
VPLS Services Command Reference

Command Hierarchies

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VPLS Service Configuration Commands

Global Commands

```

config
  — service
    — vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls] [b-vpls | i-vpls] [etree] [create]
    — no vpls service-id
      — forward-ipv4-multicast-to-ip-int
      — [no] forward-ipv4-multicast-to-ip-int
    — backbone-smac ieee-address
    — no backbone-smac
    — backbone-vpls service-id[:isid]
    — no backbone-vpls
      — [no] stp
    — bgp
      — pw-template-binding policy-id [split-horizon-group group-name]
        [import-rt {ext-community...(up to 5 max)}]
      — no pw-template-binding policy-id
        — [no] bfd-enable
        — bfd-template [256 chars max]
        — no bfd-template
        — monitor-oper-group group-name
        — no monitor-oper-group
        — oper-group group-name
        — no oper-group
      — route-target {ext-community | {[export ext-community] [import ext-community]}}
      — no route-target
      — route-distinguisher rd
      — no route-distinguisher
      — route-distinguisher auto-rd
      — 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
    — [no] bgp-ad
      — vpls-id vpls-id
      — vsi-id
        — prefix low-order-vsi-id
        — no prefix
    — bgp-evpn
      — [no] mac-advertisement
      — mac-duplication
        — detect num-moves num-moves window minutes
        — [no] retry minutes
      — [no] unknown-mac-route
      — vxlan
        — [no] shutdown
    — 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
— description description-string
— 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* [**create**]
 - **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**
 - **[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**

- **delayed-enable** *seconds*
- **no delayed-enable**
- **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**
- **isis-policy**
 - **entry**
 - **[no] advertise-local**
 - **range** *isid* [**to** *isid*]
 - **no range**
 - **[no] use-def-mcast**
- **load-balancing**
 - **[no] per-service-hashing**
 - **[no] spi-load-balancing**
 - **[no] teid-load-balancing**
- **local-age** *aging-timer*
- **no local-age** [*aging-time*]
- **[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] 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**
- **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-min-down-timer** *min-down-time*
- **no site-min-down-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** [*isis-instance*] [**fid** *fid*] [**create**]
- **no spb**
 - **level** [1..1]
 - **bridge-priority** *bridge-priority*
 - **no bridge-priority**
 - **ect-algorithm** *fid-range fid-range* {**low-path-id**|**high-path-id**}
 - **no ect-algorithm** *fid-range fid-range*
 - **forwarding-tree-topology** **unicast** {**spf**|**st**}
 - **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] 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**
- **vxlan vni** *vni-id* **create**
- **no vxlan vni**

Oper Group Commands

```
config
  — service
    — vpls service-id (See the Layer 2 Services Guide)
      — [no] interface ip-int-name
        — monitor-oper-group name
        — no monitor-oper-group
```

SAP Commands

```

config
  — service
    — vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls] [b-vpls | i-vpls] [etree] [create]
    — no vpls service-id
      — sap sap-id [split-horizon-group group-name] [create] [capture-sap] [root-leaf-tag leaf-tag-vid | leaf-ac]
      — 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] cflowd
        — [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**
- **dhcp-python-policy** *policy-name*
- **no dhcp-python-policy**
- **dhcp6-user-db** *local-user-db-name*
- **no dhcp6-user-db**
- **dhcp6**
 - **description** *description-string*
 - **no description**
 - [no] **option**
 - **interface-id**
 - **interface-id** *ascii-tuple*
 - **interface-id** *vlan-ascii-tuple*
 - **no interface-id**
 - **remote-id**
 - **remote-id** *mac*
 - **remote-id** *string* [*32 chars max*]
 - **no remote-id**
 - [no] **shutdown**
 - [no] **snoop**
- [no] **disable-aging**
- [no] **disable-learning**
- [no] **discard-unknown**
- **dist-cpu-protection** *policy-name*
- **no dist-cpu-protection**
- **egress**
 - [no] **agg-rate**
 - [no] **limit-unused-bandwidth**
 - [no] **queue-frame-based-accounting**
 - **rate** {*max* | *rate*}
 - **no rate**
- **encap-defined-qos**
 - **encap-group** *group-name* [*type group-type*] [*qos-per-member*] [*create*]
 - **no encap-group** *group-name*

- [no] **agg-rate**
 - [no] **limit-unused-bandwidth**
 - [no] **queue-frame-based-accounting**
 - **rate** {max | rate}
 - **no rate**
- [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*
 - **parent** [**weight** *weight*] [**cir-weight** *cir-weight*]
 - **no parent**
 - **rate** *pir-rate* [**cir** *cir-rate*]
 - **no rate**
- **scheduler-policy** *scheduler-policy-name*
- **no scheduler-policy**
- **eth-cfm**
 - **[no] collect-lmm-stats**
 - **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**
 - **[no] interface-support-enable**
 - **[no] interface-support-enable**
 - **ccm-padding-size** *ccm-padding*
 - **no ccm-padding-size** *ccm-padding*
 - **[no] csf-enable**
 - **multiplier** *multiplier-value*
 - **no multiplier**
 - **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] **squelch-ingress-levels** [*md-level* [*md-level...*]]
- [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] **feature**
- [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] **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-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 use-lag-port-weight**
- **[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**
 - **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-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**
- **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*
 - **parent** [**weight** *weight*] [**cir-weight** *cir-weight*]
 - **no parent**
 - **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**
- **l2pt-termination** [**cdp**] [**dtp**] [**pagp**] [**stp**] [**udld**] [**vtp**]
- **no l2pt-termination**
- **lag-link-map-profile** *link-map-profile-id*
- **no lag-link-map-profile**
- **lag-per-link-hash** **class** {**1** | **2** | **3**} **weight** [1..1024]
- **no lag-per-link-hash**
- **leaf-ac**
- **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**
- **mld-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**
 - **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**
 - **static**
 - **[no] group** *group-address*
 - **[no] source** *ip-address*
 - **[no] starg**
 - **version** *version*
 - **no version**
- **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**
 - **monitor-oper-group** *group-name*
 - **no monitor-oper-group**
 - **oper-group** *group-name*
 - **no oper-group**
 - **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*
 - **[no] process-cpm-traffic-on-sap-down**
 - **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**
 - **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
        — load-balancing
          — [no] per-service-hashing
          — [no] spi-load-balancing
          — [no] teid-load-balancing
        — 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] **squelch-ingress-levels** [*md-level* [*md-level...*]]
- [no] **disable-aging**
- [no] **disable-learning**
- [no] **discard-unknown**
- **egress**
 - **agg-rate-limit** *agg-rate* [queue-frame-based-accounting]
 - **no agg-rate-limit**
 - [no] **agg-rate**
 - **rate** {max | rate}
 - **no rate**
 - [no] **limit-unused-bandwidth**
 - [no] **queue-frame-based-accounting**
 - **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] [etree] [create]
      — mesh-sdp sdp-id[:vc-id] [vc-type {ether | vlan}] [root-leaf-tag | leaf-ac]
      — no mesh-sdp sdp-id[:vc-id]
        — accounting-policy acct-policy-id
        — no accounting-policy
        — [no] auto-learn-mac-protect
        — [no] bfd-enable
        — bfd-template name
        — no bfd-template
        — [no] collect-stats
        — [no] control-word
        — description description-string
        — no description
        — dhcp
          — description description-string
          — no description
          — snoop [l2-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
          — [no] collect-lmm-stats
          — mep mep-id domain md-index association ma-index [direction {up | down}]
          — no mep mep-id domain md-index association ma-index primary-vlan-enable [vlan vlan-id]
            — [no] ais-enable
              — client-meg-level [[level [level...]]]
              — no client-meg-level
            — [no] interface-support-enable
            — interval {1 | 60}
            — no interval
            — low-priority-defect {allDef|macRemErrXcon}
            — priority priority-value
            — no priority
            — [no] ccm-enable
            — ccm-padding-size ccm-padding
            — no ccm-padding-size

```

- **ccm-ltm-priority** *priority*
- **no ccm-ltm-priority**
- **[no] csf-enable**
 - **multiplier** *multiplier-value*
 - **no multiplier**
- **description** *description-string*
- **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] shutdown**
- **[no] mip** [**mac** *mac-address*] **primary-vlan-enable** [**vlan** *vlan-id*]
- **[no] squelch-ingress-levels** [**md-level** [**md-level...**]]
- **[no] vmep-filter**
- **fault-propagation-bmac** [*mac-name* | *ieee-address*] [**create**]
- **no fault-propagation-bmac** [*mac-name* | *ieee-address*]
- **[no] force-qinq-vc-forwarding**
- **[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**
 - **mcaac**
 - **policy** *policy-name*
 - **no policy**
 - **unconstrained-bw** *bandwidth* **mandatory-bw** *mandatory-bw*
 - **no unconstrained-bw**
- **[no] mrouter-port**
- **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** *ingress-vc-label*
 - **no vc-label** [*ingress-vc-label*]
- [**no**] **mac-pinning**
- **mld-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**
 - **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**
 - **static**
 - [**no**] **group** *group-address*
 - [**no**] **source** *ip-address*
 - [**no**] **starg**
 - **version** *version*
 - **no version**
- **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] [etree] [create]
      — spoke-sdp sdp-id[:vc-id] [vc-type {ether | vlan}] [split-horizon-group group-name] [root-leaf-tag | leaf-ac]
      — no spoke-sdp sdp-id[:vc-id]
        — accounting-policy acct-policy-id
        — no accounting-policy
        — app-profile app-profile-name
        — no app-profile
        — [no] auto-learn-mac-protect
        — [no] bfd-enable
        — bfd-template name
        — no bfd-template
        — [no] block-on-mesh-failure
        — bpdu-translation {auto | pvst | stp}
        — no bpdu-translation
        — [no] collect-stats
        — [no] control-channel-status
          — [no] acknowledgment
          — refresh-timer value
          — no refresh-timer
          — request-timer timer1 retry-timer timer2 [timeout-multiplier multiplier]
          — no request-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
          — [no] collect-lmm-stats
          — 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
              — [no] interface-support-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

```

- **nocm-padding-size** *ccm-padding*
- **[no] csf-enable**
 - **multiplier** *multiplier-value*
 - **no multiplier**
- **[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*] **primary-vlan-enable** [vlan *vlan-id*]
- **[no] squelch-ingress-levels** [*md-level* [*md-level...*]]
- **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] 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**
- [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** *instance-id*
 - **no qos**
 - **mfib-allowed-mds-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] **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**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-response-interval** *seconds*
 - **no query-response-interval**
 - **robust-count** *robust-count*
 - **no robust-count**
 - [no] **send-queries**
 - **static**
 - [no] **group** *group-address*
 - [no] **source** *ip-address*
 - [no] **starg**
 - **version** *version*
 - **no version**

- **monitor-oper-group** *group-name*
- **no monitor-oper-group**
- **oper-group** *group-name*
- **no oper-group**
- **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

```

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
      — [no] allow-ip-int-bind
```


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]
      — bgp-evpn
      — 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]
      — etree
      — fdb [sap sap-id] [expiry] | [sdp sdp-id] [expiry] | [mac ieee-address] [expiry] | endpoint endpoint | [detail] [expiry] [pbb]
      — gsmp
        — 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
        — port-db vxlan vtep ip-address vni [0..4294967295]
        — 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**
- **proxy-arp [ip-address *ip-address*] [detail]**
- **proxy-nd [ip-address *ip-address*] [detail]**
- **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**
- **vxlan**
- **ingress-label *start-label* [end-label]**
- **isid-using [ISID]**
- **sap-using [msap] [dyn-script] [description]**
- **sap-using [sap *sap-id*] [vlan-translation | anti-spoof]**
- **sap-using app-profile *app-profile-name***
- **sap-using authentication-policy *policy-name* [msap]**
- **sap-using encap-type *encap-type***

```

— sap-using eth-cfm collect-lmm-stats [sap sap-id]
— sap-using eth-ring [ring-id eth-ring-id]
— sap-using eth-tunnel [tunnel-id eth-tunnel-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
— sap-using mc-ring peer ip-address ring sync-tag
— sap-using process-cpm-traffic-on-sap-down
— sap-using etree
— 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]
— sdp-using e-tree
— service-using [vpls][b-vpls] [i-vpls] [m-vpls]
— service-using[msap] [dyn-script] [description] e-tree
— 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]
— vxlan

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
      — proxy-arp {all | ip-address} [{dynamic|dup}]
      — proxy-nd {all | ipv6-address} [{dynamic|dup}]
      — 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

```

Command Hierarchies

```
— 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
        — [no] vxlan vtep vtep vni vni-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] proxy-arp [mac ieee-address] [ip [<ipaddr>] [all]]
      — [no] proxy-nd [mac ieee-address] [ip [<ipaddr>] [all]]
      — [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

```

Command Hierarchies

```
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
      — proxy-arp usage
      — proxy-nd usage
      — vpls id
        — provider-tunnels type
      — vxlan [clear]
        — dup-vtep-egrvni [clear]
        — dup-vtep-egrvni
  — 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.