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## Filter Command Reference

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### Configuration Commands

#### DHCP Filter Policy Commands

```

config
  — filter
    — dhcp-filter filter-id [create]
    — no dhcp-filter filter-id
      — description description-string
      — no description
      — entry entry-id [create]
      — no entry entry-id
        — action {bypass-host-creation}
        — action drop
        — no action
        — option dhcp-option-number {present | absent}
        — option dhcp-option-number match hex hex-string [exact] [invert-match]
        — option dhcp-option-number match string ascii-string [exact] [invert-match]
        — no option

```

IP Filter Policy Commands

```

config
  — filter
    — ip-filter filter-id [create]
    — ip-filter {filter-id | filter-name}
    — no ip-filter filter-id
      — chain-to-system-filter
      — no chain-to-system-filter
      — default-action {drop | forward}
      — description description-string
      — no description
      — embed-filter filter-id [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name [{system | service {service-id | service-name} |
        sap sap-id}] [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name system [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name service {service-id | service-name} [offset offset]
        [{active | inactive}]
      — embed-filter open-flow ofs-name sap sap-id] [offset offset] [{active | inactive}]
      — no embed-filter filter-id
      — no embed-filter open-flow ofs-name service {service-id | service-name}
      — no embed-filter open-flow ofs-name sap sap-id
      — no embed-filter open-flow ofs-name system
      — no embed-filter open-flow ofs-name [{system | service {service-id | service-name} |
        sap sap-id}]
      — entry entry-id [time-range time-range-name] [create]
      — no entry entry-id
        — action (IPv4)
        — no action (IPv4)
          — drop
          — drop packet-length {{lt | eq | gt} packet-length-value | range
            packet-length-value packet-length-value}
          — drop [ttl {{lt | gt | eq} ttl-value | range ttl-value ttl-value}]
          — forward
          — forward esi esi sf-ip ip-address vas-interface interface-name
            router {router-instance | service-name service-name}
          — forward esi esi service-id vpls-service-id
          — forward lsp lsp-name
          — forward next-hop [indirect] ip-address
          — forward next-hop [indirect] ip-address router {router-instance |
            service-name service-name}
          — forward next-hop interface ip-int-name
          — forward redirect-policy policy-name
          — forward router {router-instance | service-name service-name}
          — forward sap sap-id
          — forward sdp sdp-id:vc-id
          — gtp-local-breakout
          — http-redirect rdr-url-string [allow-radius-override]
          — nat [nat-policy nat-policy-name]
          — reassemble
        — description description-string
        — no description
        — egress-pbr {default-load-balancing | l4-load-balancing}
        — no egress-pbr
    
```

```

— [no] filter-sample
— [no] interface-disable-sample
— log log-id
— no log
— match [protocol protocol-id]
— no match
    — dscp dscp-name
    — no dscp
    — dst-ip {ip-address/mask | ip-address ipv4-address-mask | ip-
      prefix-list prefix-list-name}
    — no dst-ip
    — dst-port {lt | gt | eq} dst-port-number
    — dst-port port-list-name
    — dst-port range dst-port-number dst-port-number
    — no dst-port
    — fragment {true|false|first-only|non-first-only}
    — no fragment
    — 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}
    — no multiple-option
    — option-present {true | false}
    — no option-present
    — port {lt|gt|eq} port-number
    — port port-list port-list-name
    — port range port-number port-number
    — no port
    — src-ip {ip-address/mask | ip-address ipv4-address-mask | ip-
      prefix-list prefix-list-name}
    — no src-ip
    — src-port {{lt | gt | eq} src-port-number}
    — src-port port-list port-list-name
    — src-port range src-port-number src-port-number
    — no src-port
    — src-route-option {true|false}
    — no src-route-option
    — tcp-ack {true | false}
    — no tcp-ack
    — tcp-syn {true | false}
    — no tcp-syn
    — pbr-down-action-override {drop | forward | filter-default-action}
    — no pbr-down-action-override
— filter-name filter-name
— no filter-name
— renum old-entry-id new-entry-id
— scope {exclusive | template | embedded | system}
— no scope
— shared-radius-filter-wmark low low-watermark high high-watermark
— no shared-radius-filter-wmark
— sub-insert-credit-control start-entry entry-id count count
— no sub-insert-credit-control
— sub-insert-radius start-entry entry-id count count
— no sub-insert-radius

```

- **sub-insert-shared-pccrule** **start-entry** *entry-id* **count** *count*
- **no sub-insert-shared-pccrule**
- **sub-insert-shared-radius** **start-entry** *entry-id* **count** *count*
- **no sub-insert-shared-radius**
- **sub-insert-wmark** **low** *low-watermark* **high** *high-watermark*
- **no sub-insert-wmark**

## IPv6 Filter Policy Commands

```

config
  — filter
    — ipv6-filter filter-id [create]
    — ipv6-filter {filter-id | filter-name}
    — no ipv6-filter filter-id
      — chain-to-system-filter
      — no chain-to-system-filter
      — default-action {drop | forward}
      — description description-string
      — no description
      — embed-filter filter-id [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name [{system | service {service-id | service-name} | sap sap-id}] [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name system [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name service {service-id | service-name} [offset offset] [{active | inactive}]
      — embed-filter open-flow ofs-name sap sap-id] [offset offset] [{active | inactive}]
      — no embed-filter filter-id
      — no embed-filter open-flow ofs-name service {service-id | service-name}
      — no embed-filter open-flow ofs-name sap sap-id
      — no embed-filter open-flow ofs-name system
      — no embed-filter open-flow ofs-name [{system | service {service-id | service-name} | sap sap-id}]
      — entry entry-id [time-range time-range-name] [create]
      — no entry entry-id
        — action(IPv6)
        — no action(IPv6)
          — drop
          — drop packet-length {{lt | eq | gt} packet-length-value | range packet-length-value packet-length-value}
          — forward
          — forward next-hop [indirect] ipv6-address
          — forward next-hop [indirect] ipv6-address router {router-instance | service-name service-name}
          — forward redirect-policy policy-name
          — forward router {router-instance service-name service-name}
          — forward sap sap-id
          — forward sdp sdp-id:vc-id
          — http-redirect rdr-url-string [allow-radius-override]
          — nat [nat-policy nat-policy-name] nat-type nat-type
        — description description-string
        — no description
        — [no] filter-sample
        — [no] interface-disable-sample
        — log log-id
        — no log
        — match [next-header next-header]
        — no match
          — ah-ext-hdr {true | false }
          — no ah-ext-hdr
          — dscp dscp-name
          — no dscp

```

- **dst-ip** {*ipv6-address/prefix-length* | *ipv6-address ipv6-address-mask* | **ipv6-prefix-list** *prefix-list-name*}
- **no dst-ip**
- **dst-port** {**lt** | **gt** | **eq**} *dst-port-number*
- **dst-port port-list** *port-list-name*
- **dst-port range** *dst-port-number dst-port-number*
- **no dst-port**
- **esp-ext-hdr** {**true** | **false**}
- **no esp-ext-hdr**
- **flow-label** *flow-label* [*mask*]
- **no flow-label**
- **fragment** {**true**|**false**|**first-only**|**non-first-only**}
- **no fragment**
- **hop-by-hop-opt** {**true**|**false**}
- **no hop-by-hop-opt**
- **icmp-code** *icmp-code*
- **no icmp-code**
- **icmp-type** *icmp-type*
- **no icmp-type**
- **port** {**lt**|**gt**|**eq**} *port-number*
- **port port-list** *port-list-name*
- **port range** *port-number port-number*
- **no port**
- **routing-type0** {**true**|**false**}
- **no routing-type0**
- **src-ip** {*ipv6-address/prefix-length* | *ipv6-address ipv6-address-mask* | **ipv6-prefix-list** *prefix-list-name*}
- **no src-ip**
- **src-port** {**lt** | **gt** | **eq**} *src-port-number*
- **src-port port-list** *port-list-name*
- **src-port range** *src-port-number src-port-number*
- **no src-port**
- **tcp-ack** {**true** | **false**}
- **no tcp-ack**
- **tcp-syn** {**true** | **false**}
- **no tcp-syn**
- **filter-name** *filter-name*
- **no filter-name**
- **renum** *old-entry-id new-entry-id*
- **scope** {**exclusive** | **template** | **embedded** | **system**}
- **no scope**
- **shared-radius-filter-wmark** **low** *low-watermark* **high** *high-watermark*
- **no shared-radius-filter-wmark**
- **sub-insert-credit-control** **start-entry** *entry-id* **count** *count*
- **no sub-insert-credit-control**
- **sub-insert-radius** **start-entry** *entry-id* **count** *count*
- **no sub-insert-radius**
- **sub-insert-shared-pccrule** **start-entry** *entry-id* **count** *count*
- **no sub-insert-shared-pccrule**
- **sub-insert-shared-radius** **start-entry** *entry-id* **count** *count*
- **no sub-insert-shared-radius**
- **sub-insert-wmark** **low** *low-watermark* **high** *high-watermark*
- **no sub-insert-wmark**

## System Filter Policy Commands

config

- filter
  - **system-filter**
    - **ip** *filter-id*
    - **no ip** *filter-id*
    - **ipv6** *filter-id*
    - **no ipv6** *filter-id*

## Log Filter Commands

- ```
config
  — filter
    — log log-id [create]
    — no log log-id
      — description description-string
      — no description
      — destination memory num-entries | syslog syslog-id
      — no destination
      — [no] shutdown
      — summary
        — [no] shutdown
        — summary-crit dst-addr
        — summary-crit src-addr
        — no summary-crit
      — [no] wrap-around
```

MAC Filter Commands

```

config
  — filter
    — mac-filter filter-id [create]
    — mac-filter {filter-id | filter-name}
    — no mac-filter filter-id
      — default-action {drop | forward}
      — description description-string
      — no description
      — entry entry-id [time-range time-range-name]
      — no entry entry-id [create]
        — action
        — no action
          — drop
          — forward esi eso service-id vpls-service-id
          — forward sap sap-id
          — forward sdp sdp-id:vc-id
          — http-redirect url
        — description description-string
        — no description
        — log log-id
        — no log
        — match [frame-type {802dot3 | 802dot2-llc | 802dot2-snap | ether-
net_II}]
        — no match
          — 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 0x0600..0xffff
          — no etype
          — inner-tag value [vid-mask]
          — no inner-tag
          — isid value [to higher-value]
          — no isid
          — outer-tag value [vid-mask]
          — no outer-tag
          — snap-oui {zero | non-zero}
          — no snap-oui
          — snap-pid snap-pid
          — no snap-pid
          — ssap ssap-value [ssap-mask]
          — no ssap
          — src-mac ieee-address [ieee-address-mask]
          — no src-mac
        — pbr-down-action-override {drop | forward | filter-default-action}
        — no pbr-down-action-override
      — renum old-entry-id new-entry-id
      — scope {exclusive | template}
      — no scope
      — type filter-type
  
```



## Match Filter List Commands

```

config
  — filter
    — match-list
      — ip-prefix-list ip-prefix-list-name [create]
      — no ip-prefix-list ip-prefix-list-name
        — [no] apply-path
          — bgp-peers index group reg-exp neighbor reg-exp
          — no bgp-peers index
        — description description-string
        — no description
        — [no] prefix ip-prefix/prefix-length
      — ipv6-prefix-list ipv6-prefix-list-name [create]
      — no ipv6-prefix-list ipv6-prefix-list-name
        — [no] apply-path
          — bgp-peers index group reg-exp neighbor reg-exp
          — no bgp-peers index
        — description description-string
        — no description
        — [no] prefix ipv6-prefix/prefix-length
      — port-list port-list-name create
      — no port-list port-list-name
        — description description-string
        — no description
        — [no] port port number
        — [no] port range start end
        — no port

```

## Redirect Policy Configuration Commands

```

config
  — filter
    — redirect-policy redirect-policy-name [create]
    — no redirect-policy redirect-policy-name
      — description description-string
      — no description
      — destination ip-address [create]
      — no destination ip-address
      — destination ipv6-address [create]
      — no destination ipv6-address
        — description description-string
        — no description
        — [no] ping-test
          — drop-count consecutive-failures [hold-down seconds]
          — no drop-count
          — interval seconds
          — no interval
          — timeout seconds
          — no timeout
        — priority [priority]
        — no priority
        — router router-instance
        — router service-name service-name
        — no router
        — [no] shutdown
        — snmp-test test-name [create]
        — no snmp-test test-name
          — drop-count consecutive-failures [hold-down seconds]
          — no drop-count
          — interval seconds
          — no interval
          — oid oid-string community community-string
          — no oid
          — return-value return-value type return-type [disable | lower-
priority priority | raise-priority priority]
          — no return-value return-value type return-type
          — timeout seconds
          — no timeout
        — sticky-dest {hold-time-up seconds | no-hold-time-up}
        — no sticky-dest
        — [no] unicast-rt-test
        — url-test test-name [create]
        — no url-test test-name
          — drop-count consecutive-failures [hold-down seconds]
          — no drop-count
          — interval seconds
          — no interval
          — return-code return-code-1 [return-code-2] [disable | lower-
priority priority | raise-priority priority]
          — no return-code return-code-1 [return-code-2]
          — timeout seconds
          — no timeout
          — url url-string [http-version version-string]
          — no url

```

- [no] **router** [*router-instance* | **service-name** *service-name*]
- [no] **shutdown**

## Copy Filter Commands

- ```

config
  — filter
    — copy ip-filter src-filter-id [src-entry src-entry-id] to dst-filter-id [dst-entry dst-entry-id]
      [overwrite]
    — copy ipv6-filter src-filter-id [src-entry src-entry-id] to dst-filter-id [dst-entry dst-entry-id]
      [overwrite]
    — copy mac-filter src-filter-id [src-entry src-entry-id] to dst-filter-id [dst-entry dst-entry-id]
      [overwrite]

```

## Show Commands

- ```

show
  — filter
    — dhcp [filter-id]
    — dhcp6 [filter-id]
    — download-failed
    — ip [filter-type filter-type]
    — ip embedded [inactive]
    — ip ip-filter-id embedded [inactive]
    — ip ip-filter-id [detail]
    — ip ip-filter-id associations
    — ip ip-filter-id type entry-type
    — ip ip-filter-id counters [type entry-type]
    — ip ip-filter-id entry entry-id counters
    — ip ip-filter-id entry entry-id [detail]
    — ipv6 [filter-type filter-type]
    — ipv6 embedded [inactive]
    — ipv6 ipv6-filter-id embedded [inactive]
    — ipv6 ipv6-filter-id [detail]
    — ipv6 ipv6-filter-id associations
    — ipv6 ipv6-filter-id type entry-type
    — ipv6 ipv6-filter-id counters [type entry-type]
    — ipv6 ipv6-filter-id entry entry-id counters
    — ipv6 ipv6-filter-id entry entry-id [detail]
    — log [bindings]
    — log log-id [match string]
    — mac {mac-filter-id [entry entry-id] [association | counters]}
    — match-list
      — ip-prefix-list [prefix-list-name]
      — ip-prefix-list prefix-list-name references
      — ipv6-prefix-list [prefix-list-name]
      — ipv6-prefix-list prefix-list-name references
      — port-list [port-list-name]
      — port-list port-list-name references
    — redirect-policy {redirect-policy-name [dest ip-address] [association]}
    — system-filter [chained-to]

```

## Clear Commands

- ```

clear
  — filter
    — ip filter-id [entry entry-id] [ingress | egress]
    — ipv6 filter-id [entry entry-id] [ingress | egress]

```

## Command Hierarchies

- **log** *log-id*
- **mac** *filter-id* [**entry** *entry-id*] [**ingress** | **egress**]

## Monitor Commands

- monitor**
  - **filter ip** *ip-filter-id* **entry** *entry-id* [**interval** *seconds*] [**repeat** *repeat*] [**absolute** | **rate**]
  - **filter ipv6** *ipv6-filter-id* **entry** *entry-id* [**interval** *seconds*] [**repeat** *repeat*] [**absolute** | **rate**]
  - **filter mac** *mac-filter-id* **entry** *entry-id* [**interval** *seconds*] [**repeat** *repeat*] [**absolute** | **rate**]

## Debug Commands

- tools**
  - **dump**
    - **filter**
      - **resources**
        - **cpm**
        - **egress-pbr** [**detail**]
        - **ip** <**filter-id**>
        - **iom**
        - **ip** <**filter-id**>
        - **ipv6** <**filter-id**>
        - **mac** <**filter-id**>