>Order Id</i>	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

2.96 Filter subrule generic Commands

2.96.1 get filter subrule generic

Description Use this command to get.

Command Syntax `get filter subrule generic [ruleid ruleid] [subruleid subruleid]`

2.96.2 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]`

2.96.3 delete filter subrule generic

Description Use this command to delete.

Command Syntax `delete filter subrule generic ruleid ruleid subruleid subruleid`

2.96.4 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
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule. Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>offsethdr ethernet ip tcp udp icmp igmp l3hdr ppp pppoe</i>	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
<i>offset offset</i>	Offset value to be added to 'offsethdr' to get the field value Type: Create -- Optional Modify -- Optional Default value: 0
<i>mask mask</i>	Mask to be applied to the contents of a packet at 'offset' Type: Create -- Optional Modify -- Optional Default value: 0
<i>valuefrom valuefrom</i>	The starting generic value of the range of generic values. This field is invalid if 'gencomp' is 'any', 'ingenlist' or 'notingenlist', or innamedlist' or 'notinamedlist'. This field and the next field specify a range of generic values, if 'gencomp' is either 'inrange' or 'exrange'. Type: Create -- Optional Modify - Optional Default value: 0
<i>valueto valueto</i>	End generic value of the range of generic values. This field and the previous field specify a range of generic values, if 'gencomp' is either 'inrange' or 'exrange'. Otherwise this field is invalid Type: Create -- Optional Modify -- Optional Default value: 0

Name	Description
<i>gencmp eq neq lt leq gt geq any inrange exrange ingenlist notingenlist innamedlist notinnamedlist]</i>	Generic value comparison type. Type: Create -- Optional Modify -- Optional Default value: Any
<i>subruleprio low high asinrule</i>	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
<i>namedlistid namedlistid</i>	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
<i>transporthdr ethernet pppoe</i>	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

```
Entry Created

Rule Id           : 1           Subrule Id : 2
Offset header     : tcp         Offset      : 20
Start value      : 0x20        End value   : 0x40
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
<i>Rule Id</i>	Unique identifier of a filter rule for which this sub rule is being created.
<i>Subrule Id</i>	Unique identifier of a filter subrule.
<i>Offset header</i>	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'.
<i>Offset</i>	Offset value to be added to 'offsethdr' to get the field value
<i>Start value</i>	The starting generic value of the range of generic values. This field is invalid if 'gencomp' is 'any', 'ingenlist' or 'notingenlist', or 'innamedlist' or 'notinnamedlist'. This field and the next field specify a range of generic values, if 'gencomp' is either 'inrange' or 'exrange'.
<i>End value</i>	End generic value of the range of generic values. This field and the previous field specify a range of generic values, if 'gencomp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
<i>Generic header comparison</i>	Generic value comparison type.
<i>Mask</i>	Mask to be applied to the contents of a packet at 'offset'
<i>Subrule Priority</i>	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.
<i>Namedlist Id</i>	This specifies the list identifier value of the named list that will be used to do the lookup. In case 'gencomp' is 'innamedlist' or 'notinnamedlist', this field is mandatory. Else, it is extra.
<i>Transport Header</i>	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

2.97 Filter subrule ICMP Commands

2.97.1 get filter subrule icmp

Description Use this command to get.

Command Syntax `get filter subrule icmp [ruleid ruleid] [subruleid subruleid]`

2.97.2 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]`

2.97.3 delete filter subrule icmp

Description Use this command to delete.

Command Syntax `delete filter subrule icmp ruleid ruleid subruleid subruleid`

2.97.4 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]`

Parameters

Name	Description
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>icmptype icmptype</i>	ICMP type Type: Create -- Optional Modify -- Optional Default value: 0
<i>icmpcode icmpcode</i>	ICMP code Type: Create -- Optional Modify -- Optional Default value: 0
<i>icmptypecmp eq / neq / any</i>	ICMP type comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>icmpcodecmp eq / neq / any</i>	ICMP code comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>subruleprio low / high / asinrule</i>	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
<i>transporthdr ethernet / pppoe</i>	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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created
<i>Subrule Id</i>	Unique identifier of a filter subrule
<i>Icmp type</i>	ICMP type
<i>Icmp code</i>	ICMP code
<i>ICMP type comparison</i>	ICMP type comparison type
<i>ICMP code comparison</i>	ICMP code comparison type
<i>Subrule Priority</i>	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.
<i>Transport Header</i>	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

2.98 Filter subrule IGMP Commands

2.98.1 get filter subrule igmp

Description Use this command to get.

Command Syntax `get filter subrule igmp [ruleid ruleid] [subruleid subruleid]`

2.98.2 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]`

2.98.3 delete filter subrule igmp

Description Use this command to delete.

Command Syntax `delete filter subrule igmp ruleid ruleid subruleid subruleid`

2.98.4 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
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>igmptype igmptype</i>	IGMP type Type: Create -- Optional Modify -- Optional Default value: 0
<i>igmpcode igmpcode</i>	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
<i>groupaddrfrom groupaddrfrom</i>	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
<i>groupaddrto groupaddrto</i>	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
<i>igmptypecmp eq / neq / any</i>	IGMP type comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>igmpcodecmp eq / neq / any</i>	IGMP code comparison type Type: Create -- Optional Modify -- Optional Default value: any

Name	Description
<i>igmpgroupaddrcmp eq / neq / lt / leq / gt / geq / any / inrange / exrange</i>	IGMP group address comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>subruleprio low / high / asinrule</i>	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
<i>transporthdr ethernet / pppoe</i>	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 groupaddrfrom 224.0.2.3 groupaddrto 224.10.20.30 igmptpecmp inrange igmpcodecmp inrange igmpgroupaddrcmp inrange subruleprio high`

Output Verbose Mode On

```
Entry Created

Rule Id           : 1           Subrule Id       : 2
Icmp type        : 0           IGMP type comparison : neq
Icmp 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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created
<i>Subrule Id</i>	Unique identifier of a filter subrule
<i>Icmp type</i>	IGMP type
<i>IGMP type comparison</i>	IGMP type comparison type

Field	Description
<i>Igmp code</i>	This field specifies the Max Response Code (time) fields of IGMP packet. This field is invalid if <i>igmpCodeCmpType</i> is any.
<i>IGMP code comparison</i>	IGMP code comparison type
<i>Start group address</i>	Start group address of the range of igmp group addresses. This field is invalid if <i>igmpgroupaddrcmp</i> is 'any'. This field and <i>groupaddrto</i> specify a range of IGMP group addresses, if <i>igmpgroupaddrcmp</i> is either 'inrange' or 'exrange'
<i>End group address</i>	End group address of the range of igmp group addresses. This field and <i>groupaddrfrom</i> specify a range of IGMP group addresses, if <i>igmpgroupaddrcmp</i> is either 'inrange' or 'exrange'
<i>IGMP group address comparison</i>	IGMP group address comparison type
<i>Subrule Priority</i>	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.
<i>Transport Header</i>	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

2.99 Filter subrule IP Commands

2.99.1 get filter subrule ip

Description Use this command to get.

Command Syntax `get filter subrule ip [ruleid ruleid] [subruleid subruleid]`

2.99.2 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]`

2.99.3 delete filter subrule ip

Description Use this command to delete.

Command Syntax `delete filter subrule ip ruleid ruleid subruleid subruleid`

2.99.4 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
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule. Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>srcipaddrfrom</i> <i>srcipaddrfrom</i>	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
<i>srcipaddrto</i> <i>srcipaddrto</i>	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
<i>dstipaddrfrom</i> <i>dstipaddrfrom</i>	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
<i>dstipaddrto</i> <i>dstipaddrto</i>	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
<p><i>prototypefrom</i> <i>prototypefrom</i></p>	<p>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'.</p> <p>Type: Create -- Optional Modify -- Optional Default value: 0</p>
<p><i>prototypeto prototypeto</i></p>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional Default value: 27</p>
<p><i>srcaddrcmp eq neq lt</i> <i> leq gt geq any </i> <i>inrange exrange </i> <i>ingenlist notingenlist</i></p>	<p>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'.</p> <p>Type: Create -- Optional Modify -- Optional Default value: any</p>
<p><i>dstaddrcmp eq neq lt</i> <i> leq gt geq any </i> <i>inrange exrange </i> <i>ingenlist notingenlist</i></p>	<p>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'.</p> <p>Type: Create -- Optional Modify -- Optional Default value: any</p>
<p><i>prototypecmp eq neq </i> <i>lt leq gt geq any</i> <i> inrange exrange</i></p>	<p>IP Protocol type comparison type.</p> <p>Type: Create -- Optional Modify -- Optional Default value: any</p>
<p><i>ipsrcaddrmask</i> <i>ipsrcaddrmask</i></p>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional Default value: 0xffffffff</p>

Name	Description
<i>ipdstaddrmask</i> <i>ipdstaddrmask</i>	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
<i>subruleprio low high asinrule</i>	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
<i>transporthdr ethernet pppoe</i>	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 prototypfrom 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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created.
<i>Subrule Id</i>	Unique identifier of a filter subrule.

Field	Description
<i>Start src Ip addr</i>	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'.
<i>End src Ip addr</i>	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.
<i>Start dest Ip addr</i>	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'.
<i>End dest Ip addr</i>	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.
<i>Start Ip Prot type</i>	Start IP protocol type of the range of IP protocol types. This field is invalid if 'prototpecmp' is 'any'. This field and 'prototypeto' specify a range of IP protocol types, if 'prototpecmp' is either 'inrange' or 'exrange'.
<i>End IP prot type</i>	End IP protocol type of the range of IP protocol types. This field and 'prototypfrom' specify a range of IP protocol types, if 'prototpecmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid.
<i>Src Ip addr comp</i>	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'.
<i>Dest Ip addr comp</i>	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'.
<i>IP Prot type comp</i>	IP Protocol type comparison type.
<i>IP Src Addr Mask</i>	The mask value for source ip address. The mask is applied over the source ip address before checking against a value.

Field	Description
<i>IP Dest Addr Mask</i>	The mask value for destination ip address. The mask is applied over the destination ip address before checking against a value.
<i>Subrule Priority</i>	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.
<i>Transport Header</i>	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

2.100 Filter subrule clftree Commands

2.100.1 get filter subrule clftree

Description Use this command to get.

Command Syntax `get filter subrule clftree [ruleid ruleid] [subruleid subruleid]`

2.100.2 create filter subrule clftree

Description Use this command to create.

Command Syntax `create filter subrule clftree ruleid ruleid subruleid subruleid tname tname entrypid entrypid`

2.100.3 delete filter subrule clftree

Description Use this command to delete.

Command Syntax `delete filter subrule clftree ruleid ruleid subruleid subruleid`

2.100.4 modify filter subrule clftree

Description Use this command to modify.

Command Syntax `modify filter subrule clftree ruleid ruleid subruleid subruleid [tname tname] [entrypid entrypid]`

Parameter

Name	Description
<code>ruleid ruleid</code>	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
<code>subruleid subruleid</code>	Unique identifier of a filter subrule. Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295

Name	Description
<i>tname</i> 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
<i>entrypid</i> 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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created.
<i>Subrule Id</i>	Unique identifier of a filter subrule.
<i>Tree Name</i>	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.
<i>Entry Profile Id</i>	Profile Id of the tree, which shall be treated as an entry point for it.

Caution None.

References • see generic filter related commands

2.101 Filter rule stats Commands

2.101.1 get filter rule stats

Description Use this command to get.

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

Parameters

Name	Description
<i>ruleid ruleid</i>	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
<i>Rule Id</i>	Unique identifier of a filter rule
<i>Num Hits</i>	Number of packets that hit this rule

Caution None.

References

- Generic Filter Commands

2.102 Filter subrule TCP Commands

2.102.1 get filter subrule tcp

Description Use this command to get.

Command Syntax `get filter subrule tcp [ruleid ruleid] [subruleid subruleid]`

2.102.2 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]`

2.102.3 delete filter subrule tcp

Description Use this command to delete.

Command Syntax `delete filter subrule tcp ruleid ruleid subruleid subruleid`

2.102.4 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
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>srcportfrom srcportfrom</i>	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
<i>srcportto srcportto</i>	End port number of the range of source port numbers. This field and 'srcportfrom' specify a range of TCP source port numbers if 'srcportcmp' is either 'inrange' or 'exrange' Type: Create -- Optional Modify -- Optional Default value: 65535
<i>dstportfrom dstportfrom</i>	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specify a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange' Type: Create -- Optional Modify -- Optional Default value: 0
<i>dstportto dstportto</i>	End port number of the range of destination port numbers. This field and 'dstportfrom' specify 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
<i>srcportcmp eq neq lt leq gt geq any inrange exrange</i>	Source port comparison type Type: Create -- Optional Modify -- Optional Default value: any

Name	Description
<i>dstportcmp eq / neq / lt / leq / gt / geq / any / inrange / exrange</i>	Destination port comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>subruleprio low / high / asinrule</i>	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
<i>transporthdr ethernet / pppoe</i>	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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created.
<i>Subrule Id</i>	Unique identifier of a filter subrule
<i>Start source port</i>	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'

Field	Description
<i>End source port</i>	End port number of the range of source port numbers. This field and 'srcportfrom' specify a range of tcp source port numbers if 'srcportcmp' is either 'inrange' or 'exrange'
<i>Start destination port</i>	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specify a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange'
<i>End destination port</i>	End port number of the range of destination port numbers. This field and 'dstportfrom' specify a range of tcp destination port numbers if 'dstportcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
<i>Source port comparison</i>	Source port comparison type
<i>Destination port comparison</i>	Destination port comparison type
<i>Subrule Priority</i>	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.
<i>Transport Header</i>	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

2.103 Filter subrule UDP Commands

2.103.1 get filter subrule udp

Description Use this command to get.

Command Syntax `get filter subrule udp [ruleid ruleid] [ubruleid subruleid]`

2.103.2 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]`

2.103.3 delete filter subrule udp

Description Use this command to delete.

Command Syntax `delete filter subrule udp ruleid ruleid subruleid subruleid`

2.103.4 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
<i>ruleid ruleid</i>	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
<i>subruleid subruleid</i>	Unique identifier of a filter subrule Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>srcportfrom srcportfrom</i>	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 udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange' Type: Create -- Optional Modify -- Optional Default value: 0
<i>srcportto srcportto</i>	End port number of the range of source port numbers. This field and 'srcportfrom' specify a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange' Type: Create -- Optional Modify -- Optional Default value: 65535
<i>dstportfrom dstportfrom</i>	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specify a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange' Type: Create -- Optional Modify -- Optional Default value: 0
<i>dstportto dstportto</i>	End port number of the range of destination port numbers. This field and 'dstportfrom' specify 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
<i>srcportcmp eq neq lt leq gt geq any inrange exrange</i>	Source port comparison type Type: Create -- Optional Modify -- Optional Default value: any

Name	Description
<i>dstportcmp</i> <i>eq</i> <i>neq</i> <i>lt</i> <i>leq</i> <i>gt</i> <i>geq</i> <i>any</i> <i>inrange</i> <i>exrange</i>	Destination port comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>subruleprio</i> <i>low</i> <i>high</i> <i>asinrule</i>	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
<i>transporthdr</i> <i>ethernet</i> <i>pppoe</i>	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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created
<i>Subrule Id</i>	Unique identifier of a filter subrule
<i>Start source port</i>	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 udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange'

Field	Description
<i>End source port</i>	End port number of the range of source port numbers. This field and 'srcportfrom' specify a range of udp source port numbers, if 'srcportcmp' is either 'inrange' or 'exrange'
<i>Start destination port</i>	Start port number of the range of destination port numbers. This field is invalid if 'dstportcmp' is 'any'. This field and 'dstportto' specify a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange'
<i>End destination port</i>	End port number of the range of destination port numbers. This field and 'dstportfrom' specify a range of udp destination port numbers, if 'dstportcmp' is either 'inrange' or 'exrange'. Otherwise this field is invalid
<i>Source port comparison</i>	Source port comparison type
<i>Destination port comparison</i>	Destination port comparison type
<i>Subrule Priority</i>	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.
<i>Transport Header</i>	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

2.104 Filter seq info Commands

2.104.1 get filter seq info

Description Use this command to get.

Command Syntax `get filter seq info [seqid seqid]`

2.104.2 create filter seq info

Description Use this command to create.

Command Syntax `create filter seq info seqid seqid [ifname ifname] [stageid stageid]
[seqdir in | out]`

2.104.3 delete filter seq info

Description Use this command to delete.

Command Syntax `delete filter seq info seqid seqid`

2.104.4 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 ifname eoa-0 stageid 1 seqdir 1`

Output Verbose Mode On

```
Entry Created

Sequence Id   : 1   Interface : eoa-0
Stage Id      : 1   Seq Direction : In
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
<i>Sequence Id</i>	Sequence Id of the sequence
<i>Interface</i>	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.
<i>Stage Id</i>	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
<i>Seq Direction</i>	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

Caution None.

References

- Generic filter related commands

2.105 Filter seq entry Commands

2.105.1 get filter seq entry

Description Use this command to get.

Command Syntax `get filter seq entry [seqid seqid] [ruleid ruleid]`

2.105.2 create filter seq entry

Description Use this command to create.

Command Syntax `create filter seq entry seqid seqid ruleid ruleid [orderid orderid]`

2.105.3 delete filter seq entry

Description Use this command to delete.

Command Syntax `delete filter seq entry seqid seqid ruleid ruleid`

2.105.4 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
<code>seqid seqid</code>	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
<i>ruleid</i> 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
<i>orderid</i> 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
<i>Sequence Id</i>	Sequence Id of the sequence
<i>Rule Id</i>	Rule Id of the rule
<i>Order Id</i>	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

2.106 Filter subrule ether Commands

2.106.1 get filter subrule ether

Description	Use this command to get.
Command Syntax	<code>get filter subrule ether [ruleid ruleid] [subruleid subruleid]</code>

2.106.2 create filter subrule ether

Description	Use this command to create.
Command Syntax	<pre>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]</pre>

2.106.3 delete filter subrule ether

Description	Use this command to delete.
Command Syntax	<code>delete filter subrule ether ruleid ruleid subruleid subruleid</code>

2.106.4 modify filter subrule ether

Description	Use this command to modify.
Command Syntax	<pre>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]</pre>

Parameters

Name	Description
<i>ruleid</i> 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
<i>subruleid</i> subruleid	Unique identifier of a filter subrule Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: 1 - 4294967295
<i>srcmacaddrfrom</i> 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"
<i>srcmacaddrto</i> 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"
<i>dstmacaddrfrom</i> 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"
<i>dstmacaddrto</i> 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
<p><i>ethertypefrom</i> ethertypefrom</p>	<p>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'</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: 0</p>
<p><i>ethertypeto</i> ethertypeto</p>	<p>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</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Default value: 0xFFFF</p>
<p><i>vlanidfrom</i> vlanidfrom</p>	<p>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'</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - 4095</p> <p>Default value: 1</p>
<p><i>vlanidto</i> vlanidto</p>	<p>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</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - 4095</p> <p>Default value: 4094</p>
<p><i>priotagfrom</i> priotagfrom</p>	<p>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'</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - 7</p> <p>Default value: 0</p>

Name	Description
<i>priotagto</i> 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
<i>dsapfrom</i> 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
<i>dsapto</i> 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
<i>ssapfrom</i> 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
<i>ssapto</i> 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
<i>srcmacaddrcmp</i> eq neq lt leq gt geq any inrange exrange	Source mac address comparison type Type: Create -- Optional Modify -- Optional Default value: any
<i>dstmacaddrcmp</i> eq neq lt leq gt geq any inrange exrange	Destination mac address comparison type Type: Create -- Optional Modify -- Optional Default value: any

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 0xf0 ssapfrom 0xf0 ssapto 0xf0 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
<i>Rule Id</i>	Unique identifier of a filter rule of which this sub rule is being created
<i>Subrule Id</i>	Unique identifier of a filter subrule
<i>Start source mac address</i>	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'
<i>End source mac address</i>	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
<i>Start destination MAC address</i>	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'
<i>End destination MAC address</i>	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
<i>Start ethernet type</i>	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'
<i>End ethernet type</i>	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
<i>Start VLAN Id</i>	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
<i>End VLAN Id</i>	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
<i>Start priority tag</i>	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'
<i>End priority tag</i>	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
<i>Start DSAP</i>	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'
<i>End DSAP</i>	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
<i>Start SSAP</i>	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'
<i>End SSAP</i>	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
<i>Source MAC address comparison</i>	Source mac address comparison type
<i>Desination MAC addr comparison</i>	Destination mac address comparison type
<i>Ether type comparison</i>	Ether type comparison type
<i>Vlan Id comparison</i>	VLAN Id comparison type. This field must be 'any', if 'priotagcmp' is not equal to 'any'
<i>Priority tag comparison</i>	Priority tag comparison type. This field must be 'any', if 'vlanidcmp' is not equal to 'any'
<i>DSAP comparison</i>	DSAP comparison type.

Field	Description
<i>SSAP comparison</i>	SSAP comparison type.
<i>Subrule Priority</i>	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

2.107 Filter rule actionmap Commands

2.107.1 get filter rule actionmap

Description Use this command to get.

Command Syntax `get filter rule actionmap [ruleid ruleid] [orderindex orderindex]`

2.107.2 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]`

2.107.3 delete filter rule actionmap

Description Use this command to delete.

Command Syntax `delete filter rule actionmap ruleid ruleid orderindex orderindex`

2.107.4 modify 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

Output field description

Field	Description
<i>Rule Id</i>	Unique identifier of a filter rule entry for which this mapping is being created
<i>Order Index</i>	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
<i>Action</i>	This field specifies the action of the rule
<i>Priority</i>	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

2.108 Igmpsnoop cfg info Commands

2.108.1 get igmpsnoop cfg info

Description Use this command to get.

Command Syntax `get igmpsnoop cfg info`

2.108.2 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
<code>queryinterval</code> 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 $((\text{QueryInterval} * 10) * \text{Robustness}) + \text{Query Response Time}$ received in Last Query Type: Modify -- Optional Valid values: 1 - 25
<code>anxioustimer</code> 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
<code>vlhosttimer</code> 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

Name	Description
<i>lastmembqryinterval</i> 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
<i>robustness</i> 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
<i>status</i> Enable Disable	Specified whether or not Igmp Snooping is to be enabled in the system. Type: Modify -- Optional
<i>reportsup</i> 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
<i>Query Interval</i>	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)
<i>Anxious Timer</i>	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.

Field	Description
<i>Vl Host Timer</i>	This is the maximum time (in seconds), for which the IcmpSnooping module can assume that there are Version 1 group members present, for the group for which this timer is running. The unit is seconds.
<i>Last Member Query Interval</i>	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.
<i>Robustness Variable</i>	This allows tuning for the expected packet loss on a subnet. The IcmpSnooping module is robust to [RobustnessVar] packet losses.
<i>Icmp Snoop Status</i>	Specified whether or not Icmp Snooping is to be enabled in the system.
<i>Report Suppression Status</i>	Report Suppression is enabled or not.

Caution None

References None

2.109 Igmpsnoop port info Commands

2.109.1 get igmpsnoop port info

Description Use this command to get.

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

2.109.2 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
<i>portid portid</i>	A Bridge Port, for which IGMP Snooping needs to be enabled or disabled. Type: Modify -- Mandatory Get -- Optional Valid values: 1 - 65535 Default value: -----

Name	Description
<i>status Enable / Disable</i>	Specifies whether or not IGMP Snooping is to be enabled on the port. Type: Modify -- Optional Get -- Optional Default value: -----
<i>leavemode Normal / Fast / FastNormal</i>	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_M ODE

Example `$ get igmpsnoop port info portid 6 leavemode Normal`

Output

```

Port Index Port      Igmp Snoop Status   Leave Mode
-----
6           Enable              Normal
    
```

Output field description

Field	Description
<i>Port Index</i>	A Bridge Port, for which IGMP Snooping needs to be enabled or disabled.

Field	Description
<i>Port Igmp Snoop Status</i>	Specifies whether or not IGMP Snooping is to be enabled on the port.
<i>Leave Mode</i>	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

2.110 Igmpsnoop querier info Commands

2.110.1 get igmpsnoop querier info

Description Use this command to get.

Command Syntax `get igmpsnoop querier info [vlanid vlanid] [portid portid]`

2.110.2 create igmpsnoop querier info

Description Use this command to create.

Command Syntax `create igmpsnoop querier info vlanid vlanid portid portid`

2.110.3 delete igmpsnoop querier info

Description Use this command to delete.

Command Syntax `delete igmpsnoop querier info vlanid vlanid portid portid`

Parameters

Name	Description
<code>vlanid vlanid</code>	<p>VlanId to uniquely identify the vlanid of the entry for which the IgmpSnooping Querier is configured/ learnt. 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.</p> <p>Type: Create -- Mandatory Delete -- Mandatory Get -- Optional</p> <p>Valid values: 0 - GS_CFG_MAX_VLAN_ID Default value: ----</p>
<code>portid portid</code>	<p>A Bridge Port, belonging to the Vlan (dot1qVlanIndex), on which the Querier exists.</p> <p>Type: Create -- Mandatory Delete -- Mandatory Get -- Optional</p> <p>Valid values: 1 - 65535 Default value: ----</p>

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
<i>VLAN Index</i>	VlanId to uniquely identify the vlanid of the entry for which the IgmpSnooping Querier is configured/ learnt. 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.
<i>Port Index</i>	A Bridge Port, belonging to the Vlan (dot1qVlanIndex), on which the Querier exists.
<i>Querier Port Status</i>	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

2.111 Igmpsnoop port stats Commands

2.111.1 get igmpsnoop port stats

Description Use this command to get.

Command Syntax `get igmpsnoop port stats [vlanid vlanid] [macaddr macaddr] [portid portid]`

2.111.2 reset igmpsnoop port stats

Description Use this command to reset.

Command Syntax `reset igmpsnoop port stats vlanid vlanid macaddr macaddr portid portid`

Parameters

Name	Description
<code>vlanid vlanid</code>	<p>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.</p> <p>Type: Reset -- Optional Get -- Optional</p> <p>Valid values: 1 - GS_CFG_MAX_VLAN_ID</p> <p>Default value: -----</p>

Name	Description
<i>macaddr macaddr</i>	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: -----
<i>portid portid</i>	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 macaddr 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
<i>VLAN Index</i>	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.
<i>Mcast Group Address</i>	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
<i>Port Index</i>	A Bridge Port belonging to the Vlan (igmpVlanIndex) and Group (igmpsnoopMcastAddress), for which the IgmpSnooping statistics are desired.

Field	Description
<i>Query Received</i>	The number of Igmp Queries received on the port belonging to a particular multicast group and Vlan.
<i>Report Received</i>	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

2.112 ACL Global Macentry Commands

2.112.1 get acl global macentry

Description Use this command to get.

Command Syntax `get acl global macentry [macaddr macaddr]`

2.112.2 create acl global macentry

Description Use this command to create.

Command Syntax `create acl global macentry macaddr macaddr [deny disable | enable] [track disable | enable]`

2.112.3 modify acl global macentry

Description Use this command to modify.

Command Syntax `modify acl global macentry macaddr macaddr [deny disable | enable] [track disable | enable]`

2.112.4 delete acl global macentry

Description Use this command to delete.

Command Syntax `delete acl global macentry macaddr macaddr`

Parameters

Name	Description
<code>macaddr macaddr</code>	Unicast Source MAC Address, which needs to be tracked/denied access Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional

Name	Description
<i>deny</i> <i>disable</i> <i>enable</i>	This flag specifies if the MAC address is to be denied access. Type: Create -- Optional Modify -- Optional Default value: enable
<i>track</i> <i>disable</i> <i>enable</i>	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
<i>Mac Address</i>	Unicast Source MAC Address, which needs to be tracked/denied access
<i>Deny</i>	This flag specifies if the MAC address is to be denied access.
<i>Track</i>	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.
<i>Number of times Port changed</i>	This specifies the number of times port has been changed by the MAC address.

Caution None

References None

2.113 ACL Port Macentry Commands

2.113.1 get acl port macentry

Description Use this command to get.

Command Syntax `get acl port macentry [portid portid] [macaddr macaddr]`

2.113.2 create acl port macentry

Description Use this command to create.

Command Syntax `create acl port macentry portid portid macaddr macaddr`

2.113.3 delete acl port macentry

Description Use this command to delete.

Command Syntax `delete acl port macentry portid portid macaddr macaddr`

Parameters

Name	Description
<i>portid portid</i>	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
<i>macaddr macaddr</i>	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
    
```

Output field description

Field	Description
<i>PortId</i>	Bridge Port Id, for which the port MAC Address entry is created
<i>Mac Address</i>	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

2.114 Aggregator Commands

2.114.1 get aggr intf

Description Use this command to get.

Command Syntax `get aggr intf [ifname ifname]`

2.114.2 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]`

2.114.3 delete aggr intf

Description Use this command to delete.

Command Syntax `delete aggr intf ifname ifname`

2.114.4 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]`

Parameters

Name	Description
<i>ifname ifname</i>	<p>This specifies the interface index used for the Aggregator type of interfaces. Valid Value is aggr-0</p> <p>Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional</p> <p>Valid values: IAD_AGGR_MIN_IFINDEX - IAD_AGGR_MAX_IFINDEX</p>
<i>ip ip</i>	<p>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.</p> <p>Type : Create - Optional. Modify - Optional</p> <p>Valid Values: Any valid class A/B/C / Classless IPAddress.</p> <p>Default Value: 0</p>
<i>mask mask</i>	<p>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.</p> <p>Type : Create - Optional. Modify - Optional</p> <p>Valid Values : 255.0.0.0 - 255.255.255.255</p> <p>Default Value: 0</p>
<i>usedhcp usedhcp</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: False, True</p> <p>Default value: GS_FALSE</p>

Name	Description
<i>mgmtvlanid mgmtvlanid</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - GS_CFG_MAX_VLAN_ID Default value: 0</p>
<i>priority priority</i>	<p>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.</p> <p>Type: Create -- Optional Modify -- Optional</p> <p>Valid values: 0 - GS_CFG_MAX_MGMT_PRIO Default value: GS_CFG_DEF_MGMT_PRIO</p>

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
<i>IfName</i>	This specifies the interface name used for the aggregator type of interfaces.
<i>Ip Address</i>	This specifies the IP address configured for the interface.

Field	Description
<i>Mask net-mask</i>	This specifies the network mask configured for the interface.
<i>UseDhcp</i>	This specifies whether a DHCP client is to be triggered to obtain an IP address for this interface from a DHCP server.
<i>Mgmt VLAN Index</i>	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.
<i>Tagged Mgmt PDU Prio</i>	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.
<i>Admin Status</i>	The administrative status of the interface.
<i>Operational Status</i>	The operational status of the interface.

Caution None

References None

2.115 SNTP Cfg Commands

2.115.1 get sntp cfg

Description Use this command to get.

Command Syntax `get sntp cfg`

2.115.2 modify sntp cfg

Description Use this command to modify.

Command Syntax `modify sntp cfg [enable | disable]`

Parameters

Name	Description
<code>enable/disable</code>	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
<code>Status</code>	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.

2.116 SNTP Stats Commands

2.116.1 get sntp stats

Description Use this command to get.

Command Syntax `get sntp stats`

2.116.2 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

Status : Enable

Output field description

Field	Description
<i>Requests count</i>	This specifies the number of requests sent to SNTP Server.
<i>Responses count</i>	This specifies the Number of responses received from SNTP Server.
<i>Invalid Responses count</i>	This specifies the Number of invalid responses received from SNTP Server.
<i>Lost Responses count</i>	This specifies the number of responses which do not come within time limit.
<i>Last Time Stamp [MM/DD/YYYY: :HH:MM:SS]</i>	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.

2.117 SNTP servaddr Commands

2.117.1 get sntp servaddr

Description Use this command to get.

Command Syntax `get sntp servaddr`

2.117.2 create sntp servaddr

Description Use this command to create.

Command Syntax `create sntp servaddr`

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
<i>Server Addr</i>	This specifies the IP Address of the SNTP Server.
<i>Status</i>	Server is in Use. OR Server is in standby mode i.e. not in use.

Caution None.

References None.

2.118 SNMP Comm Commands

2.118.1 get snmp comm

Description Use this command to get.

Command Syntax `get snmp comm [community community]`

2.118.2 create snmp comm

Description Use this command to create.

Command Syntax `create snmp comm community community [access ro | rw]`

2.118.3 delete snmp comm

Description Use this command to delete.

Command Syntax `delete snmp comm community community`

Parameter

Name	Description
<code>community community</code>	This specifies the Community name. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<code>access ro rw</code>	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
<i>community</i>	This specifies the Community name.
<i>Access</i>	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

2.119 SNMP Host Commands

2.119.1 get snmp host

Description Use this command to get.

Command Syntax `get snmp host [ip ip] [community community]`

2.119.2 create snmp host

Description Use this command to create.

Command Syntax `create snmp host ip ip community community`

2.119.3 delete snmp host

Description Use this command to delete.

Command Syntax `delete snmp host ip ip community community`

Parameter

Name	Description
<code>ip ip</code>	This specifies the IP address of the manager that has access permissions. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional
<code>community community</code>	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
<i>Ip Address</i>	This specifies the IP address of the manager that has access permissions.
<i>Community</i>	This specifies the Community name. This must be a valid community in the snmp community table.

Caution None.

References

- SNMP commands

2.120 SNMP Stats Commands

2.120.1 get snmp stats

Description Use this command to get.

Command Syntax `get snmp stats`

2.120.2 modify snmp stats

Description Use this command to modify.

Command Syntax `modify snmp stats [authentraps enable | disable]`

Parameter

Field	Description
<code>authentraps enable / disable</code>	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
<code>InPkts</code>	The total number of Messages delivered to the SNMP entity from the transport service.
<code>OutPkts</code>	The total number of SNMP Messages which were passed from the SNMP protocol entity to the transport service.

Field	Description
<i>InBadVersions</i>	The total number of SNMP Messages which were delivered to the SNMP protocol entity and were for an unsupported SNMP version.
<i>InBadCommunityNames</i>	The total number of SNMP Messages delivered to the SNMP protocol entity which used a SNMP community name not known to said entity.
<i>InBadCommunityUses</i>	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.
<i>InASNParseErrs</i>	The total number of ASN.1 or BER errors encountered by the SNMP protocol entity when decoding received SNMP Messages.
<i>InTooBig</i>	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'.
<i>InNoSuchNames</i>	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'.
<i>InBadValues</i>	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'.
<i>InReadOnly</i>	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.
<i>InGenErrs</i>	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'.
<i>InTotalReqVars</i>	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.
<i>InTotalSetVars</i>	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.
<i>InGetRequests</i>	The total number of SNMP Get-Request PDUs which have been accepted and processed by the SNMP protocol entity.
<i>InGetNexts</i>	The total number of SNMP Get-Next PDUs which have been accepted and processed by the SNMP protocol entity.

Field	Description
<i>InSetRequests</i>	The total number of SNMP Set-Request PDUs which have been accepted and processed by the SNMP protocol entity.
<i>InGetResponses</i>	The total number of SNMP Get-Response PDUs which have been accepted and processed by the SNMP protocol entity.
<i>InTraps</i>	The total number of SNMP Trap PDUs which have been accepted and processed by the SNMP protocol entity.
<i>OutTooBig</i>	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'.
<i>OutNoSuchNames</i>	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'.
<i>OutBadValues</i>	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'.
<i>OutGenErrs</i>	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'.
<i>OutGetRequests</i>	The total number of SNMP Get-Request PDUs which have been generated by the SNMP protocol entity.
<i>OutGetNexts</i>	The total number of SNMP Get-Next PDUs which have been generated by the SNMP protocol entity.
<i>OutSetRequests</i>	The total number of SNMP Set-Request PDUs which have been generated by the SNMP protocol entity.
<i>OutGetResponses</i>	The total number of SNMP Get-Response PDUs which have been generated by the SNMP protocol entity.
<i>OutTraps</i>	The total number of SNMP Trap PDUs which have been generated by the SNMP protocol entity.
<i>AuthenTraps</i>	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.

Field	Description
<i>SilentDrops</i>	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.
<i>ProxyDrops</i>	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.

2.121 SNMP Traphost Commands

2.121.1 get snmp traphost

Description Use this command to get.

Command Syntax `get snmp traphost [ip ip] [port port]`

2.121.2 create snmp traphost

Description Use this command to create.

Command Syntax `create snmp traphost ip ip community community [port port]
[version v1 | v2c]`

2.121.3 delete snmp traphost

Description Use this command to delete.

Command Syntax `delete snmp traphost ip ip [port port]`

2.121.4 modify snmp traphost

Description Use this command to modify

Command Syntax `modify snmp traphost ip ip [port port] [version v1 | v2c]`

Parameter

Name	Description
<code>port port</code>	This specifies the Port at which the trap is to be sent. Type: Create -- Optional Get -- Optional Modify -- Optional Delete -- Optional Default value: 162
<code>version v1 v2c</code>	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
<i>Ip Address</i>	This specifies the IP address of the manager where trap is to be sent.
<i>Community</i>	This specifies the Community name used in the trap.
<i>Port</i>	This specifies the Port at which the trap is to be sent.
<i>Version</i>	This specifies the Trap version to be sent to the Manager.

Caution None.

References

- SNMP commands

2.122 File Commands

2.122.1 apply

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
<code>fname file-name</code>	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', '-', '_', ' ')
<code>version version</code>	This specifies the version of the file that needs to be applied. Type: Optional Default Value: In case of multiple version files the active copy gets applied. Not valid for single version file.
<code>besteffort true/false</code>	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 : <code>false</code>

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      : 0xffffffffffffffffffffffffffff
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

2.122.2download

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
<i>src src-filename</i>	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 .bin 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
<p><i>dest dest-filename</i></p>	<p>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.</p> <p>The directories are</p> <p>/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.</p> <p>/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.</p> <p>/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.</p> <p>/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.</p> <p>/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.</p> <p>/nvram/user/ - This directory contains user specific files. There can be multiple versions of files. The files are stored in NVRAM.</p> <p>/sdram/cfg/ - This directory contains user specific configuration files with .cfg extension. The files are stored in SDRAM</p> <p>/sdram/user/ - This directory contains user specific files. The files are stored in SDRAM.</p> <p>Type: Mandatory Valid values: String of up to 128 characters (all characters except ‘;’, ‘‘, ‘?’)</p>

Name	Description
<i>ip ip-address</i>	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.
<i>mode tftp ftp</i>	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.

2.122.3list

Description This command is used to list the Configuration or binary files stored on the unit

Command Syntax `listfname [/nvram | /sdram]`

Parameters

Name	Description
<i>fname</i> [/nvram /sdram]	<p>This specifies whether the files of NVRAM or SDRAM are to be listed.</p> <p>/nvram – This lists all directories and files stored in NVRAM.</p> <p>/sdram - This lists all directories and files stored in SDRAM.</p> <p>Type: Optional. Default Value : All the files present in the NVRAM or SDRAM will be displayed.</p>

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 <i>i/i</i> 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.

2.122.4remove

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
<i>fname file-name</i>	<p>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</p> <p>/nvram/bin/control/, /nvram/bin/control/, /nvram/bin/dataplane/, /nvram/bin/dslphy, /nvram/cfg/factorydef/, /nvram/user/, /sdram/cfg, /sdram/user.</p> <p>Type : Mandatory</p> <p>Valid values: string of upto 128 characters ('A'-'Z', 'a'-'z', '0'-'9', '-', '_')</p>
<i>version version</i>	<p>This specifies the version of the file that need to be removed.</p> <p>Type: Optional for single version file. Mandatory for multiple version file. Default Value:</p>

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

2.122.5upgrade

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
<i>fname file-name</i>	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', '-', '_')
<i>version version</i>	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.

2.123 Scheduling profile info Commands

2.123.1 get sched profile info

Description Use this command to get.

Command Syntax `get sched profile info [name name]`

2.123.2 create sched profile info

Description Use this command to create.

Command Syntax `create sched profile info name name [algo pp]`

2.123.3 delete sched profile info

Description Use this command to delete.

Command Syntax `delete sched profile info name name`

2.123.4 modify sched profile info

Description Use this command to modify.

Command Syntax `modify sched profile info name name [algo pp]`

Parameters

Name	Description
<code>name name</code>	Name of the scheduling profile Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional
<code>algo pp</code>	Scheduling algorithm of the profile. Currently only Proabalistic Priority (1) is supported. In Proabalistic Priority algorithm, the traffic class parameter determines the probability with which its corresponding queue is served, when it is polled by the server. Type: Create -- Optional Modify -- Optional Default value: pp

Example `$ create sched profile info name gold algo pp`

Output Verbose Mode On

Entry Created

```
Profile Name      : gold
Scheduling Algorithm : pp
```

Verbose Mode Off:

```
Entry Created
```

Output field description

Field	Description
<i>Profile Name</i>	Name of the scheduling profile
<i>Scheduling Algorithm</i>	Scheduling algorithm of the profile. Currently only Proabalistic Priority (1) is supported. In Proabalistic Priority algorithm, the traffic class parameter determines the probability with which its corresponding queue is served, when it is polled by the server.

Caution None.

References

- Scheduling profile related commands.

2.124 Scheduling profile class Commands

2.124.1 get sched profile class

Description Use this command to get.

Command Syntax `get sched profile class [name name] [classid classid]`

2.124.2 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]`

Parameters

Name	Description
<code>name name</code>	Name of the scheduling profile. Type: Modify -- Mandatory Get -- Optional
<code>classid classid</code>	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
<code>param1 param1</code>	First parameter of the profile class Type: Modify -- Optional
<code>param2 param2</code>	Second parameter of the profile class. Type: Modify -- Optional
<code>param3 param3</code>	Third parameter of the profile class. 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
```

Output field description

Field	Description
<code>Profile Name</code>	Name of the scheduling profile.
<code>Class Id</code>	Scheduling profile class identifier
<code>Profile Class Param1</code>	First parameter of the profile class

Field	Description
<i>Profile Class Param2</i>	Second parameter of the profile class.
<i>Profile Class Param3</i>	Third parameter of the profile class.

Caution None.

References

- Scheduling profile related commands

2.125 Ehdlc intf Commands

2.125.1 get ehdlc intf

Description Use this command to get.

Command Syntax `get ehdlc intf [ifname ifname]`

2.125.2 create ehdlc intf

Description Use this command to create.

Command Syntax `create ehdlc intf ifname ifname lowif lowif [sarstatusEnable
| Disable] [enable | disable]`

2.125.3 delete ehdlc intf

Description Use this command to delete.

Command Syntax `delete ehdlc intf ifname ifname`

2.125.4 modify ehdlc intf

Description Use this command to modify.

Command Syntax `modify ehdlc intf ifname ifname [sarstatus Enable | Disable]
[enable | disable]`

Parameters

Name	Description
<i>ifname</i> 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
<i>lowif</i> 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
<i>sarstatus</i> 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
<i>enable</i> / <i>disable</i>	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
    
```

Output field description

Field	Description
<i>IfName</i>	This parameter specifies the name assigned to this interface. Valid Values starts from ehdlc-0 and continues to ehdlc-*
<i>LowIfName</i>	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-*
<i>EHDLC Sar Status</i>	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'.
<i>Admin Status</i>	Administrative status of the Ehdlc interface

Caution None.

References None.

2.126 Active Standby aggr info Commands

2.126.1 get actstdby aggr info

Description Use this command to get.

Command Syntax `get actstdby aggr info [ifname ifname]`

2.126.2 modify actstdby aggr info

Description Use this command to modify.

Command Syntax `modify actstdby aggr info ifname ifname [status Enable | Disable]`

Parameters

Name	Description
<code>ifname ifname</code>	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
<code>status enable disable</code>	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
<code>Interface Index</code>	This specifies the aggregator interface index on which active standby is to be enabled. Valid Value is aggr-0.
<code>Status</code>	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.

2.127 Redundancy aggr info Commands

2.127.1 get rdncy aggr info

Description Use this command to get.

Command Syntax `get rdncy aggr info [ifname ifname]`

2.127.2 create rdncy aggr info

Description Use this command to create.

Command Syntax `create rdncy aggr info ifname ifname [revdistrib Enable | Disable] [fallback Enable | Disable]`

2.127.3 delete rdncy aggr info

Description Use this command to delete.

Command Syntax `delete rdncy aggr info ifname ifname`

2.127.4 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
<i>ifname</i> 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
<i>revdistrib</i> 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
<i>fallback</i> 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
<i>Interface Index</i>	This specifies the interface index used for the Redundancy Aggregator type of interfaces. Valid Value is aggr-0
<i>Reverse Distribution</i>	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.
<i>FallBack</i>	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

2.128 Redundancy `aggrport list` Commands

2.128.1 `get rdncy aggrport list`

Description Use this command to get.

Command Syntax `get rdncy aggrport list [ifname ifname]`

Parameters

Name	Description
<code>ifname ifname</code>	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 ifname aggr-0`

Output

```
Aggr IfName          : aggr-0
PortList            : eth-0 eth-1
Port List Interface type : None
```

Output field description

Field	Description
<code>IfName</code>	Index of the redundancy aggregator, for which layer2 interfaces are associated. Valid Value is aggr-0
<code>PortList</code>	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.
<code>Port List Interface type</code>	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.

2.129 Redundancy aggr stats Commands

2.129.1 get rdncy aggr stats

Description Use this command to get.

Command Syntax `get rdncy aggr stats [ifname ifname]`

2.129.2 reset rdncy aggr stats

Description Use this command to reset.

Command Syntax `reset rdncy aggr stats ifname ifname`

Parameters

Name	Description
<code>ifname ifname</code>	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
<i>Interface Index</i>	This specifies the interface index used for the Aggregator type of interfaces for which the redundancy stats are desired. Valid Value is aggr-0
<i>Collapse Count</i>	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.
<i>DeCollapse Count</i>	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
<i>Last Collapse Time [MM/DD/YYYY::HH:MM:SS]</i>	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.
<i>Last De-Collapse Time [MM/DD/YYYY::HH:MM:SS]</i>	This specifies time at which the last de-collapse (one of the failed redundant interface has come up) occurred. The display format shall be mm/dd/yyyy:hr:min:sec.

Caution None.

References None.

2.130 SNMP Proxy Host Commands

2.130.1 get snmp proxy host

Description Use this command to get.

Command Syntax `get snmp proxy host [ip ip] [netcomm netcomm]`

2.130.2 create snmp proxy host

Description Use this command to create.

Command Syntax `create snmp proxy host ip ip netcomm netcomm [hostport hostport]`

2.130.3 delete snmp proxy host

Description Use this command to delete.

Command Syntax `delete snmp proxy host ip ip netcomm netcomm`

2.130.4 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
<i>ip ip</i>	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
<i>netcomm</i> 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
<i>hostport</i> 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
<i>Ip Address</i>	This specifies the IP address of the manager that has access permissions for the CPE for community specified by 'NetCommunity'.
<i>NET Community</i>	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.
<i>Host Port</i>	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

2.131 SNMP Proxy Comm Commands

2.131.1 get snmp proxy comm

Description Use this command to get.

Command Syntax `get snmp proxy comm [netcomm netcomm]`

2.131.2 create snmp proxy comm

Description Use this command to create.

Command Syntax `create snmp proxy comm netcomm netcomm cpecomm cpecomm lowif lowif`

2.131.3 delete snmp proxy comm

Description Use this command to delete.

Command Syntax `delete snmp proxy comm netcomm netcomm`

2.131.4 modify snmp proxy comm

Description Use this command to modify.

Command Syntax `modify snmp proxy comm netcomm netcomm [cpecomm cpecomm]`

Parameters

Name	Description
<code>netcomm netcomm</code>	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
<i>cpecomm</i> 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
<i>lowif</i> 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
<i>NET Community</i>	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.
<i>CPE Community</i>	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.
<i>LowIfName</i>	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

2.132 SNMP Proxy cfg Commands

2.132.1 get snmp proxy cfg

Description Use this command to get.

Command Syntax `get snmp proxy cfg`

2.132.2 modify snmp proxy cfg

Description Use this command to modify.

Command Syntax `modify snmp proxy cfg [status disable | enable]`

Parameters

Name	Description
<code>status disable enable</code>	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
<code>status</code>	Setting the value 'enable' for this object will activate the SNMP Proxy feature.

Caution None.

References

- snmp proxy related commands

2.133 PPPoE Global ACprofile Commands

2.133.1 get pppoe global acprofile

Description Use this command to get.

Command Syntax `get pppoe global acprofile [profileid profileid]`

2.133.2 create pppoe global acprofile

Description Use this command to create.

Command Syntax `create pppoe global acprofile profileid profileid acname acname`

2.133.3 delete pppoe global acprofile

Description Use this command to delete.

Command Syntax `delete pppoe global acprofile profileid profileid`

Parameters

Name	Description
<code>profileid profileid</code>	Profile Id of the AC Name configured. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional Valid values: 1 - GS_CFG_MAX_AC_PROFILE
<code>acname acname</code>	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
```

Output field description

Field	Description
<i>Profile Id</i>	Profile Id of the AC Name configured.
<i>AC Name</i>	AC Name for the Session, based on which, the AC is selected.

Caution • None.

References • PPPoE global ACprofile related commands.

2.134 PPPoE Global Config Commands

2.134.1 get pppoe global config

Description Use this command to get.

Command Syntax `get pppoe global config`

2.134.2 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
<i>padimaxnumretries</i> 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
<i>padrmaxnumretries</i> 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
<i>paditxintrvl</i> 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
<i>padrtxintrvl</i> 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
<i>wandntmrintrvl</i> 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
<i>inactivitytmrintrvl</i> 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
<i>discmaxnumretries</i> 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
<i>Max Total Sessions</i>	Maximum number of PPPoE sessions supported.
<i>PADI Max Num Retries</i>	Maximum number of times the PPPoE Client sends a PADI for establishing a PPPoE Session.
<i>PADR Max Num Retries</i>	Maximum number of times the PPPoE Client sends a PADR for establishing a PPPoE Session.
<i>PADI Tx Interval</i>	The time, n seconds, between PADI retries from the PPPoE Client.
<i>PADR Tx Interval</i>	The time, n seconds, between PADR retries from the PPPoE Client.
<i>WAN Dn Tmr Interval</i>	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.
<i>InActivity Tmr Interval</i>	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.
<i>DISC Max Num Retries</i>	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.

Caution • None.

References • PPPoE global config related commands.

2.135 PPPoE Global Macprofile Commands

2.135.1 get pppoe global macprofile

Description Use this command to get.

Command Syntax `get pppoe global macprofile [profileid profileid]`

2.135.2 create pppoe global macprofile

Description Use this command to create.

Command Syntax `create pppoe global macprofile profileid profileid macaddr macaddr`

2.135.3 delete pppoe global macprofile

Description Use this command to delete.

Command Syntax `delete pppoe global macprofile profileid profileid`

**Input Parameter
Description**

Name	Description
<code>profileid profileid</code>	Profile Id of the MAC Address configured. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional Valid values: 1 - GS_CFG_MAX_MACADDR_PROFILE
<code>macaddr macaddr</code>	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

Output field description

Field	Description
<i>Profile Id</i>	Profile Id of the MAC Address configured.
<i>MAC Address</i>	MAC Address for the profile.

Caution

- None.

References

- PPPoE global macprofile related commands.

2.136 PPPoE Global Serviceprofile Commands

2.136.1 get pppoe global serviceprofile

Description Use this command to get.

Command Syntax `get pppoe global serviceprofile [profileid profileid]`

2.136.2 create pppoe global serviceprofile

Description Use this command to create.

Command Syntax `create pppoe global serviceprofile profileid profileid servicename
servicename`

2.136.3 delete pppoe global serviceprofile

Description Use this command to delete.

Command Syntax `delete pppoe global serviceprofile profileid profileid`

**Input Parameter
Description**

Name	Description
<code>profileid profileid</code>	Profile Id of the Service Name configured. Type: Create -- Mandatory Delete -- Mandatory Get -- Optional Valid values: 1 - GS_CFG_MAX_SERVICE_PROFILE
<code>servicename servicename</code>	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

Output field description

Field	Description
<i>Profile Id</i>	Profile Id of the Service Name configured.
<i>Service Name</i>	Service Name for the Session, based on which, the AC is selected.

Caution • None.

References • PPPoE global serviceprofile related commands.

2.137 PPPoE Interface Commands

2.137.1 get pppoe intf

Description Use this command to get.

Command Syntax `get pppoe intf [ifname ifname]`

2.137.2 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]`

2.137.3 delete pppoe intf

Description Use this command to delete.

Command Syntax `delete pppoe intf ifname ifname`

2.137.4 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
<code>ifname ifname</code>	The PPPoE interface. Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: IAD_PPPOE_MIN_IFINDEX - IAD_PPPOE_MAX_IFINDEX
<code>lowif lowif</code>	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
<p><i>wanbridgeport</i> wanbridgeport</p>	<p>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</p>
<p><i>sessionid</i> sessionid</p>	<p>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</p>
<p><i>acmacaddr</i> acmacaddr</p>	<p>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</p>
<p><i>macaddrprof</i> macaddrprof</p>	<p>Profile Id for self MAC addresses. The profile for the same is created using the PPPoEMacAddrProfileTable. Type: Create -- Mandatory Modify -- Optional</p>
<p><i>servicenameprof</i> servicenameprof</p>	<p>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</p>
<p><i>acnameprof</i> acnameprof</p>	<p>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</p>
<p><i>ethpkttype</i> Type2 802_3</p>	<p>This specifies the type of the packet. Type: Create -- Optional Modify -- Optional Default value: Type2</p>

Name	Description
<i>nature</i> 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
<i>enable</i> / <i>disable</i>	Administrative status of the interface Type: Optional Valid values: <i>enable</i> or <i>disable</i> Default Value: <i>enable</i>

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
<i>Ifname</i>	The PPPoE interface.
<i>Low If Name</i>	This specifies the lower interface index. It contains the ifindex of the PPP relay interface.
<i>WAN Bridge Port</i>	WAN side bridge port. A value of zero means any WAN side port is acceptable. Currently, only value zero is supported.
<i>Session Id</i>	Session Id for the session given only in case a static session is being created.
<i>AC Mac Addr</i>	MAC address of the remote AC given only in case a static session is being created.
<i>Mac Addr Prof</i>	Profile Id for self MAC addresses. The profile for the same is created using the PPPoEMacAddrProfileTable.

Field	Description
<i>Service Name Profile</i>	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.
<i>AC Name Prof</i>	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.
<i>Eth Pkt Type</i>	This specifies the type of the packet.
<i>Nature</i>	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.
<i>Operational Status</i>	The actual/current state of the interface. It may be either Up or Down.
<i>Admin Status</i>	The desired state of the interface. It may be either Up or Down.

Caution

- None.

References

- PPPoE session config related commands.

2.138 PPPoE Session Stats Commands

2.138.1 get pppoe session stats

Description Use this command to get.

Command Syntax `get pppoe session stats [ifname ifname]`

Input Parameter Description

Name	Description
<i>ifname</i> 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
<i>Ifname</i>	The PPPoE interface.
<i>Session Id</i>	Session Id.
<i>Peer Mac Addr</i>	MAC address of the remote AC.
<i>Num of PADI Tx</i>	The number of PPPoE PADI transmitted.
<i>Num of PADI Timeouts</i>	The number of PPPoE timeouts waiting for a response to a PADI.
<i>Num of PADR Tx</i>	The number of PPPoE PADR transmitted.
<i>Num of PADR Timeouts</i>	The number of PPPoE timeouts waiting for a response to a PADR.
<i>Num of PADT Tx</i>	The number of PPPoE PADT transmitted.
<i>Num of PADT Rx</i>	The number of PPPoE PADT received.
<i>Num of PADT Rejected</i>	The number of PPPoE PADT discarded.

Field	Description
<i>Num of PADO Rx</i>	The number of PPPoE PADO received.
<i>Num of PADO Rejected</i>	The number of PPPoE PADO discarded.
<i>Num of Multi PADO Rx</i>	Number of times more than 1 PPPoE PADO was received.
<i>Num of PADS Rx</i>	The number of PPPoE PADS received.
<i>Num of PADS Rejected</i>	The number of PPPoE PADS discarded.
<i>Num of Generic Err Rx</i>	Number of generic errors received.
<i>Version</i>	Version as given in the PPPoE rfc-2516.
<i>Type</i>	Type as given in the PPPoE rfc-2516.
<i>Connect Time</i>	Time when the session was established.
<i>Duration (s)</i>	Number of seconds since the session was established.
<i>AC Cookie</i>	Binary sequence representing the AC cookie given in negotiations.
<i>Host Unique</i>	Binary sequence representing the host unique tag value.
<i>State</i>	State that session is in.
<i>Service Name</i>	Service name with which the session came up.
<i>AC Name</i>	AC name with which the session came up.

Caution • None.

References • PPPoE session stats related commands.

2.139 PPPoE Global Stats Commands

2.139.1 get pppoe global stats

Description	Use this command to get.
Command Syntax	<i>get pppoe global stats</i>
Input Parameter Description	None.
Example	<i>\$ get pppoe global stats</i>
Output	<pre> 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 </pre>

Output field description

Field	Description
<i>Active Sessions</i>	The number of active pppoe sessions in the system.
<i>Total Sessions</i>	The total number of PPPoE sessions.
<i>Peak Active Sessions</i>	Peak number of active PPPoE sessions.
<i>Num of PADI Tx</i>	The number of PPPoE PADI transmitted.
<i>Num of PADI Timeouts</i>	The number of PPPoE timeouts waiting for a response to a PADI.
<i>Num of PADR Tx</i>	The number of PPPoE PADR transmitted.
<i>Num of PADR Timeouts</i>	The number of PPPoE timeouts waiting for a response to a PADR.
<i>Num of PADT Tx</i>	The number of PPPoE PADT transmitted.
<i>Num of PADT Rx</i>	The number of PPPoE PADT received.
<i>Num of PADT Rejected</i>	The number of PPPoE PADT discarded.
<i>Num of PADO Rx</i>	The number of PPPoE PADO received.
<i>Num of PADO Rejected</i>	The number of PPPoE PADO discarded.
<i>Num of PADS Rx</i>	The number of PPPoE PADS received.
<i>Num of PADS Rejected</i>	The number of PPPoE PADS discarded.
<i>Num of Malformed Pkts Rx</i>	The number of PPPoE malformed packets received.

Caution • None.

- References**
- PPPoE global stats related commands.

2.140 PPPR Interface Commands

2.140.1 get pppr intf

Description Use this command to get.

Command Syntax `get pppr intf [ifname ifname]`

2.140.2 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]`

2.140.3 delete pppr intf

Description Use this command to delete.

Command Syntax `delete pppr intf ifname ifname`

2.140.4 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
<code>ifname ifname</code>	The PPPR interface. Type: Create -- Mandatory Delete -- Mandatory Modify -- Mandatory Get -- Optional Valid values: IAD_PPPR_MIN_IFINDEX - IAD_PPPR_MAX_IFINDEX
<code>lowif lowif</code>	This specifies the name of the lower AAL5 interface. Type: Create -- Mandatory

Name	Description
<i>maxpdu</i> 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
<i>ppprackto</i> 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_PPPR_ACK_TIMER_DEFAULT
<i>lowiftoggletimerto</i> 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_PPPR_LOWIF_TOGGLE_TO_DEFAULT
<i>nature</i> dynamic static	Specifies if the interface is dynamic or static in nature. Type: Create -- Optional Modify -- Optional Default value: Dynamic
<i>configstatus</i> 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
<i>enable</i> / <i>disable</i>	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
```

Nature : dynamic Config Status : Normal
 Operational Status : up Admin Status : up

Verbose Mode Off:

Entry Created

Output field description

Field	Description
<i>Ifname</i>	The PPPR interface.
<i>Low IfName</i>	This specifies the name of the lower AAL5 interface.
<i>Max PDU Size</i>	This specifies the maximum PDU size on a PPPR interface.
<i>Ter Ack TimeOut</i>	Time in seconds to wait for LCP terminate Ack, after sending a terminate request.
<i>Lowif Toggle TimeOut</i>	Time in seconds to wait for lowif to come up without tearing down the pppr session.
<i>Nature</i>	Specifies if the interface is dynamic or static in nature.
<i>Config Status</i>	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.
<i>Operational Status</i>	The actual/current state of the interface. It may be either Up or Down.
<i>Admin Status</i>	The desired state of the interface. It may be either Up or Down.

Cautions None.

References None.

2.141 Other Commands

2.141.1 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
<i>alias-string</i>	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
<i>Alias</i>	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.

2.141.2unalias

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
<i>all</i>	Using this option all the aliases defined in the system will be removed. Type: Optional Valid values: String iALL.î
<i>Name</i>	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

2.141.3help

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
```

```

-----
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.

2.141.4logout

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.

2.141.5prompt

Description Use this command to set the new CLI prompt.

Command Syntax *prompt new-prompt*

Parameters

Name	Description
<i>prompt new-prompt</i>	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.

2.141.6tracertoute

Description This command is used to trace the route to the specified destination.

Command Syntax `tracertoute {<ip-address> | dname <domain>} {ping | udp} [-m num-of-hops] [-w wait-time] [-p udp-port-number] [-q num-of-probes]`

Parameters

Name	Description
<i><ip-address> dname <domain></i>	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 '.'))
<i>Ping udp</i>	Tracertoute probe message type Type: Mandatory
<i>-m num-of-hops</i>	Maximum number of hops to search for ip-address Type: Optional Valid Values: 0-255 Default Value : 30
<i>-w wait-time</i>	This specifies the timeout in seconds Type: Optional Valid values : 0-65535 Default Value : 5

Name	Description
<i>-p udp-port-number</i>	Destination UDP port to be used, only when Probe is Udp Type: Optional. Valid Values: 0-65535 Default Value : 32768
<i>-q num-of-probes</i>	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.

2.141.7verbose

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
<i>On</i>	Used for switching on the verbose mode. Type: Optional Valid values: On.
<i>Off</i>	Used for switching off the verbose mode. Type: Optional. Valid values: Off

Mode Super-User, User

Output Set Done

Output Fields None

A

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