
NAT Command Reference

Command Hierarchies

- [ISA Configuration Commands on page 639](#)
- [NAT Service Configuration Commands on page 640](#)
 - [VPRN Commands on page 643](#)
- [NAT Subscriber Management Commands on page 645](#)
- [NAT Router Configuration Commands on page 645](#)
- [Show Commands on page 648](#)
- [Filter Commands on page 649](#)
- [Show Commands on page 648](#)
- [Clear Commands on page 648](#)
- [Tools Commands on page 649](#)
- [Filter Commands on page 649](#)

ISA Configuration Commands

```

config
  — isa
    — nat-group nat-group-id [create]
    — no nat-group
      — active-mda-limit number
      — no active-mda-limit
      — description description-string
      — no description
      — [no] mda mda-id
      — radius-accounting-policy nat-accounting-policy
      — no radius-accounting-policy
      — session-limits
        — reserved num-sessions
        — no reserved
        — watermarks high percentage low percentage
        — no watermarks
      — [no] shutdown

```

NAT Service Configuration Commands

```

configure
  — service
    — nat
      — deterministic-script
        — location remote-url
        — no location
      — nat-policy nat-policy-name [create]
      — no nat-policy nat-policy-name
      — alg
        — [no] ftp
        — [no] rtsp
        — [no] sip
      — block-limit [1..40]
      — no block-limit
      — description description-string
      — no description
      — filtering filtering-mode
      — no filtering
      — ipfix-export-policy [32 chars max]
      — no ipfix-export-policy
      — pool nat-pool-name service-name service-name
      — pool nat-pool-name router router-instance
      — no pool
      — port-limits
        — forwarding limit
        — no forwarding
        — reserved num-ports
        — no reserved
        — watermarks high percentage-high low percentage-low
        — no watermarks
      — [no] priority-sessions
        — [no] fc fc-name
      — session-limits
        — max num-sessions
        — no max
        — reserved num-sessions
        — no reserved
        — watermarks high percentage-high low percentage-low
        — no watermarks
      — tcp-mss-adjust segment-size
      — no tcp-mss-adjust
      — [no] timeouts
        — icmp-query [min minutes] [sec<seconds]
        — no icmp-query
        — sip min minutes] [sec<seconds]
        — no sip
        — subscriber-retention [hrs hours] [min minutes]
        — no subscriber-retention
        — tcp-established [hrs hours] [min minutes] [sec seconds]
        — no tcp-established
        — tcp-syn [hrs hours] [min minutes] [sec seconds]
        — no tcp-syn
        — tcp-time-wait [min minutes] [sec seconds]

```

- **no tcp-time-wait**
- **tcp-transitory** [hrs hours] [min minutes] [sec seconds]
- **no tcp-transitory**
- **udp** [hrs hours] [min minutes] [sec seconds]
- **no udp**
- **udp-dns** [hrs hours] [min minutes] [sec seconds]
- **no udp-dns**
- **udp-initial** [min minutes] [sec seconds]
- **no udp-initial**
- [no] **udp-inbound-refresh**

configure

- **service**
 - **ipfix**
 - **ipfix-export-policy** *policy-name* [create]
 - **no ipfix-export-policy** *policy-name*
 - **collector router** *router-instance* **ip** *ip-address* [create]
 - **no collector router** *router-instance* **ip** *ip-address*
 - **mtu** [512..9212]
 - **no collector**
 - [no] **shutdown**
 - **source-address** *ip-address*
 - **no source-address**
 - **template-refresh-timeout** [hrs hours] [min minutes] [sec seconds]
 - **no template-refresh-timeout**
 - **description** *description-string*
 - **no description**

configure

- **aaa**
 - **nat-accounting-policy** *policy-name* [create]
 - **no nat-accounting-policy** *policy-name*
 - **description** *description-string*
 - **no description**
 - [no] **include-radius-attribute**
 - [no] **called-station-i**
 - [no] **frame-counters**
 - [no] **framed-ip-addr**
 - [no] **hardware-timestamp**
 - [no] **inside-service-id**
 - [no] **multi-session-id**
 - [no] **nas-identifier**
 - [no] **nat-subscriber-string**
 - [no] **octet-counters**
 - [no] **outside-ip**
 - [no] **outside-service-id**
 - [no] **port-range-block**
 - [no] **release-reason**

- [no] **session-time**
- [no] **subscriber-data**
- [no] **user-name**
- **radius-accounting-server**
 - **access-algorithm** {direct|round-robin}
 - **no access-algorithm**
 - **retry** *count*
 - **no retry**
 - **router** *router-instance*
 - **router service-name** *service-name*
 - **no router**
 - **server** *server-index* **address** *ip-address* **secret** *key* [**hash**|**hash2**] [**port** *port*]
 - **no server** *server-index*
 - **source-address-range** *start-ip-address* *end-ip-address*
 - **no source-address-range**
 - **timeout** [**sec** *seconds*] [**min** *minutes*]
 - **no timeout**

VPRN Commands

```

config
  — service
    — vprn service-id customer cust-id create
      — nat
        — inside
          — [no] destination-prefix ip-prefix/length
          — deterministic
            — classic-lsn-max-subscriber-limit max
            — no classic-lsn-max-subscriber-limit
            — dslite-max-subscriber-limit max
            — no dslite-max-subscriber-limit
            — prefix ip-prefix/length subscriber-type nat-sub-type nat-policy nat-policy-name [create]
            — prefix ip-prefix/length subscriber-type nat-sub-type
            — no prefix ip-prefix/length subscriber-type nat-sub-type
            — map start inside-ip-address end inside-ip-address to outside-ip-address
            — no map start inside-ip-address end inside-ip-address
            — [no] shutdown
          — dual-stack-lite
            — [no] address ipv6-address
            — ip-fragmentation {disabled|fragment-ipv6|fragment-ipv6-unless-ipv4-df-set}
            — no ip-fragmentation
            — tunnel-mtu mtu-bytes
            — no tunnel-mtu
            — [no] shutdown
            — subscriber-prefix-length prefix-length
            — no subscriber-prefix-length
          — l2-aware
            — [no] address ip-address/mask
          — nat-policy nat-policy-name
          — no nat-policy
          — [[no] nat64
            — [no] drop-zero-ipv4-checksum
            — [no] ignore-tos
            — [no] insert-ipv6-fragment-header
            — ip-fragmentation {disabled|fragment-ipv6|fragment-ipv6-unless-ipv4-df-set}
            — no ip-fragmentation
            — ipv6-mtu [1280..9212]
            — no ipv6-mtu
            — prefix ipv6-prefix/prefix-length
            — no prefix
            — set-tos [0..255]
            — no set-tos
            — [no] shutdown
            — subscriber-prefix-length prefix-length
            — no subscriber-prefix-length
          — redundancy

```

- **peer** *ip-address*
- **no peer**
- **steering-route** *ip-prefix/length*
- **no steering-route**
- **outside**
 - **mtu** [512..9000]
 - **no mtu**
 - **pool** *nat-pool-name* [**nat-group** *nat-group-id* **type** *pool-type* **create**]
 - **no pool** *nat-pool-name*
 - **address-range** *start-ip-address end-ip-address* [**create**]
 - **no address-range** *start-ip-address end-ip-address*
 - **description** *description-string*
 - **no description**
 - **[no] drain**
 - **description** *description-string*
 - **no description**
 - **deterministic**
 - **port-reservation** *num-ports*
 - **no port-reservation**
 - **mode** {**auto**|**napt**|**one-to-one**}
 - **no mode**
 - **[no] port-forwarding-dyn-block-reservation**
 - **port-forwarding-range** *range-end*
 - **no port-forwarding-range**
 - **port-reservation blocks** *num-blocks*
 - **port-reservation ports** *num-ports*
 - **no port-reservation**
 - **[no] shutdown**
 - **subscriber-limit** [1..65535]
 - **no subscriber-limit**
 - **watermarks high** *percentage-high low percentage-low*
 - **no watermarks**
 - **upstream-ip-filter** *filter-id*
 - **no upstream-ip-filter**

NAT Subscriber Management Commands

```

configure
  — subscriber-mgmt
    — sub-profile
      — nat-policy policy-name
      — no nat-policy

```

NAT Router Configuration Commands

```

config
  — router
    — nat
      — inside
        — [no] destination-prefix ip-prefix/length
        — dual-stack-lite
          — [no] address ipv6-address
            — tunnel-mtu mtu-bytes
            — no tunnel-mtu
            — ip-fragmentation {disabled|fragment-ipv6|fragment-ipv6-unless-ipv4-df-set}
            — no ip-fragmentation
          — [no] shutdown
          — subscriber-prefix-length prefix-length
          — no subscriber-prefix-length
        — l2-aware
          — [no] address ip-address/mask
        — nat-policy nat-policy-name
        — no nat-policy
        — [[no] nat64
          — [no] drop-zero-ipv4-checksum
          — [no] ignore-tos
          — [no] insert-ipv6-fragment-header
          — ip-fragmentation {disabled|fragment-ipv6|fragment-ipv6-unless-ipv4-df-set}
          — no ip-fragmentation
          — ipv6-mtu [1280..9212]
          — no ipv6-mtu
          — prefix ipv6-prefix/prefix-length
          — no prefix
          — set-tos [0..255]
          — no set-tos
          — [no] shutdown
          — subscriber-prefix-length prefix-length
          — no subscriber-prefix-length
        — redundancy
          — peer ip-address
          — no peer
          — steering-route ip-prefix/length
          — no steering-route
        — subscriber-identification

```

- **attribute** [**vendor** *vendor-id*] **attribute-type** *attribute-type*
- **no attribute**
- **description** *description-string*
- **no description**
- **[no] drop-unidentified-traffic**
- **radius-proxy-server** **router** *router-instance* **name** *server-name*
- **no radius-proxy-server**
- **[no] shutdown**
- **outside**
 - **mtu** [512..9000]
 - **no mtu**
 - **pool** *nat-pool-name* [**nat-group** *nat-group-id* **type** *pool-type* **create**]
 - **no pool** *nat-pool-name*
 - **address-range** *start-ip-address end-ip-address* [**create**]
 - **no address-range** *start-ip-address end-ip-address*
 - **description** *description-string*
 - **no description**
 - **[no] drain**
 - **description** *description-string*
 - **no description**
 - **mode** {**auto** | **napt** | **one-to-one**}
 - **no mode**
 - **[no] port-forwarding-dyn-block-reservation**
 - **port-forwarding-range** *range-end*
 - **no port-forwarding-range**
 - **port-reservation** **blocks** *num-blocks*
 - **port-reservation** **ports** *num-ports*
 - **no port-reservation**
 - **redundancy**
 - **export** *ip-prefix/length*
 - **no export**
 - **monitor** *ip-prefix/length*
 - **no monitor**
 - **[no] shutdown**
 - **subscriber-limit** [1..65535]
 - **no subscriber-limit**
 - **watermarks** **high** *percentage-high* **low** *percentage-low*
 - **no watermarks**

NAT Admin Configuration Commands

- admin**
 - **nat**
 - **save-deterministic-script**

Tools Commands

- tools**
 - **dump**

- **nat**
- **histogram router** *router-instance* **pool** *pool-name* **bucket-size** [1..65536] **num-buckets** [2..50]

Show Commands

```

show
  — aaa
    — nat-accounting-policy
    — nat-accounting-policy policy-name
    — nat-accounting-policy policy-name associations
    — nat-accounting-policy
  — isa
    — nat-group
    — nat-group nat-group-id [associations]
    — nat-group nat-group-id member [1..255] [statistics]
    — nat-group [nat-group-id] members
  — service
    — nat
      — l2-aware-hosts [outside-router router-instance] [outside-ip outside-ip-address]
        [inside-ip-prefix ip-prefix/mask]
      — l2-aware-subscribers [nat-policy nat-policy-name] [nat-group nat-group-id]
        [member [1..255]] [outside-router router-instance] [outside-ip outside-ip-
        address]
      — l2-aware-subscribers subscriber sub-ident
      — nat-policy nat-policy-name associations
      — nat-policy nat-policy-name statistics
      — nat-policy nat-policy-name
      — nat-policy
      — pcp-server-policy
      — pcp-server-policy name
      — port-forwarding-entries

```

```

show
  — router
    — nat
      — dual-stack-lite-subscribers subscriber dslite-sub-id
      — dual-stack-lite-subscribers [nat-policy nat-policy-name] [nat-group nat-group-
      id] [member [1..255]] [outside-router router-instance] [outside-ip outside-ip-
      address] [inside-ip-prefix ipv6-prefix]
      — l2-aware-blocks [outside-ip-prefix ip-prefix/length] [outside-port [1..65535]]
        [pool pool-name]
      — lsn-blocks [inside-router router-instance] [inside-ip ip-address] [outside-ip-pre-
      fix ip-prefix/length] [outside-port [1..65535]] [pool pool-name]
      — lsn-hosts host ip-address
      — lsn-hosts [outside-router router-instance] [outside-ip ip-address] [inside-ip-pre-
      fix ip-prefix/mask]
      — pool pool-name
      — pool
      — summary

```

Clear Commands

```

clear
  — nat
  — isa

```

- **nat-group** *nat-group-id* **member** [1..255] **l2-aware-subscribers**
- **nat-group** *nat-group-id* **member** [1..255] **statistics**

Tools Commands

- tools**
 - **dump**
 - **nat**
 - **isa**
 - **resources** **mda** *mda-id*
 - **sessions** [**nat-group** *nat-group-id*] [**mda** *mda-id*] [**protocol** {**icmp|tcp|udp**}] [**inside-ip** *ip-address*] [**inside-router** *router-instance*] [**inside-port** *port-number*] [**outside-ip** *ip-address*] [**outside-port** *port-number*] [**foreign-ip** *ip-address*] [**foreign-port** *port-number*]
 - **perform**
 - **nat**
 - **port-forwarding-action**
 - **l2-aware** **create** **subscriber** *sub-ident-string* **ip** *ip-address* **protocol** {**tcp|udp**} [**port** *port*] **lifetime** *lifetime* [**outside-ip** *ip-address*] [**outside-port** *port*]
 - **l2-aware** **delete** **subscriber** *sub-ident-string* **ip** *ip-address* **protocol** {**tcp|udp**} **port** *port*
 - **l2-aware** **modify** **subscriber** *sub-ident-string* **ip** *ip-address* **protocol** {**tcp|udp**} **port** *port* **lifetime** *lifetime*
 - **lsn** **create** **router** *router-instance* [**b4** *ipv6-address*] [**aftr** *ipv6-address*] **ip** *ip-address* **protocol** {**tcp|udp**} [**port** *port*] **lifetime** *lifetime* [**outside-ip** *ipv4-address*] [**outside-port** *port*]
 - **lsn** **delete** **router** *router-instance* [**b4** *ipv6-address*] **ip** *ip-address* **protocol** {**tcp|udp**} **port** *port*
 - **lsn** **modify** **router** *router-instance* [**b4** *ipv6-address*] **ip** *ip-address* **protocol** {**tcp|udp**} **port** *port* **lifetime** *lifetime*

Filter Commands

- configure**
 - **filter**
 - **ip-filter** *filter-id*
 - **entry** *entry-id*
 - **action** **nat**
 - **no** **action**

