

Service SAP QoS Policy Command Reference

Command Hierarchies

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Service Ingress QoS Policy Commands

```
config
  qos
    [no] sap-ingress policy-id | policy-name
      default-fc fc-name
      no default-fc
      default-priority {low | high}
      no default-priority
      description description-string
      no description
      dot1p dot1p-priority [fc fc-name] [priority {low | high}]
      no dot1p dot1p-priority
      dscp dscp-name [fc fc-name] [priority {low | high}]
      no dscp dscp-name
      [no] fc fc-name
        policer policer-id [fp-redirect-group]
        no policer
        broadcast-policer policer-id [fp-redirect-group]
        no broadcast-policer
        broadcast-queue queue-id [group queue-group-name]
        no broadcast-queue
        [no] de-1-out-profile
        egress-fc fc-name
        no egress-fc
        in-remark dscp dscp-name
```

- **in-remark prec** *ip-prec-value*
- **no in-remark**
- **multicast-policer** *policer-id* [**fp-redirect-group**]
- **no multicast-policer**
- **multicast-queue** *queue-id* [**group** *queue-group-name*]
- **no multicast-queue**
- **out-remark dscp** *dscp-name*
- **out-remark prec** *ip-prec-value*
- **no out-remark**
- **profile** {**in** | **out**}
- **no profile**
- **queue** *queue-id* [{**group** *queue-group-name* [*instance instance-id*]} | **port-redirect-group-queue**]
- **no queue**
- **unknown-policer** *policer-id* [**fp-redirect-group**]
- **no unknown-policer**
- **unknown-queue** *queue-id* [**group** *queue-group-name*]
- **no unknown-queue**
- [**no**] **ip-criteria**
 - [**no**] **entry** *entry-id*
 - **action** [**fc** *fc-name*] [**profile** {**in** | **out**}]
 - **no action**
 - **description** *description-string*
 - **no description**
 - **match** [**protocol** *protocol-id*]
 - **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ip-address/mask* | *ip-address netmask*}
 - **no dst-ip**
 - **dst-port** {**lt** | **gt** | **eq**} *dst-port-number*
 - **dst-port range** *start end*
 - **no dst-port**
 - **fragment** {**true** | **false**}
 - **no fragment**
 - **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**
 - **renum** [*old-entry-id new-entry-id*]
- [**no**] **ipv6-criteria**
 - [**no**] **entry** *entry-id*
 - **action** [**fc** *fc-name*] [**priority** {**low** | **high**}]
 - **no action**
 - **description** *description-string*
 - **no description**
 - **match** [**next-header** *next-header*]
 - **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ipv6-address/prefix-length*}
 - **no dst-ip**
 - **dst-port** {**lt** | **gt** | **eq**} *dst-port-number*

- **dst-port** *range start end*
- **no dst-port**
- **src-ip** {*ipv6-address/prefix-length*}
- **no src-ip**
- **src-port** {**lt** | **gt** | **eq**} *src-port-number*
- **src-port range** *start end*
- **no src-port**
- **renum** [*old-entry-id new-entry-id*]
- **lsp-exp** *lsp-exp-value* [**fc** *fc-name*] [**priority** {**low**|**high**}] [**hsm-da-counter-override** *counter-id*]
- **no lsp-exp** *lsp-exp-value*
- [**no**] **mac-criteria**
 - [**no**] **entry** *entry-id*
 - **action** [**fc** *fc-name*] [**priority** {**low** | **high**}]
 - **no action**
 - **description** *description-string*
 - **no description**
 - **match** [**frame-type** {**802dot3** | **802dot2-llc** | **802dot2-snap** | **ether-net-II** | **atm**}]
 - **no match**
 - **atm-vci** *vci-value*
 - **no atm-vci**
 - **dot1p** *dot1p-value* [*dot1p-mask*]
 - **no dot1p**
 - **dsap** *dsap-value* [*dsap-mask*]
 - **no dsap**
 - **dst-mac** *ieee-address* [*ieee-address-mask*]
 - **no dst-mac**
 - **etype** *etype-value*
 - **no etype**
 - **inner-tag** *value* [*vid-mask*]
 - **no inner-tag**
 - **outer-tag** *value* [*vid-mask*]
 - **no outer-tag**
 - **snap-oui** [*zero* | *non-zero*]
 - **no snap-oui**
 - **snap-pid** *snap-pid*
 - **no snap-pid**
 - **src-mac** *ieee-address* [*ieee-address-mask*]
 - **no src-mac**
 - **ssap** *ssap-value* [*ssap-mask*]
 - **no ssap**
 - **renum** *old-entry-number new-entry-number*
 - **type** *filter-type*
- **policer** *policer-id* [**create**]
- **no policer** *policer-id*
 - **adaptation-rule** **pir** {**max** | **min** | **closest**}] [**cir** {**max** | **min** | **closest**}]
 - **no adaptation-rule**
 - **adv-config-policy** *policy-name*
 - **no adv-config-policy**
 - **description** *description-string*
 - **no description**
 - **cbs** {*size* [**bytes** | **kilobytes**] | **default**}
 - **no cbs**

- **high-prio-only** *percent-of-mbs*
- **no high-prio-only**
- **mbs** {*size* [bytes | kilobytes] | default}
- **no mbs**
- **packet-byte-offset** {add *bytes* | subtract *bytes*}
- **no packet-byte-offset**
- **parent** {root | *arbiter-name*} [level *level*] [weight *weight-within-level*]
- **no parent**
- **percent-rate** *percent-of-line-rate* [cir *percent-of-line-rate*]
- **no percent-rate**
- **no profile-capped**
- **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 | offered-profile-capped-cir | offered-limited-capped-cir}
- **no stat-mode**
- **prec** *ip-prec-value* [fc *fc-name*] [priority {low | high}]
- **no prec** *ip-prec-value*
- **queue** *queue-id* [multipoint] [*queue-type*] [*queue-mode*] pool *pool-name*
- **no queue** *queue-id*
 - **adaptation-rule** [pir *adaptation-rule*] [cir *adaptation-rule*]
 - **no adaptation-rule**
 - **adv-config-policy** *policy-name*
 - **no adv-config-policy**
 - **burst-limit**
 - **no burst-limit**
 - **cbs** *size-in-kbytes*
 - **no cbs**
 - **high-prio-only** *percent*
 - **no high-prio-only**
 - **mbs** *size* [bytes|kilobytes]
 - **no mbs**
 - **parent** *scheduler-name* [weight *weight*] [level *level*] [cir-weight *cir-weight*] [cir-level *cir-level*]
 - **no parent**
 - **percent-rate** *pir-percent* [cir *cir-percent*] [port-limit|local-limit]
 - **percent-rate** *pir-percent* police [port-limit|local-limit]
 - **no percent-rate**
 - [no] **pool** *pool-name*
 - **rate** *pir-rate* [cir *cir-rate* | police]
 - **no rate**
 - **scope** {exclusive | template}
- **no scope**

Service Egress QoS Policy Commands

```
config
  — qos
    — [no] sap-egress policy-id | policy-name
      — description description-string
      — no description
      — dot1p dot1p-value [fc fc-name] [profile {in | out | use-de}]
      — no dot1p dot1p-value
      — dscp dscp-name [hsmda-counter-override counter-id] [fc fc-name] [profile {in | out}]
      — no dscp dscp-name
      — ethernet-ctag
      — no ethernet-ctag
      — fc fc-name
      — no fc fc-name
        — [no] de-mark [force de-value]
        — [no] dot1p {dot1p-value | in-profile dot1p-value | out-profile dot1p-value}
        — dscp {dscp-name | in-profile dscp-name | out-profile dscp-name}
        — no dscp
        — hsmda
          — queue [1..8]
          — no queue
        — policer policer-id [ { [port-redirect-group-queue] [queue queue-id] } | { group
          queue-group-name [instance instance-id] [queue group-queue-id] } ]
        — no policer
          — adaptation-rule [pir {max | min | closest}] [cir {max | min | closest}]
          — no adaptation-rule
          — cbs {size [bytes | kilobytes] | default}
          — no cbs
          — description description string
          — no description
          — high-prio-only percent-of-mbs
          — no high-prio-only
          — mbs {size [bytes | kilobytes] | default}
          — no mbs
          — packet-byte-offset {add bytes | subtract bytes}
          — no packet-byte-offset
          — parent {root | arbiter-name} [level level] [weight weight-within-level]
          — no parent
          — percent-rate percent-of-line-rate [cir percent-of-line-rate]
          — no percent-rate
          — rate {max | kilobits-per-second} [cir {max | kilobits-per-second}]
          — no rate
          — stat-mode {no-stats | minimal | offered-profile-no-cir | offered-profile-cir | offered-total-cir}
          — no stat-mode
        — prec ip-prec-value [hsma-counter-override counter-id] [fc fc-name] [profile
          {in | out}]
        — no prec ip-prec-value
```

- **queue** *queue-id* [{group *queue-group-name* [instance *instance-id*]} | **port-redirect-group-queue**]
- **no queue**
- [no] **ipv6-criteria**
 - **entry** *entry-id*
 - **action** [**hsmda-counter-override** *counter-id*] [**fc** *fc-name*] [**profile** {in | out}]
 - **no action**
 - **description** *description string*
 - **no description**
 - **match** [**next-header** *next header*]
 - **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ipv6-address/prefix-length*}
 - **no dst-ip**
 - **dst-port** {It|gt|cq} *dst-port-number*
 - **dst-port range** *start end*
 - **no dst-port**
 - **src-ip** {*ipv6-address/prefix-length*}
 - **no src-ip**
 - **src-port** {It|gt|cq} *dst-port-number*
 - **src-port range** *start end*
 - **no src-port**
 - **renum** *old-entry-number new-entry-number*
- **policer** *policer-id* [group *queue-group-name* [queue *group-queue-id*]]
- **no policer**
 - **adaptation-rule** [**pir** {max | min | closest}] [**cir** {max | min | closest}]
 - **no adaptation-rule**
 - **cbs** {*size* [bytes | kilobytes]} | default}
 - **no cbs**
 - **description** *description string*
 - **no description**
 - **high-prio-only** *percent-of-mbs*
 - **no high-prio-only**
 - **mbs** {*size* [bytes | kilobytes]} | default}
 - **no mbs**
 - **packet-byte-offset** {add *bytes* | subtract *bytes*}
 - **no packet-byte-offset**
 - **parent** {root | *arbiter-name*} [**level** *level*] [**weight** *weight-within-level*]
 - **no parent**
 - **percent-rate** *percent-of-line-rate* [**cir** *percent-of-line-rate*]
 - **no percent-rate**
 - **rate** {max | kilobits-per-second} [**cir** {max | kilobits-per-second}]
 - **no rate**
 - **stat-mode** {no-stats | minimal | offered-profile-no-cir | offered-profile-cir | offered-total-cir}
 - **no stat-mode**

Queue Commands

- **hsmda-queues**
 - [no] **wrr-policy** *hsmda-wrr-policy-name*

- [no] **low-burst-max-class** *class-id*
- **packet-byte-offset** {**add** *add-bytes* | **subtract** *sub-bytes*}
- **no packet-byte-offset**
- **queue** *queue-id* [**port-redirect-group-queue**]
- **no queue** *queue-id*
 - **adaptation-rule** [**pir** *adaptation-rule*]
 - **no adaptation-rule**
 - **rate** *pir-rate* {**max** | *kilobits-per-second*}
 - **no rate**
 - **slope-policy** *hsmda-slope-policy-name*
 - **no slope-policy**
 - [no] **wrr-weight** *weight*
 - [no] **mbs** {*size* [**bytes** | **kilobytes**] | **default**}
- [no] **ip-criteria**
 - [no] **entry** *entry-id*
 - **action** [**hsmda-counter-override** *counter-id*] [**fc** *fc-name*] [**profile** {**in** | **out**}]
 - **no action**
 - **description** *description-string*
 - **no description**
 - **match** [**protocol** *protocol-id*]
 - **no match**
 - **dscp** *dscp-name*
 - **no dscp**
 - **dst-ip** {*ip-address/mask* | *ip-address netmask*}
 - **no dst-ip**
 - **dst-port** {**lt** | **gt** | **eq**} *dst-port-number*
 - **fragment** {**true** | **false**}
 - **no fragment**
 - **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**
- **prec** *ip-prec-value* [**hsmda-counter-override** *counter-id*] [**fc** *fc-name*] [**profile** {**in** | **out**}]
- **no prec** *ip-prec-value*
- **queue** *queue-id* [**multipoint**] [*queue-type*] [*queue-mode*] **pool** *pool-name*
- **no queue** *queue-id*
 - **adaptation-rule** [**pir** *adaptation-rule*] [**cir** *adaptation-rule*]
 - **no adaptation-rule**
 - **adv-config-policy** *policy-name*
 - **no adv-config-policy**
 - **avg-frame-overhead** *percent*
 - **no avg-frame-overhead**
 - **burst-limit**
 - **no burst-limit**
 - **cbs** *size-in-kbytes*
 - **no cbs**
 - **high-prio-only** *percent*
 - **no high-prio-only**
 - **mbs** *size* [**bytes** | **kilobytes**]
 - **no mbs**
 - **packet-byte-offset** {**add** *bytes* | **subtract** *bytes*}
 - **no packet-byte-offset**

- **parent** *scheduler-name* [**weight** *weight*] [**level** *level*] [**cir-weight** *cir-weight*] [**cir-level** *cir-level*]
- **no parent**
- **percent-rate** *pir-percent* [**cir** *cir-percent*] [**port-limit** | **local-limit**]
- **no percent-rate**
- [**no**] **pool** *pool-name*
- **port-parent** [**weight** *weight*] [**level** *level*] [**cir-weight** *cir-weight*] [**cir-level** *cir-level*]
- **no port-parent**
- **rate** *pir-rate* [**cir** *cir-rate*]
- **no rate**
- **scope** {**exclusive** | **template**}
- **no scope**

Operational Commands

config

- qos
 - **copy** sap-egress *src-pol dst-pol* [**overwrite**]
 - **copy** sap-ingress *src-pol dst-pol* [**overwrite**]
 - **copy** hsmda-pool-policy *src-name dst-name* [**overwrite**]
 - **copy** hsmda-scheduler-policy *src-name dst-name* [**overwrite**]
 - **copy** hsmda-slope-policy *src-name dst-name* [**overwrite**]
 - **copy** named-pool-policy *src-name dst-name* [**overwrite**]

Show Commands

show

- qos
 - **sap-ingress** *policy-id* [**detail**]
 - **sap-egress** [*policy-id*] [**association** | **match-criteria** | **hsmda** | **detail**]
 - **hsmda-pool-policy** [*hsmda-pool-policy-name*] [**associations**] [**detail**]
 - **hsmda-pools** *mda mda-id* {**ingress** | **egress**} [**detail**]
 - **hsmda-scheduler-hierarchy** **port** *port-id* [{**shapers** | **shaper** *shaper-name*}]
 - **hsmda-scheduler-hierarchy** *mda mda-id*
 - **hsmda-scheduler-hierarchy** **sap** *sap-id* [**ingress** | **egress**]
 - **hsmda-scheduler-hierarchy** **subscriber** *sub-id* [**ingress** | **egress**]
 - **hsmda-scheduler-policy** [*hsmda-scheduler-policy-name*] [**associations**] [**detail**]
 - **hsmda-slope-policy** [*hsmda-slope-policy-name*] [**associations**] [**detail**]

