
VPLS Services Command Reference

Command Hierarchies

- [Global Commands on page 818](#)
- [SAP Commands on page 825](#)
- [Mesh SDP Commands on page 835](#)
- [Spoke SDP Commands on page 838](#)
- [Provider Tunnel Commands on page 842](#)
- [Egress Multicast Group Commands on page 843](#)
- [Provider Edge Discovery Policy Commands on page 844](#)
- [Routed VPLS Commands on page 844](#)
- [Show Commands on page 845](#)
- [Clear Commands on page 849](#)
- [Debug Commands on page 851](#)

VPLS Service Configuration Commands

Global Commands

```

config
  — service
    — vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls] [b-vpls | i-vpls] [create]
    — no vpls service-id
      — backbone-smac ieee-address
      — no backbone-smac
      — backbone-vpls service-id[:isis]
      — no backbone-vpls
        — [no] stp
      — bgp
        — vsi-export policy-name [policy-name...(up to 5 max)]
        — no vsi-export
        — vsi-import policy-name [policy-name...(up to 5 max)]
        — no vsi-import
        — route-target {ext-community | {[export ext-community] [import ext-community]}}
        — no route-target
        — pw-template-binding policy-id [split-horizon-group group-name]
          [import-rt {ext-community...(up to 5 max)}]
        — no pw-template-binding policy-id
          — oper-group group-name
          — no oper-group
        — route-distinguisher [ip-addr:comm-val | as-number:ext-comm-val]
        — no route-distinguisher
      — [no] bgp-ad
        — [no] shutdown
        — vpls-id vpls-id
        — vsi-id
          — prefix low-order-vsi-id
          — no prefix
      — bgp-vpls
        — max-ve-id value
        — no max-ve-id
        — ve-name name
        — no ve-name
          — ve-id ve-id-value
          — no ve-id
        — [no] shutdown
      — [no] def-mesh-vc-id vc-id
      — default-gtw
        — ip ip-address
        — no ip
        — mac ieee-address
        — no mac
      — description description-string
      — no description
      — [no] disable-aging
      — [no] disable-learning
      — [no] discard-unknown
      — endpoint endpoint-name [create]
      — no endpoint

```

- [no] **auto-learn-mac-protect**
- [no] **block-on-mesh-failure**
- **description** *description-string*
- **no description**
- [no] **ignore-standby-signaling**
- [no] **mac-pinning**
- **max-nbr-mac-addr** *table-size*
- **no max-nbr-mac-addr**
- [no] **mc-endpoint**
 - **mc-ep-peer** *name*
 - **mc-ep-peer** *ip-address*
 - **no mc-ep-peer**
- **restrict-protected-src** **alarm-only**
- **restrict-protected-src** [**discard-frame**]
- **no restrict-protected-src**
- **revert-time** *revert-time* | **infinite**
- **no revert-time**
- **static-mac** *ieee-address* [**create**]
- **no static-mac**
- [no] **suppress-standby-signaling**
- **eth-cfm**
 - [no] **mep** *mep-id* **domain** *md-index* **association** *ma-index*
 - [no] **ccm-enable**
 - **ccm-ltm-priority** *priority*
 - **no ccm-ltm-priority**
 - [no] **description**
 - [no] **eth-test-enable**
 - [no] **test-pattern** {**all-zeros** | **all-ones**} [**crc-enable**]
 - **low-priority-defect** {**allDef** | **macRemErrXcon** | **remErrXcon** | **errXcon** | **xcon** | **noXcon**}
 - **mac-address** *mac-address*
 - **no mac-address**
 - **one-way-delay-threshold** *seconds*
 - [no] **shutdown**
 - **tunnel-fault** [**accept** | **ignore**]
- [no] **fdb-table-high-wmark** *high-water-mark*
- [no] **fdb-table-low-wmark** *low-water-mark*
- **fdb-table-size** *table-size*
- **no fdb-table-size** [*table-size*]
- **gsmp**
 - [no] **group** *name*
 - **ancp**
 - [no] **dynamic-topology-discover**
 - [no] **line-configuration**
 - [no] **oam**
 - **description** *description-string*
 - **no description**
 - **hold-multiplier** *multiplier*
 - **no hold-multiplier**
 - **keepalive** *seconds*
 - **no keepalive**
 - [no] **neighbor** *ip-address*
 - **description** *description-string*
 - **no description**

- **local-address** *ip-address*
- **no local-address**
- **priority-marking dscp** *dscp-name*
- **priority-marking prec** *ip-prec-value*
- **no priority-marking**
- **[no] shutdown**
- **[no] shutdown**
- **idle-filter**
- **[no] idle-filter**
- **persistency-database**
- **no persistency-database**
- **[no] shutdown**
- **host-connectivity-verify source-ip** *ip-address* [**source-mac** *ieee-address*] [**interval** *interval*] [**action** {**remove** | **alarm**}]
- **igmp-host-tracking**
 - **expiry-time** *expiry-time*
 - **no expiry-time**
 - **[no] shutdown**
- **igmp-snooping**
 - **mvr**
 - **description** *description-string*
 - **no description**
 - **group-policy** *policy-name*
 - **no group-policy**
 - **[no] shutdown**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-src-ip** *ip-address*
 - **no query-src-ip**
 - **report-src-ip** *ip-address*
 - **no report-src-ip**
 - **robust-count** *robust-count*
 - **no robust-count**
 - **[no] shutdown**
- **[no] interface** *ip-int-name*
 - **address** *ip-address[/mask]* [*netmask*]
 - **no address**
 - **arp-timeout** *seconds*
 - **no arp-timeout**
 - **description** *description-string*
 - **no description**
 - **mac** *ieee-address*
 - **no mac**
 - **[no] shutdown**
 - **static-arp** *ieee-mac-addr unnumbered*
 - **no static-arp** *unnumbered*]
 - **unnumbered** [*ip-int-name* | *ip-address*]
 - **no unnumbered**
- **isid-policy**
- **no isid-policy**
 - **entry**
 - **advertise-local**
 - **range** *isid [to isid]*
 - **[no] use-def-mcast**
- **local-age** *aging-timer*

- **no local-age**
- **[no] mac-move**
 - **move-frequency** *frequency*
 - **no move-frequency**
 - **number-retries** *number-retries*
 - **no number-retries**
 - **primary-ports**
 - **cumulative-factor** *cumulative-factor*
 - **no cumulative-factor**
 - **[no] sap** *sap-id*
 - **[no] spoke-sdp** *spoke-id*
 - **[no] cumulative-factor** *factor*
 - **retry-timeout** *timeout*
 - **no retry-timeout**
 - **secondary-ports**
 - **cumulative-factor** *cumulative-factor*
 - **no cumulative-factor**
 - **[no] sap** *sap-id*
 - **[no] spoke-sdp** *spoke-id*
 - **[no] cumulative-factor** *factor*
 - **[no] shutdown**
- **mac-protect**
 - **[no] mac** *ieee-address*
- **mac-subnet-length** *subnet-length*
- **no mac-subnet-length**
- **mfib-table-high-wmark** *high-water-mark*
- **no mfib-table-high-wmark**
- **mfib-table-low-wmark** *low-water-mark*
- **no mfib-table-low-wmark**
- **mfib-table-size** *table-size*
- **no mfib-table-size**
- **mld-snooping**
 - **mvr**
 - **description** *description-string*
 - **no description**
 - **group-policy** *policy-name*
 - **no group-policy**
 - **[no] shutdown**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-src-ip** *ipv-address*
 - **no query-src-ip**
 - **report-src-ip** *ipv6-address*
 - **no report-src-ip**
 - **robust-count** *robust-count*
 - **no robust-count**
 - **[no] shutdown**
- **mrp**
 - **[no] attribute-table-size**
 - **[no] attribute-table-high-wmark**
 - **[no] attribute-table-low-wmark**
 - **flood-time** *flood-time*
 - **no flood-time**
 - **[no] shutdown**

- **mvrp**
 - [no] **attribute-table-size**
 - [no] **attribute-table-high-wmark**
 - [no] **attribute-table-low-wmark**
 - **flood-time** *flood-time*
 - **no flood-time**
 - **flood-time**
 - [no] **hold-time** *value*
 - [no] **shutdown**
- **multicast-info-policy** *policy-name*
- **no multicast-info-policy**
- [no] **per-service-hashing**
- [no] **pim-snooping**
 - **group-policy** *grp-policy-name* [*.. grp-policy-name*]
 - **no group-policy**
 - **oper-group** *seconds*
 - **no oper-group**
 - **mode** *mode*
 - [no] **shutdown**
- [no] **propagate-mac-flush**
- [no] **propagate-mac-flush-from-bvpls**
- [no] **radius-discovery**
 - **pe-discovery-policy** *name*
 - **no pe-discovery-policy**
 - [no] **shutdown**
 - **user-name-format** {*vpn-id vpn-id* | **router-distinguisher** *rd*}
 - **no user-name-format**
- **remote-age** *aging-timer*
- **no remote-age**
- **send-bvpls-flush** {[**all-but-mine**] [**all-from-me**]}
- **no send-bvpls-flush**
- [no] **send-flush-on-bvpls-failure**
- [no] **send-flush-on-failure**
- **service-mtu** *octets*
- **no service-mtu**
- **service-name** *service-name*
- **no service-name**
- [no] **shutdown**
- **site** *name* [**create**]
- **no site** *name*
 - **boot-timer** *seconds*
 - **no boot-timer**
 - **failed-threshold** [1..1000]
 - **failed-threshold** **all**
 - [no] **mesh-sdp-binding**
 - **monitor-oper-group** *name*
 - **no monitor-oper-group**
 - **sap** *sap-id*
 - **no sap**
 - [no] **shutdown**
 - **site-activation-timer** *seconds*
 - **no site-activation-timer**
 - **site-id** *value*
 - **no site-id**
 - **split-horizon-group** *group-name*

- **no split-horizon-group**
- **spoke-sdp** *sdp-id:vc-id*
- **no spoke-sdp**
- spb **[create]**
- no spb
 - level [1..1]
 - hello-interval *seconds*
 - no hello-interval
 - hello-multiplier *multiplier*
 - no hello-multiplier
 - metric ipv4-metric
 - no metric
 - lsp-pacing-interval *milli-seconds*
 - no lsp-pacing-interval
 - retransmit-interval *seconds*
 - no retransmit-interval
 - **[no]** shutdown
- **[no] split-horizon-group** *group-name [residential-group]*
 - **[no] auto-learn-mac-protect**
 - **description** *description-string*
 - **no description**
 - **restrict-protected-src** *alarm-only*
 - **restrict-protected-src** **alarm-only**
 - **restrict-protected-src** **[discard-frame]**
 - **no restrict-protected-src**
- **static-mac**
 - **mac** *ieee-address* **[create]** *sap sap-id* **[monitor fwd-status]**
 - **mac** *ieee-address* **[create]** **spoke-sdp** *sdp-id:vc-id* **[monitor fwd-status]**
 - **[no] mac** *ieee-address*
- **stp**
 - **forward-delay** *forward-delay*
 - **no forward-delay**
 - **hello-time** *hello-time*
 - **no hello-time**
 - **hold-count** *BDPU tx hold count*
 - **no hold-count**
 - **max-age** *max-info-age*
 - **no max-age**
 - **mode** {**rstp** | **comp-dot1w** | **dot1w** | **mstp** | **pmstp**}
 - **no mode**
 - **[no] mst-instance** *mst-inst-number*
 - **mst-priority** *bridge-priority*
 - **no mst-priority**
 - **[no] vlan-range** *vlan-range*
 - **mst-max-hops** *hops-count*
 - **no mst-max-hops**
 - **mst-name** *region-name*
 - **no mst-name**
 - **mst-revision** *revision-number*
 - **no mst-revision**
 - **priority** *bridge-priority*
 - **no priority**
 - **[no] shutdown**
- **vpls-group** *id*

- **service-range** *startid-endid* [**vlan-id** *startvid*]
- **vpls-template-binding** *name/id*
- **vpls-sap-template-binding** *name/id*
- [**no**] **mvrp-control**

SAP Commands

```

config
  — service
    — vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls] [b-vpls | i-vpls] [create]
    — no vpls service-id
      — sap sap-id [split-horizon-group group-name] [create] [capture-sap]
      — no sap sap-id
        — accounting-policy acct-policy-id
        — no accounting-policy
        — [no] auto-learn-mac-protect
        — anti-spoof {ip | mac | ip-mac}
        — no anti-spoof
        — app-profile app-profile-name
        — no app-profile
        — arp-host
          — host-limit max-num-hosts
          — no host-limit
          — min-auth-interval min-auth-interval
          — no min-auth-interval
          — [no] shutdown
        — arp-reply-agent [sub-ident]
        — no arp-reply-agent
        — atm
          — egress
            — traffic-desc traffic-desc-profile-id
            — no traffic-desc
          — encapsulation atm-encap-type
          — ingress
            — traffic-desc traffic-desc-profile-id
            — no traffic-desc
          — oam
            — [no] alarm-cells
        — authentication-policy name
        — no authentication-policy
        — bpdu-translation {auto | pvst | stp}
        — no bpdu-translation
        — calling-station-id {mac | remote-id | sap-id | sap-string}
        — no calling-station-id
        — [no] collect-stats
        — cpu-protection policy-id [mac-monitoring] | [eth-cfm-monitoring][aggregate][car]
        — no cpu-protection
        — default-msap-policy policy-name
        — no default-msap-policy
        — description description-string
        — no description
        — dhcp
          — description description-string
          — no description
          — lease-populate [nbr-of-entries]
          — no lease-populate
          — [no] option

```

- **action** [*dhcp-action*]
- **no action**
- **circuit-id** [*ascii-tuple* | *vlan-ascii-tuple*]
- **[no] remote-id** [*mac* | *string string*]
- **[no] vendor-specific-option**
 - **[no] client-mac-address**
 - **[no] sap-id**
 - **[no] service-id**
 - **string text**
 - **no string**
 - **[no] system-id**
- **proxy-server**
 - **emulated-server ip-address**
 - **no emulated-server**
 - **lease-time** [*days days*] [*hrs hours*] [*min minutes*] [*sec seconds*] [*radius-override*]
 - **no lease-time**
 - **[no] shutdown**
- **[no] shutdown**
- **[no] snoop**
- **[no] disable-aging**
- **[no] disable-learning**
- **[no] discard-unknown**
- **dist-cpu-protection** *policy-name*
- **no dist-cpu-protection**
- **egress**
 - **agg-rate-limit** *agg-rate* [*queue-frame-based-accounting*]
 - **no agg-rate-limit**
 - **encap-defined-qos**
 - **encap-group** *group-name* [*type group-type*] [*qos-per-member*] [*create*]
 - **no encap-group** *group-name*
 - **agg-rate-limit** *agg-rate* [*queue-frame-based-accounting*]
 - **no agg-rate-limit**
 - **[no] member** *encap-id* [*to encap-id*]
 - **qos** *policy-id*
 - **no qos**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
- **filter ip** *ip-filter-id*
- **filter ipv6** *ipv6-filter-id*
- **filter mac** *mac-filter-id*
- **no filter**
- **no filter** [*ip ip-filter-id*] [*mac mac-filter-id*] [*ipv6 ipv6-filter-id*]
- **[no] hsmda-queue-override**
 - **secondary-shaper** *secondary-shaper-name*
 - **no secondary-shaper**
 - **wrr-policy** *hsmda-wrr-policy-name*
 - **no wrr-policy**
 - **packet-byte-offset** {*add add-bytes* | *subtract sub-bytes*}
 - **no packet-byte-offset**
 - **queue** *queue-id*
 - **no queue** *queue-id*

- **wrr-weight** *weight*
- **no wrr-weight**
- **mbs** *size* {[bytes | kilobytes] | default}
- **no mbs**
- **rate** *pir-rate*
- **no rate**
- **slope-policy** *hsmda-slope-policy-name allowable*
- **no slope-policy**
- **multicast-group** *group-name*
- **no multicast-group**
- **policer-control-override** [create]
- **no policer-control-override**
 - **max-rate** {*rate* | max}
 - **priority-mbs-thresholds**
 - **min-thresh-separation** *size* [bytes | kilobytes]
 - [no] **priority** *level*
 - **mbs-contribution** *size* [bytes | kilobytes]
- **policer-control-policy** *policy-name*
- **no policer-control-policy**
- [no] **policer-override**
 - **policer** *policer-id* [create]
 - **no policer** *policer-id*
 - **cbs** *size* [bytes | kilobytes]
 - **no cbs**
 - **mbs** *size* [bytes | kilobytes]
 - **no mbs**
 - **packet-byte-offset** {add *add-bytes* | subtract *sub-bytes*}
 - **rate** {*rate* | max} [cir {max | rate}]
 - **stat-mode** *stat-mode*
 - **no stat-mode**
- [no] **qinq-mark-top-only**
- **qos** *policy-id* [port-redirect-group *queue-group-name* instance *instance-id*]
- **no qos**
- [no] **queue-override**
 - [no] **queue** *queue-id*
 - **adaptation-rule** [pir *adaptation-rule*] [cir *adaptation-rule*]
 - **no adaptation-rule**
 - **avg-frame-overhead** *percentage*
 - **no avg-frame-overhead**
 - **cbs** *size-in-kbytes*
 - **no cbs**
 - **high-prio-only** *percent*
 - **no high-prio-only**
 - **mbs** *size-in-kbytes*
 - **no mbs**
 - **rate** *pir-rate* [cir *cir-rate*]
 - **no rate**
 - **wred-queue-policy** *slope-policy-name*
 - **no wred-queue-policy**
- [no] **scheduler-override**
 - [no] **scheduler** *scheduler-name*

- **rate** *pir-rate* [*cir* *cir-rate*]
 - **no rate**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
 - **eth-cfm**
 - **mep** *mep-id* **domain** *md-index* **association** *ma-index* [**direction** {**up** | **down**}] **primary-vlan-enable** [*vlan* *vlan-id*]
 - **no mep** *mep-id* **domain** *md-index* **association** *ma-index*
 - [no] **ais-enable**
 - **ccm-padding-size** *ccm-padding*
 - **no ccm-padding-size** *ccm-padding*
 - **client-meg-level** [*level* [*level...*]]
 - **no client-meg-level**
 - [no] **description**
 - **interval** {**1** | **60**}
 - **no interval**
 - **priority** *priority-value*
 - **no priority**
 - [no] **ccm-enable**
 - **ccm-ltm-priority** *priority*
 - **no ccm-ltm-priority**
 - [no] **eth-test-enable**
 - **test-pattern** {**all-zeros** | **all-ones**} [**crc-enable**]
 - **no test-pattern**
 - **fault-propagation-enable** {**use-if-tlv** | **suspend-ccm**}
 - **no fault-propagation-enable**
 - **low-priority-defect** {**allDef** | **macRemErrXcon** | **remErrXcon** | **errXcon** | **xcon** | **noXcon**}
 - **mac-address** *mac-address*
 - **no mac-address**
 - **one-way-delay-threshold** *seconds*
 - [no] **shutdown**
 - [no] **mip** [{*mac* *mac-address* | **default-mac**}
 - **tunnel-fault** [**accept** | **ignore**]
 - **vmep-extensions**
 - **vmep-filter**
- **eth-tunnel**
 - **path** *path-index* **tag** *qtag* [*qtag*]
 - **no path** *path-index*
 - [no] **mip**
- **fault-propagation-bmac** [*mac-name* | *ieee-address*] [**create**]
- **no fault-propagation-bmac** [*mac-name* | *ieee-address*]
- [no] **force-l2pt-boundary**
- **frame-relay**
 - [no] **frf-12**
 - **ete-fragment-threshold** *threshold*
 - **no ete-fragment-threshold**
 - [no] **interleave**
 - **scheduling-class** *class-id*
 - **no scheduling-class**
- **host-connectivity-verify** **source-ip** *ip-address* [**source-mac** *ieee-address*] [**interval** *interval*] [**action** {**remove** | **alarm**}]
- **igmp-host-tracking**
 - [no] **disable-router-alert-check**

- **expiry-time** *expiry-time*
 - **no expiry-time**
 - **import** *policy-name*
 - **no import**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **max-num-sources** *max-num-sources*
 - **no max-num-sources**
 - **max-num-grp-sources** [1..32000]
 - **no max-num-grp-sources**
 - **igmp-snooping**
 - **[no] fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **max-num-sources** *max-num-sources*
 - **no max-num-sources**
 - **max-num-grp-sources** [1..32000]
 - **no max-num-grp-sources**
 - **mcac**
 - **mc-constraints**
 - **level** *level-id* **bw** *bandwidth*
 - **no level** *level-id*
 - **number-down** *number-lag-port-down* **level** *level-id*
 - **no number-down**
 - **policy** *policy-name*
 - **no policy**
 - **unconstrained-bw** *bandwidth* **mandatory-bw** *mandatory-bw*
 - **no unconstrained-bw**
 - **[no] mrouter-port**
 - **mvr**
 - **from-vpls** *vpls-id*
 - **no from-vpls**
 - **to-sap** *sap-id*
 - **no to-sap**
 - **query-interval** *interval*
 - **no query-interval**
 - **query-response-interval** *interval*
 - **no query-response-interval**
 - **robust-count** *count*
 - **no robust-count**
 - **[no] send-queries**
 - **static**
 - **[no] group** *group-address*
 - **[no] source** *ip-address*
 - **[no] starg**
 - **version** *version*
 - **no version**
- **ingress**

- **agg-rate-limit** *agg-rate*
- **no agg-rate-limit**
- **filter ip** *ip-filter-id*
- **filter ipv6** *ipv6-filter-id*
- **filter mac** *mac-filter-id*
- **no filter** [*ip ip-filter-id*] [*mac mac-filter-id*] [*ipv6 ipv6-filter-id*]
- **match-qinq-dot1p** {*top* | *bottom*}
- **no match-qinq-dot1p** *de*
- **qos** *policy-id* [*shared-queuing* | *multipoint-shared*] [*fp-redirect-group queue-group-name instance instance-id*]
- **no qos**
- [**no**] **queue-override**
 - [**no**] **queue** *queue-id*
 - **adaptation-rule** [**pir** {*max*|*min*|*closest*}] [*cir* {*max* | *min* | *closest*}]
 - **no adaptation-rule**
 - **cbs** *size-in-kbytes*
 - **no cbs**
 - **high-prio-only** *percent*
 - **no high-prio-only**
 - **mbs** *size-in-kbytes*
 - **no mbs**
 - **rate** *pir-rate* [*cir cir-rate*]
 - **no rate**
 - [**no**] **scheduler-override**
 - [**no**] **scheduler** *scheduler-name*
 - **rate** *pir-rate* [*cir cir-rate*]
 - **no rate**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
 - **vlan-translation** {*vlan-id* | *copy-outer*}
 - **no vlan-translation**
- **lag-link-map-profile** *link-map-profile-id*
- **no lag-link-map-profile**
- **l2pt-termination** [*cdp*] [*dtp*] [*pagp*] [*stp*] [*udld*] [*vtp*]
- **no l2pt-termination**
- **limit-mac-move** [*blockable* | *non-blockable*]
- **no limit-mac-move**
- [**no**] **mac-pinning**
- **managed-vlan-list**
 - [**no**] **default-sap**
 - [**no**] **range** *vlan-range*
- **max-nbr-mac-addr** *table-size*
- **no max-nbr-mac-addr**
- **monitor-oper-group** *group-name*
- **no monitor-oper-group**
- **oper-group** *group-name*
- **no oper-group**
- **mld-snooping**
 - [**no**] **fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*

- **no max-num-groups**
- **mvr**
 - **fast-leave**
 - **no fast-leave**
 - **to-sap** *sap-id*
 - **no to-sap**
- **query-interval** *seconds*
- **no query-interval**
- **query-response-interval** *seconds*
- **no query-response-interval**
- **robust-count** *robust-count*
- **no robust-count**
- **[no] send-queries**
- **mrp**
 - **[no] join-time** *value*
 - **[no] leave-all-time** *value*
 - **[no] leave-time** *value*
 - **[no] mrp-policy** *policy-name*
 - **[no] periodic-time** *value*
 - **[no] periodic-time**
 - **mvrp**
 - **endstation-vid-group** **id** *vlan-id* *startvid-endvid*
 - **[no] shutdown**
- **msap-defaults**
 - **[no] service** *service-id*
 - **policy** *msap-policy-name*
 - **no policy**
- **multi-service-site** *customer-site-name*
- **no multi-service-site**
- **pim-snooping**
 - **max-num-groups** *num-groups*
 - **[no] monitor-oper-group** *name*
 - **[no] oper-group** *name*
- **pppoe-policy** *pppoe-policy-name*
- **no pppoe-policy**
- **restrict-protected-src** **alarm-only**
- **restrict-protected-src** **[discard-frame]**
- **no restrict-protected-src**
- **restrict-unprotected-dst** *alarm-only*
- **no restrict-unprotected-dst**
- **[no] shutdown**
- **static-host ip** *ip-address* **[mac** *ieee-address* **]** **[create]**
- **static-host mac** *ieee-address* **[create]**
- **no static-host** **[ip** *ip-address* **]** **mac** *ieee-address*
- **no static-host all** **[force]**
- **no static-host ip** *ip-address*
 - **ancp-string** *ancp-string*
 - **no ancp-string**
 - **app-profile** *app-profile-name*
 - **no app-profile**
 - **inter-dest-id** *intermediate-destination-id*
 - **no inter-dest-id**
 - **[no] shutdown**
 - **sla-profile** *sla-profile-name*

- **no sla-profile**
- **sub-profile** *sub-profile-name*
- **no sub-profile**
- **subscriber** *sub-ident*
- **no subscriber**
- **[no] subscriber-sap-id**
- **[no] static-isid range** *entry-id isid [to isid] [create]*
- **[no] static-mac** *ieee-address*
- **stp**
 - **[no] auto-edge**
 - **[no] edge-port**
 - **link-type** {*pt-pt | shared*}
 - **no link-type** [*pt-pt | shared*]
 - **mst-instance** *mst-inst-number*
 - **mst-path-cost** *inst-path-cost*
 - **no mst-path-cost**
 - **mst-priority** *bridge-priority*
 - **no mst-priority**
 - **path-cost** *sap-path-cost*
 - **no path-cost**
 - **[no] port-num** *virtual-port-number*
 - **priority** *stp-priority*
 - **no priority**
 - **[no] vpls-group**
 - **[no] shutdown**
- **[no] sub-sla-mgmt**
 - **def-sla-profile** *default-sla-profile-name*
 - **no def-sla-profile**
 - **def-sub-profile** *default-subscriber-profile-name*
 - **no def-sub-profile**
 - **[no] mac-da-hashing**
 - **multi-sub-sap** [*subscriber-limit*]
 - **[no] shutdown**
 - **single-sub-parameters**
 - **non-sub-traffic** **sub-profile** *sub-profile-name* **sla-profile** *sla-profile-name* [**subscriber** *sub-ident-string*]
 - **no non-sub-traffic**
 - **[no] profiled-traffic-only**
 - **sub-ident-policy** *sub-ident-policy-name*
 - **no sub-ident-policy**
- **tod-suite** *tod-suite-name*
- **no tod-suite**
- **trigger-packet** [*dhcp*] [*pppoe*] [*arp*] [*dhcp6*] [*ppp*]
- **no trigger-packet**

Template Commands

```

config
  — service
    — template
      — vpls-template name/id create
        — [no] temp-flooding flood-time
        — [no] disable-aging
        — [no] disable-learning
        — [no] discard-unknown
        — [no] fdb-table-high-wmark high-water-mark
        — [no] fdb-table-low-wmark low-water-mark
        — fdb-table-size table-size
        — no fdb-table-size [table-size]
        — local-age aging-timer
        — no local-age
        — [no] mac-move
          — move-frequency frequency
          — no move-frequency
          — number-retries number-retries
          — no number-retries
          — primary-ports
            — cumulative-factor cumulative-factor
            — no cumulative-factor
          — retry-timeout timeout
          — no retry-timeout
          — secondary-ports
            — cumulative-factor cumulative-factor
            — no cumulative-factor
          — [no] shutdown
        — [no] per-service-hashing
        — remote-age aging-timer
        — no remote-age
        — service-mtu octets
        — no service-mtu
        — stp
          — forward-delay forward-delay
          — no forward-delay
          — hello-time hello-time
          — no hello-time
          — hold-count BDPU tx hold count
          — no hold-count
          — max-age max-info-age
          — no max-age
          — mode {rstp | comp-dot1w | dot1w | mstp | pmstp}
          — no mode
          — priority bridge-priority
          — no priority
          — [no] shutdown
      — vpls-sap-template name/id create
        — l2pt-termination [cdp] [dtp] [pagp] [stp] [udld] [vtp]
        — no l2pt-termination
        — bpdu-translation {auto | pvst | stp}
        — no bpdu-translation

```

- [no] **collect-stats**
- **cpu-protection** *policy-id* [mac-monitoring]
- **no cpu-protection**
- **eth-cfm**
 - [no] **mip primary-vlan-enable** [vlan *vlan-id*]
- [no] **disable-aging**
- [no] **disable-learning**
- [no] **discard-unknown**
- **egress**
 - **agg-rate-limit** *agg-rate* [queue-frame-based-accounting]
 - **no agg-rate-limit**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **filter mac** *mac-filter-id*
 - **no filter**
 - **no filter** [ip *ip-filter-id*] [mac *mac-filter-id*] [ipv6 *ipv6-filter-id*]
 - **policer-control-policy** *policy-name*
 - **no policer-control-policy**
 - [no] **qinq-mark-top-only**
 - **qos** *policy-id* [shared-queuing | multipoint-shared]
 - **no qos**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
- **ingress**
 - **agg-rate-limit** *agg-rate*
 - **no agg-rate-limit**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **filter mac** *mac-filter-id*
 - **no filter** [ip *ip-filter-id*] [mac *mac-filter-id*] [ipv6 *ipv6-filter-id*]
 - **match-qinq-dot1p** {top | bottom}
 - **no match-qinq-dot1p** de
 - **policer-control-policy** *policy-name*
 - **no policer-control-policy**
 - **qos** *policy-id* [shared-queuing | multipoint-shared]
 - **no qos**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
- **limit-mac-move** [blockable | non-blockable]
- **no limit-mac-move**
- **max-nbr-mac-addr** *table-size*
- **no max-nbr-mac-addr**
- **stp**
 - [no] **auto-edge**
 - [no] **edge-port**
 - **link-type** {pt-pt | shared}
 - **no link-type** [pt-pt | shared]
 - **path-cost** *sap-path-cost*
 - **no path-cost**
 - **priority** *stp-priority*
 - **no priority**
 - [no] **vpls-group**
 - [no] **shutdown**
- [no] **mac-move-level**

Mesh SDP Commands

```

config
  — service
    — [no] vpls service-id [customer customer-id] [vpn vpn-id] [mvpls] [b-vpls|i-vpls] [create]
      — mesh-sdp sdp-id[:vc-id] [vc-type {ether | vlan}]
      — no mesh-sdp sdp-id[:vc-id]
        — accounting-policy acct-policy-id
        — no accounting-policy
        — [no] auto-learn-mac-protect
        — [no] collect-stats
        — [no] control-word
        — description description-string
        — no description
        — dhcp
          — description description-string
          — no description
          — snoop [12-header]
          — no snoop
        — egress
          — filter ip ip-filter-id
          — filter ipv6 ipv6-filter-id
          — filter mac mac-filter-id
          — no filter [ip ip-filter-id] [mac mac-filter-id] [ipv6 ipv6-filter-id]
          — qos network-policy-id port-redirect-group queue-group-name
            [instance instance-id]
          — no qos
          — mfib-allowed-mda-destinations
            — [no] mda mda-id
          — vc-label egress-vc-label
          — no vc-label [egress-vc-label]
        — eth-cfm
          — mep mep-id domain md-index association ma-index [direction
            {up | down}]
          — no mep mep-id domain md-index association ma-index pri-
            mary-vlan-enable [vlan vlan-id]
            — [no] ais-enable
              — client-meg-level [[level [level...]]]
              — no client-meg-level
              — interval {1 | 60}
              — no interval
              — priority priority-value
              — no priority
            — [no] ccm-enable
              — ccm-padding-size ccm-padding
              — no ccm-padding-size ccm-padding
              — ccm-ltm-priority priority
              — no ccm-ltm-priority
            — [no] description
            — [no] eth-test-enable
              — test-pattern {all-zeros | all-ones} [crc-enable]
              — no test-pattern
            — fault-propagation-enable {use-if-tlv | suspend-ccm}

```

- **no fault-propagation-enable**
- **low-priority-defect** {allDef | macRemErrXcon | remErrXcon | errXcon | xcon | noXcon}
- **mac-address** *mac-address*
- **no mac-address**
- [no] **description**
- [no] **shutdown**
- **vmep-filter**
- **fault-propagation-bmac** [*mac-name* | *ieee-address*] [create]
- **no fault-propagation-bmac** [*mac-name* | *ieee-address*]
- [no] **force-vlan-vc-forwarding**
- [no] **hash-label**
- **igmp-snooping**
 - [no] **disable-router-alert-check**
 - [no] **fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **max-num-grp-sources** [1..32000]
 - **no max-num-grp-sources**
 - **mcac**
 - **policy** *policy-name*
 - **no policy**
 - **unconstrained-bw** *bandwidth* **mandatory-bw** *mandatory-bw*
 - **no unconstrained-bw**
- [no] **mrouter-port**
- **query-interval** *interval*
- **no query-interval**
- **query-response-interval** *interval*
- **no query-response-interval**
- **robust-count** *count*
- **no robust-count**
- [no] **send-queries**
- **static**
 - [no] **group** *group-address*
 - [no] **source** *ip-address*
 - [no] **starg**
- **version** *version*
- **no version**
- **ingress**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **filter mac** *mac-filter-id*
 - **no filter** [**ip** *ip-filter-id*] [**mac** *mac-filter-id*] [**ipv6** *ipv6-filter-id*]
 - **qos** *network-policy-id* **fp-redirect-group** *queue-group-name*
 - **instance** *instance-id*
 - **no qos**
 - **mfib-allowed-mda-destinations**
 - [no] **mda** *mda-id*
 - **vc-label** *egress-vc-label*
 - **no vc-label** [*egress-vc-label*]

- **[no] mac-pinning**
- **mld-snooping**
 - **[no] fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **mvr**
 - **[no] fast-leave**
 - **to-sap** *sap-id*
 - **no to-sap**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-response-interval** *seconds*
 - **no query-response-interval**
 - **robust-count** *robust-count*
 - **no robust-count**
 - **[no] send-queries**
- **mrp**
 - **[no] join-time** *value*
 - **[no] leave-all-time** *value*
 - **[no] leave-time** *value*
 - **[no] mrp-policy** *policy-name*
 - **[no] periodic-time** *value*
 - **[no] periodic-time**
- **restrict-protected-src alarm-only**
- **restrict-protected-src** [*discard-frame*]
- **no restrict-protected-src**
- **[no] shutdown**
- **[no] static-mac** *ieee-address*
- **vlan-vc-tag** *0..4094*
- **no vlan-vc-tag** [*0..4094*]

Spoke SDP Commands

```

config
  — service
    — [no] vpls service-id [customer customer-id] [vpn vpn-id] [mvpls] [b-vpls|i-vpls] [create]
      — spoke-sdp sdp-id[:vc-id] [vc-type {ether | vlan}] [split-horizon-group group-name]
      — no spoke-sdp sdp-id[:vc-id]
          — accounting-policy acct-policy-id
          — no accounting-policys
          — app-profile app-profile-name
          — no app-profile
          — [no] auto-learn-mac-protect
          — [no] block-on-mesh-failure
          — bpdu-translation {auto | pvst | stp}
          — no bpdu-translation
          — [no] collect-stats
          — [no] control-channel-status
              — refresh-timer value
              — no refresh-timer
          — [no] control-word
          — description description-string
          — no description
          — dhcp
              — description description-string
              — no description
              — [no] snoop
          — [no] disable-aging
          — [no] disable-learning
          — [no] discard-unknown-source
          — eth-cfm
              — mep mep-id domain md-index association ma-index [direction {up | down}]
              — no mep mep-id domain md-index association ma-index
                  — [no] ais-enable
                  — client-meg-level [[level [level...]]]
                  — no client-meg-level
                  — interval {1 | 60}
                  — no interval
                  — priority priority-value
                  — no priority
                  — [no] ccm-enable
                  — ccm-ltm-priority priority
                  — no ccm-ltm-priority
                  — ccm-padding-size ccm-padding
                  — noccm-padding-size ccm-padding
                  — [no] description
                  — [no] eth-test-enable
                      — test-pattern {all-zeros | a ll-ones} [crc-enable]
                      — no test-pattern
                  — fault-propagation-enable {use-if-tlv | suspend-ccm}
                  — no fault-propagation-enable
                  — low-priority-defect {allDef | macRemErrXcon | remErrXcon | errXcon | xcon | noXcon}

```

- **mac-address** *mac-address*
- **no mac-address**
- **[no] description**
- **[no] shutdown**
- **[no] mip** [{**mac** *mac-address* | *default-mac*}]
- **vmep-filter**
- **egress**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **filter mac** *mac-filter-id*
 - **no filter** [**ip** *ip-filter-id*] [**mac** *mac-filter-id*] [**ipv6** *ipv6-filter-id*]
 - **qos** *network-policy-id* **port-redirect-group** *queue-group-name* [*instance instance-id*]
 - **no qos**
 - **mfib-allowed-mda-destinations**
 - **[no] mda** *mda-id*
 - **vc-label** *egress-vc-label*
 - **no vc-label** [*egress-vc-label*]
- **fault-propagation-bmac** [*mac-name* | *ieee-address*] [**create**]
- **no fault-propagation-bmac** [*mac-name* | *ieee-address*]
- **[no] force-vlan-vc-forwarding**
- **hash-label**
- **no hash-label**
- **igmp-snooping**
 - **[no] fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **max-num-grp-sources** [1..32000]
 - **no max-num-grp-sources**
 - **mcac**
 - **policy** *policy-name*
 - **no policy**
 - **unconstrained-bw** *bandwidth* **mandatory-bw** *mandatory-bw*
 - **no unconstrained-bw**
 - **[no] mrouter-port**
 - **query-interval** *interval*
 - **no query-interval**
 - **query-response-interval** *interval*
 - **no query-response-interval**
 - **robust-count** *count*
 - **no robust-count**
 - **[no] send-queries**
 - **static**
 - **[no] group** *group-address*
 - **[no] source** *ip-address*
 - **[no] starg**
 - **version** *version*
 - **no version**
- **[no] ignore-standby-signaling**

- **ingress**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **filter mac** *mac-filter-id*
 - **no filter** [**ip** *ip-filter-id*] [**mac** *mac-filter-id*] [**ipv6** *ipv6-filter-id*]
 - **qos** *network-policy-id* **fp-redirect-group** *queue-group-name*
instance-id
 - **no qos**
 - **mfib-allowed-mda-destinations**
 - [**no**] **mda** *mda-id*
 - **vc-label** *egress-vc-label*
 - **no vc-label** [*egress-vc-label*]
- [**no**] **l2pt-termination**
- **limit-mac-move** [**blockable** | **non-blockable**]
- **no limit-mac-move**
- [**no**] **mac-pinning**
- **max-nbr-mac-addr** *table-size*
- **no max-nbr-mac-addr**
- **mld-snooping**
 - [**no**] **fast-leave**
 - **import** *policy-name*
 - **no import**
 - **last-member-query-interval** *interval*
 - **no last-member-query-interval**
 - **max-num-groups** *max-num-groups*
 - **no max-num-groups**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-response-interval** *seconds*
 - **no query-response-interval**
 - **robust-count** *robust-count*
 - **no robust-count**
 - [**no**] **send-queries**
- **mrp**
 - [**no**] **join-time** *value*
 - [**no**] **leave-all-time** *value*
 - [**no**] **leave-time** *value*
 - [**no**] **mrp-policy** *policy-name*
 - [**no**] **periodic-time** *value*
- **oper-group** *group-name*
- **no oper-group**
- **pim-snooping**
 - **max-num-groups** *num-groups*
 - [**no**] **monitor-oper-group** *name*
 - [**no**] **oper-group** *name*
- **precedence** *precedence-value* | **primary**
- **no precedence**
- [**no**] **pw-path-id**
 - **agi** *agi*
 - **no agi**
 - **saii-type2** *global-id:node-id:ac-id*
 - **no saii-type2**
 - **taii-type2** *global-id:node-id:ac-id*
 - **no taii-type2**
- [**no**] **pw-status-signaling**

- **propagate-mac-flush** [*precedence-value* | **primary**]
- **no propagate-mac-flush**
- **[no] shutdown**
- **[no] static-isid range** *entry-id isid* [**to isid**] [**create**]
- **[no] static-mac** *ieee-address*
- **stp**
 - **[no] auto-edge**
 - **[no] edge-port**
 - **link-type** {**pt-pt** | **shared**}
 - **no link-type** [**pt-pt** | **shared**]
 - **path-cost** *sap-path-cost*
 - **no path-cost**
 - **[no] port-num** *virtual-port-number*
 - **priority** *stp-priority*
 - **no priority**
 - **[no] vpls-group**
 - **[no] shutdown**
- **transit-policy prefix** *prefix-aasub-policy-id*
- **no transit-policy**
- **vlan-vc-tag** *0..4094*
- **no vlan-vc-tag** [*0..4094*]

Provider Tunnel Commands

```
config
  — service
    — [no] vpls service-id [customer customer-id] [vpn vpn-id] [mvpls] [b-vpls|i-vpls] [create]
      — provider-tunnel
        — inclusive
          — data-delay-interval seconds
          — no data-delay-interval
          — mldp
          — [no] mldp
          — [no] root-and-leaf
          — [no] rsvp
            — lsp-template p2mp-lsp-template-name
            — no lsp-template
          — [no] shutdown
```

Egress Multicast Group Commands

```

config
— service
— egress-multicast-group group-name [create]
— no egress-multicast-group group-name
— description description-string
— no description
— dest-chain-limit destinations per pass
— no dest-chain-limit
— sap-common-requirements
— dot1q-etype 0x0600..0xffff
— no dot1q-etype
— egress-filter [ip ip-filter-id]
— egress-filter [ipv6 ipv6-filter-id]
— egress-filter [mac mac-filter-id]
— no egress-filter [ip ip-filter-id] [ipv6 ipv6-filter-id] [mac mac-filter-id]
— encap-type {dot1q | null}
— no encap-type
— qinq-etype [0x0600..0xffff]
— no qinq-etype
— qinq-fixed-tag-value tag-value
— no qinq-fixed-tag-value

config
— service
— [no] vpls service-id [customer customer-id] [vpn vpn-id] [mvpls] [b-vpls|i-vpls] [create]
— sap sap-id [split-horizon-group group-name]
— no sap sap-id
— egress
— multicast-group group-name
— no multicast-group

```

Provider Edge Discovery Policy Commands

```

config
  — service
    — [no] pe-discovery-policy name
      — password password
      — no password
      — polling-interval minutes
      — no polling-interval
      — server server-index address ip-address secret key [hash | hash2] [port port-num]
      — no server server-index
      — timeout seconds
      — no timeout

```

Routed VPLS Commands

```

config
  — service
    — vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls] [b-vpls | i-vpls] [create]
      — service-name service-name
      — no service-name
        — 1 — 9194service-name service-name
        — no 1 — 9194service-name
          — [no] allow-ip-int-binding

```

Show Commands

```

show
  — service
    — active-subscribers summary
    — active-subscribers [subscriber sub-ident-string] [sap-id sap-id] [sla-profile sla-profile-name] [detail | mirror]
    — active-subscribers hierarchy [subscriber sub-ident-string]
    — egress-label egress-label1 [egress-label2]
    — fdb-info
    — fdb-mac ieee-address [expiry]
    — id service-id
      — all
      — 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]
      — authentication
        — statistics [policy name] [sap sap-id]
      — base [msap]
      — dhcp
        — lease-state [[sap sap-id] | [sdp sdp-id:vc-id] | [interface interface-name] | [ip-address ip-address]] [detail] [[mac ieee-address] | [wholesaler service-id] [detail]
        — lease-state [sap sap-id]
        — statistics [sdp sdp-id:vc-id]
        — statistics [interface interface-name]
        — summary
      — endpoint [endpoint-name]
      — fdb [sap sap-id] [expiry] | [sdp sdp-id] [expiry] | [mac ieee-address] [expiry] | endpoint endpoint | [detail] [expiry] [pbb]
      — gsm
        — neighbors group [name] [ip-address]
        — sessions [group name] neighbor ip-address] [port port-number] [association] [statistics]
      — host [sap sap-id] [detail]
      — host summary
      — i-vpls
      — igmp-snooping
        — all
        — base
        — mrouters [detail]
        — mvr
        — port-db sap sap-id [detail]
        — port-db sap sap-id group grp-address
        — port-db sdp sdp-id:vc-id [detail]
        — port-db sdp sdp-id:vc-id group grp-address
        — proxy-db [detail]
        — proxy-db [group grp-ip-address]
        — querier
        — static [sap sap-id | sdp sdp-id:vc-id]
      — isid-policy

```

- **labels**
- **l2pt disabled**
- **l2pt [detail]**
- **mac-move**
- **mac-protect**
- **mfib [brief | statistics] [ip | mac] brief**
- **mfib [group grp-address | *] [statistics]**
- **mld-snooping**
 - **all**
 - **base**
 - **mrollers [detail]**
 - **mvr**
 - **port-db sap sap-id**
 - **port-db sap sap-id detail**
 - **port-db sap sap-id group grp-ipv6-address**
 - **port-db sdp sdp-id:vc-id**
 - **port-db sdp \sdp-id:vc-id detail**
 - **port-db sdp \sdp-id:vc-id group grp-ipv6-address**
 - **proxy-db [detail]**
 - **proxy-db group grp-ipv6-address**
 - **querier**
 - **static [sap sap-id | sdp sdp-id:vc-id]**
 - **static [sap sap-id | sdp sdp-id:vc-id]**
- **mmrp mac [ieee-address]**
- **mrp-policy [mrp-policy]**
- **mrp-policy mrp-policy [association]**
- **mrp-policy mrp-policy [entry entry-id]**
- **mstp-configuration**
- **provider-tunnel**
- **retailers**
- **sap [sap-id [detail]]**
- **sdp [sdp-id | far-end ip-addr] [detail]**
- **sdp sdp-id:vc-id {mrp | mmrp}**
- **site [detail]**
- **site name**
- **split-horizon-group [group-name]**
- **stp mst-instance mst-inst-number**
- **stp [detail]**
- **subscriber-hosts [sap sap-id] [ip ip-address[/mask]] [mac ieee-address] [sub-profile sub-profile-name] [sla-profile sla-profile-name] [detail]**
- **wholesalers**
- **ingress-label start-label [end-label]**
- **isid-using [ISID]**
- **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**
- **sdp [sdp-id | far-end ip-address] [detail | keep-alive-history]**
- **sdp [sdp-id[:vc-id] | far-end ip-address]**
- **sdp [sdp-id | far-end ip-addr] [detail | keep-alive-history]**
- **sdp-using [sdp-id[:vc-id] | far-end ip-address]**
- **service-using [vpls][b-vpls] [i-vpls] [m-vpls]**

```

— 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]

show
— egress-replication
— vpls vpls-service-id mda slot/mda
— vpls vpls-service-id mda slot/mda [igmp-record grp-address {source source-ip-address |
starg}] | [mRouter]

show
— igmp
— group [grp-ip-address]
— ssm-translate
— interface [ip-int-name | ip-address] [group grp-address] [detail]
— static [ip-int-name | ip-addr]
— statistics [ip-int-name | ip-address]
— status

```

Show Multi-Chassis Endpoint Commands

```
show
  — service
    — id service-id
      — endpoint [endpoint-name]
  — redundancy
    — multi-chassis
      — mc-endpoint statistics
      — mc-endpoint peer [ip-address] statistics
      — mc-endpoint endpoint [mcep-id] statistics
      — mc-endpoint peer [ip-address]
```

Clear Commands

```

clear
  — service
    — id service-id
      — 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]
      — authentication
        — statistics
      — dhcp
        — lease-state [no-dhcp-release]
        — lease-state ip-address [ip-address[/mask]] [no-dhcp-release]
        — lease-state mac ieee-address [no-dhcp-release]
        — lease-state sap sap-id [no-dhcp-release]
        — lease-state sdp sdp-id:vc-id [no-dhcp-release]
        — statistics [sap sap-id | sdp sdp-id:vc-id | interface ip-int-name | ip-address]
      — fdb {all | mac ieee-address | sap sap-id | mesh-sdp sdp-id[:vc-id] | spoke-sdp sdp-id:vc-id}
      — igmp-snooping
        — port-db sap sap-id [group grp-address [source ip-address]]
        — port-db sdp sdp-id:vc-id [group grp-address [source ip-address]]
        — querier
        — statistics [all | sap sap-id | sdp sdp-id:vc-id]
      — mfib
        — statistics {all | ip | mac}
        — statistics group grp-address
      — mld-snooping
        — port-db sap sap-id [group grp-ipv6-address]
        — port-db sap sap-id group grp-ipv6-address source src-ipv6-address
        — port-db sdp sdp-id:vc-id [group grp-ipv6-address]
        — port-db sdp sdp-id:vc-id group grp-ipv6-address source src-ipv6-address
        — querier
        — statistics all
        — statistics sap sap-id
        — statistics sdp sdp-id:vc-id
      — mesh-sdp sdp-id[:vc-id] ingress-vc-label
      — msap msap-id
      — spoke-sdp sdp-id:vc-id ingress-vc-label
      — stp
        — detected-protocols [all | sap sap-id | spoke-sdp [sdp-id[:vc-id]]]
    — statistics
      — id service-id
        — capture-sap sap-id [trigger]
        — cem
        — counters
        — l2pt
        — mesh-sdp sdp-id[:vc-id] {all | counters | stp | mrp}
        — mrp
        — pip
        — spoke-sdp sdp-id[:vc-id] {all | counters | stp | l2pt | mrp}
        — spoke-sdp

```

- **stp**
- **sap** *sap-id* {**all** | **cem** | **counters** | **l2pt** | **stp** | **mrp**}
- **sdp** *sap-id* {**keep-alive**}

clear

- **router**
 - **dhcp**
 - **statistics** [**interface** *ip-int-name* | *ip-address*]

Debug Commands

```

debug
  — service
    — id service-id
      — [no] arp-host
      — igmp-snooping
        — detail-level {low | medium | high}
        — no detail-level
        — [no] mac ieee-address
        — mode {dropped-only | ingr-and-dropped | egr-ingr-and-dropped}
        — no mode
        — [no] sap sap-id
        — [no] sdp sdp-id:vc-id
      — mld-snooping
        — detail-level {low | medium | high}
        — no detail-level
        — [no] mac ieee-address
        — mode {dropped-only|ingr-and-dropped|egr-ingr-and-dropped}
        — no mode
        — [no] sap sap-id
        — [no] sdp sdp-id:vc-id
      — [no] mrp
        — all-events
        — [no] applicant-sm
        — [no] leave-all-sm
        — [no] mmrp-mac ieee-address
        — [no] mrpdu
        — [no] periodic-sm
        — [no] registrant-sm
        — [no] sap sap-id
        — [no] sdp sdp-id:vc-id
      — [no] event-type {config-change | svc-oper-status-change | sap-oper-status-change
        | sdpbind-oper-status-change}
      — [no] host-connectivity-verify
        — [no] ip ip-address
        — [no] mac ieee-address
        — [no] sap sap-id
      — [no] sap sap-id
      — stp
        — all-events
        — [no] bpdu
        — [no] core-connectivity
        — [no] exception
        — [no] fsm-state-changes
        — [no] fsm-timers
        — [no] port-role
        — [no] port-state
        — [no] sap sap-id
        — [no] sdp sdp-id:vc-id
  debug
    — igmp
      — router

```

- [no] **interface** [*ip-int-name* | *ip-address*]
- [no] **mcs** [*ip-int-name*]
- [no] **mcs**
- [no] **packet** [*query*|*v1-report*|*v2-report*|*v3-report*|*v2-leave*] [*ip-int-name* | *ip-address*]

Tools Commands

- tools
 - **dump**
 - **service**
 - **vpls** *id*
 - **provider-tunnels** **type**
 - **perform**
 - **service**
 - **eval-pw-template** *policy-id* [**allow-service-impact**]
 - **id** *service-id*
 - **eval-pw-template** *policy-id* [**allow-service-impact**]
 - **eval-vpls-template**
 - **eval-vpls-sap-template** [*sap-id*]
 - **instantiate-data-saps** *sap-id*
 - **provider-tunnels**

Refer to the 7750 SR OS OAM and Diagnostic Guide for information about CLI commands and syntax for OAM and diagnostics commands.