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# System Command Reference

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## Command Hierarchies

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### System Information Commands

```

config
  — system
    — atm
      — atm-location-id
      — oam
        — loopback-period period
        — retry-down retries
        — retry-up retries
    — boot-bad-exec file-url
    — no boot-bad-exec
    — boot-bad-exec file-url
    — no boot-bad-exec
    — chassis-mode {chassis-mode} [force]
    — cli-code cli-code
    — no cli-code
    — config-backup count
    — no config-backup
    — contact contact-name
    — no contact
    — coordinates coordinates

```

- **no coordinates**
- **dns**
  - **address-pref** {ipv4-only | ipv6-first}
  - **no address-pref**
- **[no] enable-icmp-vse**
- **lACP-system-priority** *lACP-system-priority*
- **no lACP-system-priority**
- **[no] l4-load-balancing**
- **[no] mc-enh-load-balancing**
- **location** *location*
- **no location**
- **name** *system-name*
- **no name**
- **no system-ip-load-balancing**

## System Alarm Commands

- ```

config
  — system
    — thresholds
      — cflash-cap-alarm cflash-id rising-threshold threshold [falling-threshold threshold]
         interval seconds [rmon-event-type] [startup-alarm alarm-type]
      — no cflash-cap-alarm cflash-id
      — cflash-cap-warn cflash-id rising-threshold threshold [falling-threshold threshold]
         interval seconds [rmon-event-type] [startup-alarm alarm-type]
      — no cflash-cap-warn cflash-id
      — kb-memory-use-alarm rising-threshold threshold [falling-threshold threshold] inter-
         val seconds [rmon-event-type] [startup-alarm alarm-type]
      — no kb-memory-use-alarm
      — kb-memory-use-warn rising-threshold threshold [falling-threshold threshold] interval
         seconds [rmon-event-type] [startup-alarm alarm-type]
      — no kb-memory-use-warn
      — memory-use-alarm rising-threshold threshold [falling-threshold threshold] interval
         seconds [rmon-event-type] [startup-alarm alarm-type]
      — no memory-use-alarm
      — memory-use-warn rising-threshold threshold [falling-threshold threshold] interval
         seconds [rmon-event-type] [startup-alarm alarm-type]
      — no memory-use-warn
      — [no] rmon
         — alarm rmon-alarm-id variable-oid oid-string interval seconds [sample-type]
            [startup-alarm alarm-type] [rising-event rmon-event-id rising-threshold
            threshold] [falling event rmon-event-id falling-threshold threshold] [owner
            owner-string]
         — no alarm rmon-alarm-id
         — event rmon-event-id [event-type] [description description-string] [owner
            owner-string]
         — no event rmon-event-id

```

## Persistence Commands

```
config
  — system
    — persistence
      — ancp
        — description description-string
        — no description
        — location cflash-id
        — no location
      — application-assurance
        — description description-string
        — no description
        — location cflash-id
        — no location
      — dhcp-server
        — description description-string
        — no description
        — location cflash-id
        — no location
      — nat-port-forwarding
        — description description-string
        — no description
        — location cflash-id
        — no location
      — subscriber-mgmt
        — description description-string
        — no description
        — location cflash-id
        — no location
```

## PTP Commands

```
config
  — system
    — ptp
      — clock-type {{ordinary [master | slave]} | boundary}
      — [no] domain domain
      — network-type {sdh | sonet}
      — [no] peer ip-address
        — [no] priority priority
        — [no] shutdown
      — [no] priority1 priority
      — [no] priority2 priority
      — profile profile
      — [no] shutdown
```

## System Time Commands

```

root
  — admin
    — set-time [date] [time]
config
  — system
    — time
      — [no] ntp
        — [no] authentication-check
        — authentication-key key-id key key [hash | hash2] type {des | message-digest}
        — no authentication-key key-id
        — [no] broadcast [router router-name] {interface ip-int-name} [key-id key-id]
          [version version] [ttl ttl]
        — broadcastclient [router router-name] {interface ip-int-name} [authenticate]
        — [no] multicast [version version] [key-id key-id]
        — [no] multicastclient [authenticate]
        — [no] ntp-server [transmit key-id]
        — [no] peer ip-address [version version] [key-id key-id] [prefer]
        — [no] server ip-address [key-id key-id] [version version] [prefer]
        — [no] shutdown
      — [no] sntp
        — [no] broadcast-client
        — server-address ip-address [version version-number] [normal | preferred]
          [interval seconds]
        — no server-address ip-address
        — [no] shutdown
      — [no] dst-zone [std-zone-name | non-std-zone-name]
        — end {end-week} {end-day} {end-month} [hours-minutes]
        — offset offset
        — start {start-week} {start-day} {start-month} [hours-minutes]
      — [no] source-ptp
      — zone std-zone-name | non-std-zone-name [hh [:mm]]
      — no zone

```

## Cron Commands

- config
  - [no] **cron**
    - [no] **action** *action-name* [owner *owner-name*]
      - **expire-time** {seconds | forever}
      - **lifetime** {seconds | forever}
      - **max-completed** *unsigned*
      - [no] **results** *file-url*
      - [no] **script** *script-name* [owner *owner-name*]
      - [no] **shutdown**
    - [no] **schedule** *schedule-name* [owner *owner-name*]
      - [no] **action** *action-name* [owner *owner-name*]
      - [no] **day-of-month** {*day-number* [..*day-number*] **all**}
      - **count** *number*
      - [no] **description** *description-string*
      - [no] **end-time** [*date*|*day-name*] *time*
      - [no] **hour** {..*hour-number* [..*hour-number*] **all**}
      - [no] **interval** *seconds*
      - [no] **minute** {*minute-number* [..*minute-number*] **all**}
      - [no] **month** {*month-number* [..*month-number*] *month-name* [..*month-name*] **all**}
      - [no] **shutdown**
      - **type** {*schedule-type*}
      - [no] **weekday** {*weekday-number* [..*weekday-number*] *day-name* [..*day-name*] **all**}
    - [no] **script** [no] **script** *script-name* [owner *owner-name*]
      - [no] **description** *description-string*
      - [no] **Specifies the script name.location** *file-url*
      - [no] **shutdown**
    - [no] **time-range** *name*
      - **absolute** **start** *start-absolute-time* **end** *end-absolute-time*
      - **no absolute** **start** *start-absolute-time*
      - **daily** **start** *start-time-of-day* **end** *end-time-of-day*
      - **no daily** **start** *start-time-of-day*
      - **weekdays** **start** *start-time-of-day* **end** *end-time-of-day*
      - **no weekdays** **start** *start-time-of-day*
      - **weekend** **start** *start-time-of-day* **end** *end-time-of-day*
      - **no weekend** **start** *start-time-of-day*
      - **weekly** **start** *start-time-in-week* **end** *end-time-in-week*
      - **no weekly** **start** *start-time-in-week*
    - [no] **tod-suite**
      - **egress**
        - **filter ip** *ip-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]
        - **filter ipv6** *ipv6-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]
        - **filter mac** *mac-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]
        - **no filter ip** *ip-filter-id* [**time-range** *time-range-name*]
        - **no filter ipv6** *ipv6-filter-id* [**time-range** *time-range-name*]
        - **no filter mac** *mac-filter-id* [**time-range** *time-range-name*]
        - **qos** *policy-id* [**time-range** *time-range-name*] [**priority** *priority*]
        - **no qos** *policy-id* [**time-range** *time-range-name*]
        - **scheduler-policy** *scheduler-policy-name* [**time-range** *time-range-name*] [**priority** *priority*]
        - **no scheduler-policy** *scheduler-policy-name* [**time-range** *time-range-name*]
      - **ingress**
        - **filter ip** *ip-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]
        - **filter ipv6** *ipv6-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]

- **filter mac** *mac-filter-id* [**time-range** *time-range-name*] [**priority** *priority*]
- **no filter ip** *ip-filter-id* [**time-range** *time-range-name*]
- **no filter ipv6** *ipv6-filter-id* [**time-range** *time-range-name*]
- **no filter mac** *mac-filter-id* [**time-range** *time-range-name*]
- **qos** *policy-id* [**time-range** *time-range-name*] [**priority** *priority*]
- **no qos** *policy-id* [**time-range** *time-range-name*]
- **scheduler-policy** *scheduler-policy-name* [**time-range** *time-range-name*] [**priority** *priority*]
- **no scheduler-policy** *scheduler-policy-name* [**time-range** *time-range-name*]

## System Administration (Admin) Commands

root

— **admin**

- **application-assurance**
  - **upgrade**
- **clear-policy-lock**
- **debug-save** *file-url*
- **disconnect** {**address** *ip-address* | **username** *user-name* | **console** | **telnet** | **ftp** | **ssh**}
- **display-config** [**detail** | **index**]
- [**no**] **enable-tech**
- **radius-discovery**
  - **force-discover** [**svc-id** *service-id*]
- **reboot** [**active** | **standby** | **upgrade**] [**now**]
- **redundancy**
  - [**no**] **cert-sync**
  - **synchronize** {**boot-env**|**config**}
  - **no synchronize**
- **save** [*file-url*] [**detail**] [**index**]
- **synchronize** [**boot-env** | **config**]
- **tech-support** [*file-url*]

## System Synchronization Commands

```

config
  — system
    — sync-if-timing
      — abort
      — begin
      — bits
        — bits-interface-type
        — input
          — [no] shutdown
        — output
          — line-length {110, 220, 330, 440, 550, 660}
          — [no] shutdown
          — source {line-ref|internal-clock}
        — ql-override {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
        — no ql-override
        — ssm-bit sa-bit
      — commit
      — ref-order first second [third [fourth]]
      — no ref-order
      — ptp
        — ql-override {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
        — no ql-override
        — [no] shutdown
      — ref1
        — bits-interface-type
        — ql-override {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
        — no ql-override
        — [no] shutdown
        — source-port port-id
        — no source-port
      — ref2
        — bits-interface-type
        — ql-override {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
        — no ql-override
        — [no] shutdown
        — source-port port-id
        — no source-port
      — [no] ql-selection
      — [no] revert

```

The following commands apply to the 7750 SR-c12 model.

```

config
  — system
    — sync-if-timing
      — abort
      — begin
      — commit
      — ref-order first second [third]
      — no ref-order
      — ref1
        — bits-interface-type {ds1 [{esf | sf}] | e1 [{pcm30crc | pcm31crc}]}

```

- **no bits-interface-type**
- **ql-override** {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
- **no ql-override**
- **[no] shutdown**
- **source-bits** *slot/mda*
- **no source-bits**
- **source-port** *port-id*
- **no source-port**
- **ssm-bit** *sa-bit*
- **ref2**
  - **bits-interface-type** {ds1 [{esf | sf}] | e1 [{pcm30crc | pcm31crc}]}
  - **no bits-interface-type**
  - **ql-override** {prs | stu | st2 | tnc | st3e | st3 | eec1 | sec | prc | ssu-a | ssu-b | eec2}
  - **no ql-override**
  - **[no] shutdown**
  - **source-bits** *slot/mda*
  - **no source-bits**
  - **source-port** *port-id*
  - **no source-port**
  - **ssm-bit** *sa-bit*
- **[no] ql-selection**
- **[no] revert**

## High Availability (Redundancy) Commands

- root
  - admin
    - **redundancy**
    - **display-config** [detail | index]
    - **redundancy**
      - **force-switchover** [now]
      - **rollback-sync**
      - **synchronize** {boot-env | config}
    - rollback
      - **redundancy** [to *source 1*]
      - **delete** {latest-rb | *checkpoint-id* | rescue}
      - **revert** [latest-rb] | *checkpoint-id* | rescue [now]
      - **revert**
      - **save (rollback)** [rescue] [comment *comment-string*]
      - **view** [latest-rb | *checkpoint-id* | rescue]
    - **view** {latest-cfg | active-cfg | latest-rb | *checkpoint-id*}
  - config
    - system
      - rollback
        - **[no] rollback-location** *file-url*
        - **[no] rescue-location** *file-url*
        - **[no] local-max-checkpoints** <1...50>
        - **[no] remote-max-checkpoints** <1...50>
      - **switchover-exec** *file-url*
      - **no switchover-exec**
    - **redundancy**
      - **multi-chassis**

- [no] **peer** *ip-address*
  - **authentication-key** [*authentication-key* | *hash-key*] [**hash** | **hash2**]
  - **no authentication-key**
  - **description** *description-string*
  - **no description**
  - [no] **mc-mobile**
    - **bfd-enable**[**service** <*service-id*>] **interface** <*interface-name*>
    - **no bfd-enable**
    - **hold-on-neighbor-failure** *multiplier*
    - **no hold-on-neighbor-failure**
    - **keep-alive-interval** *interval*
    - **no keep-alive-interval**
  - [no] **mc-endpoint**
    - [no] **bfd-enable**
    - **boot-timer** *interval*
    - **no boot-timer**
    - **hold-on-neighbor-failure** *multiplier*
    - **no hold-on-neighbor-failure**
    - **keep-alive-interval** *interval*
    - **no keep-alive-interval**
    - [no] **passive-mode**
    - [no] **shutdown**
    - **system-priority** *value*
    - **no system-priority**
  - [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**
    - **ring** *sync-tag* [**create**]
    - **no ring** *sync-tag*
      - **in-band-control-path**
        - **dst-ip** *ip-address*
        - **no dst-ip**
        - **interface** *ip-int-name*
        - **no interface**
        - **service-id** *service-id*
        - **no service-id**
      - [no] **path-b**
        - [no] **range** *vlan-range*
      - [no] **path-excl**
        - [no] **range** *vlan-range*
      - **ring-node** *ring-node-name* [**create**]
      - **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**
- **peer-name** *name*
- **no peer-name**
- **[no] shutdown**
- **source-address** *ip-address*
- **no source-address**
- **[no] sync**
  - **[no] igmp**
  - **[no] igmp-snooping**
  - **[no] local-dhcp-server**
  - **[no] mc-ring**
  - **[no] mld-snooping**
  - **port** [*port-id* | *lag-id*] [**sync-tag** *sync-tag*]
  - **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**
- **bgp-multi-homing**
  - **boot-timer** *seconds*
  - **no boot-timer**
  - **site-activation-timer** *seconds*
  - **no site-activation-timer**
- **[no] cert-sync**
- **[no] rollback-sync**
- **synchronize** {*boot-env* | *config*}

## LLDP System Commands

```

configure
  — system
    — lldp
      — message-fast-tx time
      — no message-fast-tx
      — message-fast-tx-init count
      — no message-fast-tx-init
      — notification-interval time
      — no notification-interval
      — reinit-delay time
      — no reinit-delay
      — [no] shutdown
      — tx-credit-max count
      — no tx-credit-max
      — tx-hold-multiplier multiplier
      — no tx-hold-multiplier
      — tx-interval interval
      — no tx-interval

```

## LLDP Ethernet Port Commands

```

configure
  — port port-id
    — ethernet
      — lldp
        — dest-mac {nearest-bridge | nearest-non-tpmr | nearest-customer}
        — admin-status {rx | tx | tx-rx | disabled}
        — [no] notification
        — tx-mgmt-address [system]
        — no tx-mgmt-address
        — tx-tlvs [port-desc] [sys-name] [sys-desc] [sys-cap]
        — no tx-tlvs

```

## Show Commands

```
show
— cron
  — action
  — schedule
  — script
  — tod-suite tod-suite-name [detail] associations failed-associations
  — time-range name associations [detail]
— redundancy
  — multi-chassis
    — all [detail]
    — mc-endpoint statistics
    — mc-endpoint peer [ip-address] statistics
    — mc-endpoint endpoint [mcep-id] statistics
    — mc-endpoint peer [ip-address]
    — mc-mobile peer [ip-address | ipv6-address]
    — mc-lag [lag lag-id]
      — peer [peer ip-address [lag lag-id]] mc-lag
      — statistics
    — 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
    — sync [port port-id | lag-id]
      — peer [port port-id]
      — detail
  — synchronization
— time
— system
  — connections [address ip-address [interface interface-name]] [port port-number] [detail]
  — cpu [sample-period seconds]
  — information
  — lldp neighbor
  — load-balancing-alg [detail]
  — memory-pools
  — ntp
  — ptp [ peer ip-address [detail] | peers [detail] | unicast | statistics | standby]
  — rollback
  — sntp
  — switch-fabric
  — sync-if-timing
  — thresholds
  — time
— uptime
```

## Clear Commands

- clear**
- **application-assurance**
    - **group** *isa-aa-group-id* **statistics**
    - **group** *isa-aa-group-id* **status**
  - **redundancy**
    - **multi-chassis**
      - **mc-endpoint** **endpoint** [*mcep-id*] **statistics**
      - **mc-endpoint** **statistics**
      - **mc-endpoint** **peer** [*ip-address*] **statistics**
      - **mc-mobile** **statistics** **peer** {*ip-address* | *ipv6-address*}
      - **mc-lag** [**peer** *ip-address* [*lag lag-id*]]
      - **mc-ring**
        - **debounce** **peer** *ip-address* **ring** *sync-tag*
        - **ring-nodes** **peer** *ip-address* **ring** *sync-tag*
        - **statistics**
          - **global**
          - **peer** *ip-address*
          - **ring** **peer** *ip-address* **ring** *sync-tag*
          - **ring-node** **peer** *ip-address* **ring** *sync-tag* **node** *ring-node-name*
      - **sync-database** **peer** *ip-address* **all** **application** *application*
      - **sync-database** **peer** *ip-address* {**port** *port-id* | *lag-id* | **sync-tag** *sync-tag*} **application** *application*
      - **sync-database** **peer** *ip-address* **port** *port-id* | *lag-id* **sync-tag** *sync-tag* **application** *application*
    - **screen** *action-name* [**owner** *owner-name*]
    - **system** **sync-if-timing** {*ref1* | *ref2* | **bits**}
    - **trace** **log**

## Debug Commands

- debug**
- **sync-if-timing**
    - **force-reference** {*ref1* | *ref2* | **bits**}
    - **no force-reference**
  - [**no**] **system**
    - **http-connections** [*host-ip-address/mask*]
    - **no http-connections**
    - **ntp** [**router** *router-name*] [**interface** *ip-int-name*]
    - **persistence**

## Tools Commands

- tools
  - dump
    - **redundancy**
      - **multi-chassis**
        - **mc-endpoint** peer *ip-address*
        - **mc-ring**
        - **mc-ring** peer *ip-address* [ring *sync-tag*]
        - **sync-database** [instance *instance-id*] [peer *ip-address*]
        - **sync-database** [peer *ip-address*] [port *port-id* | lag-*id*] [sync-tag *sync-tag*]  
[application *application*] [detail] [type *type*]