
Subscriber Management Command Reference

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Note: Enhanced Subscriber Management is supported on the redundant chassis model only.

Subscriber management commands are also described in the [Triple Play Services Command Reference on page 67](#) section.

ANCP Commands

```

config
  — subscriber-mgmt
    — ancp
      — ancp-policy name
        — egress
          — rate-adjustment adjusted-percent
          — no rate-adjustment
          — rate-modify agg-rate-limit
          — rate-modify {scheduler scheduler-name | arbiter arbiter-name}
          — no rate-modify
          — rate-monitor kilobit-per-second [alarm]
          — no rate-monitor
          — rate-reduction kilobit-per-second
          — no rate-reduction
        — ingress
          — rate-adjustment adjusted-percent
          — rate-modify {scheduler scheduler-name | arbiter arbiter-name}
          — rate-monitor kilobit-per-second [alarm] [log]
          — rate-reduction kilobit-per-second
        — [no] port-down
          — [no] disable-shcv [alarm] [hold-time seconds]
      — ancp-static-map
        — entry key ancp-string customer customer-id multi-service-site customer-site-name ancp-policy policy-name
        — entry key ancp-string sap sap-id ancp-policy policy-name
        — no entry key ancp-string customer customer-id multi-service-site customer-site-name
        — no entry key ancp-string sap sap-id

```

VPRN GSMP Configuration Commands

```

config
  — service
    — [no] vprn service-id [customer customer-id] [vpn vpn-id] [m-vpls]
      — gsmp
        — [no] group name
          — ancp
            — [no] dynamic-topology-discover
            — [no] oam
          — description description-string
          — no description
          — hold-multiplier multiplier
          — no hold-multiplier
          — [no] idle-filter
          — 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] persistency-database
          — [no] shutdown
        — [no] shutdown

```

Authentication Policy Commands

```

config
  — subscriber-mgmt
    — aaa
      — radius-coa-port {1647|1700|1812|3799}
      — no radius-coa-port
    — [no] authentication-policy name
      — [no] accept-authorization-change
      — accept-script-policy policy-name
      — no accept-script-policy
      — description description-string
      — no description
      — fallback-action accept
      — fallback-action user-db-local-user-name
      — no fallback-action
      — [no] include-radius-attribute
        — [no] access-loop-options
        — [no] acct-session-id
        — [no] called-station-id
        — calling-station-id
        — calling-station-id {mac | remote-id | sap-id | sap-string}
        — no calling-station-id
        — [no] circuit-id
        — [no] dhcp-options
        — [no] dhcp-vendor-class-id
        — [no] mac-address
        — [no] nas-identifier
        — nas-port-id [prefix-string string] [suffix suffix-option]
        — nas-port-type
        — nas-port-type [0..255]
        — no nas-port-type
        — [no] pppoe-service-name
        — [no] remote-id
        — [no] tunnel-server-attribs
      — password password
      — no password
      — ppp-user-name append domain-name
      — ppp-user-name default-domain domain-name
      — ppp-user-name replace domain-name
      — ppp-user-name strip
      — no ppp-user-name
      — pppoe-access-method {none | padi | pap-chap}
      — no pppoe-access-method
      — radius-authentication-server
        — access-algorithm {direct | round-robin}
        — no access-algorithm
        — [no] access-loop-options
        — fallback-action accept
        — fallback-action user-db local-user-db-name
        — no fallback-action
        — hold-down-time seconds
        — no hold-down-time
        — retry count
        — no retry

```

- **router** *router-instance*
- **router** *service-name*
- **no router**
- **server** *server-index* **address** *ip-address* **secret** *key* [**hash** | **hash2**] [**port** *port*] [**coa-only**]
- **no server** *server-index*
- **source-address** *ip-address*
- **no source-address**
- **timeout** *seconds*
- **no timeout**
- **radius-server-policy** *radius-server-policy-name*
- **[no] radius-server-policy**
- **[no] re-authentication**
- **request-script-policy** *policy-name*
- **no request-script-policy**
- **send-acct-stop-on-fail** {[**on-request-failure**] [**on-reject**] [**on-accept-failure**]}
- **no send-acct-stop-on-fail**
- **user-name-format** *format* [**mac-format** *mac-format*]
- **user-name-format** *format* **append** [*domain-name*] [**mac-format** *mac-format*]
- **user-name-format** *format* **append** **domain-name**
- **user-name-format** *format* **default-domain** *domain-name* [**mac-format** *mac-format*]
- **user-name-format** *format* **replace** *domain-name* [**mac-format** *mac-format*]
- **user-name-format** *format* **strip** [**mac-format** *mac-format*]
- **no user-name-format**

Diameter Policy Commands

```

config
  — subscriber-mgmt
    — diameter-policy
      — diameter-base
        — peer name [create]
        — no peer name
          — address ip-address
          — no address
          — connection-timer seconds
          — no connection-timer
          — destination-host destination-host-string
          — no destination-host
          — destination-realm destination-realm-string
          — no destination-realm
          — preference preference
          — no preference
          — [no] shutdown
          — transaction-timer seconds
          — no transaction-timer
          — transport tcp port port
          — no transport
          — watchdog-timer seconds
          — no watchdog-timer
        — router service service-name
        — router router-instance
        — no router
        — source-address ip-address
        — no source-address
        — transaction-timer seconds
        — no transaction-timer
        — vendor-support [3gpp|vodafone]
        — no vendor-support
        — watchdog-timer seconds
        — no watchdog-timer
      — dcca
        — cc-session-failover-handler {terminate | continue | retry-and-terminate}
        — no cc-session-failover-handler
        — [no] cc-session-failover
        — [no] tx-timer seconds
        — include-avp
          — 3gpp-imsi {circuit-id|subscriber-id|imsi}
          — no 3gpp-imsi
          — called-station-id string
          — no called-station-id
          — [no] radius-user-name
          — service-context-id string
          — no service-context-id
          — subscription-id {circuit-id|subscriber-id|imsi|msisdn|imei}
            [type {e164|private|imsi}]
          — no subscription-id
        — out-of-credit-reporting {final|quota-exhausted}
        — no out-of-credit-reporting

```

- config
 - **subscriber-mgmt**
 - **credit-control-policy** *policy-name* [**create**]
 - **no credit-control-policy** *policy-name*
 - **credit-control-server** **radius**
 - **credit-control-server** **diameter** *policy-name*
 - **no credit-control-server**
 - **default-category-map** *category-map-name*
 - **no default-category-map**
 - **description** *description-string*
 - **no description**
 - **error-handling-action** {**continue**|**block**}
 - **no error-handling-action**
 - **out-of-credit-action** {**continue**|**disconnect-host**|**block-category**|**change-service-level**}
 - **no out-of-credit-action**

Category Map Commands

```

config
  — subscriber-mgmt
    — category-map category-map-name [create]
    — no category-map category-map-name
      — activity-threshold kilobits-per-second
      — no activity-threshold
      — category category-name [create]
      — no category category-name
        — credit-type-override {volume | time}
        — no credit-type-override
        — default-credit volume credits bytes|kilobytes|megabytes|gigabytes
        — default-credit time seconds
        — no default-credit
        — [no] exhausted-credit-service-level
          — [no] egress-ip-filter-entries
            — entry entry-id [create]
              — action drop
              — action forward
              — action http-redirect url
              — no action
              — match [protocol protocol-id]
              — no match
                — dscp dscp-name
                — no dscp
                — dst-port {lt|gt|eq} dst-port-number
                — dst-port range start end
                — no dst-port
                — fragment {true|false}
                — icmp-code icmp-code
                — no icmp-code
                — icmp-type icmp-type
                — no icmp-type
                — ip-option ip-option-value [ip-option-mask]
                — no ip-option
                — multiple-option {true | false}
                — option-present {true | false}
                — src-ip {ip-address/mask | ip-address netmask}
                — no src-ip
                — src-port {lt|gt|eq} src-port-number
                — src-port range start end
                — no src-port
                — tcp-ack {true|false}
                — no tcp-ack
                — tcp-syn {true|false}
                — no tcp-syn
            — [no] egress-ipv6-filter-entries
              — entry entry-id [create]
                — action drop
                — action forward
                — no action
                — match [protocol protocol-id]
                — no match

```

- **dscp** *dscp-name*
- **no dscp**
- **dst-port** {lt|gt|eq} *dst-port-number*
- **dst-port range** *start end*
- **no dst-port**
- **icmp-code** *icmp-code*
- **no icmp-code**
- **icmp-type** *icmp-type*
- **no icmp-type**
- **src-ip** {*ip-address/mask* | *ip-address net-mask*}
- **no src-ip**
- **src-port** {lt|gt|eq} *src-port-number*
- **src-port range** *start end*
- **no src-port**
- **tcp-ack** {true|false}
- **no tcp-ack**
- **tcp-syn** {true|false}
- **no tcp-syn**
- **[no] ingress-ipv6-filter-entries**
 - **entry** *entry-id* [*create*]
 - **action drop**
 - **action forward**
 - **action http-redirect** *url*
 - **no action**
 - **match** [*protocol protocol-id*]
 - **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ip-address/mask* | *ip-address net-mask*}
 - **no dst-ip**
 - **dst-port** {lt|gt|eq} *dst-port-number*
 - **dst-port range** *start end*
 - **no dst-port**
 - **fragment** {true|false}
 - **icmp-code** *icmp-code*
 - **no icmp-code**
 - **icmp-type** *icmp-type*
 - **no icmp-type**
 - **ip-option** *ip-option-value* [*ip-option-mask*]
 - **no ip-option**
 - **multiple-option** {true|false}
 - **option-present** {true|false}
 - **src-port** {lt|gt|eq} *src-port-number*
 - **src-port range** *start end*
 - **no src-port**
 - **tcp-ack** {true|false}
 - **no tcp-ack**
 - **tcp-syn** {true|false}
 - **no tcp-syn**
- **[no] ingress-ipv6-filter-entries**
 - **entry** *entry-id* [*create*]
 - **action drop**
 - **action forward**

- **no action**
- **match** [*protocol protocol-id*]
- **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ip-address/mask* | *ip-address net-mask*}
 - **no dst-ip**
 - **dst-port** {*lt|gt|eq*} *dst-port-number*
 - **dst-port range** *start end*
 - **no dst-port**
 - **icmp-code** *icmp-code*
 - **no icmp-code**
 - **icmp-type** *icmp-type*
 - **no icmp-type**
 - **src-port** {*lt|gt|eq*} *src-port-number*
 - **src-port range** *start end*
 - **no src-port**
 - **tcp-ack** {*true|false*}
 - **no tcp-ack**
 - **tcp-syn** {*true|false*}
 - **no tcp-syn**
- **ingress-ipv6-filter-entries** *pir-rate*
- **ingress-ipv6-filter-entries max**
- **no ingress-ipv6-filter-entries**
- **out-of-credit-action-override** {*continue* | *block-category* | *change-service-level*}
- **no out-of-credit-action-override**
- **queue** *queue-id* {*ingress-only* | *egress-only* | *ingress-egress*}
- **no queue** *queue-id*
- **rating-group** *rating-group-id*
- **no rating-group**
- **credit-exhaust-threshold** *threshold-percentage*
- **no credit-exhaust-threshold**
- **credit-type** {*volume* | *time*}
- **no credit-type**
- **credit-control-policy** *policy-name* [*create*]
- **no credit-control-policy** *policy-name*
 - **credit-control-server** *radius*
 - **no credit-control-server**
 - **default-category-map** *category-map-name*
 - **no default-category-map**
 - **description** *description-string*
 - **no description**
 - **error-handling-action** {*continue* | *block*}
 - **no error-handling-action**
 - **out-of-credit-action** *action*
 - **no out-of-credit-action**
- **description** *description-string*
- **no description**

Filter Commands

```

config
  — filter
    — copy {ip-filter | mac-filter | ipv6-filter} src-filter-id [src-entry src-entry-id] to dst-filter-id
      [dst-entry dst-entry-id] [overwrite]
    — ip-filter filter-id [create]
    — no ip-filter filter-id
      — default-action drop|forward
      — description description-string
      — entry entry-id [time-range time-range-name] [create]
      — no entry entry-id
        — action drop|forward
        — no action
        — log log-id
        — no log
        — match [next-header next-header]
        — no match
          — dscp
          — no dscp
          — dst-ip
          — no dst-ip
          — dst-port
          — no dst-port
          — icmp-code
          — no icmp-code
          — icmp-type
          — no icmp-type
          — src-ip
          — no src-ip
          — src-port
          — no src-port
          — tcp-ack
          — no tcp-ack
          — tcp-syn
          — no tcp-syn
      — group-inserted-entries application application location location
      — renum old-entry-id new-entry-id
      — scope exclusive|template
      — no scope
      — shared-radius-filter-wmark low low-watermark high high-watermark
      — sub-insert-radius start-entry entry-id count count
      — no sub-insert-radius
      — sub-insert-credit-control start-entry entry-id count count
      — no sub-insert-credit-control
      — sub-insert-shared-radius start-entry entry-id count count
      — sub-insert-wmark [low percentage] [high percentage]
      — no sub-insert-wmark
    — ipv6-filter ipv6-filter-id [create]
    — no ipv6-filter ipv6-filter-id
      — default-action drop|forward
      — description description-string
      — entry entry-id [time-range time-range-name] [create]
      — no entry entry-id
        — action drop|forward

```

- **no action**
- **log** *log-id*
- **no log**
- **match** [**next-header** *next-header*]
- **no match**
 - **dscp**
 - **no dscp**
 - **dst-ip**
 - **no dst-ip**
 - **dst-port**
 - **no dst-port**
 - **icmp-code**
 - **no icmp-code**
 - **icmp-type**
 - **no icmp-type**
 - **src-ip**
 - **no src-ip**
 - **src-port**
 - **no src-port**
 - **tcp-ack**
 - **no tcp-ack**
 - **tcp-syn**
 - **no tcp-syn**
- **group-inserted-entries** **application** *application* **location** *location*
- **renum** *old-entry-id* *new-entry-id*
- **scope** *exclusive|template*
- **no scope**
- **shared-radius-filter-wmark** **low** *low-watermark* **high** *high-watermark*
- **sub-insert-radius** **start-entry** *entry-id* **count** *count*
- **no sub-insert-radius**
- **sub-insert-credit-control** **start-entry** *entry-id* **count** *count*
- **no sub-insert-credit-control**
- **sub-insert-shared-radius** **start-entry** *entry-id* **count** *count*
- **sub-insert-wmark** [**low** *percentage*] [**high** *percentage*]
- **no sub-insert-wmark**

BGP Peering Policy Commands

```

config
  — subscriber-mgmt
    — bgp-peering-policy policy-name [create]
    — no bgp-peering-policy policy-name
      — [no] advertise-inactive
      — [no] aggregator-id-zero
      — [no] as-override
      — auth-keychain name
      — no auth-keychain
      — authentication-key [authentication-key | hash-key] [hash | hash2]
      — no authentication-key
      — cluster cluster-id
      — no cluster
      — [no] connect-retry seconds
      — [no] damping
      — description description-string
      — no description
      — [no] disable-4byte-asn
      — [no] disable-client-reflect
      — disable-communities [standard] [extended]
      — no disable-communities
      — [no] disable-fast-external-failover
      — export policy-name [policy-name...(upto 5 max)]
      — no export
      — hold-time seconds
      — no hold-time
      — import policy-name [policy-name...(up to 5 max)]
      — no import
      — keepalive seconds
      — no keepalive
      — local-address ip-address
      — no local-address
      — local-as as-number [private]
      — no local-as
      — local-preference local-preference
      — no local-preference
      — loop-detect {drop-peer | discard-route | ignore-loop| off}
      — no loop-detect
      — med-out {number | igp-cost}
      — no med-out
      — min-as-origination seconds
      — no min-as-origination
      — min-route-advertisement seconds
      — no min-route-advertisement
      — multihop ttl-value
      — no multihop
      — [no] next-hop-self
      — [no] passive
      — peer-as as-number
      — preference preference
      — no preference
      — prefix-limit limit [log-only] [threshold percent]
      — no prefix-limit

```

- [no] **remove-private**
- **ttl-security** *min-ttl-value*
- **no ttl-security**
- **type** {**internal** | **external**}
- **no type**

Explicit Subscriber Mapping Commands

```

config
  — subscriber-mgmt
    — explicit-sub-map
      — entry key sub-ident-string [sub-profile sub-profile-name] [alias sub-alias-string] [sla-profile sla-profile-name]
      — no entry key sub-ident-string

```

IGMP Policy Commands

```

config
  — subscriber-mgmt
    — igmp-policy policy-name [create]
      — description description-string
      — no description
      — egress-rate-modify [egress-rate-limit | scheduler scheduler-name]
      — [no] fast-leave
      — 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
      — [no] mcast-reporting
        — mcast-reporting-dest dest-name
        — no mcast-reporting-dest
        — opt-reporting-fields [host-mac] [pppoe-session-id] [svc-id] [sap-id]
        — no opt-reporting-fields
        — [no] shutdown
      — [no] per-host-replication
      — redirection-policy policy-name
      — no redirection-policy
      — static
        — [no] group ip-address
      — version version
      — no version
    — sub-mcac-policy policy-name
    — sub-profile
      — sub-mcac-policy policy-name

```

Host Lockout Commands

```

config
  — subscriber-mgmt
    — host-lockout-policy policy-name [create]
    — no host-lockout-policy policy-name

```



```

— description description-string
— no description
— lockout-reset-time seconds
— no lockout-reset-time
— lockout-time [min seconds] [max seconds]
— no lockout-time
— max-lockout-hosts hosts
— no max-lockout-hosts

config
— service
— vpn service-id [customer customer-id]
— no vpn service-id
— [no] interface ip-int-name
— sap sap-id [create]
— no sap sap-id
— host-lockout-policy policy-name
— no host-lockout-policy
— subscriber-interface ip-int-name [ fwd-service service-id  fwd-subscriber-interface
ip-int-name] [create]
— no subscriber-interface ip-int-name
— sap sap-id [create]
— no sap sap-id
— host-lockout-policy policy-name
— no host-lockout-policy

config
— service
— ies service-id [customer customer-id] [vpn vpn-id]
— [no] interface ip-int-name
— [no] sap sap-id
— host-lockout-policy policy-name
— host-lockout-policy
— [no] subscriber-interface ip-int-name
— [no] sap sap-id
— host-lockout-policy policy-name
— no host-lockout-policy

config
— service
— [no] vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls]
— sap sap-id [split-horizon-group group-name] [create] [capture-sap] [eth-ring
ring-index]
— no sap sap-id
— host-lockout-policy policy-name
— no host-lockout-policy

```

Host Tracking Policy Commands

```

config
— subscriber-mgmt
— host-tracking-policy policy-name [create]
— no host-tracking-policy policy-name
— description description-string
— no description

```

Subscriber Management Command Reference

- **egress-rate-modify** **agg-rate-limit**
- **egress-rate-modify** **scheduler** *scheduler-name*
- **no egress-rate-modify**

RADIUS Accounting Policy Commands

```

config
  — subscriber-mgmt
    — [no] radius-accounting-policy name
      — [no] custom-record
        — [no] override-counter override-counter-id
          — e-counters [all]
          — no e-counters
            — [no] in-profile-octets-discarded-count
            — [no] in-profile-octets-forwarded-count
            — [no] in-profile-packets-discarded-count
            — [no] in-profile-packets-forwarded-count
            — [no] out-profile-octets-discarded-count
            — [no] out-profile-octets-forwarded-count
            — [no] out-profile-packets-discarded-count
            — [no] out-profile-packets-forwarded-count
          — i-counters [all]
          — no i-counters
            — [no] all-octets-offered-count
            — [no] all-packets-offered-count
            — [no] high-octets-discarded-count
            — [no] high-packets-discarded-count
            — [no] in-profile-octets-forwarded-count
            — [no] in-profile-packets-forwarded-count
            — [no] low-octets-discarded-count
            — [no] low-packets-discarded-count
            — [no] out-profile-octets-forwarded-count
            — [no] out-profile-packets-forwarded-count
        — [no] queue queue-id
          — e-counters [all]
          — no e-counters
            — [no] in-profile-octets-discarded-count
            — [no] in-profile-octets-forwarded-count
            — [no] in-profile-packets-discarded-count
            — [no] in-profile-packets-forwarded-count
            — [no] out-profile-octets-discarded-count
            — [no] out-profile-octets-forwarded-count
            — [no] out-profile-packets-discarded-count
            — [no] out-profile-packets-forwarded-count
          — i-counters [all]
          — no i-counters
            — [no] all-octets-offered-count
            — [no] all-packets-offered-count
            — [no] high-octets-discarded-count
            — [no] high-octets-offered-count
            — [no] high-packets-discarded-count
            — [no] high-packets-offered-count
            — [no] in-profile-octets-forwarded-count
            — [no] in-profile-packets-forwarded-count
            — [no] low-octets-discarded-count
            — [no] low-octets-offered-count
            — [no] low-packets-discarded-count
            — [no] low-packets-offered-count

```

- [no] out-profile-octets-forwarded-count
- [no] out-profile-packets-forwarded-count
- [no] uncoloured-octets-offered-count
- [no] uncoloured-octets-offered-count
- **ref-override-counter** *ref-override-counter-id*
- **ref-override-counter** all
- **no ref-override-counter**
 - **e-counters** [all]
 - **no e-counters**
 - [no] in-profile-octets-discarded-count
 - [no] in-profile-octets-forwarded-count
 - [no] in-profile-packets-discarded-count
 - [no] in-profile-packets-forwarded-count
 - [no] out-profile-octets-discarded-count
 - [no] out-profile-octets-forwarded-count
 - [no] out-profile-packets-discarded-count
 - [no] out-profile-packets-forwarded-count
 - **i-counters** [all]
 - **no i-counters**
 - [no] all-octets-offered-count
 - [no] all-packets-offered-count
 - [no] high-octets-discarded-count
 - [no] high-packets-discarded-count
 - [no] in-profile-octets-forwarded-count
 - [no] in-profile-packets-forwarded-count
 - [no] low-octets-discarded-count
 - [no] low-packets-discarded-count
 - [no] out-profile-octets-forwarded-count
 - [no] out-profile-packets-forwarded-count
- **ref-queue** *queue-id*
- **ref-queue** all
- **no ref-queue**
 - **e-counters** [all]
 - **no e-counters**
 - [no] in-profile-octets-discarded-count
 - [no] in-profile-octets-forwarded-count
 - [no] in-profile-packets-discarded-count
 - [no] in-profile-packets-forwarded-count
 - [no] out-profile-octets-discarded-count
 - [no] out-profile-octets-forwarded-count
 - [no] out-profile-packets-discarded-count
 - [no] out-profile-packets-forwarded-count
 - **i-counters** [all]
 - **no i-counters**
 - [no] all-octets-offered-count
 - [no] all-packets-offered-count
 - [no] high-octets-discarded-count
 - [no] high-octets-offered-count
 - [no] high-packets-discarded-count
 - [no] high-packets-offered-count
 - [no] in-profile-octets-forwarded-count
 - [no] in-profile-packets-forwarded-count
 - [no] low-octets-discarded-count
 - [no] low-packets-discarded-count
 - [no] low-octets-offered-count

- [no] **low-packets-offered-count**
- [no] **out-profile-octets-forwarded-count**
- [no] **out-profile-packets-forwarded-count**
- [no] **uncoloured-octets-offered-count**
- [no] **uncoloured-packets-offered-count**
- **significant-change** *delta*
- **no significant-change**
- **description** *description-string*
- **no description**
- **fallback-action** **accept**
- **fallback-action** **user-db** *local-user-db-name*
- **no fallback-action** **accept**
- [no] **host-accounting** [interim-update]
- **include-radius-attribute**
 - [no] **access-loop-options**
 - [no] **acct-authentic**
 - [no] **acct-delay-time**
 - [no] **all-authorized-session-addresses**
 - [no] **called-station-id**
 - [no] **calling-station-id**
 - [no] **circuit-id**
 - [no] **delegated-ipv6**
 - [no] **dhcp-vendor-class-id**
 - [no] **framed-interface-id**
 - [no] **framed-ip-addr**
 - [no] **framed-ip-netmask**
 - [no] **framed-ipv6-prefix**
 - [no] **framed-ipv6-route**
 - [no] **framed-route**
 - [no] **ipv6-address**
 - [no] **mac-address**
 - [no] **nas-identifier**
 - [no] **nas-port**
 - [no] **nas-port-id**
 - [no] **nas-port-type**
 - [no] **nat-port-range**
 - [no] **remote-id**
 - [no] **sla-profile**
 - [no] **sub-profile**
 - [no] **subscriber-id**
 - [no] **tunnel-server**
 - [no] **user-name**
- **queue-instance-accounting** [interim-update]
- **no queue-instance-accounting**
- **radius-authentication-server**
 - **access-algorithm** {**direct** | **round-robin**}
 - **no access-algorithm**
 - **retry** *count*
 - **no retry**
 - **router** *router-instance*
 - **no router**
 - **server** *server-index* [**address** *ip-address*] [**secret** *key*] [**port** *port*] [**pending-requests-limit** *limit*]
 - **no server** *server-index*
 - **source-address** *ip-address*

- **no source-address**
- **timeout** *seconds*
- **no timeout**
- **radius-server-policy** *radius-server-policy-name*
- **[no] radius-server-policy**
- **session-accounting** [**interim-update**] [**host-update**]
- **no session-accounting**
- **session-id-format** {**description** | **number**}
- **no session-id-format**
- **update-interval** *minutes*
- **no update-interval**
- **update-interval-jitter** **absolute** *seconds*
- **[no] update-interval-jitter**
- **[no] use-std-acct-attributes**

```
config
  — log
    — [no] accounting-policy
      — collection-interval
      — default
      — [no] description
      — record
      — [no] shutdown
      — to
    — event-control application-id [event-name | event-number] [generate [severity-level] [throttle]
    — event-control application-id [event-name | event-number] suppress
    — no event-control application [event-name | event-number]
```

RADIUS Route Download Commands

```
configure
  — aaa
    — route-downloader name [create]
    — no route-downloader name
      — base-user-name user-name
      — no base-user-name
      — default-metric metric
      — no default-metric
      — default-tag tag
      — no default-tag
      — description description-string
      — no description
      — download-interval minutes
      — no download-interval
      — max-routes routes
      — no max-routes
      — password password [hash|hash2]
      — no password
      — radius-server-policy policy-name
      — no radius-server-policy
      — retry-interval min minimum max maximum
      — no retry-interval
      — [no] shutdown
```


SLA Profile Commands

```

config
  — subscriber-mgmt
    — [no] sla-profile sla-profile-name
      — category-map category-map-name [create]
      — no category-map category-map-name
        — category category-name [create]
        — no category category-name
          — idle-timeout timeout
          — no idle-timeout
          — idle-timeout-action {shcv-check|terminate}
          — no idle-timeout-action
      — description description-string
      — no description
      — egress
        — [no] ip-filter filter-id
        — qos sap-egress-policy-id [vport-scheduler|port-scheduler] [force]
        — no qos
          — queue queue-id
          — no queue queue-id
            — avg-frame-overhead percent
            — no avg-frame-overhead
            — burst-limit
            — no burst-limit
            — burst-limit size-in-kbytes
            — no burst-limit
            — high-prio-only percent
            — no high-prio-only
            — mbs size-in-kbytes
            — no mbs
            — rate pir-rate [cir cir-rate]
            — no rate
          — policer policer-id [create]
          — no policer policer-id
            — cbs {size [bytes | kilobytes] | default}
            — no cbs
            — mbs {size [bytes | kilobytes] | default}
            — no mbs
            — packet-byte-offset {add bytes | subtract bytes}
            — no packet-byte-offset
            — rate {max | kilobits-per-second} [cir {max | kilobits-per-second}]
            — no rate
            — stat-mode {no-stats | minimal | offered-profile-no-cir | offered-priority-no-cir | offered-limited-profile-cir | offered-profile-cir | offered-priority-cir | offered-total-cir}
            — no stat-mode
        — [no] qos-marking-from-sap
        — report-rate agg-rate-limit
        — report-rate scheduler scheduler-name
        — report-rate pppoe-actual-rate
        — report-rate rfc5515-actual-rate
        — no report-rate

```

- [no] **use-ingress-l2tp-dscp**
- **host-limit** *max-number-of-hosts* [remove-oldest]
- **no host-limit**
- **ingress**
 - [no] **ip-filter** *filter-id*
 - **qos** *sap-ingress-policy-id* [shared-queuing | multipoint-shared | service-queuing] [force]
 - **no qos**
 - **queue** *queue-id*
 - **no queue** *queue-id*
 - **burst-limit**
 - **no burst-limit**
 - **burst-limit** *size-in-kbytes*
 - **no burst-limit**
 - **high-prio-only** *percent*
 - **no high-prio-only**
 - **mbs** *size-in-kbytes*
 - **no mbs**
 - **rate** *pir-rate* [cir *cir-rate*]
 - **no rate**
 - **policer** *policer-id* [create]
 - **no policer** *policer-id*
 - **cbs** {*size* [bytes | kilobytes] | default}
 - **no cbs**
 - **mbs** {*size* [bytes | kilobytes] | default}
 - **no mbs**
 - **packet-byte-offset** {add *bytes* | subtract *bytes*}
 - **no packet-byte-offset**
 - **rate** {max | kilobits-per-second} [cir {max | kilobits-per-second}]
 - **no rate**
 - **stat-mode** {no-stats | minimal | offered-profile-no-cir | offered-priority-no-cir | offered-limited-profile-cir | offered-profile-cir | offered-priority-cir | offered-total-cir}
 - **no stat-mode**
 - **report-rate** *agg-rate-limit*
 - **report-rate** *scheduler scheduler-name*
 - **no report-rate**
- **one-time-http-redirection** *filter-id*

Subscriber Identification Policy Commands

```

config
  — subscriber-mgmt
    — [no] sub-ident-policy sub-ident-policy-name
      — app-profile-map
        — entry key app-profile-string app-profile app-profile-name
        — no entry key app-profile-string
        — [no] use-direct-map-as-default
      — description description-string
      — no description
      — primary
        — script-url dhcp-primary-script-url
        — no script-url
        — [no] shutdown
      — secondary
        — script-url dhcp-secondary-script-url
        — no script-url
        — [no] shutdown
      — sla-profile-map
        — entry key sla-profile-string sla-profile sla-profile-name
        — no entry key sla-profile-string
        — [no] use-direct-map-as-default
      — sub-profile-map
        — entry key sub-profile-string sub-profile sub-profile-name
        — no entry key sub-profile-string
        — [no] use-direct-map-as-default
      — tertiary
        — script-url dhcp-tertiary-script-url
        — no script-url
        — [no] shutdown

```

Auto-Generated Subscriber Identification Key Commands

Note: These commands are supported on the 7450 ESS in mixed mode.

```

config
  — subscriber-mgmt
    — auto-sub-id-key
      — ipoe-sub-id-key sub-id-key [sub-id-key...(up to 4 max)]
      — no ipoe-sub-id-key
      — ppp-sub-id-key sub-id-key [sub-id-key...(up to 5 max)]
      — no ppp-sub-id-key

```

Auto-Generated Subscriber Identification Key Service Commands

Notes: Refer to the 7750 SR OS Services Guide/7450 ESS OS Services Guide for further services commands.

```

config
  — service
    — vprn
      — subscriber-interface ip-int-name
        — group-interface ip-int-name
          — sap sap-id
            — sub-sla-mgmt
              — def-sub-id use-auto-id
              — def-sub-id use-sap-id
              — def-sub-id string sub-id
              — no def-sub-id
        — vpls
          — sap sap-id
            — sub-sla-mgmt
              — def-sub-id use-auto-id
              — def-sub-id use-sap-id
              — def-sub-id string sub-id
              — no def-sub-id
        — ies
          — subscriber-interface ip-int-name
            — group-interface ip-int-name
              — sap sap-id
                — sub-sla-mgmt
                  — def-sub-id use-auto-id
                  — def-sub-id use-sap-id
                  — def-sub-id string sub-id
                  — no def-sub-id
    — subscriber-management
      — msap-policy msap-policy-name
        — sub-sla-mgmt

```

- **def-sub-id** **use-auto-id**
- **def-sub-id** **use-sap-id**
- **def-sub-id** **string** *sub-id*
- **no** **def-sub-id**

Subscriber MCAC Policy Commands

config

- **subscriber-mgmt**
 - **sub-mcac-policy** *sub-mcac-policy-name* [**create**]
 - **no** **sub-mcac-policy** *sub-mcac-policy-name*
 - **description** *description-string*
 - **no** **description**
 - [**no**] **shutdown**
 - **unconstrained-bw** *mandatory-bw mandatory-bw*
 - **no** **unconstrained-bw**

Subscriber Profile Commands

```

config
  — subscriber-mgmt
    — [no] sub-profile subscriber-profile-name
      — accounting-policy acct-policy-id
      — no accounting-policy
      — ancp
        — ancp-policy name
        — no ancp-policy
          — egress
            — rate-adjustment adjusted-percent
            — no rate-adjustment
            — rate-modify scheduler scheduler-name
            — no rate-modify
            — rate-monitor kilobit-per-second [alarm]
            — no rate-monitor
            — rate-reduction kilobit-per-second
            — no rate-reduction
          — ingress
            — rate-adjustment adjusted-percent
            — no rate-adjustment
            — rate-modify scheduler scheduler-name
            — no rate-modify
            — rate-monitor kilobit-per-second [alarm]
            — no rate-monitor
            — rate-reduction kilobit-per-second
            — no rate-reduction
        — [no] collect-stats
      — description description-string
      — no description
    — egress
      — agg-rate-limit agg-rate [queue-frame-based-accounting]
      — no agg-rate-limit
      — avg-frame-size bytes
      — no avg-frame-size
      — encap-offset [type type]
      — no encap-offset
      — policer-control-policy policy-name
      — no policer-control-policy
        — max-rate {kilobits-per-second | max}
        — no max-rate
        — priority-mbs-thresholds
          — min-thresh-separation size [bytes | kilobytes]
          — no min-thresh-separation
          — priority level
          — mbs-contribution size [bytes | kilobytes] [fixed]
        — scheduler-policy scheduler-policy-name
        — no scheduler-policy
          — scheduler scheduler-name rate [pir-rate] [cir cir-rate]
          — no scheduler scheduler-name
      — [no] host-tracking-policy
    — no host-tracking-policy policy-name
      — description description-string
      — no description

```

- **egress-rate-modify** **agg-rate-limit**
- **egress-rate-modify** **scheduler** *scheduler-name*
- **no egress-rate-modify**
- **hsmda**
 - **egress-qos**
 - **agg-rate-limit** *agg-rate*
 - **no agg-rate-limit**
 - **qos** *policy-id*
 - **no qos**
 - **wrr-policy** *weight*
 - **no wrr-policy**
 - **packet-byte-offset** {**add** *add-bytes* | **subtract** *sub-bytes*}
 - **no packet-byte-offset**
 - **queue** *queue-id* [**create**]
 - **no queue** *queue-id*
 - **wrr-weight** *weight*
 - **no wrr-weight**
 - **rate** *pir-rate* [**cir** *cir-rate*]
 - **no rate**
 - **rate** {**max** | *kilobits-per-second*}
 - **no rate**
 - **slope-policy** *hsmda-slope-policy-name*
 - **no slope-policy**
 - **ingress-qos**
 - **qos** *policy-id*
 - **no qos**
 - **queue** *queue-id*
 - **rate** {**max** | *kilobits-per-second*}
 - **no rate**
 - **cbs** {*size* [**bytes** | **kilobytes**] | **default**}
 - **no cbs**
 - **mbs** *kilobits*
 - **no mbs**
 - **policer** *policer-id* [**create**]
 - **stat-mode** {**no-stats** | **minimal** | **offered-profile-no-cir** | **offered-priority-no-cir** | **offered-limited-profile-cir** | **offered-profile-cir** | **offered-priority-cir** | **offered-total-cir**}
 - **no stat-mode**
 - **rate** {**max** | *kilobits-per-second*}
 - **no rate**
 - **cbs** {*size* [**bytes** | **kilobytes**] | **default**}
 - **no cbs**
 - **mbs** *kilobits*
 - **no mbs**
 - **packet-byte-offset** {**add** *add-bytes* | **subtract** *sub-bytes*}
 - **no packet-byte-offset**
- **igmp-policy** *policy-name*
- **no igmp-policy**
- **ingress**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
 - **scheduler** *scheduler-name* **rate** [*pir-rate*] [**cir** *cir-rate*]

- **no scheduler** *scheduler-name*
- **radius-accounting-policy**
- **no radius-accounting-policy**
- **sla-profile-map**
 - **entry key** *sla-profile-string* **sla-profile** *sla-profile*
 - **no entry key** *sla-profile-string*
 - **[no] use-direct-map-as-default**
- **sub-mcac-policy** *policy-name*
- **no sub-mcac-policy**

Multi-Chassis Redundancy Commands

```

config
  — redundancy
    — multi-chassis
      — [no] peer ip-address
        — authentication-key [authentication-key | hash-key] [hash | hash2]
        — no authentication-key
        — description description-string
        — no description
        — mc-ipsec
          — bfd-enable service service-id interface interface-name dst-ip
            ip-address
          — no bfd-enable
          — discovery-interval interval-1 [boot interval-2]
          — no discovery-interval
          — hold-on-neighbor-failure multiplier
          — no hold-on-neighbor-failure
          — keep-alive-interval time-interval
          — no keep-alive-interval
          — tunnel-group group-id [create]
          — no tunnel-group group-id
            — peer-group group-id
            — no peer-group
            — priority priority
            — no priority
            — [no] preempt
            — [no] shutdown
        — [no] mc-lag
          — hold-on-neighbor-failure multiplier
          — no hold-on-neighbor-failure
          — keep-alive-interval interval
          — no keep-alive-interval
          — lag lag-id lacp-key admin-key system-id system-id [remote-lag
            lag-id] system-priority system-priority
          — no lag lag-id
          — [no] shutdown
      — mc-ring
        — [no] ring sync-tag
          — in-band-control-path
            — [no] debounce
            — dst-ip ip-address
            — no dst-ip
            — interface ip-int-name
            — no interface
            — no max-debounce-time
            — service-id service-id
            — no service-id
          — [no] path-b
            — [no] range vlan-range
          — [no] path-excl
            — [no] range vlan-range
          — [no] ring-node ring-node-name
            — connectivity-verify

```

- **dst-ip** *ip-address*
- **no dst-ip**
- **interval** *interval*
- **no interval**
- **service-id** *service-id*
- **no service-id**
- **[no] shutdown**
- **src-ip** *ip-address*
- **no src-ip**
- **src-mac** *ieee-address*
- **no src-mac**
- **vlan** [0..4094]
- **no vlan**
- **[no] shutdown**
- **[no] l3-ring** *sync-tag*
 - **in-band-control-path**
 - **[no] debounce**
 - **dst-ip** *ip-address*
 - **no dst-ip**
 - **interface** *ip-int-name*
 - **no interface**
 - **max-debounce-time** *max-debounce-time*
 - **no max-debounce-time**
 - **service-id** *service-id*
 - **no service-id**
 - **[no] ring-node** *ring-node-name*
 - **connectivity-verify**
 - **dst-ip** *ip-address*
 - **no dst-ip**
 - **interval** *interval*
 - **no interval**
 - **service-id** *service-id*
 - **no service-id**
 - **[no] shutdown**
 - **src-ip** *ip-address*
 - **no src-ip**
 - **src-mac** *ieee-address*
 - **no src-mac**
 - **vlan** [0..4094]
 - **no vlan**
 - **[no] srrp-instance** *srrp-id*
 - **[no] shutdown**
- **[no] shutdown**
- **source-address** *ip-address*
- **no source-address**
- **[no] sync**
 - **[no] igmp**
 - **[no] igmp-snooping**
 - **[no] ipsec**
 - **[no] local-dhcp-server**
 - **[no] mc-ring**
 - **[no] mld-snooping**
 - **port** [*port-id* | *lag-id*] [*sync-tag sync-tag*] [*create*]
 - **no port** [*port-id* | *lag-id*]
 - **range** *encap-range* [*sync-tag sync-tag*]

- **no range** *encap-range*
- **[no] shutdown**
- **[no] srrp**
- **[no] sub-host-trk**
- **[no] sub-mgmt**
- **tunnel-group** *tunnel-group-id sync-tag tag-name* **[create]**
- **no tunnel-group**

VPLS Subscriber Management Configuration Commands

```

config
  — service
    — [no] vpls service-id [customer customer-id] [vpn vpn-id] [m-vpls]
      — sap sap-id [split-horizon-group group-name]
      — no sap sap-id
        — arp-host
          — host-limit max-num-hosts
          — no host-limit
          — min-auth-interval min-auth-interval
          — no min-auth-interval
          — [no] shutdown
        — host [ip ip-address [mac mac-address]] [subscriber-sap-id | subscriber
          sub-ident-string [sub-profile sub-profile-name [sla-profile sla-profile-
          name [ancp-string ancp-string] [app-profile app-profile-name] [inter-
          dest-id intermediate-destination-id]
        — no host [ip ip-address [mac mac-address]]
        — no host all
        — host-connectivity-verify source-ip ip-address [source-mac ieee-
          address] [interval interval] [action {remove | alarm}]
        — [no] sub-sla-mgmt
          — def-app-profile default-app-profile-name
          — no def-app-profile
          — def-sla-profile default-sla-profile-name
          — no def-sla-profile
          — def-sub-id string sub-ident-string
          — def-sub-id use-sap-id
          — no def-sub-id
          — def-sub-profile default-sub-profile-name
          — no def-sub-profile
          — [no] mac-da-hashing
          — multi-sub-sap number-of-sub
          — no multi-sub-sap
          — [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

```

Managed SAP Policy Commands

```

config
  — subscriber-mgmt
    — msap-policy msap-policy-name [create]
    — no msap-policy msap-policy-name
      — cpu-protection policy-id [mac-monitoring ]
      — no cpu-protection
      — description description-string
      — no description
      — no dist-cpu-protection policy-name
      — ies-vprn-only-sap-parameters
        — anti-spoof {ip-mac | nh-mac}
        — no anti-spoof
      — igmp-host-tracking
        — expiry-time expiry-time
        — no expiry-time
        — import policy-name
        — no import policy-name
        — max-num-group max-num-groups
        — no max-num-group
        — max-num-sources max-num-sources
        — no max-num-sources
        — max-num-grp-sources [1..32000]
        — no max-num-grp-sources [1..32000]
      — lag-link-map-profile link-map-profile-id
      — no lag-link-map-profile
      — sub-sla-mgmt
        — def-app-profile app-profile-name
        — no def-app-profile
        — def-inter-dest-id {string string | use-top-q}
        — no def-inter-dest-id
        — def-sla-profile sla-profile-name
        — no def-sla-profile
        — def-sub-id use-sap-id
        — def-sub-id string sub-id
        — no def-sub-id
        — def-sub-profile sub-profile-name
        — no def-sub-profile
        — multi-sub-sap [limit limit]
        — no multi-sub-sap
        — single-sub-parameters
          — non-sub-traffic sub-profile-name sla-profile sla-profile-name
            [subscriber sub-ident-string] [app-profile app-profile-name]
          — no non-sub-traffic
          — [no] profiled-traffic-only
        — sub-ident-policy policy-name
        — no sub-ident-policy
      — vpls-only-sap-parameters
        — arp-host
          — host-limit max-num-hosts
          — no host-limit
          — min-auth-interval min-auth-interval
          — no min-auth-interval
        — arp-reply-agent [sub-ident]

```

- **no arp-reply-agent**
- **dhcp**
 - **lease-populate** [*nbr-of-leases*]
 - **no lease-populate**
 - **[no] option**
 - **action** *dhcp-action*
 - **no action**
 - **circuit-id** {*ascii-tuple* | *vlan-ascii-tuple*}
 - **remote-id** {*mac* | *string string*}
 - **no remote-id**
 - **[no] vendor-specific-option**
 - **[no] client-mac-address**
 - **[no] sap-id**
 - **[no] service-id**
 - **[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**
- **egress**
 - **multicast-group** *group-name*
 - **no multicast-group**
- **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**
 - **mcac**
 - **mc-constraints**
 - **level** *level-id* **bw** *bandwidth*
 - **no level** *level-id*
 - **number-down** *number-lag-port-down* **level** *level-id*
 - **no number-down** *number-lag-port-down*
 - **policy** *policy-name*
 - **no policy**
 - **unconstrained-bw** *bandwidth* **mandatory-bw** *mandatory-bw*
 - **no unconstrained-bw**
 - **mvr**
 - **from-vpls** *service-id*
 - **no from-vpls**
 - **query-interval** *seconds*
 - **no query-interval**
 - **query-response-interval** *seconds*
 - **no query-response-interval**
 - **robust-count** *robust-count*
 - **no robust-count**

- [no] **send-queries**
- **version** *version*
- **no version**
- [no] **mac-da-hashing**
- **split-horizon-group** *group-name*
- **no split-horizon-group**

```
config
  — service
    — vpls
      — sap
        — default-msap-policy policy-name
        — no default-msap-policy
        — trigger-packet [dhcp] [pppoe] [arp] [dhcp6] [ppp]
        — no trigger-packet
        — eval-msap {policy msap-policy-name | msap sap-id }
```


VPRN Subscriber Interface Configuration Commands

```

config
  — service
    — vprn service-id [customer customer-id]
    — no vprn service-id
    — subscriber-interface ip-int-name [fwd-service service-id fwd-subscriber-interface
      ip-int-name] [create]
    — no subscriber-interface ip-int-name
      — address {ip-address/mask | ip-address netmask} [gw-ip-address ip-
        address] [populate-host-routes]
      — no address
      — [no] allow-unmatching-subnets
      — authentication-policy name
      — no authentication-policy
      — delayed-enable seconds [init-only]
      — no delayed-enable
      — description description-string
      — no description
      — dhcp
        — client-applications {[dhcp] [pppoe]}
        — no client-applications
        — description description-string
        — no description
        — gi-address ip-address [src-ip-addr]
        — no gi-address
        — lease-populate [nbr-of-entries]
        — no lease-populate
        — [no] option
          — [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] [override]
          — no lease-time
          — [no] shutdown
        — relay-unicast-msg [release-update-src-ip]
        — no relay-unicast-msg
        — server server1 [server2...(up to 8 max)]
        — no server
        — [no] shutdown
      — ipv6
        — [no] allow-unmatching-prefixes
        — default-dns ipv6-address [secondary ipv6-address]
        — no default-dns
        — delegated-prefix-length bits
        — delegated-prefix-length variable
        — no delegated-prefix-length

```

- **link-local-address** *ipv6-address*
- **no link-local-address**
- **subscriber-prefixes**
 - **prefix** *ipv6-address/prefix-length* [**pd**] [**wan-host**]
track-srrp *srrp-instance* [**holdup-time** *milli-seconds*]
 - **no prefix** *ipv6-address/prefix-length*
 - **prefix** *ipv6-address/prefix-length* [**pd**] [**wan-host**]
- [**no**] **private-retail-subnets**
- [**no**] **shutdown**
- **unnumbered** [*ip-int-name*|*ip-address*]
- **no unnumbered**

```

config
  — service
    — vprn service-id [customer customer-id]
    — no vprn service-id
      — subscriber-interface ip-int-name [fwd-service service-id fwd-subscriber-interface
        ip-int-name] [create]
      — no subscriber-interface ip-int-name
        — group-interface ip-int-name [create]
        — group-interface ip-int-name [create] lns
        — group-interface ip-int-name [create] softgre
        — no group-interface ip-int-name
          — arp-host
          — [no] arp-populate
            — arp-timeout seconds
            — no arp-timeout
            — authentication-policy name
            — no authentication-policy
            — description description-string
            — no description
            — dhcp
              — client-applications {[dhcp] [pppoe]}
              — no client-applications
              — description description-string
              — no description
              — gi-address ip-address [src-ip-address]
              — no gi-address
              — lease-populate nbr-of-leases
              — no lease-populate
              — [no] match-circuit-id
              — [no] option
                — action {replace | drop | keep}
                — no action
                — circuit-id [ascii-tuple | ifindex | sap-id |
                  vlan-ascii-tuple]
                — no circuit-id
                — remote-id [mac | string string]
                — no remote-id
                — [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] [override]
              — no lease-time
              — [no] shutdown
            — relay-unicast-msg [release-update-src-ip]
            — no relay-unicast-msg
            — server server1 [server2...(up to 8 max)]
            — no server

```

- [no] **shutdown**
- [no] **trusted**
- **host-limit** *max-num-hosts*
- **no host-limit**
- **host-connectivity-verify** [*interval interval*] [*action* {**remove**|**alarm**}]
- **icmp**
 - [no] **mask-reply**
 - **redirects** [*number seconds*]
 - **no redirects**
 - **ttl-expired** *number seconds*
 - **no ttl-expired**
 - **unreachables** [*number seconds*]
 - **no unreachables**
- **ip-mtu** *octets*
- **no ip-mtu**
- **ipoe-linking**
 - [no] **gratuitous-rtr-adv**
 - [no] **shared-circuit-id**
 - [no] **shutdown**
- **ipv6**
 - [no] **ipoe-bridged-mode**
 - **router-advertisements**
 - **dns-options**
 - **no dns-options**
 - **include-dns**
 - **no include-dns**
 - **rdnss-lifetime** *seconds*
 - **rdnss-lifetime infinite**
 - **no rdnss-lifetime**
- **local-address-assignment**
 - **client-application** [*ppp-v4*]
 - **no client-application**
 - **default-pool** *pool-name* [*secondary pool-name*]
 - **no default-pool**
 - **server** *server-name*
 - **no server**
 - **no shutdown**
- [no] **local-proxy-arp**
- [no] **loopback**
- [no] **mac** *ieee-address*
- **min-auth-interval** *min-auth-interval*
- **no min-auth-interval**
- **sap-host-limit** *max-num-hosts-sap*
- **no sap-host-limit**
- [no] **shutdown**
- [no] **pppoe**
 - **description** *description-string*
 - **no description**
 - **pap-chap-user-db** *local-user-db-name*
 - **no pap-chap-user-db**
 - **ppp-policy** *pppoe-policy-name*
 - **no ppp-policy**
 - **sap-session-limit** *sap-session-limit*
 - **no sap-session-limit**

- **session-limit** *session-limit*
- **no session-limit**
- **[no] shutdown**
- **[no] proxy-arp-policy** *policy-name* [*policy-name...*(up to 5 max)]
- **[no] remote-proxy-arp**
- **[no] sap** *sap-id*
 - **accounting-policy** *acct-policy-id*
 - **no accounting-policy** [*acct-policy-id*]
 - **anti-spoof** {**ip** | **ip-mac** | **nh-mac**}
 - **no anti-spoof**
 - **app-profile** *app-profile-name*
 - **no app-profile**
 - **atm**
 - **egress**
 - **traffic-desc** *traffic-desc-profile-id*
 - **no traffic-desc**
 - **encapsulation** *atm-encap-type*
 - **ingress**
 - **traffic-desc** *traffic-desc-profile-id*
 - **oam**
 - **[no] alarm-cells**
 - **[no] periodic-loopback**
 - **[no] calling-station-id**
 - **[no] collect-stats**
 - **cpu-protection** *policy-id* [**mac-monitoring**]
 - **no cpu-protection**
 - **default-host** *ip-address/mask* **next-hop** *next-hop-ip*
 - **no default-host** *ip-address/mask*
 - **description** *description-string*
 - **no description**
 - **egress**
 - **agg-rate-limit** *agg-rate* [**queue-frame-based-accounting**]
 - **no agg-rate-limit**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **no filter** [**ip** *ip-filter-id*] [**ipv6** *ipv6-filter-id*]
 - **no filter**
 - **[no] qinq-mark-top-only**
 - **[no] qos** *policy-id*
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
 - **host ip** *ip-address* [**mac** *ieee-address*] [**subscriber** *sub-ident-string*] [**sub-profile** *sub-profile-name*] [**sla-profile** *sla-profile-name*] [**ancp-string** *ancp-string*]
 - **no host** {[**ip** *ip-address*] [**mac** *ieee-address*]}
 - **no host all**
 - **igmp-host-tracking**
 - **[no] disable-router-alert-check**
 - **expiry-time** *expiry-time*
 - **no expiry-time**
 - **import** *policy-name*
 - **no import**
 - **max-num-group** *max-num-groups*

- **no max-num-group**
- **max-num-sources** *max-num-sources*
- **no max-num-sources**
- **max-num-grp-sources** [1..32000]
- **no max-num-grp-sources**
- **ingress**
 - **filter ip** *ip-filter-id*
 - **filter ipv6** *ipv6-filter-id*
 - **no filter** [**ip** *ip-filter-id*] [**ipv6** *ipv6-filter-id*]
 - **no filter**
 - **match-qinq-dot1p** {**top**|**bottom**}
 - **no match-qinq-dot1p**
 - **qos** *policy-id* [**shared-queuing**]
 - **no qos** *policy-id*
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
- **multi-service-site** *customer-site-name*
- **no multi-service-site**
- **static-host ip** *ip/did-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**
 - **managed-routes**
 - **route** {*ip-prefix/length* | *ip-prefix netmask*} [**create**]
 - **no route** {*ip-prefix/length* | *ip-prefix netmask*}
- [**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**] **shutdown**
- [**no**] **sub-sla-mgmt**
 - **def-app-profile** *default-app-profile-name*
 - **no def-app-profile**
 - **def-sla-profile** *default-sla-profile-name*
 - **no def-sla-profile**
 - **def-sub-id** **string** *sub-ident-string*
 - **def-sub-id use-sap-id**
 - **no def-sub-id**
 - **def-sub-profile** *default-subscriber-profile-name*
 - **no def-sub-profile**
 - **multi-sub-sap** *subscriber-limit*
 - **no multi-sub-sap**

- **[no] shutdown**
- **single-sub-parameters**
 - **no-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**
- **[no] shutdown**
- **[no] srrp** *srrp-id*
 - **description** *description-string*
 - **no description**
 - **gw-mac** *mac-address*
 - **no gw-mac**
 - **keep-alive-interval** *interval*
 - **no keep-alive-interval**
 - **message-path** *sap-id*
 - **no message-path**
 - **[no] policy** *vrrp-policy-id*
 - **priority** *priority*
 - **no priority**
 - **[no] shutdown**
- **tos-marking-state** {**trusted** | **untrusted**}
- **no tos-marking-state**

IES Subscriber Management Configuration Commands

- IES Interface Commands on page 1232
- IES Subscriber Interface Commands on page 1233
- IES Subscriber Interface Group Interface Commands on page 1233

```

config
  — service
    — ies service-id [customer customer-id] [vpn vpn-id]
      — [no] interface ip-int-name
        — address {ip-address/mask | ip-address netmask} [gw-ip-address ip-address] [populate-host-routes]
        — no address
        — [no] allow-directed-broadcast
        — [no] arp-populate
        — arp-timeout seconds
        — no arp-timeout
        — cflowd [acl | interface]
        — no cflowd
        — description description-string
        — no description
        — dhcp
          — client-applications {[dhcp] [pppoe]}
          — no client-applications
          — description description-string
          — no description
          — gi-address ip-address [src-ip-addr]
          — no gi-address
          — lease-populate nbr-of-leases
          — no lease-populate
          — [no] option
            — action {replace | drop | keep}
            — no action
            — circuit-id [ascii-tuple | ifindex | sap-id]
            — no circuit-id
            — [no] remote-id
          — [no] relay-plain-bootp
          — relay-unicast-msg [release-update-src-ip]
          — no relay-unicast-msg
          — server server1 [server2...(up to 8 max)]
          — no server
          — [no] shutdown
          — [no] trusted
        — host-connectivity-verify [source {vrrp|interface}] [interval interval]
          [action {remove | alarm}]
        — icmp
          — [no] mask-reply
          — redirects [number seconds]
          — no redirects
          — ttl-expired number seconds]
          — no ttl-expired
          — unreachables [number seconds]

```


- **no unreachable**
- **[no] local-proxy-arp**
- **[no] loopback**
- **[no] mac** *ieee-address*
- **[no] proxy-arp-policy** *policy-name* [*policy-name...*(up to 5 max)]
- **[no] remote-proxy-arp**
- **[no] sap** *sap-id*
- **[no] subscriber-interface** *ip-int-name*
 - **[no] address** {*ip-address/mask* | *ip-address netmask*}
 - **[no] allow-unmatching-subnets**
 - **delayed-enable** *seconds* [**init-only**]
 - **no delayed-enable**
 - **description** *description-string*
 - **no description**
 - **dhcp**
 - **gi-address** *ip-address* [*src-ip-addr*]
 - **no gi-address**
 - **relay-unicast-msg** [*release-update-src-ip*]
 - **no relay-unicast-msg**
- **ipv6**
 - **[no] allow-unmatching-subnets**
 - **default-dns** *ipv6-address* [**secondary** *ipv6-address*]
 - **no default-dns**
- **local-address-assignment**
 - **client-application** [**ppp-v4**]
 - **no client-application**
 - **default-pool** *pool-name* [**secondary** *pool-name*]
 - **no default-pool**
 - **server** *server-name*
 - **no server**
 - **no shutdown**
- **[no] group-interface** *ip-int-name*
 - **arp-host**
 - **host-limit** *max-num-hosts*
 - **no host-limit**
 - **min-auth-interval** *min-auth-interval*
 - **no min-auth-interval**
 - **sap-host-limit** *max-num-hosts-sap*
 - **no sap-host-limit**
 - **[no] shutdown**
 - **[no] arp-populate**
 - **arp-timeout** *seconds*
 - **no arp-timeout**
 - **authentication-policy** *name*
 - **no authentication-policy**
 - **description** *description-string*
 - **no description**
 - **dhcp**
 - **client-applications** **dhcp**
 - **description** *description-string*
 - **no description**
 - **filter** *filter-id*
 - **no filter**
 - **gi-address** *ip-address* [*src-ip-addr*]
 - **no gi-address**

- **lease-populate** *nbr-of-leases*
- **no lease-populate**
- **[no] match-circuit-id**
- **option**
 - **action** {replace | drop | keep}
 - **no action**
 - **circuit-id** [ascii-tuple | ifindex | sap-id]
 - **no circuit-id**
 - **[no] remote-id**
 - **[no] vendor-specific-option**
 - **[no] client-mac-address**
 - **[no] sap-id**
 - **[no] service-id**
 - **string** *text*
 - **no string**
 - **[no] system-id**
- **relay-unicast-msg** [*release-update-src-ip*]
- **no relay-unicast-msg**
- **server** *server1* [*server2...*(up to 8 max)]
- **no server**
- **[no] shutdown**
- **[no] trusted**
- **host-connectivity-verify** [*interval interval*] [**action** {remove | alarm}]
- **icmp**
 - **[no] mask-reply**
 - **redirects** [*number seconds*]
 - **no redirects**
 - **ttl-expired** *number seconds*
 - **no ttl-expired**
 - **unreachables** [*number seconds*]
 - **no unreachables**
- **ip-mtu** *octets*
- **no ip-mtu**
- **ipoe-linking**
 - **[no] gratuitous-rtr-adv**
 - **[no] shared-circuit-id**
 - **[no] shutdown**
- **[no] local-proxy-arp**
- **[no] loopback**
- **[no] mac** *ieee-address*
- **[no] oper-up-while-empty**
- **[no] pppoe**
 - **description** *description-string*
 - **no description**
 - **pap-chap-user-db** *local-user-db-name*
 - **no pap-chap-user-db**
 - **ppp-policy** *pppoe-policy-name*
 - **no ppp-policy**
 - **sap-session-limit** *sap-session-limit*
 - **no sap-session-limit**
 - **session-limit** *session-limit*
 - **no session-limit**
 - **[no] shutdown**

- [no] **proxy-arp-policy** *policy-name* [*policy-name...*(up to 5 max)]
- [no] **remote-proxy-arp**
- **router-advertisement**
 - **ipv6**
 - **dns-options**
 - **no dns-options**
 - **include-dns**
 - **no include-dns**
 - **rdnss-lifetime** *seconds*
 - **rdnss-lifetime infinite**
 - **no rdnss-lifetime**
- [no] **sap** *sap-id*
 - **accounting-policy** *acct-policy-id*
 - **no accounting-policy** [*acct-policy-id*]
 - **anti-spoof** {**ip** | **ip-mac** | **nh-mac**}
 - **no anti-spoof**
 - **atm**
 - **egress**
 - **traffic-desc** *traffic-desc-profile-id*
 - **no traffic-desc**
 - **encapsulation** *atm-encap-type*
 - **ingress**
 - **traffic-desc** *traffic-desc-profile-id*
 - **oam**
 - [no] **alarm-cells**
 - [no] **periodic-loopback**
 - [no] **calling-station-id**
 - [no] **collect-stats**
 - **cpu-protection** [**mac-monitoring**] | [**eth-cfm-monitoring** [**aggregate**][**car**]]
 - **no cpu-protection**
 - **default-host** *ip-address/mask* **next-hop** *next-hop-ip*
 - **no default-host** *ip-address/mask*
 - **description** *description-string*
 - **no description**
 - **egress**
 - **agg-rate-limit** *agg-rate*
 - **no agg-rate-limit** *agg-rate*
 - **filter ip** *ip-filter-id*
 - **filter**
 - **no filter ip** *ip-filter-id*
 - **no filter**
 - **qos** *policy-id*
 - **no qos**
 - [no] **queue-override**
 - [no] **queue** *queue-id*
 - **adaptation-rule** [**pir** {**max** | **min** | **closest**}] [**cir** {**max** | **min** | **closest**}]
 - **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* | default}
- **no mbs**
- **rate** *pir-rate* [*cir cir-rate*]
- **no rate**
- **scheduler-policy** *scheduler-policy-name*
- **no scheduler-policy**
- **host ip** *ip-address* [**mac** *ieee-address*] [**subscriber** *sub-ident-string*] [**sub-profile** *sub-profile-name*] [**sla-profile** *sla-profile-name*]
- **no host** {[**ip** *ip-address*] [**mac** *ieee-address*]}
- **no host all**
- **ingress**
 - **filter ip** *ip-filter-id*
 - **no filter**
 - **match-qinq-dot1p** {**top**|**bottom**}
 - **no match-qinq-dot1p**
 - **qos** *policy-id* [**shared-queuing**]
 - **no qos**
 - **scheduler-policy** *scheduler-policy-name*
 - **no scheduler-policy**
- [**no**] **multi-service-site** *customer-site-name*
- **static-host ip** *ip/did-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**] **shutdown**
- [**no**] **sub-sla-mgmt**
 - [**no**] **sub-sla-mgmt**
 - **def-app-profile** *default-app-profile-name*
 - **no def-app-profile**
 - **def-sla-profile** *default-sla-profile-name*
 - **no def-sla-profile**
 - **def-sub-id** **string** *sub-ident-string*
 - **def-sub-id** **use-sap-id**
 - **no def-sub-id**
 - **def-sub-profile** *default-subscriber-profile-name*
 - **no def-sub-profile**
 - **multi-sub-sap** *subscriber-limit*

- **no multi-sub-sap**
- **[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**
- **[no] shutdown**
- **tos-marking-state** {**trusted** | **untrusted**}
- **no tos-marking-state**
- **[no] shutdown**
- **[no] srrp** *srrp-id*
 - **bfd-enable**
 - **description** *description-string*
 - **no description**
 - **gw-mac** *mac-address*
 - **no gw-mac**
 - **keep-alive-interval** *interval*
 - **no keep-alive-interval**
 - **message-path** *sap-id*
 - **no message-path**
 - **[no] policy** *vrrp-policy-id*
 - **priority** *priority*
 - **no priority**
 - **[no] shutdown**

VPort Commands

Refer to the SR OS Interfaces Guide for further information on card, Media Dependent Adapter (MDA), MCM (MDA Carrier Module), CMA (Compact Media Adapter) and port provisioning.

```

config
  — port port-id
    — ethernet
      — access
        — egress
          — vport vport-name [create]
          — no vport vport-name
            — agg-rate-limit limit
            — no agg-rate-limit
            — description description-string
            — no description
            — [no] egress-rate-modify
            — host-match dest string [create]
            — no host-match dest string
            — port-scheduler-policy port-scheduling-policy-name
            — no port-scheduler-policy
            — scheduler-policy scheduler-policy-name
            — no scheduler-policy

```

Redundant Interface Commands

```

config
  — service
    — ies
      — [no] redundant-interface ip-int-name
        — address {ip-address/mask | ip-address netmask} [remote-ip ip-address]
        — no address
        — [no] description description-string
        — [no] shutdown
        — [no] spoke-sdp sdp-id:vc-id
          — egress
            — filter [ip ip-filter-id]
            — vc-label ingress-vc-label
            — no vc-label [ingress-vc-label]
          — ingress
            — filter [ip ip-filter-id]
            — no filter
            — vc-label ingress-vc-label
            — no vc-label [ingress-vc-label]
          — [no] shutdown

config
  — service
    — vprn
      — [no] redundant-interface ip-int-name
        — address {ip-address/mask | ip-address netmask} [remote-ip ip-address]
        — no address
        — [no] description description-string
        — [no] shutdown
        — [no] spoke-sdp sdp-id:vc-id
          — egress
            — filter [ip ip-filter-id]
            — vc-label ingress-vc-label
            — no vc-label [ingress-vc-label]
          — ingress
            — filter [ip ip-filter-id]
            — no filter
            — vc-label ingress-vc-label
            — no vc-label [ingress-vc-label]
          — [no] shutdown

config
  — service
    — sdp sdp-id [gre | mpls]
    — no sdp sdp-id
      — binding
        — port [port-id | lag-id]
        — no port
        — pw-port pw-port-id [vc-id vc-id] [create]
        — no pw-port pw-port-id
          — egress
            — shaper
              — int-dest-id int-dest-id

```

- **no int-dest-id** *int-dest-id*
- **pw-sap-secondary-shaper** *secondary-shaper-name*
- **no pw-sap-secondary-shaper** *secondary-shaper-name*
- **vport** *vport-name*
- **no vport** *vport-name*
- **encap-type** {dot1q|qinq}
- **no encap-type**
- **[no] shutdown**
- **vc-type** {ether|vlan}
- **no vc-type**
- **vlan-vc-tag** *vlan-id*
- **no vlan-vc-tag**

config

- **service**
 - **ies** *service-id* [**customer** *customer-id*] [**vprn** *vprn-id*]
 - **vprn** *service-id* [**customer** *customer-id*]
 - **no vprn** *service-id*
 - **interface** *ip-int-name* [**create**] [**tunnel**]
 - **no interface** *ip-int-name*
 - **[no] ipv6**
 - **[no] urpf-check**
 - **mode** {strict | loose | strict-no-ecmp}
 - **no mode**
 - **[no] subscriber-interface** *ip-int-name*
 - **group-interface** *ip-int-name* [**create**]
 - **group-interface** *ip-int-name* [**create**] **lns**
 - **group-interface** *ip-int-name* [**create**] **softgre**
 - **no group-interface** *ip-int-name*
 - **[no] ipv6**
 - **[no] urpf-check**
 - **mode** {strict | loose | strict-no-ecmp}
 - **no mode**

Show Commands

```

show
  — service
    — active-subscribers detail
    — active-subscribers mirror
    — active-subscribers [summary]
      — credit-control credit-control [subscriber sub-ident-string]
      — credit-control out-of-credit [action action] [summary]
      — filter [subscriber sub-ident-string] [origin origin]
      — hierarchy [subscriber sub-ident-string]
      — host-tracking [subscriber sub-ident-string]
      — host-tracking [subscriber sub-ident-string] detail
      — host-tracking [subscriber sub-ident-string] summary
      — host-tracking [subscriber sub-ident-string] statistics
        — groups [group group-ip-address]
        — groups group group-ip-address] detail
        — groups group group-ip-address] summary
      — igmp [subscriber sub-ident-string][detail]
      — subscriber sub-ident-string
      — subscriber sub-ident-string detail
      — subscriber sub-ident-string mirror
      — subscriber sub-ident-string sap sap-id sla-profile sla-profile-name
      — subscriber sub-ident-string sap sap-id sla-profile sla-profile-name detail
      — subscriber sub-ident-string sap sap-id sla-profile sla-profile-name mirror
  — id service-id
    — 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
    — dhcp
      — lease-state [wholesaler service-id][sap sap-id | sdp sdp-id:vc-id | inter-
        face interface-name | ip-address ip-address[/mask] | chaddr ieee-address |
        mac ieee-address | {[port port-id] [no-inter-dest-id | inter-dest-id inter-
        dest-id}}] [detail]
      — statistics [sap sap-id] | [ sdp [sdp-id[:vc-id] ]]
      — summary
    — retailers
    — wholesalers
    — subscriber-hosts [sap sap-id] [ip ip-address[/mask]] [mac ieee-address] [sub-pro-
      file sub-profile-name] [sla-profile sla-profile-name] [detail]
    — gsm
      — neighbors group [name] [ip-address]
      — sessions [group name] neighbor ip-address] [ port port-number] [associ-
        ation] [statistics]
    — host [sap sap-id] [wholesaler service-id] [port port-id] [inter-dest-id intermediate-
      destination-id] [detail]
    — host [sap sap-id] [wholesaler service-id] [port port-id] no-inter-dest-id [detail]
    — host summary
    — host [detail] wholesaler service-id (VPRN only)
    — interface [ {[ip-address|ip-int-name] [interface-type] [detail] [family]}]summary]

```

- **sdp** *sdp-id* **pw-port** [*pw-port-id*]
 - **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*] [**app-profile** *app-profile-name*]
- show
- **qos**
 - **port-scheduler-policy** [*port-scheduler-policy-name*] [**association**]
 - **port-scheduler-policy** *port-scheduler-policy-name* **network-policy** *network-queue-policy-name*
 - **port-scheduler-policy** *port-scheduler-policy-name* **sap-egress** *policy-id*
 - **port-scheduler-policy** *port-scheduler-policy-name* **scheduler-policy** *scheduler-policy-name*
 - **port-scheduler-policy** *port-scheduler-policy-name* **scheduler-policy** *scheduler-policy-name* **sap-egress** *policy-id*
 - **sap-egress** [*policy-id*] [**association**|**detail**]
 - **sap-ingress** [*policy-id*] [**association** | **match-criteria** | **detail**]
 - **scheduler-hierarchy**
 - **customer** *customer-id* **site** *customer-site-name* [**scheduler** *scheduler-name*] [**ingress**|**egress**] [**detail**]
 - **sap** *sap-id* [**scheduler** *scheduler-name*] [**ingress**|**egress**] [**detail**]
 - **subscriber** *sub-ident-string* [**scheduler** *scheduler-name*] [**ingress**|**egress**][**detail**]
 - **scheduler-name** *scheduler-name*
 - **scheduler-policy** [*scheduler-policy-name*] [**association**|**sap-ingress** *policy-id*|**sap-egress** *policy-id*]
 - **scheduler-stats**
 - **customer** *customer-id* **site** *customer-site-name* [**scheduler** *scheduler-name*] [**ingress**|**egress**] [**detail**]
 - **sap** *sap-id* [**scheduler** *scheduler-name*] [**ingress**|**egress**] [**detail**]
 - **subscriber** *sub-ident-string* [**scheduler** *scheduler-name*] [**ingress**|**egress**][**detail**]
 - **shared-queue** *shared-queue-policy-name* [**detail**]
- show
- **redundancy**
 - **multi-chassis** **all**
 - **multi-chassis** **mc-lag**
 - **multi-chassis** **sync**
 - **mc-ipsec** *addr* [**tunnel-group** *grp-id*]
 - **mc-ring** **peer** *ip-address* **statistics**
 - **mc-ring** **peer** *ip-address* [**ring** *sync-tag* [**detail**|**statistics**]]
 - **mc-ring** **peer** *ip-address* **ring** *sync-tag* **ring-node** [*ring-node-name*] [**detail**|**statistics**]
 - **mc-ring** **global-statistics**
- show
- **aaa**
 - **radius-configuration**
- show
- **subscriber-mgmt**
 - **ancp-string** [*policy-name*]
 - **ancp-string** *policy-name* **association**
 - **ancp-string**
 - **ancp-string** *ancp-string*
 - **ancp-string** **customer** *customer-id* **site** *customer-site-name*
 - **ancp-string** **sap** *sap-id*
 - **authentication** *policy-name* **association**

- **authentication** *[policy-name]*
- **authentication** *[policy-name]* **statistics**
- **authentication** **coa-statistics**
- **explicit-subscriber-map**
- **host-lockout-policy**
- **host-lockout-policy** *policy-name* **association**
- **host-lockout-policy** *policy-name*
- **host-lockout-policy** *policy-name* **all**
- **host-lockout-policy** *policy-name* **sap** *sap-id* [**circuit-id** | **mac** | **remote-id**]
- **igmp-policy**
- **igmp-policy** *policy-name* **association**
- **igmp-policy** *policy-name*
- **local-user-db** *local-user-db-name* **association** [**dhcp**] [**ppp**]
- **local-user-db** *local-user-db-name* **dhcp-all-hosts**
- **local-user-db** *local-user-db-name* **dhcp-host** *dhcp-host-name*
- **local-user-db** *local-user-db-name* **dhcp-unmatched-hosts**
- **local-user-db** [*local-user-db-name*]
- **local-user-db** *local-user-db-name* **ppp-all-hosts**
- **local-user-db** *local-user-db-name* **ppp-host** *pppoe-host-name*
- **local-user-db** *local-user-db-name* **ppp-unmatched-hosts**
- **msap-policy** [*msap-policy-name* [**association**]]
- **sla-profile** [*sla-profile-name* [**association**]]
- **statistics** **iom** (*slot* | **all**) [**host**|**session**|**subscriber**|**summary**] [**non-zero-value-only**]
- **statistics** **mda** (*mda* | **all**) [**host**|**session**|**subscriber**|**summary**] [**non-zero-value-only**]
- **statistics** **port** (*port-id* | **all**) [**host**|**session**|**subscriber**|**summary**] [**non-zero-value-only**]
- **statistics** **pw-port** (*pw-port* | **all**) [**host**|**session**|**subscriber**|**summary**] [**non-zero-value-only**]
- **statistics** **system** [**host**|**session**|**subscriber**|**summary**] [**non-zero-value-only**]
- **sub-ident-policy** [*sub-ident-policy-name* [**association**]]
- **sub-ident-policy** *sub-ident-policy-name* **script** {**primary** | **secondary** | **tertiary**}
- **sub-profile** [*sub-profile-name* [**association**]]

Subscriber Management Command Reference

Monitor Commands

```
monitor
  — service
    — subscriber sub-ident-string sap sap-id sla-profile sla-profile-name [base | ingress-queue-id
      ingress-queue-id | egress-queue-id egress-queue-id] [interval seconds] [repeat repeat] [absolute
      | rate]
```

Clear Commands

```
clear
  — subscriber-mgmt
    — ancp
      — ancp-sub-string string
      — authentication [policy-name]
      — authentication coa-statistics
      — msap-policy msap-policy-name
      — peakvalue-stats iom (slot | all) [recursive]
      — peakvalue-stats mda (mda | all) [recursive]
      — peakvalue-stats port (port-id | all)
      — peakvalue-stats pw-port (pw-port | all)
      — peakvalue-stats system [recursive]
      — radius-accounting [policy-name]
    — service
      — id service-id
        — arp-host
          — arp-host { mac ieee-address | sap sap-id | ip-address ip-address[/mask] }
          — arp-host [port port-id] [inter-dest-id intermediate-destination-id | no-inter-dest-id]
          — arp-host statistics [sap sap-id | interface interface-name]
          — authentication
            — statistics
          — msap msap-id
          — msap-policy msap-policy-name
        — statistics
          — subscriber sub-ident-string
        — qos
          — scheduler-stats
            — subscriber sub-ident-string [scheduler scheduler-name] [ingress|egress]
      — router
        — srrp
          — interface subscriber-interface [id srrp-id]
          — statistics interface subscriber-interface [id srrp-id]
      — aaa
        — route-downloader name [vprn vprn] [family family]
```

Debug Commands

```

debug
  — service
    — id service-id
      — arp
      — [no] arp-host
      — one-time-http-redirection
      — [no] ppp
        — [no] circuit-id circuit-id
        — [no] event
          — dhcp-client [terminate-only]
          — no dhcp-client
          — l2tp [terminate-only]
          — no l2tp
          — local-address-assignment [terminate-only]
          — no local-address-assignment
          — ppp [terminate-only]
          — no ppp
        — [no] mac ieee-address
        — [no] msap msap-id
        — [no] packet
          — detail-level {low|medium|high}
          — no detail-level
          — [no] dhcp-client
          — discovery [padi] [pado] [padr] [pads] [padt]
          — no discovery
          — mode {dropped-only|ingr-and-dropped|egr-ingr-and-dropped}
          — no mode
          — ppp [lcp] [pap] [chap] [ipcp] [ipv6cp]
          — no ppp
        — [no] remote-id remote-id
        — [no] sap sap-id
        — [no] username username
      —
    — subscriber-mgmt
      — [no] authentication [policy policy-name] [mac-addr ieee-address] [circuit-id circuit-id]
      — [no] sub-ident-policy policy-name
        — script-all-info
        — [no] script-compile-error
        — [no] script-export-variables
        — [no] script-output
        — [no] script-output-on-error
        — [no] script-runtime-error
    — router
      — [no] srrp
        — [no] events [interface ip-int-name]
        — [no] packets [interface ip-int-name]
      — [no] radius
      — radius
        — detail-level {low|medium|high}
        — no detail-level

```

- **packet-type** [authentication] [accounting] [coa]
- **no packet-type**
- **no radius-attr type** *attribute-type* {address|hex|integer|string} *attribute-value*
- **no radius-attr vendor** *vendor-id type attribute-type*
- **no radius-attr vendor** *vendor-id type attribute-type* {address |string} *value attribute-value*
- **radius-attr type** *attribute-type* [transaction]
- **radius-attr type** *attribute-type* [transaction] {address|hex|integer|string} *value attribute-value*
- **radius-attr vendor** *vendor-id type attribute-type* [transaction *encoding-type*]
- **radius-attr vendor** *vendor-id type attribute-type* [transaction *encoding-type*] {address|hex|integer|string} *value attribute-value*
- **no radius-attr type** *attribute-type*
- [no] **server-address** *ip-address*

Tools Commands

tools

- **dump**
 - **redundancy**
 - **multi-chassis**
 - **force-switchover** *tunnel-group local-group-id*
 - **mc-ipsec**
 - **mc-ring**
 - **srrp-sync-data** [*instance instance-id*] [*peer ip-address*]
 - **srrp-sync-data** *pppoe*
 - **srrp-sync-data** *dhcp pppoe*
 - **sync-database** [*peer ip-address*] [*port port-id | lag-id*] [*sync-tag sync-tag*] [*application* {dhcps|igmp|igmp-snooping|mc-ring|srrp|sub-mgmt|mld-snooping}] [*detail*] [*type* {alarm-deleted|local-deleted}]
- **perform**
 - **aaa**
 - **route-downloader** *start* [*force*]
 - **persistence**
 - **downgrade** *target-version target* [*reboot*]
 - **subscriber-mgmt**
 - **credit-reset** *sap sap-id subscriber sub-ident-string sla-profile sla-profile-name* {*category category-name*|*all-categories*}
 - **credit-reset** *sap sap-id ip ip-address* {*category category-name*| *all-categories*}
 - **credit-reset** *svc service-id ip ip-address* {*category category-name*| *all-categories*}
 - **eval-lease-state** *sap sap-id ip ip-address* [*subscriber sub-ident-string*] [*sub-profile-string sub-profile-string*] [*sla-profile-string sla-profile-string*] [*app-profile-string app-profile-string*] [*inter-dest-id intermediate-destination-id*] [*ancp-string ancp-string*]
 - **eval-lease-state** *svc-id service-id ip ip-address* [*subscriber sub-ident-string*] [*sub-profile-string sub-profile-string*] [*sla-profile-string sla-profile-string*] [*app-profile-string app-profile-string*] [*inter-dest-id intermediate-destination-id*] [*ancp-string ancp-string*]
 - **re-ident-sub** *old-sub-ident-string to new-sub-ident-string*