IES Show Commands

customer

Syntax **customer** [*customer-id*] [**site** *customer-site-name*]

Context show>service

Description This command displays service customer information.

Parameters *customer-id* — Displays only information for the specified customer ID.

Default All customer IDs display

Values 1 — 2147483647

site *customer-site-name* — Specifies the customer site which is an anchor point for an ingress and egress virtual scheduler hierarchy.

Output **Show Customer Command Output —** The following table describes show customer command output fields:

Label	Description
Customer-ID	The ID that uniquely identifies a customer.
Contact	The name of the primary contact person.
Description	Generic information about the customer.
Phone	The phone/pager number to reach the primary contact person.
Total Customers	The total number of customers configured.
Multi-service site	
Site	Multi-service site name. A multi-service customer site is a group of SAPs with common origination and termination points.
Description	Information about a specific customer's multi-service site.
Assignment	The port ID, MDA, or card number, where the SAP's that are members of this multi- service site are defined.
I. Sched Pol	The ingress QoS scheduler policy assigned to this multi-service site.
E. Sched Pol	The egress QoS scheduler policy assigned to this multi-service site.
Service Association	
Service-ID	The ID that uniquely identifies a service.
SAP	Specifies the SAP assigned to the service.

Sample Output

```
*A:ALA-12# show service customer
============================================================
Customers
============================================================
Customer-ID : 1
Contact     : Manager
Description : Default customer
Phone       : (123) 555-1212

Customer-ID : 2
Contact     : Tech Support
Description : TiMetra Networks
Phone       : (234) 555-1212

Customer-ID : 3
Contact     : Fred
Description : TiMetra Networks
Phone       : (345) 555-1212

Customer-ID : 6
Contact     : Ethel
Description : Epipe Customer
Phone       : (456) 555-1212

Customer-ID : 7
Contact     : Lucy
Description : ABC Customer
Phone       : (567) 555-1212

Customer-ID : 8
Contact     : Customer Service
Description : IES Customer
Phone       : (678) 555-1212

Customer-ID : 274
Contact     : Mssrs. Beaucoup
Description : ABC Company
Phone       : 650 123-4567

Customer-ID : 94043
Contact     : Test Engineer on Duty
Description : TEST Customer
Phone       : (789) 555-1212

------------------------------------------------------
Total Customers : 8
------------------------------------------------------
*A:ALA-12#


*A:ALA-12# show service customer 274
================================================================================
Customer  274
================================================================================
Customer-ID : 274
Contact     : Mssrs. Beaucoup
Description : ABC Company
Phone       : 650 123-4567
```

```
-------------------------------------------------------------------------------
Multi Service Site
-------------------------------------------------------------------------------
Site        : west
Description : (Not Specified)
===============================================================================
*A:ALA-12#


*A:ALA-12# show service customer 274 site west
===============================================================================
Customer  274
===============================================================================
Customer-ID : 274
Contact     : Mssrs. Beaucoup
Description : ABC Company
Phone       : 650 123-4567
-------------------------------------------------------------------------------
Multi Service Site
-------------------------------------------------------------------------------
Site        : west
Description : (Not Specified)
Assignment  : Card 5
I. Sched Pol: SLA1
E. Sched Pol: (Not Specified)
-------------------------------------------------------------------------------
Service Association
-------------------------------------------------------------------------------
No Service Association Found.
===============================================================================
*A:ALA-12#
```

egress-label

Syntax **egress-label** *egress-label1* [*egress-label2*]

Context show>service

Description Display services using the range of egress labels.

If only the mandatory *egress-label1* parameter is specified, only services using the specified label are displayed.

If both *egress-label1* and *egress-label2* parameters are specified, the services using the range of labels X where *egress-label1* <= X <= *egress-label2* are displayed.

Use the **show router ldp bindings** command to display dynamic labels.

Parameters *egress-label1* — The starting egress label value for which to display services using the label range. If only *egress-label1* is specified, services only using *egress-label1* are displayed.

Values 0, 2049 — 131071

egress-label2 — The ending egress label value for which to display services using the label range.

Default The *egress-label1* value.

Values 2049 — 131071

Output **Show Service Egress Command Output —** The following table describes show service egress label output fields.

Label	Description
Svc Id	The value that identifies a service.
Sdp Id	The value that identifies a SDP.
Type	Indicates whether the SDP binding is a spoke or a mesh.
I. Lbl	The VC label used by the far-end device to send packets to this device in this service by the SDP.
E. Lbl	The VC label used by this device to send packets to the far-end device in this service by the SDP.
Number of bindings found	The total number of SDP bindings that exist within the specified egress label range.

Sample Output

```
*A:ALA-12# show service egress-label 0 10000
===============================================================================
Martini Service Labels
===============================================================================
Svc Id     Sdp Id             Type I.Lbl        E.Lbl
-------------------------------------------------------------------------------
1          10:1               Mesh 0            0
1          20:1               Mesh 0            0
1          30:1               Mesh 0            0
1          100:1              Mesh 0            0
...
1          107:1              Mesh 0            0
1          108:1              Mesh 0            0
1          300:1              Mesh 0            0
1          301:1              Mesh 0            0
1          302:1              Mesh 0            0
1          400:1              Mesh 0            0
100        300:100            Spok 0            0
200        301:200            Spok 0            0
300        302:300            Spok 0            0
400        400:400            Spok 0            0
-------------------------------------------------------------------------------
Number of Bindings Found : 21
===============================================================================
*A:ALA-12#
```

ingress-label

Syntax **ingress-label** *start-label* [*end-label*]

Context show>service

Description This command displays services using the range of ingress labels. If only the mandatory *start-label*

parameter is specified, only services using the specified label are displayed.

If both *start-label* and *end-label* parameters are specified, the services using the range of labels X where *start-label* <= X <= *end-label* are displayed.

Use the **show router** *vprn-service-id* **ldp bindings** command to display dynamic labels.

Parameters *start-label* — The starting ingress label value for which to display services using the label range. If only *start-label* is specified, services only using *start-label* are displayed.

Values 0, 2048 — 131071

end-label — The ending ingress label value for which to display services using the label range.

Default The *start-label* value.

Values 2049 — 131071

Output **Show Service Ingress-Label —** The following table describes show service ingress-label output fields:

Label	Description
Svc ID	The service identifier.
SDP Id	The SDP identifier.
Type	Indicates whether the SDP is spoke or mesh.
I.Lbl	The ingress label used by the far-end device to send packets to this device in this service by the SDP.
E.Lbl	The egress label used by this device to send packets to the far-end device in this service by the SDP.
Number of Bindings Found	The number of SDP bindings within the label range specified.

Sample Output

```
*A:ALA-12# show service ingress-label 0
===============================================================================
Martini Service Labels
===============================================================================
Svc Id     Sdp Id             Type I.Lbl        E.Lbl
-------------------------------------------------------------------------------
1          10:1               Mesh 0            0
1          20:1               Mesh 0            0
1          30:1               Mesh 0            0
1          50:1               Mesh 0            0
1          100:1              Mesh 0            0
1          101:1              Mesh 0            0
1          102:1              Mesh 0            0
1          103:1              Mesh 0            0
1          104:1              Mesh 0            0
1          105:1              Mesh 0            0
1          106:1              Mesh 0            0
1          107:1              Mesh 0            0
1          108:1              Mesh 0            0
1          300:1              Mesh 0            0
1          301:1              Mesh 0            0
```

```
1          302:1             Mesh 0           0
1          400:1             Mesh 0           0
1          500:2             Spok 131070      2001
1          501:1             Mesh 131069      2000
100        300:100           Spok 0           0
200        301:200           Spok 0           0
300        302:300           Spok 0           0
400        400:400           Spok 0           0
-------------------------------------------------------------------------------
Number of Bindings Found : 23
-------------------------------------------------------------------------------
*A:ALA-12#
```

sap-using

Syntax **sap-using [msap] [dyn-script] [description]**
sap-using [**sap** *sap-id*] [**vlan-translation | anti-spoof**] [**description**]
sap-using [**sap** *sap-id*]
sap-using interface [*ip-address* | *ip-int-name*]
sap-using [**ingress** | **egress**] **atm-td-profile** *td-profile-id*
sap-using [**ingress** | **egress**] **filter** *filter-id*
sap-using [**ingress** | **egress**] **qos-policy** *qos-policy-id*
sap-using authentication-policy *policy-name*

Context show>service

Description Displays SAP information.

If no optional parameters are specified, the command displays a summary of all defined SAPs. The optional parameters restrict output to only SAPs matching the specified properties.

Parameters **sap *sap-id* —** Specifies the physical port identifier portion of the SAP definition. See Common CLI Command Descriptions on page 2569 for command syntax.

ingress — Specifies matching an ingress policy.

egress — Specifies matching an egress policy.

qos-policy *qos-policy-id* **—** The ingress or egress QoS Policy ID for which to display matching SAPs.

Values 1 — 65535

atm-td-profile *td-profile-id* **—** Displays SAPs using this traffic description.

filter *filter-id* **—** The ingress or egress filter policy ID for which to display matching SAPs.

Values 1 — 65535

dyn-script — Displays dynamic service SAPs information.

authentication *policy-name* **—** The session authentication policy for which to display matching SAPs.

interface — Specifies matching SAPs with the specified IP interface.

ip-addr — The IP address of the interface for which to display matching SAPs.

Values 1.0.0.0 — 223.255.255.255

ip-int-name — The IP interface name for which to display matching SAPs.

Output **Show Service SAP —** The following table describes show service SAP output fields:

Label	Description
Port ID	The ID of the access port where the SAP is defined.
Svc ID	The value that identifies the service.
SapMTU	The SAP MTU value.
Igr.QoS	The SAP ingress QoS policy number specified on the ingress SAP.
Ing.Fltr	The MAC or IP filter policy ID applied to the ingress SAP.
E.QoS	The SAP egress QoS policy number specified on the egress SAP.
Egr.Fltr	The MAC or IP filter policy ID applied to the egress SAP.
A.Pol	The accounting policy ID assigned to the SAP.
Adm	The administrative state of the SAP.
Opr	The actual state of the SAP.

Sample Output

```
*A:ALA-48# show service sap-using sap 2/1/10:0
===============================================================================
Service Access Points Using Port 2/1/10:0
===============================================================================
PortId                          SvcId      Ing.  Ing.    Egr.  Egr.   Adm  Opr
                                           QoS   Fltr    QoS   Fltr
-------------------------------------------------------------------------------
2/1/10:0                        13         1     none    1     none   Up   Down
-------------------------------------------------------------------------------
Number of SAPs : 1
-------------------------------------------------------------------------------
===============================================================================
*A:ALA-48#
*A:ALA-12#  show service sap-using egress atm-td-profile 2
===============================================================================
Service Access Point Using ATM Traffic Profile 2
===============================================================================
PortId     SvcId    I.QoS I.Fltr E.QoS E.Fltr A.Pol Adm Opr
-------------------------------------------------------------------------------
5/1/1:0/11 511111    2    none     2    none    none  Up  Up
5/1/1:0/12 511112    2    none     2    none    none  Up  Up
5/1/1:0/13 511113    2    none     2    none    none  Up  Up
5/1/1:0/14 511114    2    none     2    none    none  Up  Up
5/1/1:0/15 511115    2    none     2    none    none  Up  Up
5/1/1:0/16 511116    2    none     2    none    none  Up  Up
5/1/1:0/17 511117    2    none     2    none    none  Up  Up
5/1/1:0/18 511118    2    none     2    none    none  Up  Up
5/1/1:0/19 511119    2    none     2    none    none  Up  Up
5/1/1:0/20 511120    2    none     2    none    none  Up  Up
5/1/1:0/21 511121    2    none     2    none    none  Up  Up
5/1/1:0/22 511122    2    none     2    none    none  Up  Up
5/1/1:0/23 511123    2    none     2    none    none  Up  Up
```

```
5/1/1:0/24 511124    2     none      2    none    none  Up   Up
5/1/1:0/25 511125    2     none      2    none    none  Up   Up
...
===============================================================================
*A:ALA-12#
```

sdp

Syntax **sdp** [*sdp-id* | **far-end** *ip-address*] [**detail** | **keep-alive-history**]

Context show>service

Description This command displays SDP information. If no optional parameters are specified, a summary SDP output for all SDPs is displayed.

Parameters *sdp-id* — Specifies the SDP ID for which to display information.

Default All SDPs.

Values 1 — 17407

far-end *ip-address* — Displays only SDPs matching with the specified far-end IP address.

Default SDPs with any far-end IP address.

detail — Displays detailed SDP information.

Default SDP summary output.

keep-alive-history — Displays the last fifty SDP keepalive events for the SDP.

Default SDP summary output.

Output **Show Service SDP —** The following table describes show service SDP output fields:

Label	Description
SDP Id	The SDP identifier.
Adm MTU	Specifies the desired largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
Opr MTU	Specifies the actual largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
IP address	Specifies the IP address of the remote end of the GRE or MPLS tunnel defined by this SDP.
Adm Admin State	Specifies the administrative state of the SDP.
Opr Oper State	Specifies the operational state of the SDP.
Deliver	Specifies the type of delivery used by the SDP: GRE or MPLS.
Flags	Specifies the conditions that affect the operating status of this SDP.
Signal Signaling	Specifies the signaling protocol used to obtain the ingress and egress labels used in frames transmitted and received on the SDP.
Last Status Change	Specifies the time of the most recent operating status change to this SDP.

Sample Output

```
*A:ALA-12# show service sdp
===============================================================================
Services: Service Destination Points
===============================================================================
SdpId    Adm MTU   Opr MTU   IP address       Adm  Opr         Deliver Signal
-------------------------------------------------------------------------------
10       4462      4462      10.20.1.3        Up   Dn NotReady MPLS    TLDP
40       4462      1534      10.20.1.20       Up   Up          MPLS    TLDP
60       4462      1514      10.20.1.21       Up   Up          GRE     TLDP
100      4462      4462      180.0.0.2        Down Down        GRE     TLDP
500      4462      4462      10.20.1.50       Up   Dn NotReady GRE     TLDP
-------------------------------------------------------------------------------
Number of SDPs : 5
-------------------------------------------------------------------------------
*A:ALA-12#


*A:ALA-12# show service sdp 2 detail
===============================================================================
Service Destination Point (Sdp Id : 2) Details
-------------------------------------------------------------------------------
 Sdp Id 2  -(10.10.10.104)
-------------------------------------------------------------------------------
Description           : GRE-10.10.10.104
SDP Id               : 2
Admin Path MTU       : 0                    Oper Path MTU      : 0
Far End              : 10.10.10.104         Delivery           : GRE
Admin State          : Up                   Oper State         : Down
Flags                : SignalingSessDown TransportTunnDown
Signaling            : TLDP                 VLAN VC Etype      : 0x8100
Last Status Change   : 02/01/2007 09:11:39  Adv. MTU Over.     : No
Last Mgmt Change     : 02/01/2007 09:11:46

KeepAlive Information :
Admin State          : Disabled             Oper State         : Disabled
Hello Time           : 10                   Hello Msg Len      : 0
Hello Timeout        : 5                    Unmatched Replies  : 0
Max Drop Count       : 3                    Hold Down Time     : 10
Tx Hello Msgs        : 0                    Rx Hello Msgs      : 0

Associated LSP LIST :
SDP Delivery Mechanism is not MPLS
===============================================================================
*A:ALA-12#


*A:ALA-12# show service sdp 8
===============================================================================
Service Destination Point (Sdp Id : 8)
===============================================================================
SdpId    Adm MTU   Opr MTU   IP address       Adm  Opr         Deliver Signal
-------------------------------------------------------------------------------
8        4462      4462      10.10.10.104     Up   Dn NotReady MPLS    TLDP
===============================================================================
*A:ALA-12#
===============================================================================
Service Destination Point (Sdp Id : 8) Details
===============================================================================
```

```
Sdp Id 8  -(10.10.10.104)
-------------------------------------------------------------------------------
Description           : MPLS-10.10.10.104
SDP Id                : 8
Admin Path MTU        : 0                     Oper Path MTU      : 0
Far End               : 10.10.10.104          Delivery           : MPLS
Admin State           : Up                    Oper State         : Down
Flags                 : SignalingSessDown TransportTunnDown
Signaling             : TLDP                  VLAN VC Etype      : 0x8100
Last Status Change    : 02/01/2007 09:11:39   Adv. MTU Over.     : No
Last Mgmt Change      : 02/01/2007 09:11:46
KeepAlive Information :
Admin State           : Disabled              Oper State         : Disabled
Hello Time            : 10                    Hello Msg Len      : 0
Hello Timeout         : 5                     Unmatched Replies  : 0
Max Drop Count        : 3                     Hold Down Time     : 10
Tx Hello Msgs         : 0                     Rx Hello Msgs      : 0

Associated LSP LIST :
Lsp Name              : to-104
Admin State           : Up                    Oper State         : Down
Time Since Last Tran*: 01d07h36m
===============================================================================
* indicates that the corresponding row element may have been truncated.
*A:ALA-12#
```

When network domains are configured, the SDP egress interface state can be verified by using the following command:

```
*A:Dut-T# show service sdp egressifs
===============================================================================
SDP Egress Ifs State Table
===============================================================================
SDP Id              Network Domain                  State
-------------------------------------------------------------------------------
100                 net1                            consistent
-------------------------------------------------------------------------------
SDPs : 1
===============================================================================
*A:Dut-Tr#
```

sdp-using

Syntax **sdp-using** [*sdp-id*[:*vc-id*] | **far-end** *ip-address*]

Context show>service

Description This command displays services using SDP or far-end address options.

Parameters *sdp-id* — Displays only services bound to the specified SDP ID.

Values 1 — 17407

vc-id — Displays information about the virtual circuit identifier.

Values 1 — 4294967295

far-end *ip-address* — Displays only services matching with the specified far-end IP address.

Default Services with any far-end IP address.

Output **Show Service SDP Using X —** The following table describes show service sdp-using output fields.

Label	Description
Svc ID	The service identifier.
Sdp ID	The SDP identifier.
Type	Type of SDP: spoke or mesh.
Far End	The far-end address of the SDP.
Oper State	The operational state of the service.
I.Label	The label used by the far-end device to send packets to this device in this service by this SDP.
E.Label	The label used by this device to send packets to the far-end device in this service by this SDP.

Sample Output

```
*A:ALA-1# show service sdp-using 300
===============================================================================
Service Destination Point (Sdp Id : 300)
===============================================================================
SvcId       SdpId               Type Far End        Opr State I.Label  E.Label
-------------------------------------------------------------------------------
1           300:1               Mesh 10.0.0.13      Up        131071   131071
2           300:2               Spok 10.0.0.13      Up        131070   131070
100         300:100             Mesh 10.0.0.13      Up        131069   131069
101         300:101             Mesh 10.0.0.13      Up        131068   131068
102         300:102             Mesh 10.0.0.13      Up        131067   131067
-------------------------------------------------------------------------------
Number of SDPs : 5
===============================================================================
*A:ALA-1#
```

service-using

Syntax **service-using** [**ies**] [**customer** *customer-id*]

Context show>service

Description This command displays the services matching certain usage properties. If no optional parameters are specified, all services defined on the system are displayed.

Parameters **ies —** Displays matching IES services.

sdp *sdp-id* **—** Displays only services bound to the specified SDP ID.

Default Services bound to any SDP ID.

Values 1 — 17407

customer *customer-id* **—** Displays services only associated with the specified customer ID.

Default Services associated with an customer.

Values 1 — 2147483647

Output **Show Service Service-Using —** The following table describes show service service-using output fields:

Label	Description
Service Id	The value that identifies the service.
Type	Specifies the service type configured for the service ID.
Adm	The administrative state of the service.
Opr	The operating state of the service.
CustomerID	The ID of the customer who owns this service.
Last Mgmt Change	The date and time of the most recent management-initiated change to this service.

Sample Output

```
A:ALA-48# show service service-using ies
===============================================================================
Services [ies]
===============================================================================
ServiceId    Type      Adm    Opr        CustomerId        Last Mgmt Change
-------------------------------------------------------------------------------
88           IES       Up     Down       8                 07/25/2006 15:46:28
89           IES       Up     Down       8                 07/25/2006 15:46:28
104          IES       Up     Down       1                 07/25/2006 15:46:28
200          IES       Up     Down       1                 07/25/2006 15:46:28
214          IES       Up     Down       1                 07/25/2006 15:46:28
321          IES       Up     Down       1                 07/25/2006 15:46:28
322          IES       Down   Down       1                 07/25/2006 15:46:28
1001         IES       Up     Down       1730              07/25/2006 15:46:28
-------------------------------------------------------------------------------
Matching Services : 8
```

```
-------------------------------------------------------------------------------
A:ALA-48#
```

subscriber-using

Syntax **subscriber-using** [**service-id** *service-id*] [**sap-id** *sap-id*] [**interface** *ip-int-name*] [**ip** *ip-address[/mask*]] [**mac** *ieee-address*] [**sub-profile** *sub-profile-name*] [**sla-profile** *sla-profile-name*]

Context show>service>subscriber-using

Description This command displays subscribers using certain options.

Parameters **service-id *service-id*** **—** Display subscriber information about the specified service ID.

Values 1 — 2147483648

sap-id *sap-id* — Specifies the physical port identifier portion of the SAP definition. See Common CLI Command Descriptions on page 2569 for command syntax.

interface *ip-int-name* **—** Display subscriber information about the specified interface.

ip *ip-address[/mask* **—** Display subscriber information about the specified IP address.

mac *ieee-address* **—** Display subscriber information about the specified MAC address.

sub-profile *sub-profile-name* **—** Display subscriber information about the specified subscriber profile name.

sla-profile *sla-profile-name* **—** Display subscriber information about the specified SLA profile name.

id

Syntax **id** *service-id* {**all** | **arp** | **base** | **sap** | **sdp**}

Context show>service

Description This command displays information for a particular service-id.

Parameters *service-id* — The unique service identification number to identify the service in the service domain.

all — Display detailed information about the service.

arp — Display ARP entries for the service.

arp-host — Displays ARP host related information.

base — Display basic service information.

interface — Display service interfaces.

sap — Display SAPs associated to the service.

sdp — Display SDPs associated with the service.

all

Syntax **all**

Context show>service>id

Description This command displays detailed information for all aspects of the service.

Output **Show All Service-ID Output —** The following table describes the show all service-id command output fields:

Label	Description
Service Detailed Information	
Service Id	The service identifier.
VPN Id	The number which identifies the VPN.
Service Type	Specifies the type of service.
SDP Id	The SDP identifier.
Description	Generic information about the service.
Customer Id	The customer identifier.
Last Mgmt Change	The date and time of the most recent management-initiated change to this customer.
SAP Count	The number of SAPs specified for this service.
SDP Bind Count	The number of SDPs bound to this service.
Service Destination Points (SDPs)	
SDP Id	The SDP identifier.
Type	Indicates whether this Service SDP binding is a spoke or a mesh.
Admin Path MTU	The largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
Oper Path MTU	The actual largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
Delivery	Specifies the type of delivery used by the SDP: GRE or MPLS.
Admin State	The administrative state of this SDP.
Oper State	The operational state of this SDP.
Ingress Label	The label used by the far-end device to send packets to this device in this service by this SDP.

Label	Description (Continued)
Egress Label	The label used by this device to send packets to the far-end device in this service by this SDP.
Ingress Filter	The ID of the ingress filter policy.
Egress Filter	The ID of the egress filter policy.
Far End	Specifies the IP address of the remote end of the GRE or MPLS tunnel defined by this SDP.
Last Changed	The date and time of the most recent change to this customer.
Signaling	Specifies the signaling protocol used to obtain the ingress and egress labels used in frames transmitted and received on this SDP.
Admin State	Specifies the operating status of the service.
Oper State	The current status of the service.
Hello Time	Specifies how often the SDP echo request messages are transmitted on this SDP.
Hello Msg Len	Specifies the length of the SDP echo request messages transmitted on this SDP.
Max Drop Count	Specifies the maximum number of consecutive SDP Echo Request messages that can be unacknowledged before the keepalive protocol reports a fault.
Hold Down Time	Specifies the amount of time to wait before the keepalive operating status is eligible to enter the alive state.
SDP Delivery Mechanism	When the SDP type is MPLS, a list of LSPs used to reach the far-end router displays. All the LSPs in the list must terminate at the IP address specified in the far-end field. If the SDP type is GRE, then the following message displays: “SDP Delivery Mechanism is not MPLS”
Number of SDPs	The total number SDPs applied to this service ID.
Service Access Points	
Service Id	The service identifier.
Port Id	The ID of the access port where this SAP is defined.
Description	Generic information about the SAP.
Encap	The value of the label used to identify this SAP on the access port.
Admin State	The desired state of the SAP.
Oper State	The operating state of the SAP.
Last Changed	The date and time of the last change.

Label	Description (Continued)
Admin MTU	The largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
Oper MTU	The actual largest service frame size (in octets) that can be transmitted through this SDP to the far-end router, without requiring the packet to be fragmented.
Ingress qos-policy	The SAP ingress QoS policy ID.
Egress qos-policy	The SAP egress QoS policy ID.
Ingress Filter-Id	The SAP ingress filter policy ID.
Egress Filter-Id	The SAP egress filter policy ID.
Multi Svc Site	Indicates the multi-service site that the SAP is a member.
Ingress sched-policy	Indicates the ingress QoS scheduler for the SAP.
Egress sched-policy	Indicates the egress QoS scheduler for the SAP.
Acct. Pol	Indicates the accounting policy applied to the SAP.
Collect Stats	Specifies whether accounting statistics are collected on the SAP.
SAP Statistics	
Dropped	The number of packets or octets dropped.
Offered Hi Priority	The number of high priority packets, as determined by the SAP ingress QoS policy.
Offered Low Priority	The number of low priority packets, as determined by the SAP ingress QoS policy.
Forwarded In Profile	The number of in-profile packets or octets (rate below CIR) forwarded.
Forwarded Out Profile	The number of out-of-profile packets or octets (rate above CIR) forwarded.
Queueing Stats	
Dropped In Profile	The number of in-profile packets or octets discarded.
Dropped Out Profile	The number of out-of-profile packets or octets discarded.
Forwarded In Profile	The number of in-profile packets or octets (rate below CIR) forwarded.
Forwarded Out Profile	The number of out-of-profile packets or octets (rate above CIR) forwarded.

Label	Description (Continued)
SAP per Queue stats	
Ingress Queue 1	The index of the ingress QoS queue of this SAP.
High priority offered	The packets or octets count of the high priority traffic for the SAP.
High priority dropped	The number of high priority traffic packets/octets dropped.
Low priority offered	The packets or octets count of the low priority traffic.
Low priority dropped	The number of low priority traffic packets/octets dropped.
In profile forwarded	The number of in-profile packets or octets (rate below CIR) forwarded.
Out profile forwarded	The number of out-of-profile octets (rate above CIR) forwarded.
Egress Queue 1	The index of the egress QoS queue of the SAP.
In profile forwarded	The number of in-profile packets or octets (rate below CIR) forwarded.
IPCP Address Extension Details	
In profile dropped	The number of in-profile packets or octets dropped for the SAP.
Peer IP Addr	Specifies the remote IP address to be assigned to the far-end of the associated PPP/MLPPP link via IPCP extensions.
Peer Pri DNS Addr	Specifies a unicast IPv4 address for the primary DNS server to be signaled to the far-end of the associate PPP/MLPPP link via IPCP extensions.
Peer Sec DNS Addr	Specifies a unicast IPv4 address for the secondary DNS server to be signaled to the far-end of the associate PPP/MLPPP link via IPCP extensions. (optional)

arp

Syntax **arp** [*ip-address*] | [**mac** *ieee-address*] | [**sap** *sap-id*] | [**interface** *ip-int-name*] [**sdp** *sdp-id:vc-id*]

Context show>service>id

Description Displays the ARP table for the IES instance. The ARP entries are displayed uniquely. Each MAC associated with the child group-interfaces are displayed with each ARP entry. They do not reflect actual ARP entries but are displayed along the interfaces ARP entry for easy lookup.

Parameters *ip-address* — Displays only ARP entries in the ARP table with the specified IP address.

Default All IP addresses.

mac *ieee-address* **—** Displays only ARP entries in the ARP table with the specified 48-bit MAC address. The MAC address can be expressed in the form *aa*:*bb*:*cc*:*dd*:*ee*:*ff* or *aa-bb-cc-dd-ee-ff* where *aa*, *bb*, *cc*, *dd*, *ee* and *ff* are hexadecimal numbers.

Default All MAC addresses.

sap *sap-id* **—** Displays SAP information for the specified SAP ID. See Common CLI Command Descriptions on page 2569 for command syntax.

port-id — **interface —** Specifies matching service ARP entries associated with the IP interface.

ip-address — The IP address of the interface for which to display matching ARP entries.

Values 1.0.0.0 — 223.255.255.255

ip-int-name — The IP interface name for which to display matching ARPs.

sdp-id — The SDP identifier.

vc-id — The virtual circuit identifier.

Values 1 — 4294967295

Output **Show Service-ID ARP —** The following table describes show service-id ARP output fields.

Label	Description
IP Address	The IP address.
MAC Address	The specified MAC address.
Type	Static – FDB entries created by management. Learned – Dynamic entries created by the learning process. OAM – Entries created by the OAM process. Other — Local entries for the IP interfaces created.
Expiry	The age of the ARP entry.
Interface	The interface applied to the service.
SAP	The SAP ID.

Sample Output

```
A:ALA-49# show service id 88 arp
===============================================================================
ARP Table
===============================================================================
IP Address   MAC Address        Type    Expiry       Interface   SAP
-------------------------------------------------------------------------------
11.30.1.1    76:1e:ff:00:01:41  Other   00h00m00s    ies30       lag-1:30
11.31.1.1    76:1e:ff:00:01:41  Other   00h00m00s    ies30       lag-1:30
11.37.1.1    00:00:00:00:00:00  Other   00h00m00s    foo2        n/a
11.20.1.1    76:1e:ff:00:00:00  Other   00h00m00s    s2          subscrib*
             76:1e:ff:00:01:41                       g3          lag-1
11.20.1.10   00:00:aa:aa:aa:dd  Managed 00h00m00s    g3          lag-1:11
11.20.1.11   00:00:aa:aa:aa:dd  Managed 00h00m00s    g3          lag-1:11
11.20.1.12   00:00:aa:aa:aa:dd  Managed 00h00m00s    g3          lag-1:11
11.38.1.1    76:1e:ff:00:00:00  Other   00h00m00s    s3          subscrib*
             76:21:04:01:00:01                       g5          4/1/1
             76:21:04:01:00:01                       g7          4/1/1
11.39.1.1    76:1e:ff:00:00:00  Other   00h00m00s    s3          subscrib*
             76:21:04:01:00:01                       g5          41/1/1
             76:21:04:01:00:01                       g7          4/1/1
11.38.1.2    76:22:07:01:00:01  Managed 00h00m00s    g7          4/1/1:25*
11.38.10.1   76:22:07:01:00:01  Managed 00h00m00s    g7          4/1/1:25*
11.38.99.1   76:22:07:01:00:01  Managed 00h00m00s    g7          4/1/1:25*
===============================================================================
* indicats that the corresponding row element may have been truncated.
A:ALA-49#
```

arp-host

Syntax **arp-host** [**wholesaler** *service-id*] [**sap** *sap-id* | **interface** *interface-name* | **ip-address** *ip-address*[/*mask*] | **mac** *ieee-address* | {[**port** *port-id*] [**no-inter-dest-id** | **inter-dest-id** *inter-dest-id*]}] [**detail**]
arp-host statistics [**sap** *sap-id* | **interface** *interface-name*]
arp-host summary [**interface** *interface-name*]

Context show>service>id

Description This command displays ARP host related information.

Sample Output

```
*A:Dut-C# show service id 2 arp-host
===============================================================================
ARP host table, service 2
===============================================================================
IP Address      Mac Address       Sap Id              Remaining           MC
                                                      Time                Stdby
-------------------------------------------------------------------------------
128.128.1.2     00:80:00:00:00:01 2/1/5:2             00h04m41s
128.128.1.3     00:80:00:00:00:02 2/1/5:2             00h04m42s
128.128.1.4     00:80:00:00:00:03 2/1/5:2             00h04m43s
128.128.1.5     00:80:00:00:00:04 2/1/5:2             00h04m44s
128.128.1.6     00:80:00:00:00:05 2/1/5:2             00h04m45s
128.128.1.7     00:80:00:00:00:06 2/1/5:2             00h04m46s
128.128.1.8     00:80:00:00:00:07 2/1/5:2             00h04m47s
128.128.1.9     00:80:00:00:00:08 2/1/5:2             00h04m48s
128.128.1.10    00:80:00:00:00:09 2/1/5:2             00h04m49s
128.128.1.11    00:80:00:00:00:0a 2/1/5:2             00h04m50s
-------------------------------------------------------------------------------
Number of ARP hosts : 10
===============================================================================
*A:Dut-C#


*A:Dut-C# show service id 2 arp-host ip-address 128.128.1.2 detail
===============================================================================
ARP hosts for service 2
===============================================================================
Service ID           : 2
IP Address           : 128.128.1.2
MAC Address          : 00:80:00:00:00:01
SAP                  : 2/1/5:2
Remaining Time       : 00h04m58s

Sub-Ident            : "alu_1_2"
Sub-Profile-String   : ""
SLA-Profile-String   : ""
App-Profile-String   : ""
ARP host ANCP-String : ""
ARP host Int Dest Id : ""
RADIUS-User-Name     : "128.128.1.2"

Session Timeout (s)  : 301
Start Time           : 02/09/2009 16:35:07
Last Auth            : 02/09/2009 16:36:34
Last Refresh         : 02/09/2009 16:36:38
```

```
Persistence Key      : N/A
-------------------------------------------------------------------------------
Number of ARP hosts : 1
===============================================================================
*A:Dut-C#


*A:Dut-C# show service id 2 arp-host statistics
===============================================================================
ARP host statistics
===============================================================================
Num Active Hosts             : 20
Received Triggers            : 70
Ignored Triggers             : 10
Ignored Triggers (overload)  : 0
SHCV Checks Forced           : 0
Hosts Created                : 20
Hosts Updated                : 40
Hosts Deleted                : 0
Authentication Requests Sent : 40
===============================================================================
*A:Dut-C#


*A:Dut-C# show service id 2 arp-host summary
============================================================
ARP host Summary, service 2
============================================================
Sap                    Used        Provided    Admin State
------------------------------------------------------------
sap:2/1/5:2            20          8000        inService
------------------------------------------------------------
Number of SAPs : 1
------------------------------------------------------------
============================================================
*A:Dut-C#
```

statistics

Syntax **statistics** [**policy** *name*] [**sap** *sap-id*]

Context show>service>id>authentication

Description Displays session authentication statistics for this service.

Parameters **policy** *name* — Specifies the subscriber authentication policy statistics to display.

sap *sap-id* — Specifies the SAP ID statistics to display. See Common CLI Command Descriptions on page 2569 for command syntax.

See Common CLI Command Descriptions on page 2569 for command syntax.

Sample Output

```
*A:ALA-1# show service id 11 authentication statistics
-------------------------------------------------------------
```

```
Authentication statistics
-------------------------------------------------------------------
Interface / SAP                Authentication  Authentication
                               Successful      Failed
-------------------------------------------------------------------
abc-11-90.1.0.254              1582            3
-------------------------------------------------------------------
Number of entries: 1
===================================================================
*A:ALA-1#
```

authentication

Syntax **authentication**

Context show>service>id

Description This command enables the context to display subscriber authentication information.

base

Syntax **base**

Context show>service>id

Description This command displays basic information about this IES service.

Sample Output

```
*A:ALA-A# show service id 100 base
-------------------------------------------------------------------
Service Basic Information
-------------------------------------------------------------------
Service Id        : 100                Vpn Id            : 100
Service Type      : IES
Description       : Default Ies description for service id 100
Customer Id       : 1
Last Status Change: 08/29/2006 17:44:28
Last Mgmt Change  : 08/29/2006 17:44:28
Admin State       : Up                 Oper State        : Up
SAP Count         : 2
-------------------------------------------------------------------------------
Service Access & Destination Points
-------------------------------------------------------------------------------
Identifier                      Type         AdmMTU  OprMTU  Adm     Opr
-------------------------------------------------------------------------------
sap:1/1/3                       null         1514    1514    Up      Up
sap:1/1/4                       null         1514    1514    Up      Up
===============================================================================
*A:ALA-A#
```

dhcp

Syntax **dhcp**

Context show>service>id

Description This command enables the context to display DHCP information for the specified service.

lease-state

Syntax **lease-state** [[**sap** *sap-id*] | [**sdp** *sdp-id:vc-id*] | [**interface** *interface-name*] | [**ip-address** *ip-address*]] [**detail**]

Context show>service>id>dhcp

Description This command displays DHCP lease state related information.

Parameters **sap** *sap-id* — Specifies the physical port identifier portion of the SAP definition. See Common CLI Command Descriptions on page 2569 for command syntax.

sdp-id — The SDP identifier.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID for which to display information.

Values 1 — 4294967295

interface *interface-name* — Displays information for the specified IP interface.

ip-address *ip-address* — Displays information associated with the specified IP address.

detail — Displays detailed information.

Sample Output

```
A:ALA-_Dut-A# show service id 13 dhcp lease-state
===============================================================================
DHCP lease state table, service 13
===============================================================================
IP Address      Mac Address       Sap/Sdp Id          Remaining  Lease    MC
                                                      LifeTime   Origin   Stdby
-------------------------------------------------------------------------------
13.13.40.1      00:00:00:00:00:13 1/1/1:13            00h00m58s  Radius
-------------------------------------------------------------------------------
Number of lease states : 1
===============================================================================
A:ALA-_Dut-A#


A:ALA-_Dut-A# show service id 13 dhcp lease-state detail
===============================================================================
DHCP lease states for service 13
===============================================================================
Service ID           : 13
IP Address           : 13.13.40.1
Mac Address          : 00:00:00:00:00:13
Interface            : ies-13-13.13.1.1
SAP                  : 1/1/1:13
Remaining Lifetime   : 00h00m58s
```

```
Persistence Key      : N/A

Sub-Ident            : "TEST"
Sub-Profile-String   : "ADSL GO"
SLA-Profile-String   : "BE-Video"
Lease ANCP-String    : ""

Sub-Ident origin     : Radius
Strings origin       : Radius
Lease Info origin    : Radius

Ip-Netmask           : 255.255.0.0
Broadcast-Ip-Addr    : 13.13.255.255
Default-Router       : N/A
Primary-Dns          : 13.13.254.254
Secondary-Dns        : 13.13.254.253

ServerLeaseStart     : 12/24/2006 23:44:07
ServerLastRenew      : 12/24/2006 23:44:07
ServerLeaseEnd       : 12/24/2006 23:45:07
Session-Timeout      : 0d 00:01:00
DHCP Server Addr     : N/A

Persistent Relay Agent Information
  Circuit Id         : ancstb6_Dut-A|13|ies-13-13.13.1.1|0|13
  Remote Id          : stringtest
-------------------------------------------------------------------------------
Number of lease states : 1
===============================================================================
A:ALA-_Dut-A#
```

Routed CO Output Example

```
A:ALA-_Dut-A# show service id 13 dhcp lease-state
===============================================================================
DHCP lease state table, service 13
===============================================================================
IP Address      Mac Address       Sap/Sdp Id          Remaining  Lease    MC
                                                      LifeTime   Origin   Stdby
-------------------------------------------------------------------------------
13.13.40.1      00:00:00:00:00:13 1/1/1:13            00h00m58s  Radius
-------------------------------------------------------------------------------
Number of lease states : 1
===============================================================================
A:ALA-_Dut-A#


A:ALA-_Dut-A# show service id 13 dhcp lease-state detail
===============================================================================
DHCP lease states for service 13
===============================================================================
Service ID           : 13
IP Address           : 13.13.40.1
Mac Address          : 00:00:00:00:00:13
Subscriber-interface : ies-13-13.13.1.1
Group-interface      : intf-13
SAP                  : 1/1/1:13
Remaining Lifetime   : 00h00m58s
Persistence Key      : N/A
```

```
Sub-Ident            : "TEST"
Sub-Profile-String   : "ADSL GO"
SLA-Profile-String   : "BE-Video"
Lease ANCP-String    : ""

Sub-Ident origin     : Radius
Strings origin       : Radius
Lease Info origin    : Radius

Ip-Netmask           : 255.255.0.0
Broadcast-Ip-Addr    : 13.13.255.255
Default-Router       : N/A
Primary-Dns          : 13.13.254.254
Secondary-Dns        : 13.13.254.253

ServerLeaseStart     : 12/24/2006 23:48:23
ServerLastRenew      : 12/24/2006 23:48:23
ServerLeaseEnd       : 12/24/2006 23:49:23
Session-Timeout      : 0d 00:01:00
DHCP Server Addr     : N/A

Persistent Relay Agent Information
  Circuit Id         : ancstb6_Dut-A|13|intf-13|0|13
  Remote Id          : stringtest
-------------------------------------------------------------------------------
Number of lease states : 1
===============================================================================
A:ALA-_Dut-A#
```

Wholesaler/Retailer Output Example

```
A:ALA-_Dut-A# show service id 2000 dhcp lease-state detail
===============================================================================
DHCP lease states for service 2000
-------------------------------------------------------------------------------
Wholesaler 1000 Leases
-------------------------------------------------------------------------------
Service ID           : 1000
IP Address           : 13.13.1.254
Mac Address          : 00:00:00:00:00:13
Subscriber-interface : whole-sub
Group-interface      : intf-13
Retailer             : 2000
Retailer If          : retail-sub
SAP                  : 1/1/1:13
Remaining Lifetime   : 00h09m59s
Persistence Key      : N/A

Sub-Ident            : "TEST"
Sub-Profile-String   : "ADSL GO"
SLA-Profile-String   : "BE-Video"
Lease ANCP-String    : ""

Sub-Ident origin     : Retail DHCP
Strings origin       : Retail DHCP
Lease Info origin    : Retail DHCP

Ip-Netmask           : 255.255.0.0
Broadcast-Ip-Addr    : 13.13.255.255
Default-Router       : N/A
Primary-Dns          : N/A
```

```
Secondary-Dns        : N/A

ServerLeaseStart     : 12/25/2006 00:29:41
ServerLastRenew      : 12/25/2006 00:29:41
ServerLeaseEnd       : 12/25/2006 00:39:41
Session-Timeout      : 0d 00:10:00
DHCP Server Addr     : 10.232.237.2

Persistent Relay Agent Information
  Circuit Id         : 1/1/1:13
  Remote Id          : stringtest
-------------------------------------------------------------------------------
Number of lease states : 1
===============================================================================
A:ALA-_Dut-A#
```

statistics

Syntax **statistics** [**sap** *sap-id*
statistics [**sdp** *sdp-id*:*vc-id*]
statistics [**interface** *interface-name*]

Context show>service>id>dhcp

Description Displays DHCP statistics information.

Parameters **sap** *sap-id* — Specifies the physical port identifier portion of the SAP definition. See Common CLI Command Descriptions on page 2569 for command syntax.

sdp-id — The SDP identifier.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID for which to display information.

Values 1 — 4294967295

interface *interface-name* — Displays information for the specified IP interface.

summary

Syntax **summary**

Context show>service>id>dhcp

Description Displays DHCP configuration summary information.

Output **Show DHCP Summary Output —** The following table describes the output fields for DHCP summary.

Label	Description
Interface Name	Name of the router interface.
Arp Populate	Specifies whether or not ARP populate is enabled.

Label	Description (Continued)
Used/Provided	Used — The number of lease-states that are currently in use on a specific interface, that is, the number of clients on that interface got an IP address by DHCP. This value is always less than or equal to the 'Provided' field. Provided — The lease-populate value that is configured for a specific interface.
Info Option	Indicates whether Option 82 processing is enabled on the interface.
Admin State	Indicates the administrative state.

Sample Output

```
A:ALA-49# show service id 88 dhcp summary
===============================================================================
DHCP Summary, service 88
===============================================================================
Interface Name                   Arp      Used/                Info    Admin
  SapId/Sdp                      Populate Provided             Option  State
-------------------------------------------------------------------------------
Sector A                         No       0/0                  Keep    Up
  sap:7/1/1.2.2                           0/0
grp-if                           No       0/1                  Keep    Down
  sap:2/2/2:0                             0/1
  sap:2/2/2:0                             0/1
test                             No       0/0                  Keep    Up
  sap:10/1/2:0                            0/0
-------------------------------------------------------------------------------
Interfaces: 3
===============================================================================
A:ALA-49#
```

gsmp

Syntax **gsmp**

Context show>service>id

Description This command enables the context to display GSMP information.

neighbors

Syntax **neighbors group** [*name*] [*ip-address*]

Context show>service>id>gsmp

Description This command displays GSMP neighbor information.

Parameters **group —** A GSMP group defines a set of GSMP neighbors which have the same properties.

name — Specifies a GSMP group name is unique only within the scope of the service in which it is defined.

ip-address — Specifies the ip-address of the neighbor.

Sample Output

These commands show the configured neighbors per service, regardless of the fact there exists an open TCP connection with this neighbor. The admin state is shown because for a neighbor to be admin enabled, the service, gsmp node, group node and the neighbor node in this service must all be in 'no shutdown' state. Session gives the number of session (open TCP connections) for each configured neighbor.

```
A:active>show>service>id>gsmp# neighbors
===============================================================================
GSMP neighbors
===============================================================================
Group                           Neighbor           AdminState  Sessions
-------------------------------------------------------------------------------
dslam1                          192.168.1.2        Enabled     0
dslam1                          192.168.1.3        Enabled     0
-------------------------------------------------------------------------------
Number of neighbors shown: 2
===============================================================================
A:active>show>service>id>gsmp#


A:active>show>service>id>gsmp# neighbors group dslam1
===============================================================================
GSMP neighbors
===============================================================================
Group                           Neighbor           AdminState  Sessions
-------------------------------------------------------------------------------
dslam1                          192.168.1.2        Enabled     0
dslam1                          192.168.1.3        Enabled     0
-------------------------------------------------------------------------------
Number of neighbors shown: 2
===============================================================================
A:active>show>service>id>gsmp#
A:active>show>service>id>gsmp# neighbors group dslam1 192.168.1.2
===============================================================================
GSMP neighbors
===============================================================================
Group                           Neighbor           AdminState  Sessions
-------------------------------------------------------------------------------
dslam1                          192.168.1.2        Enabled     0
===============================================================================
A:active>show>service>id>gsmp#
```

sessions

Syntax **sessions** [**group** *name*] **neighbor** *ip-address*] [**port** *port-number*] [**association**] [**statistics**]

Context show>service>id>gsmp

Description This command displays GSMP sessions information.

Parameters **group —** A GSMP group defines a set of GSMP neighbors which have the same properties.

name — Specifies a GSMP group name is unique only within the scope of the service in which it is defined.

ip-address — Specifies the ip-address of the neighbor.

port — Specifies the neighbor TCP port number use for this ANCP session.

Values 0 — 65535

association — Displays to what object the ANCP-string is associated.

statistics — Displays statistics information about an ANCP session known to the system.

Sample Output

This show command gives information about the open TCP connections with DSLAMs.

```
A:active>show>service>id>gsmp# sessions
=======================================================
GSMP sessions for service 999 (VPRN)
=======================================================
Port   Ngbr-IpAddr     Gsmp-Group
-------------------------------------------------------
40590  192.168.1.2     dslam1
-------------------------------------------------------
Number of GSMP sessions : 1
=======================================================
A:active>show>service>id>gsmp#


A:active>show>service>id>gsmp# sessions neighbor 192.168.1.2 port 40590
===============================================================================
GSMP sessions for service 999 (VPRN), neighbor 192.168.1.2, Port 40590
===============================================================================
State           : Established
Peer Instance   : 1                  Sender Instance : a3cf58
Peer Port       : 0                  Sender Port     : 0
Peer Name       : 12:12:12:12:12:12  Sender Name     : 00:00:00:00:00:00
timeouts        : 0                  Max. Timeouts   : 3
Peer Timer      : 100                Sender Timer    : 100
Capabilities      : DTD OAM
Conf Capabilities : DTD OAM
Priority Marking  : dscp nc2
Local Addr.       : 192.168.1.4
Conf Local Addr.  : N/A
===============================================================================
A:active>show>service>id>gsmp#


A:active>show>service>id>gsmp# sessions neighbor 192.168.1.2 port 40590 association
===============================================================================
```

```
ANCP-Strings
===============================================================================
ANCP-String                                                  Assoc. State
-------------------------------------------------------------------------------
No ANCP-Strings found
===============================================================================
A:active>show>service>id>gsmp#


A:active>show>service>id>gsmp# sessions neighbor 192.168.1.2 port 40590 statistics
===============================================================
GSMP session stats, service 999 (VPRN), neighbor 192.168.1.2, Port 40590
===============================================================
Event                                Received  Transmitted
---------------------------------------------------------------
Dropped                              0         0
Syn                                  1         1
Syn Ack                              1         1
Ack                                  14        14
Rst Ack                              0         0
Port Up                              0         0
Port Down                            0         0
OAM Loopback                         0         0
===============================================================
A:active>show>service>id>gsmp#
```

Note: The association command gives an overview of each ANCP string received from this session.

```
A:active>show>service>id>gsmp# sessions neighbor 192.168.1.2 port 40590 association
===============================================================================
ANCP-Strings
===============================================================================
ANCP-String                                                  Assoc.
State
-------------------------------------------------------------------------------
7330-ISAM-E47 atm 1/1/01/01:19425.64048                      ANCP    Up
-------------------------------------------------------------------------------
Number of ANCP-Strings : 1
===============================================================================
A:active>show>service>id>gsmp#
```

host

Syntax **host**

Context show>service>id

Description Displays static hosts configured for this IES service.

Output **Show All Service-ID Output —** The following table describes the show all service-id command output fields.

Label	Description
Service Id	The service identifier.
VPN Id	The number which identifies the VPN.
Service Type	Specifies the type of service.
SDP Id	The SDP identifier.
Description	Generic information about the service.
Customer Id	The customer identifier.
Last Mgmt Change	The date and time of the most recent management-initiated change to this customer.
SAP Count	The number of SAPs specified for this service.

Sample Output

```
*A:ALA-48# show service id 88  host
===============================================================================
Static Hosts for service 88
===============================================================================
Sap                        IP Address      Configured MAC    Dynamic MAC
  Subscriber                                                   Fwding state
-------------------------------------------------------------------------------
1/2/4:50/5                 143.144.145.1   N/A               N/A
   N/A                                                         Fwding
-------------------------------------------------------------------------------
Number of static hosts : 1
===============================================================================
*A:ALA-48#
```

host-connectivity-verify

Syntax **host-connectivity-verify statistics** [**sap** *sap-id*]

Context show>service>id

Description Displays host connectivity check statistics.

Parameters **statistics** — Displays host connectivity verification data.

sap ***sap-id*** — See Common CLI Command Descriptions on page 2569 for command syntax.

Output **Show Service Id Host Connectivity Verify —** The following table describes show service-id host connectivity verification output fields:

Label	Description
Svc Id	The service identifier.
SapId/SdpId	The SAP and SDP identifiers.
DestIp Address	The destination IP address.
Last Response	The time when the last response was received.
Time Expired	Displays whether the interval value has expired.
Oper State	Displays the current operational state of the service.

Sample Output

```
A:ALA-48>show>service>id# host-connectivity-verify statistics sap 1/1/9:0
===============================================================================
Host connectivity check statistics
===============================================================================
Svc   SapId/          DestIp          Last                    Time   Oper
Id    SdpId           Address         Response                Expired State
-------------------------------------------------------------------------------
1000  551/2/3:0       143.144.145.1                                  Up
===============================================================================
A:ALA-48>show>service>id#
```

interface

Syntax **interface** [*ip-address* | *ip-int-name*] [*interface-type*] [**detail**] [**family**]

Context show>service>id

Description This command displays information for the IP interfaces associated with the IES service. If no optional parameters are specified, a summary of all IP interfaces associated to the service are displayed.

Parameters *ip-address* — The IP address of the interface for which to display information.

Values ipv4-address: a.b.c.d (host bits must be 0)
ipv6-address: x:x:x:x:x:x:x:x (eight 16-bit pieces)

x:x:x:x:x:x:d.d.d.d
x: [0 — FFFF]H
d: [0 — 255]

ip-int-name — Specifies the IP interface name for which to display information.

Values 32 characters maximum

family — Displays the router IP interface table to display.

Values **ipv4** — Displays only those peers that have the IPv4 family enabled.
ipv6 — Displays the peers that are IPv6-capable.

interface-type — Specifies to display either group or interfaces.

Values group, subscriber

detail — Displays detailed IP interface information.

Default IP interface summary output.

Output **Show Service-ID —** The following table describes show service-id output fields.

Label	Description
If Name	The name used to refer to the IES interface.
Type	Specifies the interface type.
IP-Address	Specifies the IP address/IP subnet/broadcast address of the interface.
Adm	The administrative state of the interface.
Opr	The operational state of the interface.
Admin State	The administrative state of the interface.
Oper State	The operational state of the interface.
IP Addr/mask	Specifies the IP address/IP subnet/broadcast address of the interface.
If Index	The index corresponding to this IES interface. The primary index is 1; all IES interfaces are defined in the base virtual router context.
If Type	Specifies the interface type.
SAP Id	Specifies the SAP's port ID.
SNTP B.Cast	Specifies whether SNTP broadcast client mode is enabled or disabled.
Arp Timeout	Specifies the timeout for an ARP entry learned on the interface.
MAC Address	Specifies the 48-bit IEEE 802.3 MAC address.
ICMP Mask Reply	Specifies whether ICMP mask reply is enabled or disabled.
Cflowd	Specifies whether Cflowd collection and analysis on the interface is enabled or disabled.

Label	Description (Continued)
Redirects	Specifies the rate for ICMP redirect messages.
Unreachables	Specifies the rate for ICMP unreachable messages.
TTL Expired	Specifies the rate for ICMP TTL messages.

Sample Output

```
A:ALA-49# show service id 88 interface
===============================================================================
Interface Table
===============================================================================
Interface-Name                   Adm          Opr(v4/v6)  Type     Port/SapId
   IP-Address                                                     PfxState
-------------------------------------------------------------------------------
Sector A                         Up           Down/Down   IES      1/1/1.2.2
   -                                                              -
test                             Up           Down/Down   IES      1/1/2:0
   1.1.1.1/31                                                     n/a
   1.1.1.1/31                                                     n/a
   1.1.2.1/31                                                     n/a
test27                           Up           Up/--       IES Sub subscriber
   192.168.10.21/24                                               n/a
grp-if                           Up           Down/--     IES Grp 1/2/2
Interfaces : 4
===============================================================================
A:ALA-49#
```

labels

Syntax **labels**

Context show>service>id

Description Displays the labels being used by the service.

Output **Show Service-ID Labels —** The following table describes show service-id labels output fields:

Label	Description
Svc Id	The service identifier.
Sdp Id	The SDP identifier.
Type	Indicates whether the SDP is a spoke or a mesh.
I.Lbl	The VC label used by the far-end device to send packets to this device in this service by the SDP.
E.Lbl	The VC label used by this device to send packets to the far-end device in this service by the SDP.

Sample Output

```
*A:ALA-12# show service id 1 labels
===============================================================================
Martini Service Labels
===============================================================================
Svc Id     Sdp Id             Type I.Lbl        E.Lbl
-------------------------------------------------------------------------------
1          10:1               Mesh 0            0
1          20:1               Mesh 0            0
1          30:1               Mesh 0            0
1          40:1               Mesh 130081       131061
1          60:1               Mesh 131019       131016
1          100:1              Mesh 0            0
-------------------------------------------------------------------------------
Number of Bound SDPs : 6
-------------------------------------------------------------------------------
*A:ALA-12#
```

sap

Syntax **sap** *sap-id* [**detail**]

Context show>service>id

Description Displays information for the SAPs associated with the service.

If no optional parameters are specified, a summary of all associated SAPs is displayed.

Parameters *sap-id* — The ID that displays SAPs for the service in the *slot*/*mda*/*port*[**.***channel* format. See Common CLI Command Descriptions on page 2569 for command syntax.

detail — Displays detailed information for the SAP.

Output **Show Service-ID SAP —** The following table describes show service SAP fields:

Label	Description
Service Id	The service identifier.
SAP	The type of SAP.
Encap	The encapsulation type of the SAP.
Ethertype	Specifies an Ethernet type II Ethertype value.
Admin State	The administrative state of the SAP.
Oper State	The operational state of the SAP.
Flags	Specifies the conditions that affect the operating status of this SAP. Display output includes: ServiceAdminDown, SapAdminDown, InterfaceAdminDown, PortOperDown, PortMTUTooSmall, L2OperDown, SapIngressQoSMismatch, SapEgressQoSMismatch,RelearnLimitExceeded, RxProtSrcMac, ParentIfAdminDown, NoSapIpipeCeIpAddr, TodResourceUnavail, TodMssResourceUnavail, SapParamMismatch, CemSapNoEcidOrMacAddr, StandByForMcRing, ServiceMTUTooSmall, SapIngressNamedPoolMismatch, SapEgressNamedPoolMismatch, NoSapEpipeRingNode.
Last Status Change	Specifies the time of the most recent operating status change to this SAP.
Last Mgmt Change	Specifies the time of the most recent management-initiated change to this SAP.
Admin MTU	The desired largest service frame size (in octets) that can be transmitted through the SAP to the far-end router, without requiring the packet to be fragmented.
Ingress qos-policy	The ingress QoS policy ID assigned to the SAP.
Egress qos-policy	The egress QoS policy ID assigned to the SAP.
Ingress Filter-Id	The ingress filter policy ID assigned to the SAP.

Label	Description (Continued)
Egress Filter-Id	The egress filter policy ID assigned to the SAP.
Acct. Pol	The accounting policy ID assigned to the SAP.
Collect Stats	Specifies whether statistics collection is enabled.
Dropped	The number of packets and octets dropped due to SAP state, ingress MAC or IP filter, same segment discard, bad checksum, etc.
Off. HiPrio	The number of high priority packets and octets, as determined by the SAP ingress QoS policy.
Off. LowPrio	The number of low priority packets and octets, as determined by the SAP ingress QoS policy.
Off. Uncolor	The number of uncolored packets and octets, as determined by the SAP ingress QoS policy, offered by the Pchip to the Qchip.
Dro. HiPrio	The number of high priority packets and octets, as determined by the SAP ingress QoS policy, dropped by the Qchip due to: MBS exceeded, buffer pool limit exceeded, etc.
Dro. LowPrio	The number of low priority packets and octets, as determined by the SAP ingress QoS policy, dropped by the Qchip due to: MBS exceeded, buffer pool limit exceeded, etc.
For. InProf	The number of in-profile packets and octets (rate below CIR) forwarded by the ingress Qchip.
For. OutProf	The number of out-of-profile packets and octets (rate below CIR) forwarded by the ingress Qchip.
Dro. InProf	The number of in-profile packets and octets discarded by the egress Qchip due to MBS exceeded, buffer pool limit exceeded, etc.
Ingress TD Profile	The profile ID applied to the ingress SAP.
Egress TD Profile	The profile ID applied to the egress SAP.
Alarm Cell Handling	The OAM operational status of the VCL.
AAL-5 Encap	The AAL-5 encapsulation type.
Mult Svc Site	Specifies the customer's multi-service-site name.
I. Sched Pol	The ingress scheduler policy applied to the customer's multi-service-site.
E. Sched Pol	The egress scheduler policy applied to the customer's multi-service-site.

Sample Output

```
A:ALA-49# show service id 88 sap 7/1/1.2.2
===============================================================================
Service Access Points(SAP)
===============================================================================
Service Id         : 88
SAP                : 1/1/1.2.2               Encap             : bcpNull
Admin State        : Up                      Oper State        : Down
Flags              : PortOperDown
                     SapEgressQoSMismatch
Last Status Change : 06/06/2006 08:22:07
Last Mgmt Change   : 06/06/2006 14:15:58
Admin MTU          : 1518                    Oper MTU          : 1518
Ingress qos-policy : 2                       Egress qos-policy : 1020
Shared Q plcy      : default                 Multipoint shared : Enabled
Ingress Filter-Id  : n/a                     Egress Filter-Id  : n/a
tod-suite          : None
Multi Svc Site     : None
Acct. Pol          : None                    Collect Stats     : Disabled
Anti Spoofing      : None                    Nbr Static Hosts  : 0
-------------------------------------------------------------------------------
Subscriber Management
-------------------------------------------------------------------------------
Admin State        : Down                    MAC DA Hashing    : False
Def Sub-Profile    : None
Def SLA-Profile    : None
Sub-Ident-Policy   : None
Subscriber Limit   : 1
Single-Sub-Parameters
 Prof Traffic Only : False
 Non-Sub-Traffic   : N/A
===============================================================================
A:ALA-49#
```

sdp

Syntax **sdp** [{*sdp-id* | **far-end** *ip-address* }] [**detail**]]

Context show>service>id

Description Displays information for the SDPs associated with the service.

If no optional parameters are specified, a summary of all associated SDPs is displayed.

Parameters *sdp-id* — The SDP ID for which to display information.

Values 1 — 17407

far-end *ip-address* **—** When specified, displays SDP having the specified far-end IP address.

detail — Displays detailed information for the SDP.

Sample Output

```
A:Dut-A# show service id 1 sdp detail
===============================================================================
Services: Service Destination Points Details
===============================================================================
 Sdp Id 1:1  -(10.20.1.2)
```

```
-------------------------------------------------------------------------------
Description     : Default sdp description
SDP Id            : 1:1                       Type              : Spoke
VC Type           : Ether                     VC Tag            : n/a
Admin Path MTU    : 0                         Oper Path MTU     : 9186
Far End           : 10.20.1.2                 Delivery          : MPLS

Admin State       : Up                        Oper State        : Up
Acct. Pol         : None                      Collect Stats     : Disabled
Ingress Label     : 2048                      Egress Label      : 2048
Ing mac Fltr      : n/a                       Egr mac Fltr      : n/a
Ing ip Fltr       : n/a                       Egr ip Fltr       : n/a
Ing ipv6 Fltr     : n/a                       Egr ipv6 Fltr     : n/a
Admin ControlWord : Not Preferred             Oper ControlWord  : False
Last Status Change : 05/31/2007 00:45:43      Signaling         : None
Last Mgmt Change  : 05/31/2007 00:45:43
Class Fwding State : Up
Flags             : None
Peer Pw Bits      : None
Peer Fault Ip     : None
Peer Vccv CV Bits  : None
Peer Vccv CC Bits  : None
Max Nbr of MAC Addr: No Limit                 Total MAC Addr    : 0
Learned MAC Addr  : 0                         Static MAC Addr   : 0

MAC Learning      : Enabled                   Discard Unkwn Srce: Disabled
MAC Aging         : Enabled
L2PT Termination  : Disabled                  BPDU Translation  : Disabled
MAC Pinning       : Disabled

KeepAlive Information :
Admin State       : Disabled                  Oper State        : Disabled
Hello Time        : 10                        Hello Msg Len     : 0
Max Drop Count    : 3                         Hold Down Time    : 10

Statistics          :
I. Fwd. Pkts.     : 0                         I. Dro. Pkts.     : 0
I. Fwd. Octs.     : 0                         I. Dro. Octs.     : 0
E. Fwd. Pkts.     : 0                         E. Fwd. Octets    : 0
MCAC Policy Name  :
MCAC Max Unconst BW: no limit                 MCAC Max Mand BW  : no limit
MCAC In use Mand BW: 0                        MCAC Avail Mand BW: unlimited
MCAC In use Opnl BW: 0                        MCAC Avail Opnl BW: unlimited

Associated LSP LIST :
Lsp Name          : A_B_1
Admin State       : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m35s

Lsp Name          : A_B_2
Admin State       : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m35s

Lsp Name          : A_B_3
Admin State       : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s

Lsp Name          : A_B_4
Admin State       : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s
```

```
Lsp Name           : A_B_5
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s

Lsp Name           : A_B_6
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s

Lsp Name           : A_B_7
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s

Lsp Name           : A_B_8
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m35s

Lsp Name           : A_B_9
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s

Lsp Name           : A_B_10
Admin State        : Up                        Oper State        : Up
Time Since Last Tr*: 00h26m34s
-------------------------------------------------------------------------------
Class-based forwarding :
-------------------------------------------------------------------------------
Class forwarding   : enabled
Default LSP        : A_B_10                    Multicast LSP     : A_B_9
===============================================================================
FC Mapping Table
===============================================================================
FC Name             LSP Name
-------------------------------------------------------------------------------
af                  A_B_3
be                  A_B_1
ef                  A_B_6
h1                  A_B_7
h2                  A_B_5
l1                  A_B_4
l2                  A_B_2
nc                  A_B_8
===============================================================================
Stp Service Destination Point specifics
-------------------------------------------------------------------------------
Mac Move           : Blockable
Stp Admin State    : Up                        Stp Oper State    : Down
Core Connectivity  : Down
Port Role          : N/A                       Port State        : Forwarding
Port Number        : 2049                      Port Priority     : 128
Port Path Cost     : 10                        Auto Edge         : Enabled
Admin Edge         : Disabled                  Oper Edge         : N/A
Link Type          : Pt-pt                     BPDU Encap        : Dot1d
Root Guard         : Disabled                  Active Protocol   : N/A
Last BPDU from     : N/A
Designated Bridge  : N/A                       Designated Port Id: 0

Fwd Transitions    : 0                         Bad BPDUs rcvd    : 0
Cfg BPDUs rcvd     : 0                         Cfg BPDUs tx      : 0
TCN BPDUs rcvd     : 0                         TCN BPDUs tx      : 0
RST BPDUs rcvd     : 0                         RST BPDUs tx      : 0
-------------------------------------------------------------------------------
```

```
Number of SDPs : 1
------------------------------------------------------------------------------
* indicates that the corresponding row element may have been truncated.
------------------------------------------------------------------------------
A:Dut-A#
```

subscriber-hosts

Syntax **subscriber-hosts** [**sap** *sap-id*] [**ip** *ip-address*[/*mask*]] [**mac** *ieee-address*] [**sub-profile** *sub-profile-name*] [**sla-profile** *sla-profile-name*] [**detail**]

Context show>service>id

Description Displays subscriber host information.

Parameters **sap** *sap-id* — Displays the specified subscriber host SAP information. See Common CLI Command Descriptions on page 2569 for command syntax.

ip-address/mask — The IP address of the IP interface. The *ip-address* portion of the **address** command specifies the IP host address that will be used by the IP interface within the subnet. This address must be unique within the subnet and specified in dotted decimal notation.

Values Allowed values are IP addresses in the range 1.0.0.0 – 223.255.255.255 (with support of / 31 subnets).
mask: 1 — 32

ieee-address — Specifies the 48-bit MAC address for the static ARP in the form aa:bb:cc:dd:ee:ff or aa-bb-cc-dd-ee-ff where aa, bb, cc, dd, ee, and ff are hexadecimal numbers. Allowed values are any non-broadcast, non-multicast MAC and non-IEEE reserved MAC addresses.

sub-profile *sub-profile-name* **—** Specifies an existing subscriber profile name to be associated with the static subscriber host. The subscriber profile is configured in the **config>subscr-mgmt>sub-profile** context.

sla-profile *sla-profile-name* **—** Specifies an existing SLA profile name to be associated with the static subscriber host. The SLA profile is configured in the **config>subscr-mgmt>sla-profile** context.

detail — Displays detailed information.

statistics

Syntax **statistics** [*ip-int-name* | *ip-address*]

Context show>router>dhcp

Description Display statistics for DHCP relay and DHCP snooping. If no IP address or interface name is specified, then all configured interfaces are displayed. If an IP address or interface name is specified, then only data regarding the specified interface is displayed.

Parameters *ip-int-name* | *ip-address* — Displays statistics for the specified IP interface.

Output **Show DHCP Statistics Output —** The following table describes the output fields for DHCP.i

Label	Description
Received Packets	The number of packets received from the DHCP clients.
Transmitted Packets	The number of packets transmitted to the DHCP clients.
Received Malformed Packets	The number of malformed packets received from the DHCP clients.
Received Untrusted Packets	The number of untrusted packets received from the DHCP clients.
Client Packets Discarded	The number of packets received from the DHCP clients that were discarded.
Client Packets Relayed	The number of packets received from the DHCP clients that were forwarded.
Client Packets Snooped	The number of packets received from the DHCP clients that were snooped.
Server Packets Discarded	The number of packets received from the DHCP server that were discarded.
Server Packets Relayed	The number of packets received from the DHCP server that were forwarded.
Server Packets Snooped	The number of packets received from the DHCP server that were snooped.

Sample Output

```
*A:ALA-1# show router dhcp statistics
===============================================================
DHCP Global Statistics
===============================================================
Rx Packets                      : 0
Tx Packets                      : 0
Rx Malformed Packets            : 0
Rx Untrusted Packets            : 0
Client Packets Discarded        : 0
Client Packets Relayed          : 0
Client Packets Snooped          : 0
Server Packets Discarded        : 0
Server Packets Relayed          : 0
Server Packets Snooped          : 0
===============================================================
*A:ALA-1#
```

summary

Syntax **summary**

Context show>router>dhcp

Description This command displays the status of the DHCP relay and DHCP snooping functions on each interface.

Output **Show DHCP Summary Output —** The following table describes the output fields for DHCP summary.

Label	Description
Interface Name	Name of the router interface.
SapId/Sdp	Specifies the associated SAP ID or SDP ID.
Arp Populate	Specifies whether or not ARP populate is enabled.
Used/Provided	Used – The number of lease-states currently in use on a specific interface (the number of clients on that interface got an IP address by DHCP). This value is always less than or equal to the 'Provided' field. Provided – The configured for a specific interface.
Info Option	Indicates whether Option 82 processing is enabled on the interface.
Admin State	Indicates the administrative state.

Sample Output

```
A:ALA-49# show router dhcp summary
===============================================================================
DHCP Summary (Router: Base)
===============================================================================
Interface Name                   Arp      Used/                Info    Admin
  SapId/Sdp                      Populate Provided             Option  State
-------------------------------------------------------------------------------
Sector A                         No       0/0                  Keep    Up
  sap:7/1/1.2.2                           0/0
grp-if                           No       0/1                  Keep    Down
ies-test                         No       0/0                  Keep    Up
  sap:9/1/2:0/500                         0/0
test                             No       0/0                  Keep    Up
  sap:10/1/2:0                            0/0
test1                            No       0/0                  Keep    Up
  sap:7/1/1.1.2                           0/0
test2                            No       0/0                  Keep    Up
  sap:7/1/1.2.1                           0/0
testA                            No       0/0                  Keep    Up
  sap:7/1/3.1.1                           0/0
testB                            No       0/0                  Keep    Up
  sap:7/1/5.1.1                           0/0
to-HQ                            No       0/0                  Keep    Up
  sdp:spoke-2:1001                        0/0
to-web                           No       0/0                  Keep    Up
  sap:2/1/10:50                           0/0
-------------------------------------------------------------------------------
Interfaces: 9
```

vrrp

Syntax **vrrp**

Context show>router

Description This command displays information VRRP instances.

instance

Syntax **instance**
instance interface *interface-name* [**vrid** *virtual-router-id*]
instance interface *interface-name* **vrid** *virtual-router-id ipv6*

Context show>router>vrrp

Description This command displays statistics for the VRRP instance.

Parameters *interface-name* — Displays statistics for the specified interface.

virtual-router-id — Displays statistics for the specified virtual router ID.

Values 1 — 255

statistics

Syntax **statistics**

Context show>router>vrrp

Description This command displays statistics for the VRRP instance.

retailers

Syntax **retailers**

Context show>service>id

Description This command displays the service ID of the retailer subscriber service to which this DHCP lease belongs.

wholesalers

Syntax **wholesalers**

Context show>service>id

Description This command displays service wholesaler information.

IES Clear Commands

dhcp

Syntax **dhcp**

Context clear>router>dhcp
clear>service>id

Description This command enables the context to clear DHCP parameters.

dhcp6

Syntax **dhcp6**

Context clear>router>dhcp6
clear>service>id

Description This command enables the context to clear DHCPv6 parameters.

statistics

Syntax **statistics** [*ip-int-name* | *ip-address*]

Context clear>router>dhcp

Description Clears DHCP statistics.

id

Syntax **id** *service-id*

Context clear>service
clear>service>statistics

Description This command clears parameters for a specific service.

Parameters *service-id* — The ID that uniquely identifies the service to clear.

arp-host

Syntax **arp-host**
arp-host { **mac** *ieee-address* | **sap** *sap-id* | **ip-address** *ip-address*[*/mask*] }
arp-host [**port** *port-id*] [**inter-dest-id** *intermediate-destination-id* | **no-inter-dest-id**]
arp-host statistics [**sap** *sap-id* | **interface** *interface-name*]

Context clear>service>id

Description This command clears ARP host data.

interface

Syntax **interface** [*ip-int-name* | *ip-addr*] [**icmp**]

Context clear>router

Description This command clears IP interface statistics.

If no IP interface is specified either by IP interface name or IP address, the command will perform the clear operation on all IP interfaces.

Parameters *ip-int-name* | *ip-addr* — The IP interface name or IP interface address.

Default All IP interfaces.

icmp — Specifies to reset the ICMP statistics for the IP interface(s) used for ICMP rate limit.

interface

Syntax **interface** *interface-name* [**vrid** *virtual-router-id*]
interface *interface-name* **vrid** *vritual-router-id* **ipv6**

Context clear>router>vrrp

Description This command clears and resets VRRP instances.

Parameters *interface-name* — Specifies an existing interface name up to 32 characters in length.

virtual-router-id — Specifies the virtual router identifier.

Values 1 — 255

statistics

Syntax **statistics interface** *interface-name* [**vrid** *virtual-router-id*]
statistics
statistics interface *interface-name* **vrid** *virtual-router-id* **ipv6**

Context clear>router>vrrp

Description This command clears statistics for VRRP instances.

Parameters *interface-name* — Specifies an existing interface name up to 32 characters in length.

virtual-router-id — Specifies the virtual router identifier.

Values 1 — 255

fdb

Syntax **fdb** {**all** | **mac** *ieee-address* | **sap** *sap-id*] | **mesh-sdp** *sdp-id*[**:***vc-id*] | **spoke-sdp** *sdp-id*:*vc-id*}

Context clear>service>id

Description This command clears FDB entries for the service.

Parameters **all —** Clears all FDB entries.

mac *ieee-address* **—** Clears only FDB entries in the FDB table with the specified 48-bit MAC address. The MAC address can be expressed in the form *aa*:*bb*:*cc*:*dd*:*ee*:*ff* or *aa-bb-cc-dd-ee-ff* where *aa*, *bb*, *cc*, *dd*, *ee* and *ff* are hexadecimal numbers.

sap *sap-id* — Clears the specified SAP information. See Common CLI Command Descriptions on page 2569 for command syntax.

mesh-sdp — Clears only service FDB entries associated with the specified mesh SDP ID. For a mesh SDP, the VC ID is optional.

spoke-sdp — Clears only service FDB entries associated with the specified spoke SDP ID. For a spoke SDP, the VC ID must be specified.

sdp-id — The SDP ID for which to clear associated FDB entries.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID for which to clear associated FDB entries.

Default For mesh SDPs only, all VC IDs.

Values 1 — 4294967295

site

Syntax **site** *service-id*

Context clear>service>id

Description This command clears site-specific information for the service.

Parameters *service-id* — Specifies the service ID or service name up to 64 characters in length.

Values 1 — 2147483648

spoke-sdp

Syntax **spoke-sdp** *sdp-id*:*vc-id* **ingress-vc-label**

Context clear>service>id

Description Clears and resets the spoke SDP bindings for the service.

Parameters *sdp-id* — The spoke SDP ID to be reset.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID to be reset.

Values 1 — 4294967295

stp

Syntax **stp**

Context clear>service>statistics>id

Description Clears all spanning tree statistics for the service ID.

lease-state

Syntax **lease-state**
lease-state ip-address *ip-address*
lease-state mac *ieee-address*
lease-state sap *sap-id*
lease-state sdp *sdp-id:vc-id*

Context clear>service>id>dhcp

Description Clears DHCP lease state information for this service.

Parameters *ip-address* — The IP address of the IP interface. The *ip-address* portion of the **address** command specifies the IP host address that will be used by the IP interface within the subnet. This address must be unique within the subnet and specified in dotted decimal notation. Allowed values are IP addresses in the range 1.0.0.0 – 223.255.255.255 (with support of /31 subnets).

ieee-address — Specifies the 48-bit MAC address for the static ARP in the form aa:bb:cc:dd:ee:ff or aa-bb-cc-dd-ee-ff where aa, bb, cc, dd, ee, and ff are hexadecimal numbers. Allowed values are any non-broadcast, non-multicast MAC and non-IEEE reserved MAC addresses.

sap *sap-id* — Clears the specified lease state SAP information. See Common CLI Command Descriptions on page 2569 for command syntax.

sdp-id — The specified SDP to be cleared.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID to be cleared.

Values 1 — 4294967295

lease-state

Syntax **lease-state** [**ip-address** *ipv6-address*/*prefix-length*] [**mac** *ieee-address*]

Context clear>service>id>dhcp6

Description This command clears DHCPv6 lease state information for this service.

Parameters **ip-address** *ipv6-address/prefix-length* — The IP address of the IP interface. The *ip-address* portion of the **address** command specifies the IP host address that will be used by the IP interface within the subnet. This address must be unique within the subnet and specified in dotted decimal notation. Allowed values are IP addresses in the range 1.0.0.0 – 223.255.255.255 (with support of /31 subnets).

Values

ipv6-address	x:x:x:x:x:x:x:x (eight 16-bit pieces) x:x:x:x:x:x:d.d.d.d x [0 — FFFF]H d [0 — 255]D
prefix-length	1 — 128

mac *ieee-address* — Specifies the 48-bit MAC address for the static ARP in the form aa:bb:cc:dd:ee:ff or aa-bb-cc-dd-ee-ff where aa, bb, cc, dd, ee, and ff are hexadecimal numbers. Allowed values are any non-broadcast, non-multicast MAC and non-IEEE reserved MAC addresses.

statistics

Syntax **statistics** [*ip-int-name* | *ipv6-address*]

Context clear>router>dhcp6

Description This command clears DHCP6 statistics.

Parameters *ip-int-name* — Specifies the IP interface name up to 32 characters inlength.

ip-address *ipv6-address/prefix-length* — The IP address of the IP interface. The *ip-address* portion of the **address** command specifies the IP host address that will be used by the IP interface within the subnet. This address must be unique within the subnet and specified in dotted decimal notation. Allowed values are IP addresses in the range 1.0.0.0 – 223.255.255.255 (with support of /31 subnets).

Values

ipv6-address	x:x:x:x:x:x:x:x (eight 16-bit pieces) x:x:x:x:x:x:d.d.d.d x [0 — FFFF]H d [0 — 255]D
prefix-length	1 — 128

statistics

Syntax **statistics** [**sap** *sap-id* | **sdp** *sdp-id:vc-id* | **interface** *ip-address* | *ip-int-name*]

Context clear>service>id>dhcp

Description This command clears DHCP statistics.

Parameters **sap** *sap-id* — Clears the specified SAP information. See Common CLI Command Descriptions on page 2569 for command syntax.

sdp *sdp-id* — The specified SDP to be cleared.

Values 1 — 17407

vc-id — The virtual circuit ID on the SDP ID to be cleared.

Values 1 — 4294967295

interface *ip-address* — The interface IP address.

ip-int-name — The interface name.

IES Debug Commands

host-connectivity-verify

Syntax [**no**] **host-connectivity-verify**

Context debug>service>id

Description This command enables Subscriber Host Connectivity Verification (SHCV) debugging.

The **no** form of the command disables the SHCV debugging.

ip

Syntax [**no**] **ip** *ip-address*

Context debug>service>id>host-connectivity-verify

Description This command displays Subscriber Host Connectivity Verification (SHCV) events for a particular IP address.

Parameters *ip-address* — The IP address of the IP interface. The *ip-address* portion of the **address** command specifies the IP host address that will be used by the IP interface within the subnet. This address must be unique within the subnet and specified in dotted decimal notation. Allowed values are IP addresses in the range 1.0.0.0 – 223.255.255.255 (with support of /31 subnets).

mac

Syntax [**no**] **mac** *ieee-address*

Context debug>service>id>host-connectivity-verify

Description This command displays Subscriber Host Connectivity Verification (SHCV) events for a particular MAC address.

Parameters *mac-address* — Specifies the 48-bit MAC address for the static ARP in the form aa:bb:cc:dd:ee:ff or aa-bb-cc-dd-ee-ff where aa, bb, cc, dd, ee, and ff are hexadecimal numbers. Allowed values are any non-broadcast, non-multicast MAC and non-IEEE reserved MAC addresses.

sap

Syntax [**no**] **sap** *sap-id*

Context debug>service>id>host-connectivity-verify

Description This command displays Subscriber Host Connectivity Verification (SHCV) events for a particular SAP.

Parameters *sap-id* — Specifies the physical port identifier portion of the SAP definition. See Common CLI Command Descriptions on page 2569 for command syntax.

packets

Syntax [**no**] **packets**
[**no**] **packets interface** *ip-int-name* [**vrid** *virtual-router-id*]
[**no**] **packets interface** *ip-int-name* **vrid** *virtual-router-id* **ipv6**

Context debug>router>vrrp

Description This command enables or disables debugging for VRRP packets.

Parameters *ip-int-name* — Specifies the interface name.

virtual-router-id — Specifies the router ID.

Values 1 — 255

events

Syntax [**no**] **events**
[**no**] **events interface** *ip-int-name* [**vrid** *virtual-router-id*]
[**no**] **events interface** *ip-int-name* **vrid** *virtual-router-id* **ipv6**

Context debug>router>vrrp

Description This command enables or disables debugging for VRRP events.

Parameters *ip-int-name* — Specifies the interface name.

virtual-router-id — Specifies the router ID.

Values 1 — 255

instance

Syntax **instance interface** *interface-name* **vr-id** *virtual-router-id* [**ipv6**] [**interval** *seconds*] [**repeat** *repeat*] [**absolute|rate**]

Context monitor>router>vrrp

Description This command enables monitoring for statistics for VRRP instances.