# FSOS

# Basic Command Line Reference

# Contents

# 1 System Configuration Commands

## 1.1 hostname

To specify or modify the host name for the network server, use the hostname command in global configuration mode. To restore the configuration to the default, use no form of this command.

**Command Syntax**

**hostname** *name*

**no hostname**

| name | New host name for the network server |
|------|--------------------------------------|

**Command Mode**

Global Configuration

**Default**

The default host name is Switch.

**Usage**

The host name is used in prompts and default configuration filenames.

The name must also follow the rules for ARPANET host names. They must start with a letter, and have as interior characters only letters, digits, hyphens, and underline. Names must be 63 characters or fewer.

**Examples**

The following example changes the host name to "sandbox":

Switch(config)# hostname sandbox

sandbox(config)#

**Related Commands**

None

## 1.2 management ip address

Use this command to set the management IP address on the Switch.

To remove the management IP address, use the no form of this command.

**Command Syntax**

**management ip address** (*A.B.C.D/M |A.B.C.D mask*) (**gateway** *A.B.C.D*)

**no management ip address**

**management ipv6 address** (*X:X::X:X/M | X:X::X:X mask*) (**gateway** *X:X::X:X*)

**no management ipv6 address**

| A.B.C.D/M | The management IPv4 address with mask length configured |
|---|---|
| A.B.C.D mask | The management IPv4 address and mask configured |
| X:X::X:X/M | The management IPv6 address with mask length configured |

| X:X::X:X mask | The management IPv6 address and mask configured |
|---|---|
| gateway | Add gateway |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

The following example sets the management ipv4 address.

Switch(config)# management ip address 192.168.100.100/24

The following example unsets the management ipv4 address.

Switch(config)# no management ip address

The following example sets the management ipv6 address.

Switch(config)# management ipv6 address 2001:1000::1000/96

The following example unsets the management ipv6 address.

Switch(config)# no management ipv6 address

**Related Commands**

None

# 1.3 management route

Use this command to set the gateway on the Switch for management ip.

**Command Syntax**

**management route** (**add | del** ) **gateway** *A.B.C.D*

**management ipv6 route** (**add | del** )**gateway** *X:X::X:X*

| add | Add the route |
|---|---|
| del | Del the route |
| ipv6 | Configure IPv6 gateway |
| gateway | Add gateway |
| A.B.C.D | The IPv4 address of the gateway |
| X:X::X:X | The IPv6 address of the gateway |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

The following example sets the gateway of 192.168.100.254 for the switch.

Switch(config)# management route add gateway 192.168.100.254

The following example sets the gateway of 2001:1000::1 for the switch.

Switch(config)# management ipv6 route add gateway 2001:1000::1

## Related Commands

None

## 1.4 show management ip address

## Command Syntax

**show management ip address**

**show management ipv6 address**

## Command Mode

Privileged EXEC

## Default

None

## Usage

None

## Examples

Switch# show management ip address

Management IP address is:    192.168.100.100/24
Gateway: 192.168.100.254

Switch# show management ipv6 address

```
Management IPv6 address is:    2001:1000::1000/96
Gateway: 2001:1000::1
```

**Related Commands**

None

## 1.5  enable password

Use this command to set the password which is needed when user enter Privileged EXEC mode.

**Command Syntax**

**enable password** ( **privilege** *LEVEL***|** ) ( **8|** ) *LINE*

**no enable password**

| Privilege *LEVEL* | User privilege level, Level value <1-4> |
|---|---|
| 8 | Specifies a hidden password will follow |
| LINE | The 'enable' password string |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

If this command is set, user need to provide the password when enter Privileged EXEC mode.

**Examples**

The following example shows how to set the password.

Switch(config)# enable password 123

Switch(config)# exit

Switch# disable

Switch> enable

Password:

Switch#

**Related Commands**

None

# 1.6 terminal length

To set the number of lines on the current terminal screen for the current session, use the terminal length command in EXEC mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**terminal length** *screen-length*

**terminal no length**

| | |
|---|---|
| screen-length | Number of lines on the screen. The value is a number from 0 to 512. A value of zero disables pausing between screens of output |

**Command Mode**

Privileged EXEC

**Default**

Automatically detected by terminal screen length

**Usage**

The system uses the length value to determine when to pause during multiple-screen output. A value of zero prevents the switch from pausing between screens of output.

Some types of terminal sessions do not require you to specify the screen length because the screen length specified can be learned by some remote hosts. For example, the rlogin protocol uses the screen length to set up terminal parameters on a remote UNIX host.

**Examples**

In the following example, the system is configured to prevent output from pausing if it exceeds the length of the screen:

Switch# terminal length 0

**Related Commands**

**service terminal-length**

## 1.7  service terminal-length

To set the number of lines on the current terminal screen for all sessions, use the service terminal-length command in global configuration mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**service terminal-length** *screen-length*

**no service terminal-length**

| | |
|---|---|
| screen-length | Number of lines on the screen. The value is a number from 0 to 512. A value of zero disables pausing between screens of output |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

The system uses the length value to determine when to pause during multiple-screen output. A value of zero prevents the switch from pausing between screens of output.

Some types of terminal sessions do not require you to specify the screen length because the screen length specified can be learned by some remote hosts. For example, the rlogin protocol uses the screen length to set up terminal parameters on a remote UNIX host.

**Examples**

In the following example, the system is configured to prevent output from pausing if it exceeds the length of the screen:

Switch(config)# service terminal-length 0

**Related Commands**

**terminal length**

# 1.8  banner motd

To set a single or multiline message banner that appears on the screen when someone logs in to the switch, use the banner motd command in global configuration mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**banner motd** *line*

**no banner motd**

| line | C banner-text c, where 'c' is a delimiting character |
|------|-------------------------------------------------------|

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This example shows how to set a single message banner.

Switch(config)# banner motd #

Enter TEXT message.    End with the character '#'.
this is a example message#

**Related Commands**

**banner exec**

**banner login**

## 1.9 banner exec

To set an exec banner to be displayed on all connected terminals and this banner appears when terminal in Privileged EXEC mode, use the banner motd command in global configuration mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**banner exec** *line*

**no banner exec**

| line | C banner-text c, where 'c' is a delimiting character |
|------|------------------------------------------------------|

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This example shows how to set a single message banner.

Switch(config)# banner exec #

Enter TEXT message.    End with the character '#'.
this is a example message#

**Related Commands**

**banner motd**

**banner login**

# 1.10  banner login

To set a login banner to be displayed on all connected terminals, and this banner appears after the MOTD banner and before the login prompt, use the banner motd command in global configuration mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**banner login** *line*

**no banner login**

| line | C banner-text c, where 'c' is a delimiting character |
|------|------------------------------------------------------|

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This example shows how to set a single message banner.

Switch(config)# banner login #

Enter TEXT message.    End with the character '#'.
this is a example message#

**Related Commands**

**banner exec**

**banner motd**

# 1.11  show version

To display the version information of the hardware and firmware, use the show version command in EXEC mode.

**Command Syntax**

**show version**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to display version information of the hardware and firmware.

Switch# show version

**Related Commands**

None

# 1.12   line vty maximum

To set the max login VTY, use this command in global configuration mode. To restore the configuration to the default, use the no form of this command.

**Command Syntax**

**line vty maximum** *vty_value*

**no line vty maximum**

| vty_value | Max login VTY. The default value is 8.range <0-8> |

**Command Mode**

Global Configuration

**Default**

8

**Usage**

None

**Examples**

This example shows how to set the max VTY to 5.

Switch(config)# line vty maximum 5

**Related Commands**

None

# 1.13 reboot

To reload the operating system, use the reload command in Privileged EXEC mode.

**Command Syntax**

**reboot**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The reboot command halts the system. Use the reboot command after configuration information is entered into a file and saved to the startup configuration.

**Examples**

The following example is sample dialog from the reboot command.

Switch# reboot

**Related Commands**

**reload**

# 1.14  schedule reboot at

To schedule a reload of the software to take place at the specified time, use the schedule reboot at command in global configuration mode. To cancel the scheduled reboot task, use the no form of this command.

**Command Syntax**

**schedule reboot at** *HH:MM (MM/DD | MM/DD/YYYY | YYYY/MM/DD)*

**no schedule reboot**

| HH:MM | The hour and minutes. The time range is 00:00 – 23:59 |
| MM/DD | Specify the date for current year (MM/DD format) |
| MM/DD/YYYY | Specify the date (MM/DD/YYYY format, year range is [2000, 2037]) |
| YYYY/MM/DD | Specify the date (YYYY/MM/DD format, year range is [2000, 2037]) |

**Command Mode**

Global Configuration

**Default**

No scheduled reboot task is defined.

**Usage**

If you specify the month and day, the reload is scheduled to take place at the specified time and date. If you do not specify the month and day, the reload takes place at the specified time on the current day.

**Examples**

The following example is sample dialog from the schedule reboot at command.

Switch(config)# schedule reboot at 12:12 2008/12/25

**Related Commands**

**schedule reboot delay**

# 1.15 schedule reboot delay

To schedule a reload of the software to take place after the specified time, use the schedule reboot delay command in global configuration mode. To cancel the scheduled reboot task, use the no form of this command.

**Command Syntax**

**schedule reboot delay** {*HH:MM | minutes*}

**no schedule reboot**

| | |
|---|---|
| HH:MM | The hour and minutes. The time range is 00:00 – 23:59 |
| minutes | The minutes. The range is 1 – 720 |

**Command Mode**

Global Configuration

**Default**

No scheduled reboot task is defined.

**Usage**

None

**Examples**

The following example is sample dialog from the schedule reboot delay command.

Switch(config)# schedule reboot delay 300

**Related Commands**

**schedule reboot at**

# 1.16  boot system

To specify the system image that the switch loads at startup, use the following boot system commands in Privileged EXEC mode.

**Command Syntax**

**boot system (tftp: mgmt-if** *SERVERIP* **| flash**:/) *file-name*

| flash | System image file for next booting |
|-------|------------------------------------|
| tftp | System image file for next booting |

| mgmt-if | Management port |
|---|---|
| *SERVERIP* | The tftp server ip |
| file-name | The file name that will be used to load at startup |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Management IP address in startup-config file will be used as source address when system boot via TFTP.

**Examples**

The following example is sample dialog from the boot system command.

Switch# boot system flash:/boot/Internal-1.0.0.25.bin

**Related Commands**

**show boot**

# 1.17  show boot

To display the current image and the image the next startup will load, use the show boot command in Privileged EXEC mode.

**Command Syntax**

> **show boot**

**Command Mode**

> Privileged EXEC

**Default**

> None

**Usage**

> None

**Examples**

> The following is sample output from the show boot command.
>
> Switch# show boot

The current boot image version is: E330-3.0.0.23.it
The current running image is: tftp://10.10.29.160/humberOS-e330-ma-v3.0.0.23.it.r.bin
The next running image is: tftp://10.10.29.160/humberOS-e330-ma-v3.0.0.23.it.r.bin

**Related Commands**

> **show boot images**

# 1.18  show boot images

> To display all booting images available in the flash system, use the show boot images
> command in Privileged EXEC mode.

**Command Syntax**

> **show boot images**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

The following is sample output from the show boot images command.

Switch# show boot images

```
System image files list:
Current boot image version: 1.0.0.25
    Create Time           Version               File name
==========================================================
*   2011-07-25 10:58:29   v3.0.0.22.it          Internal-3.0.0.22.bin
```

**Related Commands**

**show boot**

# 1.19  show memory

To display memory utilization information about the active processes, use the show memory command in Privileged EXEC mode.

**Command Syntax**

**show memory (all | bgp | bhm | chsm | dhclient | dhcpd | dhcprelay | decprelay6 | dot1x | imi | ipv6 | lacp | ldp | lib | mstp | nsm | oamd |onmd| ospf | pim | ptp| rip | rsvp | shal | summary)**

| all | All memory information |
|---|---|
| bgp | Border Gateway Protocol (BGP) |
| bhm | Health monitoring |
| chsm | Chassis management |
| dhclient | DHCP client module |
| dhcpd | DHCP server module |
| dhcprelay | DHCP relay module |
| dhcprelay6 | DHCPV6 relay module |
| dot1x | IEEE 802.1X Port-Based Access Control |
| imi | Integrated Management Interface (IMI) |
| ipv6 | Internet Protocol version 6 (IPv6) |
| lacp | Link Aggregation Control Protocol (LACP) |
| ldp | Label Distribution Protocol (LDP) |
| lib | Library information |
| mstp | Spanning Tree Protocols (STP/RSTP/MSTP) |
| nsm | Network Service Module (NSM) |
| oamd | Bidirectional Forwarding Detection (BFD) |
| onmd | LLDP and EFM_OAM |
| ospf | Open Shortest Path First (OSPF) |
| pim | Protocol Independent Multicast (PIM) |
| ptp | Precision Time Protocol (PTP) |
| rip | Routing Information Protocol (RIP) |
| rsvp | Resource Reservation Protocol (RSVP) |
| shal | Hal server monitoring |
| summary | Summary memory information |

## Command Mode

Privileged EXEC

## Default

None

## Usage

None

## Examples

The following is sample output from the show memory command with keyword bgp:

Switch# show memory bgp

Library memories for BGP

| Memory type | | Alloc cells | Alloc bytes |
|---|---|---|---|
| ============================== | ============ | ============== | |
| Temporary memory | : | 6596 | 322216 |
| Hash | : | 10 | 320 |
| Hash index | : | 10 | 40960 |
| Hash bucket | : | 55 | 880 |
| Link list | : | 13 | 400 |
| Link list node | : | 115 | 1840 |
| Show | : | 1 | 512 |
| Show page | : | 1 | 8192 |
| Show server | : | 1 | 64 |
| Prefix IPv4 | : | 6 | 48 |
| Route table | : | 6 | 48 |
| Route node | : | 309 | 19776 |
| Vector | : | 3383 | 324768 |
| Vector index | : | 3383 | 48824 |
| SNMP subtree | : | 8 | 6144 |
| Host config | : | 1 | 16 |
| Message of The Day | : | 1 | 128 |
| IMI Client | : | 2 | 1056 |
| VTY master | : | 1 | 16 |
| VTY if | : | 52 | 39936 |
| VTY connected | : | 3 | 192 |
| Message handler | : | 2 | 128 |
| Host | : | 1 | 96 |
| Log information | : | 2 | 128 |
| Context | : | 1 | 512 |

Memories for BGP

| Memory type | | Alloc cells | Alloc bytes |
|---|---|---|---|
| ============================ | ============ | ============= | =============== |
| BGP structure | : | 1 | 768 |
| BGP VR structure | : | 1 | 384 |
| BGP global structure | : | 1 | 64 |
| BGP peer | : | 1 | 2048 |
| Ext community | : | 1 | 16 |
| BGP as list master | : | 1 | 32 |
| Community list handler | : | 1 | 32 |
| BGP Damp Reuse List Array | : | 1 | 2048 |
| BGP table | : | 31 | 248 |
| BGP VRF list | : | 1 | 64 |

**Related Commands**

**show processes memory sorted**

# 1.20 show cpu traffic-limit

Use this command to show the CPU traffic-limit configurations.

**Command Syntax**

**show cpu traffic-limit**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows cpu traffic-limit configurations.

Switch # show cpu traffic-limit

| reason | rate (pps) | class |
|---|---|---|
| bpdu | 64 | 3 |
| cfm | 512 | 2 |
| slow-protocol | 128 | 1 |
| eapol | 128 | 0 |
| erps | 128 | 2 |
| smart-link | 128 | 2 |
| udld | 128 | 3 |
| arp | 640 | 1 |
| dhcp | 128 | 0 |
| rip | 64 | 1 |
| ldp | 512 | 1 |
| ospf | 256 | 1 |
| pim | 128 | 1 |
| vrrp | 512 | 1 |
| rsvp | 512 | 1 |
| ipda | 1024 | 0 |
| icmp-redirect | 128 | 0 |
| mcast-rpf-fail | 128 | 1 |
| macsa-mismatch | 128 | 0 |
| port-security-discard | 128 | 0 |
| vlan-security-discard | 128 | 0 |
| mtu-dontfrag | 64 | 0 |
| mtu-frag | 64 | 0 |
| ptp | 512 | 2 |
| ip-option | 512 | 0 |
| ucast-ttl-fail | 64 | 0 |
| mpls-ttl-fail | 64 | 0 |
| igmp | 128 | 2 |
| sflow-ingress | 128 | 0 |
| sflow-egress | 128 | 0 |
| fwd-to-cpu | 64 | 0 |
| mpls-tp-pwoam | 128 | 2 |
| Total rate: | 2048 (pps) | |

**Related Commands**

None

# 1.21  show processes cpu sorted

To display CPU utilization information about the active processes sorted by percentage in a device, use the show processes cpu sorted command in Privileged EXEC mode.

## Command Syntax

**show process cpu sorted**

## Command Mode

Privileged EXEC

## Default

None

## Usage

None

## Examples

The following is sample output from the show processes cpu sorted command:

Switch# show processes cpu sorted

| CPU usage for five seconds: 4.17%; one minute: 3.70%; five minutes: 3.68% | | | | |
|---|---|---|---|---|
| PID | TIME | %CPU | TTY | COMMAND |
| 924 | 00:20:03 | 2.0 | ? | hsrvd |
| 956 | 00:07:17 | 0.7 | ? | nsm |
| 1007 | 00:02:44 | 0.2 | ? | imi |
| 959 | 00:01:24 | 0.1 | ? | snmpd |
| 1317 | 00:00:01 | 0.1 | pts/0 | imish |
| 5 | 00:00:45 | 0.0 | ? | events/0 |
| 983 | 00:00:23 | 0.0 | ? | mstpd |
| 985 | 00:00:15 | 0.0 | ? | onmd |
| 966 | 00:00:15 | 0.0 | ? | lacpd |
| 963 | 00:00:12 | 0.0 | ? | bhm |
| 929 | 00:00:12 | 0.0 | ? | chsm |
| 964 | 00:00:11 | 0.0 | ? | oamd |
| 919 | 00:00:10 | 0.0 | ? | ntpd |
| 1003 | 00:00:08 | 0.0 | ? | pimd |
| 942 | 00:00:08 | 0.0 | ? | sshd |
| 957 | 00:00:08 | 0.0 | ? | dhcrelay |
| 973 | 00:00:07 | 0.0 | ? | authd |
| 1005 | 00:00:07 | 0.0 | ? | ldpd |
| 977 | 00:00:07 | 0.0 | ? | rmond |
| 1021 | 00:00:07 | 0.0 | ? | ripd |
| 1027 | 00:00:07 | 0.0 | ? | ospfd |
| 1032 | 00:00:07 | 0.0 | ? | bgpd |
| 1 | 00:00:05 | 0.0 | ? | init |

| | | | |
|---|---|---|---|
| 779 | 00:00:04 | 0.0 ? | jffs2_gcd_mtd1 |
| 1106 | 00:00:01 | 0.0 ? | imish |
| 3 | 00:00:00 | 0.0 ? | ksoftirqd/0 |
| 916 | 00:00:00 | 0.0 ? | syslog-ng |
| 65 | 00:00:00 | 0.0 ? | bdi-default |
| 965 | 00:00:00 | 0.0 ? | ptpd |
| 917 | 00:00:00 | 0.0 ? | crond |
| 63 | 00:00:00 | 0.0 ? | sync_supers |
| 1096 | 00:00:00 | 0.0 ? | telnetd |
| 6 | 00:00:00 | 0.0 ? | khelper |
| 105 | 00:00:00 | 0.0 ? | khungtaskd |
| 2 | 00:00:00 | 0.0 ? | kthreadd |
| 4 | 00:00:00 | 0.0 ? | watchdog/0 |
| 9 | 00:00:00 | 0.0 ? | netns |
| 10 | 00:00:00 | 0.0 ? | async/mgr |
| 66 | 00:00:00 | 0.0 ? | kblockd/0 |
| 73 | 00:00:00 | 0.0 ? | kseriod |
| 88 | 00:00:00 | 0.0 ? | rpciod/0 |
| 106 | 00:00:00 | 0.0 ? | kswapd0 |
| 157 | 00:00:00 | 0.0 ? | aio/0 |
| 164 | 00:00:00 | 0.0 ? | nfsiod |
| 171 | 00:00:00 | 0.0 ? | crypto/0 |
| 712 | 00:00:00 | 0.0 ? | mtdblockd |
| 741 | 00:00:00 | 0.0 ? | kpsmoused |
| 789 | 00:00:00 | 0.0 ? | PETH/Tx |
| 912 | 00:00:00 | 0.0 ? | angel |
| 1098 | 00:00:00 | 0.0 ? | telnetd |
| 1414 | 00:00:00 | 0.0 pts/0 | imish |
| 1415 | 00:00:00 | 0.0 pts/0 | more |
| 1416 | 00:00:00 | 0.0 ? | ps |

**Related Commands**

None

## 1.22  show processes cpu history

To display CPU utilization information for a period of time, use the show processes cpu history command in Privileged EXEC mode, the period of 1s, 1min, 5min could be shown.

**Command Syntax**

**show process cpu history**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

The following is sample output from the show processes cpu history command:

Switch# show processes cpu history

CPU usage for five seconds: 4.17%; one minute: 3.70%; five minutes: 3.68%

**Related Commands**

None

# 1.23  show processes memory sorted

To display memory utilization information about the active processes sorted by percentage in a device, use the show processes memory sorted command in Privileged EXEC mode. Here, CPU usage for each process means the CPU timeslice used by this process from the process was started to this command has been operated.

**Command Syntax**

**show processes memory sorted (core | physical | virtual)**

| | |
|---|---|
| core | Size in physical pages of the core image of the process |
| physical | Non-swapped physical memory that a task has used |

| virtual | Virtual memory usage of entire process |
|---------|----------------------------------------|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

The following is sample output from the show processes memory sorted command without keywords:

Switch# show processes memory sorted

Total: 256108; Used: 89644; Free: 166464; Buffers: 0

| PID TTY | RSS | VSZ | SZ | COMMAND |
|---------|------|-------|------|----------|
| 1317 pts/0 | 9516 | 13104 | 3276 | imish |
| 1106 ? | 9428 | 13104 | 3276 | imish |
| 1463 pts/0 | 7436 | 13104 | 3276 | imish |
| 956 ? | 6836 | 14644 | 3661 | nsm |
| 1007 ? | 5948 | 9624 | 2406 | imi |
| 924 ? | 5912 | 17652 | 4413 | hsrvd |
| 959 ? | 3336 | 8076 | 2019 | snmpd |
| 1032 ? | 2724 | 8204 | 2051 | bgpd |
| 1027 ? | 2488 | 7140 | 1785 | ospfd |
| 1003 ? | 2472 | 7152 | 1788 | pimd |
| 957 ? | 2340 | 6572 | 1643 | dhcrelay |
| 983 ? | 2336 | 6592 | 1648 | mstpd |
| 1021 ? | 2324 | 6600 | 1650 | ripd |
| 1005 ? | 2320 | 6732 | 1683 | ldpd |
| 942 ? | 2284 | 6772 | 1693 | sshd |
| 985 ? | 2208 | 6592 | 1648 | onmd |
| 929 ? | 2132 | 7168 | 1792 | chsm |
| 966 ? | 2028 | 6140 | 1535 | lacpd |
| 973 ? | 2028 | 6284 | 1571 | authd |
| 965 ? | 2024 | 6408 | 1602 | ptpd |
| 964 ? | 1952 | 6364 | 1591 | oamd |

| | | | | |
|---|---|---|---|---|
| 977 ? | 1948 | 6200 | 1550 | rmond |
| 963 ? | 1708 | 5980 | 1495 | bhm |
| 919 ? | 1120 | 3792 | 948 | ntpd |
| 916 ? | 1060 | 2300 | 575 | syslog-ng |
| 1465 pts/0 | 764 | 2516 | 629 | ps |
| 917 ? | 668 | 3040 | 760 | crond |
| 1 ? | 656 | 2928 | 732 | init |
| 1464 pts/0 | 472 | 1668 | 417 | more |
| 1096 ? | 416 | 2928 | 732 | telnetd |
| 1098 ? | 272 | 2928 | 732 | telnetd |
| 912 ? | 172 | 1496 | 374 | angel |
| 2 ? | 0 | 0 | 0 | kthreadd |
| 3 ? | 0 | 0 | 0 | ksoftirqd/0 |
| 4 ? | 0 | 0 | 0 | watchdog/0 |
| 5 ? | 0 | 0 | 0 | events/0 |
| 6 ? | 0 | 0 | 0 | khelper |
| 9 ? | 0 | 0 | 0 | netns |
| 10 ? | 0 | 0 | 0 | async/mgr |
| 63 ? | 0 | 0 | 0 | sync_supers |
| 65 ? | 0 | 0 | 0 | bdi-default |
| 66 ? | 0 | 0 | 0 | kblockd/0 |
| 73 ? | 0 | 0 | 0 | kseriod |
| 88 ? | 0 | 0 | 0 | rpciod/0 |
| 105 ? | 0 | 0 | 0 | khungtaskd |
| 106 ? | 0 | 0 | 0 | kswapd0 |
| 157 ? | 0 | 0 | 0 | aio/0 |
| 164 ? | 0 | 0 | 0 | nfsiod |
| 171 ? | 0 | 0 | 0 | crypto/0 |
| 712 ? | 0 | 0 | 0 | mtdblockd |
| 741 ? | 0 | 0 | 0 | kpsmoused |
| 779 ? | 0 | 0 | 0 | jffs2_gcd_mtd1 |
| 789 ? | 0 | 0 | 0 | PETH/Tx |

**Related Commands**

None

# 1.24  terminal monitor

To copy debug output to the current terminal line, use the terminal monitor command in Privileged EXEC mode.

**Command Syntax**

**terminal monitor**

**terminal no monitor**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

The following is sample output from the terminal monitor command

Switch# terminal monitor

Jan    1 16:09:30 DUT1 IMISH-6: ready to service

**Related Commands**

None

## 1.25  configure terminal

To enter global configuration mode, use configure terminal command in Privileged EXEC mode.

**Command Syntax**

**configure terminal**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use this command to enter global configuration mode. Note that commands in this mode are written to the running configuration file as soon as you enter them (using the Enter key/Carriage Return).

After you enter the configure command, the system prompt changes from <switch-name># to <switch-name>(config)#, indicating that the switch is in global configuration mode. To leave global configuration mode and return to Privileged EXEC mode, type end or press Ctrl-Z.

**Examples**

In the following example, the user enters global configuration mode:

Switch# configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#

**Related Commands**

**enable**

**disable**

# 1.26  disable

To exit Privileged EXEC mode and return to user EXEC mode, enter the disable command in EXEC mode.

**Command Syntax**

**disable**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

In the following example, the user enters Privileged EXEC mode using the enable command, then exits back to user EXEC mode using the disable command. Note that the prompt for user EXEC mode is >, and the prompt for Privileged EXEC mode is #.

Switch> enable

Password: <password>

Switch# disable

Switch>

**Related Commands**

**enable**

# 1.27  enable

To enter Privileged EXEC mod, use the enable command in user EXEC or Privileged EXEC mode.

**Command Syntax**

> **enable**

**Command Mode**

> User EXEC
>
> Privileged EXEC

**Default**

> None

**Usage**

> None

**Examples**

> In the following example, the user enters Privileged EXEC mode using the enable command. The system prompts the user for a password before allowing access to the Privileged EXEC mode. The password is not printed to the screen. The user then exits back to user EXEC mode using the disable command. Note that the prompt for user EXEC mode is the greater than symbol (>), and the prompt for Privileged EXEC mode is the number sign (#).
>
> Switch> enable
>
> Password: <password>
>
> Switch# disable
>
> Switch>

**Related Commands**

> **disable**

# 1.28 end

To end the current configuration session and return to Privileged EXEC mode, use the end command in global configuration mode.

**Command Syntax**

**end**

**Command Mode**

Global Configuration

**Default**

None

**Usage**

This command will bring you back to Privileged EXEC mode regardless of what configuration mode or configuration sub-mode you are in.

This global configuration command can be used in any configuration mode.

Use this command when you are done configuring the system and you want to return to EXEC mode to perform verification steps.

**Examples**

In the following example, the end command is used to exit from interface configuration mode and return to Privileged EXEC mode. A show command is used in Privileged EXEC mode to verify the configuration.

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# end

Switch# show interface eth-0-1

**Related Commands**

**exit**

## 1.29  exit (global)

To exit any configuration mode to the lower mode in the CLI mode hierarchy, use the exit command in any configuration mode.

**Command Syntax**

**exit**

**Command Mode**

All Configuration Modes

**Default**

None

**Usage**

The exit command is used in the CLI to exit from the current command mode to the lower mode in the CLI mode hierarchy.

For example, use the exit command in global configuration mode to return to Privileged EXEC mode. Use the exit command in interface, line, or router configuration mode to return to global configuration mode.

**Examples**

The following example displays an exit from the interface configuration mode to return to the global configuration mode.

Switch(config-if)# exit

Switch(config)#

**Related Commands**

**end**

**exit (EXEC)**

# 1.30 exit (EXEC)

To close an active terminal session by logging off the switch, use the exit command in EXEC mode.

**Command Syntax**

**exit**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the exit command in EXEC mode to exit the active session (log off the device). This command can be used in any EXEC mode (such as User EXEC mode or Privileged EXEC mode) to exit from the EXEC process.

**Examples**

In the following example, the exit (global) command is used to move from global configuration mode to Privileged EXEC mode, the disable command is used to move from

Privileged EXEC mode to user EXEC mode, and the exit (EXEC) command is used to log off (exit the active session):

Switch(config)# exit

Switch# disable

Switch> exit

**Related Commands**

**quit**

# 1.31  quit

To close an active terminal session by logging off the switch, use the quit command in EXEC mode.

**Command Syntax**

**quit**

**Command Mode**

All Configuration Modes

**Default**

None

**Usage**

Use the quit command in EXEC mode to exit the active session (log off the device). This command can be used in any EXEC mode (such as User EXEC mode or Privileged EXEC mode) to exit from the EXEC process.

**Examples**

In the following example, the quit command is used to move from global configuration mode to Privileged EXEC mode, the disable command is used to move from Privileged EXEC mode to user EXEC mode, and the quit command is used to log off (exit the active session):

Switch(config)# quit

Switch# disable

Switch> quit

**Related Commands**

**exit**

# 1.32 cd

Change the current directory to dir, use the cd command in EXEC mode.

**Command Syntax**

**cd** (*dir* | )

| dir | (Optional) The directory or file systems followed by a colon. If flash: argument is specified, change the current directory to flash: . If udisk: argument is specified, change the current directory to udisk:. If you don't use USB device, failed to cd udisk |
|---|---|

**Command Mode**

Privileged EXEC

**Default**

The initial default file system is **flash:**. If you do not specify a directory on a file system, the default is the root directory on that file system.

**Usage**

For all EXEC commands that have an optional file system argument, the system uses the file system specified by the cd command when you omit the optional file system argument. For example, the dir EXEC command, which displays a list of files on a file system, contain an optional file system argument. When you omit this argument, the system lists the files on the file system specified by the cd command.

**Examples**

- In the following example, the cd command is used to set the default file system to the Flash memory.

    Switch # cd

    Switch# pwd

flash:/

- In the following example, the cd command is used to set the file system without plug in the USB mass storage device

    Switch # cd udisk:

% Failed to cd udisk:: No such file or directory

- In the following example, the cd command is used to set the file system with plug in the USB mass storage device

    Switch # cd udisk:

    Switch # pwd

udisk:/

**Related Commands**

**dir**

**ls**

**pwd**

# 1.33 copy

To copy file system, use the copy command in Privileged EXEC mode.

**Command Syntax**

**copy** *source-name destination-name*

| source-name | The location URL of the source file to be copied. The source can be either local or remote |
|---|---|
| destination-name | The destination URL of the copied file. The destination can be either local or remote |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The exact format of the source and destination URLs varies according to the file or directory location. You may enter a particular file or a filename that follows the standard file system syntax (filesystem:[/filepath][/filename]).

**Examples**

The following example shows how to get image from TFTP server through in band management interface.

Switch# copy tftp://192.168.0.1/image flash:/boot/image

Download from URL to temporary file.
Get file from tftp://192.168.0.1/image
..............................................................................................
Received 15591515 bytes in 16.6 seconds
Copy the temporary file to its destination.
..............................................................................................
15591515 bytes in 69.8 seconds, 218 kbytes/second

The following CLI example shows how to get image from TFTP server throughout band management interface.

Switch# copy mgmt-if tftp://192.168.0.1/image flash:/boot/image

**Related Commands**

**delete**

# 1.34  delete

To delete a file on the flash, use the delete command in Privileged EXEC mode.

**Command Syntax**

**delete** *file-name*

| file-name | The file name that is supposed to be deleted |
|---|---|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

If you attempt to delete the configuration file or image, the system prompts you to confirm the deletion. Also, if you attempt to delete the system specified file such as DHCP snooping bindings, the system prompts you to confirm the deletion.

**Examples**

The following example deletes the file named test from the flash:

Switch# delete flash:/test

Are you sure to delete flash:/test? [confirm]:y

**Related Commands**

**copy**

# 1.35 dir

To display a list of files on a file system, use the dir command in EXEC mode.

**Command Syntax**

**dir** (**flash: | udisk: |** ) (*directory-name | *) (*file-name | *)

| flash | The flash system |
|---|---|
| udisk | The USB mass storage device. If you don't use USB mass storage device, failed to dir udisk |
| directory-name | The directory in flash or udisk |
| file-name | The file name |

## Command Mode

Privileged EXEC

## Default

None

## Usage

Use the dir (Flash file system) command to display flash or udisk information.

## Examples

The following is sample output from the dir command.

Switch# dir

```
Directory of flash:/

total 42
drwxr-xr-x   2        0 Jul 30 15:42 boot
drwxr-xr-x   3        0 Jan   1   1970 conf
drwxr-xr-x   2        0 Jan   1   1970 log
-rw-r-----    1     1020 Jul 29 19:18 startup-config.conf
-rw-r--r--    1 10270 Jul 30 10:10 syslog
-rw-r--r--    1     6886 Jul 29 23:59 syslog.1.gz

63.0M bytes total (30.4M bytes free)
Switch#
```

The following is sample output from udisk if plug in the USB mass storage device.

Switch # cd udisk:

Switch # dir

```
Directory of udisk:/

total 12
drwxrwxrwx 2 4096 Jun   2   2011 test
drwxrwxrwx 2 4096 Jun   8   2011 test1
```

drwxrwxrwx 2 4096 Jun   7    2011 test2

3.7G bytes total (3.7G bytes free)

**Related Commands**

**ls**

# 1.36  ls

To display a list of files on a file system, use the ls command in EXEC mode.

**Command Syntax**

**ls** (**flash: | udisk: |** ) (*directory-name | )*(*file-name | )*

| flash | The flash system |
| --- | --- |
| udisk | The USB mass storage device. If you don't use USB mass storage device, failed to dir udisk |
| directory-name | The directory in flash or udisk |
| file-name | The file name |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the ls (Flash file system) command to display flash or udisk information.

**Examples**

The following is sample output from the ls command.

Switch# ls

Directory of flash:/

total 42
drwxr-xr-x   2        0 Jul 30 15:42 boot
drwxr-xr-x   3        0 Jan   1   1970 conf
drwxr-xr-x   2        0 Jan   1   1970 log
-rw-r-----   1    1020 Jul 29 19:18 startup-config.conf
-rw-r--r--   1 10270 Jul 30 10:10 syslog
-rw-r--r--   1    6886 Jul 29 23:59 syslog.1.gz

63.0M bytes total (30.4M bytes free)

**Related Commands**

**dir**

# 1.37  more

To display the contents of a file, use the more command in EXEC mode.

**Command Syntax**

**more** (**flash: | udisk:**) (*directory-name*|)*file-name*

| flash | The flash system |
|---|---|
| udisk | The USB mass storage device. If you don't use USB mass storage device, failed to dir udisk |
| directory-name | The directory in flash or udisk |
| file-name | The file name |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The system can only display a file in ASCII format.

**Examples**

The following partial sample output displays the configuration file named startup-config in flash.

Switch# more flash:/startup-config.conf

**Related Commands**

**dir**

**ls**

# 1.38  mkdir

To create a new directory in a Flash file system or udisk device, use the mkdir command in EXEC mode.

**Command Syntax**

**mkdir** *directory-name*

| directory-name | The directory in flash or udisk |
| --- | --- |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

This command is valid only for local file systems.

**Examples**

The following example creates a directory named newdir in Flash.

Switch# mkdir flash:/newdir

The following example creates a directory named newdir in USB mass storage device if plug in it.

Switch# mkdir udisk:/newdir

**Related Commands**

**rmdir**

**dir**

# 1.39 rename

To rename a file in a Class C Flash file system or udisk device, use the rename command in EXEC mode.

**Command Syntax**

**rename** *old-filename new-filename*

| old-filename | The original file name in flash |
|---|---|
| new-filename | The new file name in flash |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

This command is valid only for local file systems.

**Examples**

In the following example, the file named startup-config.conf-bak is renamed

startup-config.conf-bak2.

Switch1# rename udisk:/wus udisk:/wu

Are you sure to rename udisk:/wus? [confirm]

**Related Commands**

None

# 1.40  rmdir

To remove an existing directory in a Flash file system or udisk device, use the rmdir command in Privileged EXEC mode.

**Command Syntax**

**rmdir** *directory-name*

| directory-name | The directory in flash |
|---|---|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

This command is valid only for local file systems.

**Examples**

The following example creates a directory named newdir.

Switch# rmdir flash:/newdir

Are you sure to delete newdir? [yes/no]: y

**Related Commands**

**mkdir**

**dir**

# 1.41 tar create

To create an new tar file in a Flash file system or udisk device, use the tar create command in Privileged EXEC mode.

**Command Syntax**

**tar create** *tar-file-name source-directory*

| tar-file-name | The file name of the new tar file |
|---|---|
| source-directory | The source directory in flash |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The source-directory must be a directory.

**Examples**

The following example creates a tar file named tar1.

Switch# tar create udisk:/tar1 udisk:/wu

**Related Commands**

**tar table**

**tar xtract**

# 1.42 tar table

To display files in the tar file, use the tar table command in Privileged EXEC mode.

**Command Syntax**

**tar table** *tar-file-name*

| tar-file-name | The file name of the new tar file |
|---|---|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The tar-file-name must be a in the flash.

**Examples**

The following example shows files in a tar file named tar1.

Switch# tar table udisk:/tar1

**Related Commands**

**tar create**

**tar xtract**

# 1.43  tar xtract

To untar files in the tar file, use the tar xtract command in Privileged EXEC mode.

**Command Syntax**

**tar xtract** *tar-file destination-directory*

| tar-file | The file name of the tar file |
|---|---|
| destination-directory | The destination directory |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The destination-directory must exist in the flash. You can use mkdir to create a new

directory.

**Examples**

The following shows an example to extract a tar file named tar1 into a directory name dir1:

Switch# tar xtract flash:/tar1 flash:/mydir

**Related Commands**

**tar create**

**tar table**

# 1.44 tar diagnostic-information

To put diagnostic-information to a Flash file system ,udisk device, ftp server or tftp server, use the tar diagnostic-information command in Privileged EXEC mode. Syslog files, core dump files, tcam entries ,running-config, startup-config, version, clock, memory and logging buffer are included in this tarfile.

**Command Syntax**

**tar diagnostic-information** (**mgmt-if |** ) *destination-directory/ tar-file*

| destination-directory | The destination directory, such as flash, udisk, tftp or ftp server |
|---|---|
| tar-file | The file name of the tar file |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

The destination-directory must reachable and disk is enough.

**Examples**

The following shows an example to put a diagnostic-information tar file to flash:

Switch# tar diagnostic-information flash:/diag.tar.gz

**Related Commands**

None

# 1.45  format

To format udisk, all data on udisk: will be lost.

**Command Syntax**

**format udsik:**

| udsik: | The USB mass storage device. If you don't use USB mass storage device, failed to format udisk |
| --- | --- |

**Command Mode**

Application Configure mode

**Default**

None

**Usage**

The destination-directory must exist.

**Examples**

The following shows an example to format USB mass storage device:

Switch(config)# format udisk:

```
    WARNING: All data on udisk: will be lost!!!

And format operation may take a while.
```

Are you sure to process with format? [yes/no]: yes

## Related Commands

None

## 1.46  umount

To uninstall the USB mass storage device before plug out it from the switch.

## Command Syntax

**umount udsik:**

| udisk: | The USB mass storage device. If you don't use USB mass storage device, failed to format udisk |
|---|---|

## Command Mode

Application Configure mode

## Default

None

## Usage

USB mass storage device must exist in the system. You can use umount command to uninstall the USB mass storage device.

## Examples

The following shows an example to umount USB mass storage device:

Switch(config)# umount udisk:

After this operation, you can not use USB disk.
Are you sure to continue? [yes/no]: yes

## Related Commands

None

# 2 User Management Commands

## 2.1 username

Use this command to create or delete a local user account on the switch.

**Command Syntax**

**username** *WORD*

**no username** *WORD*

| username | Establish User Name Authentication |
|----------|-----------------------------------|
| *WORD* | User name |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to add a user named testName.

Switch (config)#username testName

**Related Commands**

None

# 2.2 username password

Use this command to add username and password.

**Command Syntax**

**username** *WORD* **password (8|)** *LINE*

| WORD | User name |
|---|---|
| Password | Password for username |
| (8|) | Specifies a hidden password will follow |
| LINE | User password string |

**Command Mode**

Global Configuration mode

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to add a user named testName and with the password of 123456.

Switch(config)# username testName password 123456

**Related Commands**

None

# 2.3  username secret

Use this command to add username and password and the password will be encrypted by the switch.

**Command Syntax**

**username** *WORD* **secret** *LINE*

| *WORD* | User name |
|--------|-----------|
| secret | Specify the secret for the user |
| *LINE* | User privilege level |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to add a user named testName and with the password of 123456.

Switch (config)#username testName secret 123456

**Related Commands**

None

## 2.4  username privilege

Use this command to set a local user account with privilege level on the switch.

**Command Syntax**

**username** *WORD* **privilege** *<1-4>*

| *WORD* | User name |
|---|---|
| privilege <1-4> | ser privilege level |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to add a user with privilege level of 2.

Switch(config)#username testName privilege 2

**Related Commands**

None

## 2.5 username privilege password

Use this command to set a local user account with privilege level and password on the switch.

**Command Syntax**

**username** *WORD* **privilege <1-4> password (8|)** *LINE*

| | |
|---|---|
| *WORD* | User name |
| privilege *<1-4>* | User privilege level |
| 8 | Specifies a HIDDEN password will follow |
| *LINE* | User privilege level |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to add a user with privilege level of 2 and password of 123456.

Switch(config)# username testName privilege 2 password 123456

**Related Commands**

None

## 2.6 re-username newname

Use this command to reset username.

**Command Syntax**

**re-username** *WORD* **newname** *WORD*

| re-username *WORD* | Old user name |
|---|---|
| newname *WORD* | New user name |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to reset username.

Switch(config)# re-username testName newname newname

**Related Commands**

None

# 2.7  cipher detect

Use this command to set high level of cipher detect.

**Command Syntax**

**cipher detect (strong| normal | none)**

| strong | Cipher must contain digital, normal char and special char |
|--------|-----------------------------------------------------------|
| normal | Cipher must contain digital and normal char |
| none | Disable security check |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

None

**Examples**

This is a sample output from this command displaying how to set high level of cipher detect.

Switch(config)# cipher detect strong



**NOTE**

This cmd will make all un-strong clear text passwords lost!

**Related Commands**

None

# 3 FTP Commands

## 3.1 ftp

To exchange files between local and remote ftp server, use the ftp command in Privileged EXEC mode.

**Command Syntax**

**ftp (mgmt-if | )** *host*

| mgmt-if | Management port |
|---------|-----------------|
| host | IPv4, IPv6 address or name of the remote host |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the ftp command to upload and download files from remote ftp server.

**Examples**

The following is sample output from the ftp command:

Switch# ftp mgmt-if 10.10.29.160

Connected to 10.10.29.160.
220---------- Welcome to Pure-FTPd ----------
220-You are user number 1 of 50 allowed.
220-Local time is now 09:00. Server port: 21.
220-IPv6 connections are also welcome on this server.
220 You will be disconnected after 15 minutes of inactivity.
Name (10.10.29.160:root): root
331 User root OK. Password required
Password:
230-User root has group access to:   wheel     disk     adm     sys     daemon
230- bin        root
230 OK. Current directory is /root
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>

Switch # ftp mgmt-if 2001:1000::2

Connected to 2001:1000::2 (2001:1000::2).
220 Serv-U FTP Server v10.2 ready...
Name (2001:1000::2:root): FS
331 User name okay, need password.
Password:
230 User logged in, proceed.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>

**Related Commands**

None

# 3.2  ftp vrf

To exchange files between local and remote ftp server in VPN, use the ftp vrf command in Privileged EXEC mode.

**Command Syntax**

**ftp vrf** *WORD*

| WORD | VPN Routing/Forwarding instance name |
|------|--------------------------------------|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

The following is sample output from the ftp vrf command:

Switch# ftp vrf testvrf

**Related Commands**

None

## 3.3 ftp username

To create an FTP username, use the ftp username command in global configuration mode.

To remove an FTP username, use the no form of this command.

**Command Syntax**

> **ftp username** *username*
>
> **no ftp username**

| username | The user name of the remote FTP server |
|---|---|

**Command Mode**

> Global Configuration

**Default**

> No ftp username is defined.

**Usage**

> The username must also follow the rules. They must start with a letter, and have as interior characters only letters, digits, and underline. Names must be 31 characters or fewer.

**Examples**

> The following example creates an FTP username "abc":
>
> Switch(config)# ftp username abc

**Related Commands**

> **ftp password**
>
> **ftp passive**

# 3.4 ftp password

To create the password of an FTP username, use the ftp password command in global configuration mode. To remove the password of an FTP username, use the no form of this command.

**Command Syntax**

**ftp password**(*passowrd* | **8** *passowrd*)

**no ftp password**

| password | The password of the user name of the remote FTP server |
|----------|----------------------------------------------------------|
| 8 | Specifies a hidden password will follow |

**Command Mode**

Global Configuration

**Default**

No ftp password is defined.

**Usage**

The password will be encrypted in running-config if service password-encryption is enabled.

**Examples**

The following example creates the ftp password:

Switch(config)# ftp password abc

**Related Commands**

**ftp username**

**ftp passive**

## 3.5 ftp passive

To set the FTP mode in passive mode, use the ftp passive command in global configuration mode. To restore the configuration to the default, use no form of this command.

**Command Syntax**

**ftp passive**

**no ftp passive**

**Command Mode**

Global Configuration

**Default**

FTP works in Active mode.

**Usage**

None

**Examples**

The following example sets the ftp mode to passive:

Switch(config)# ftp passive

**Related Commands**

**ftp username**

**ftp password**

# 3.6 show ftp

To display the ftp configurations, use show ftp command in Privileged EXEC mode.

**Command Syntax**

>**show ftp**

**Command Mode**

>Privileged EXEC

**Default**

>None

**Usage**

>None

**Examples**

>The following example displays the ftp configurations:

>Switch# show ftp

>ftp passive mode: on
>ftp username: root
>ftp password: unencrypted, abc

**Related Commands**

>**ftp username**

>**ftp password**

>**ftp passive**

# 4 TFTP Commands

## 4.1 copy GFILENAME GURLNAME

Use this command to copy local file to tftp server.

**Command Syntax**

**copy** *GFILENAME* (**mgmt-if |** ) *GURLNAME*

| mgmt-if | Management port |
|---------|-----------------|
| GFILENAME | Copy to URL |
| GURLNAME | Copy to local file |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This is a sample output from the command displaying how to copy local file to tftp server.

Switch# copy flash:/test.c tftp://1.1.1.1/running-config

**Related Commands**

None

## 4.2  copy GURLNAME GFILENAME

Use this command to copy file from tftp server to local.

**Command Syntax**

**copy** (**mgmt-if**| ) *GURLNAME GFILENAME*

| mgmt-if | Management port |
|---------|-----------------|
| GURLNAME | Copy from URL |
| GFILENAME | Copy to local file |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This is a sample output from the command displaying how to copy file from tftp server to local.

Switch# copy tftp://1.1.1.1/test.c flash:test1.c

get file from tftp://1.1.1.1/test.c
.
Received 225 bytes in 0.3 seconds

**Related Commands**

None

## 4.3 copy running-config mgmt-if

Use this command to copy running-config to tftp server.

**Command Syntax**

**copy running-config (mgmt-if| )** *GURLNAME*

| startup-config | Copy from current system configuration |
|----------------|----------------------------------------|
| mgmt-if | Management port |
| GFILENAME | Copy to URL |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This is a sample output from the command displaying how to copy running-config to tftp server.

Switch#copy running-config tftp://1.1.1.1/running-config

Building configuration...
send file to tftp://1.1.1.1/running-config
..
Sent 40198 bytes in 8.3 seconds

**Related Commands**

None

# 4.4  copy startup-config mgmt-if

Use this command to copy startup-config to tftp server.

**Command Syntax**

**copy startup-config (mgmt-if| )** *GURLNAME*

| startup-config | Copy from current system configuration |
|---|---|
| mgmt-if | Management port |
| GFILENAME | Copy to URL |

**Command Mode**

Privileged EXEC

**Default**

    None

**Usage**

    None

**Examples**

    This is a sample output from the command displaying how to copy startup-config to tftp server.

    Switch# copy startup-config tftp://1.1.1.1/startup-config

```
send file to tftp://1.1.1.1/startup-config
..
Sent 32252 bytes in 6.4 seconds
```

**Related Commands**

    None

## 4.5 copy mgmt-if startup-config

    Use this command to copy startup-config from tftp server.

**Command Syntax**

    **copy (mgmt-if| )** *GURLNAME* **startup-config**

| | |
|---|---|
| mgmt-if | Management port |
| GURLNAME | Copy from URL |
| startup-config | Copy to startup system configuration |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This is a sample output from the command displaying how to copy startup-config from tftp server.

Switch #copy tftp://1.1.1.1/startup-config startup-config

get file from tftp://1.1.1.1/startup-config
..
Sent 32252 bytes in 6.4 seconds

**Related Commands**

None

# 5  Telnet Commands

## 5.1  telnet

Use this command from the switch to access the other devices in the network.

**Command Syntax**

**telnet** ( **vrf** *WORD* **| mgmt-if** ) *WORD* (*PORT |*)

| vrf *WORD* | VPN Routing/Forwarding instance |
|-----------|--------------------------------|
| mgmt-if | Management port |
| WORD | IPv4, IPv6 address or hostname of a remote system |
| PORT | TCP Port number |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

None

**Examples**

This example shows how to Telnet from the switch to a remote host.

Switch# telnet mgmt-if 10.10.29.247

Entering character mode
Escape character is '^]'.


TestOS, Version 2.3(62), fcs

Switch# telnet 2001:1000::1


Entering character mode
Escape character is '^]'.


DUT1#

**Related Commands**

None

# 6    SSH Commands

## 6.1   ip ssh server

To enable SSH service, use ip ssh server enable command in global configuration mode. To disable SSH service, use ip ssh server disable command.

**Command Syntax**

**ip ssh server** (**enable | disable**)

| | |
|---|---|
| enable | Turn on the SSH service |
| disable | Turn off the SSH service |

**Command Mode**

Global Configuration

**Default**

SSH service is enabled.

**Usage**

None

**Examples**

The following example enables the SSH service on your switch:

Switch(config)# ip ssh server enable

**Related Commands**

**show ip ssh server status**

# 6.2 ip ssh server authentication-retries

To configure Secure Shell (SSH) authentication retry times on your switch, use the ip ssh
server authentication-retries command in global configuration mode. To restore the default
value, use the no form of this command.

**Command Syntax**

**ip ssh server authentication-retries** *integer*

**no ip ssh server authentication-retries**

| integer | The number of retries, with a maximum of 6 authentication retries |
|---|---|

**Command Mode**

Global Configuration

**Default**

The default is 6.

**Usage**

None

**Examples**

The following examples configure SSH authentication retry times on your switch.

Switch(config)# ip ssh server authentication-retries 3

**Related Commands**

**show ip ssh server status**

# 6.3 ip ssh server authentication-timeout

To configure Secure Shell (SSH) authentication timeout on your switch, use the ip ssh server authentication-timeout command in global configuration mode. To restore the default value, use the no form of this command.

**Command Syntax**

**ip ssh server authentication-timeout** *seconds*

**no ip ssh server authentication-timeout**

| seconds | The number of seconds until timeout disconnects, with a maximum of 120 seconds |
|---|---|

**Command Mode**

Global Configuration

**Default**

The default is 120 seconds.

**Usage**

None

**Examples**

The following examples configure SSH authentication timeout on your switch:

Switch(config)# ip ssh server authentication-timeout 100

**Related Commands**

**show ip ssh server status**

# 6.4 ip ssh server authentication-type

To configure Secure Shell (SSH) authentication type on your switch, use the ip ssh server authentication-type command in global configuration mode. To restore the default value, use the no form of this command.

**Command Syntax**

**ip ssh server authentication-type** (**all** |{**password | public-key | rsa**})

**no ip ssh server authentication-type**

| all | Enable all authentication type |
|---|---|
| password | Enable password authentication |
| public-key | Enable SSHv2 public key authentication |
| rsa | Enable SSHv1 rsa authentication |

**Command Mode**

Global Configuration

**Default**

The default authentication type is all.

**Usage**

None

**Examples**

The following examples configure SSH authentication type on your switch.

Switch(config)# ip ssh server authentication-type password

**Related Commands**

**show ip ssh server status**

## 6.5  ip ssh server host-key rsa key

To configure Secure Shell (SSH) host-key on your switch, use the ip ssh server host-key rsa key command in global configuration mode. To restore the default value, use the no form of this command.

**Command Syntax**

**ip ssh server host-key rsa key** *key*

**no ip ssh server host-key rsa**

| key | The key value for host key |
|---|---|

## Command Mode

Global Configuration

## Default

There is no host-key defined.

## Usage

None

## Examples

The following examples configure SSH host key on your switch:

Switch(config)# ip ssh server host-key rsa key KEY1

## Related Commands

**show ip ssh server status**

# 6.6  ip ssh server rekey-interval

To configure Secure Shell (SSH) rekey interval on your switch, use the ip ssh server rekey-interval command in global configuration mode. To restore the default value, use the no form of this command.

## Command Syntax

**ip ssh server rekey-interval** *minute*

**no ip ssh server rekey-interval**

| minute | The rekey interval, with a maximum of 1440 minutes |
|--------|----------------------------------------------------|

**Command Mode**

Global Configuration

**Default**

The default interval is 60 minutes.

**Usage**

None

**Examples**

The following examples configure SSH rekey interval on your switch:

Switch(config)# ip ssh server rekey-interval 30

**Related Commands**

**show ip ssh server status**

## 6.7 ip ssh server version

To configure Secure Shell (SSH) version on your switch, use the ip ssh server version command in global configuration mode. To restore the default value, use the no form of this command.

**Command Syntax**

**ip ssh server version** (**1 | 2 | all**)

**no ip ssh server version**

| 1 | Switch runs only SSH Version 1 |
|-----|------------------------------------------|
| 2 | Switch runs only SSH Version 2 |
| all | Version 1 and Version 2 are both supported |

**Command Mode**

Global Configuration

**Default**

The default SSH version is 2.

**Usage**

You can use this command with the 2 keyword to ensure that your switch will not inadvertently establish a weaker SSH Version 1 connection.

**Examples**

The following example shows that only SSH Version 1 support is configured:

Switch(config)# ip ssh server version 1

The following example shows that only SSH Version 2 is configured:

Switch(config)# ip ssh server version 2

The following example shows that SSH Versions 1 and 2 are configured:

Switch(config)# no ip ssh server version

**Related Commands**

**show ip ssh server status**

# 6.8  show ip ssh server session

To display the session information for Secure Shell (SSH), use the show ip ssh server session command in Privileged EXEC mode.

**Command Syntax**

**show ip ssh server session**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the show ip ssh server session command to view the session information.

**Examples**

The following example shows the current SSH sessions:

Switch# show ip ssh server session

| Version | Encryption | Hmac | User | IP | State |
|---|---|---|---|---|---|
| 2.0 | aes128-cbc | hmac-md5 | abc | 10.10.29.22 | Session started |

**Related Commands**

**show ip ssh server status**

# 6.9 show ip ssh server status

To display the version and configuration data for Secure Shell (SSH), use the show ip ssh server status command in Privileged EXEC mode.

**Command Syntax**

**show ip ssh server status**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the show ip ssh server status command to view the version and configuration data.

**Examples**

The following example shows the current SSH configurations:

Switch# show ip ssh server status

```
SSH server enabled
Version: 1.99
Authentication timeout: 33 second(s)
Authentication retries: 6 time(s)
Server key lifetime: 60 minute(s)
Authentication type: password, public-key
```

**Related Commands**

**show ip ssh server session**

# 6.10 rsa key generate

To create a key by system, use the rsa key generate command in global configuration mode.

**Command Syntax**

**rsa key** *keyname* **generate**

| keyname | The name of the key |
|---------|---------------------|

**Command Mode**

Global Configuration

**Default**

None

**Usage**

Use the rsa key command to create a key by system.

**Examples**

The following example creates a key named KEY1:

Switch(config)# rsa key KEY1 generate

Generating RSA private key, 1024 bit long modulus

Please waiting for a moment: done!

Public exponent is 65537 (0x10001)

Generate RSA key successfully

Switch(config)#

**Related Commands**

**show rsa keys**

# 6.11  rsa key

To create a key, use the rsa key command in global configuration mode.

**Command Syntax**

**rsa key** *keyname*

| keyname | The name of the key |
|---------|---------------------|

**Command Mode**

Global Configuration

**Default**

None

**Usage**

Use the rsa key command to create a key.

**Examples**

The following example creates a key named KEY1:

Switch(config)# rsa key KEY1

Switch(config-rsa-key)#

**Related Commands**

**show rsa keys**

# 6.12  key format

To specify the key format, use the key format command in RSA key configuration mode.

**Command Syntax**

**key format** (**der | pem**)

| der | The format is der |
|-----|-------------------|
| pem | The format is pem |

**Command Mode**

Rsa Key Configuration

**Default**

The default key format is DER.

**Usage**

Use the key format command to specify the key format.

**Examples**

The following example specify the key format of KEY1 as der :

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# key format der

**Related Commands**

**rsa key**

## 6.13  key string end

To exit the rsa key configuration mode to global configuration mode and apply all rsa key configurations, use the key string end command in RSA key configuration mode.

**Command Syntax**

**key string end**

**Command Mode**

Rsa Key Configuration

**Default**

None

**Usage**

Use the key string end command to exit the rsa key configuration mode.

**Examples**

The following example shows exit the rsa key configuration mode :

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# key string end

Switch(config)#

**Related Commands**

**rsa key**

# 6.14 key type

To specify the key type, use the key type command in RSA key configuration mode.

**Command Syntax**

**key type** (**public | private**)

| public | Specify the key as a public key |
|--------|---------------------------------|
| private | Specify the key as a private key |

**Command Mode**

Rsa Key Configuration

**Default**

None

**Usage**

Use the key type command to specify the type of the key.

**Examples**

The following example specifies the key type of KEY1 as public key:

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# key type public

**Related Commands**

**rsa key**

## 6.15 reset

To clear all key configurations, use the reset command in RSA key configuration mode.

**Command Syntax**

**reset**

**Command Mode**

Rsa Key Configuration

**Default**

None

**Usage**

Use the reset command to clear all key configurations.

**Examples**

The following example shows to clear all configurations for the key KEY1:

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# reset

**Related Commands**

**rsa key**

## 6.16 validate

To check the validation of the key strings, use the validate command in RSA key configuration mode.

**Command Syntax**

**validate**

**Command Mode**

Rsa Key Configuration

**Default**

None

**Usage**

Use the validate command to clear all key configurations.

**Examples**

The following example shows to validate key strings of the key KEY1:

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# validate

**Related Commands**

**rsa key**

# 6.17  KEYLINE

To add key strings from the screen directly, type any strings in RSA key configuration mode
except the keywords in this mode.

**Command Syntax**

KEYLINE

**Command Mode**

Rsa Key Configuration

**Default**

None

**Usage**

Type any key string.

**Examples**

The following example shows to type a key string of the key KEY1:

Switch(config)# rsa key KEY1

Switch(config-rsa-key)# 00302017 4A7D385B 1234EF29 335FC973

Switch(config-rsa-key)# 2DD50A37 C4F4B0FD 9DADE748 429618D5

**Related Commands**

**validate**

## 6.18  rsa key export

To export the key file to a specified destination, use the rsa key export command in global configuration mode.

**Command Syntax**

**rsa key** *keyname* **export url** *destination-file* (**public | private**) (**der | der-hex | pem | ssh1 | ssh2**)

| keyname | Specify the key name to display |
|---|---|
| destination-file | The destination file path and name |
| public | Specify the key as a public key |
| private | Specify the key as a private key |
| der | DER format |
| der-hex | DER HEX format |
| pem | PEM format |
| ssh1 | SSHv1 format |
| ssh2 | Specify the key format |
| der | DER format |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

Use the rsa key generate command to generate a key.

**Examples**

The following example shows to export the key KEY1 to flash as a public key:

Switch(config)# rsa key KEY1 export url flash:/key1.pub public ssh2

The following example shows to export the key KEY2 to flash as a private key:

Switch(config)# rsa key KEY2 export url flash:/key1 private ssh1

**Related Commands**

**rsa key generate**

**rsa key import**

# 6.19  rsa key import

To import the key file from a specified source, use the rsa key import command in global configuration mode.

**Command Syntax**

**rsa key** *keyname* **import url** *source-file* **(public | private) (der | der-hex | pem | ssh1 | ssh2)**

| keyname | Specify the key name to display |
|---------|--------------------------------|
| source-file | The destination file path and name |
| public | Specify the key as a public key |
| private | Specify the key as a private key |
| der | DER format |
| der-hex | DER HEX format |
| pem | PEM format |
| ssh1 | SSHv1 format |
| ssh2 | Specify the key format |

**Command Mode**

Global Configuration

**Default**

None

**Usage**

Use the rsa key to generate command to generate a key.

**Examples**

The following example shows to import the key KEY1 to flash as a public key:

Switch(config)# rsa key KEY1 import url flash:/key1.pub public ssh2

The following example shows to import the key KEY2 to flash as a private key:

Switch(config)# rsa key KEY2 import url flash:/key1 private ssh1

**Related Commands**

**rsa key generate**

**rsa key export**

# 6.20  show rsa key

To display the details of the keys, use the show rsa key command in Privileged EXEC mode.

**Command Syntax**

**show rsa key** *keyname*

| keyname | Specify the key name to display |
|---------|----------------------------------|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the rsa key generate command to generate a key.

**Examples**

The following example displays the detailed information of the key named "KEY1":

Switch# show rsa key KEY1

```
RSA key information:
=========================================================
Name: KEY1
Type: private
Modulus: 1024 bit
Usage count: 0
Private key DER code:
  30820258
    0201
     00
   028180
     9B3E9726 6405BD54 692F172A 901F3879 C947366E 5703D282 AA31707F 214D38C9
```

**Related Commands**

**show rsa keys**

## 6.21  show rsa keys

To display the brief information of all the keys, use the show rsa keys command in Privileged EXEC mode.

**Command Syntax**

**show rsa keys**

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

Use the rsa key generate command to generate a key.

**Examples**

The following example displays the brief information of the keys:

Switch# show rsa keys

| Name | Type | Usage | Modulus |
|------|------|-------|---------|
| ================================================= | | | |
| key1 | private | 0 | 1024 |
| key2 | public | 0 | 1024 |

**Related Commands**

**show rsa key**

# 6.22  ssh

To connect to the remote SSH server, use the ssh command in Privileged EXEC mode.

**Command Syntax**

**ssh -l** *NAME* **({-i** *KEYNAME* **| -p** *DPORT* **| -v (1|2) | -c**

**{3des|des|3des-cbc|aes128-cbc|aes192-cbc|aes256-cbc} | -m**

**{hmac-md5-128|hmac-md5-96|hmac-sha1-160|hmac-sha1-96} | -o**

**numberofpasswordprompts** *NUM*}|) **(mgmt-if|) (***A.B.C.D|X:X::X:X|HOST***)**

| | |
|---|---|
| **-l** NAME | Log in using this user name |
| **-i** KEYNAME | Specify the name of RSA private key |
| **-p** DPORT | Specify the remote port |
| -v (1|2) | Specify SSH protocol version |
| -c | Select encryption algorithm |
| 3des | Triple DES (SSHv1 only) |
| des | DES (SSHv1 only) |
| 3des-cbc | Triple DES (SSHv2 only) |
| aes128-cbc | AES 128 bits (SSHv2 only) |
| aes192-cbc | AES 192 bits (SSHv2 only) |
| aes256-cbc | AES 256 bits (SSHv2 only) |
| -m | Select HMAC algorithm |
| hmac-md5-128 | MD5 based HMAC (128 bits, SSHv2 only) |
| hmac-md5-96 | MD5 based HMAC (96 bits, SSHv2 only) |
| hmac-sha1-160 | SHA1 based HMAC (160 bits, SSHv2 only) |
| hmac-sha1-96 | SHA1 based HMAC (96 bits, SSHv2 only) |
| -o numberof-passwordprompts *NUM* | Specify number of password prompts with the range in [1, 5] |
| mgmt-if | Use Management port |
| A.B.C.D | Specify IP address of remote system |
| X:X::X:X | Specify IPv6 address of remote system |
| HOST | Specify hostname of remote system |

## Command Mode

Privileged EXEC

## Default

None

## Usage

None

## Examples

The following example displays the usage of this command:

Switch# ssh -l aaa -v 2 1.1.1.1

aaa@1.1.1.1's password:

Switch#

## Related Commands

**ip ssh server**

# 7 Time&Timezone

## 7.1  clock set datetime

Use this command to set system current date and time on the Switch.

**Command Syntax**

**clock set datetime** *hh:mm:ss month day year*

| hh:mm:ss | Specify the time in hours (24-hour format), minutes, and seconds. The time specified is relative to the configured time zone |
|---|---|
| month | Specify the month by name, should be in range 1 to 12 |
| day | Specify the day by date in the month, should be in range 1 to 31 |
| year | Specify the year, should be in range 2000 to 2037 |

**Command Mode**

Global Configuration

**Default**

The default time is based from UTC.

**Usage**

If no other source of time is available, you can manually configure the time and date after the system is restarted. The time remains accurate until the next system restart. We recommend that you use manual configuration only as a last resort. If you have an outside source to which the switch can synchronize, you do not need to manually set the system clock.

**Examples**

This example shows how to manually set the system clock to 1:32 p.m. on July 23, 2014:

Switch(config)# clock set 13:32:00 23 7 2014

**Related Commands**

**show clock**

## 7.2  clock set timezone

Use this command to set the time zone on the Switch.

To restore to the default time of UTC, use the no form of this command.

**Command Syntax**

**clock set timezone** ZONE (*add |minus*) *hours-offset [minutes-offset] [seconds-offset]*

**no clock set timezone**

| ZONE | Specify the zone name, the length should be [3, 32), and only [a-zA-Z_] is supported, and the first and last character must be alphabet. |
|------|------|
| add | Specify the time offset is positive from UTC |
| minus | Specify the time offset is negative from UTC |

| hours-offset | Specify the time offset in hours, should be in range 0 to 23 |
|---|---|
| minutes-offset | [optional]Specify the time offset in minutes, should be in range 0 to 59 |
| seconds-offset | [optional]Specify the time offset in seconds, should be in range 0 to 59 |

**Command Mode**

Global Configuration

**Default**

The default time zone should be UTC.

**Usage**

None

**Examples**

The following example sets the Atlantic Canada time zone is 3.5 hours less than UTC.

Switch(config)# clock set timezone Canada minus 3 30

**Related Commands**

**show clock (detail)**

## 7.3  clock set summer-time

Use this command to set summer time (daylight saving time) in areas where it starts and ends on a particular day each year(recurring) or on specified year(date).

To restore to the default time of UTC, use the no form of this command.

**Command Syntax**

**clock set summer-time** ZONE **recurring** *start-time end-time offset*

**clock set summer-time** ZONE **date** *start-time end-time offset*

**no clock set summer-time**

| ZONE | Specify the summer zone name, the length should be [3, 32), and only [a-zA-Z_] is supported, and the first and last character must be alphabet. |
|---|---|
| recurring | Specify that summer time starts and ends on a particular day of the week each year |
| date | Specify that summer time starts and ends on a particular day of the specified year |
| start-time | Specify the start time of summer time, for **recurring** summer time, the format should be *month, day, hh:mm:ss*, while for **date** summer time, the format should be *month, day, year, hh:mm:ss* |
| end-time | Specify the end time of summer time, for **recurring** summer time, the format should be *month, day, hh:mm:ss*, while for **date** summer time, the format should be *month, day, year, hh:mm:ss* |
| offset | For offset, specify the number of minutes to add during summer time. The default is 60. |

**Command Mode**

Global Configuration

**Default**

Summer time should be disabled by default.

**Usage**

The first part of the clock summer-time global configuration command specifies when

summer time begins, and the second part specifies when it ends. All times are relative to

the local time zone. The start time is relative to standard time. The end time is relative to summer time. If the starting month is after the ending month, the system assumes that you are in the southern hemisphere.

**Examples**

This example shows how to specify that summer time starts on june 1st at 02:00 and ends on the October 31 at 02:00:.

Switch(config)# clock set summer-time recurring 6 1 02:00:00 10 31 02:00:00 120

**Related Commands**

**show clock (detail)**

## 7.4  show clock

Use this command to display the current time and date configuration.

**Command Syntax**

**show clock (detail|)**

| detail | Display the configured timezone and summer time information in addition to current date and time |
|--------|---------------------------------------------------------------------------------------------------|

**Command Mode**

Privileged EXEC mode

**Default**

None

**Usage**

None

**Examples**

This example displays current time and date in detail:

Switch(config)#show clock detail

10:43:00 beijing Fri Oct 25 2013
Time zone: (GMT + 08:00:00)    beijing

**Related Commands**

**show clock**

# 7.5  show timezones

Use this command to display all the timezones in world.

**Command Syntax**

**show timezons**

**Command Mode**

Privileged EXEC mode

**Default**

None

**Usage**

None

**Examples**

This example displays all the current timezones:

Switch(config)#show timezones

(GMT+00:06:04)     Europe/Andorra

(GMT+03:41:12)     Asia/Dubai

(GMT+04:36:48)     Asia/Kabul

(GMT-04:07:12)     America/Antigua

(GMT-04:12:16)     America/Anguilla

(GMT+01:19:20)     Europe/Tirane

(GMT+02:58:00)     Asia/Yerevan

(GMT-04:36:00)     America/Curacao

(GMT+00:52:56)     Africa/Luanda

(GMT+11:06:24)     Antarctica/McMurdo        McMurdo Station, Ross Island

========================================================
(GMT+00:00:00)     Antarctica/South_Pole Amundsen-Scott Station, South Pole

(GMT-04:32:32)     Antarctica/Rothera        Rothera Station, Adelaide Island

(GMT-04:16:24)     Antarctica/Palmer        Palmer Station, Anvers Island

**Related Commands**

**show clock**

# 8 License Commands

## 8.1 generate device identifier

To generate device identifier, use this command in Privileged EXEC mode.

**Command Syntax**

**generate device identifier** (**mgmt-if |** ) *GURLNAME*

**generate device identifier** (*GFILENAME|*)

| mgmt-if | Management port |
|---------|-----------------|
| GURLNAME | URL name |
| GFILENAME | local file name |

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

This command will generate the unique device identifier(UDI) on the current device, customer can get license for the current deivce form FS with UDI.

**Examples**

The following example shows how to generate UDI:

Switch# generate device identifier mgmt-if tftp://10.10.38.160/device.udi

**Related Commands**

None

# 8.2  show license

To show license on the device, use the show license command in Privileged EXEC mode.

**Command Syntax**

**show license** (*GFILENAME*|)

| GFILENAME | local file name |
|-----------|----------------|

**Command Mode**

Privileged EXEC

**Default**

None

**Usage**

This command will show the license on the current device.

**Examples**

The following example shows how to show license:

Switch# show lincese

```
License files:
====================================================================
flash:/ma.lic:
   Created Time: Fri Dec   6 17:22:23 CST 2013
   Vendor:          FS
   Customer:        FS
   Device MAC:      00:1E:08:09:03:00
   Feature Set:   QINQ MVR ERPS MEF ETHOAM
                    VPWS VPLS HVPLS SMLK TPOAM
                    OSPF PIM_SM IGMP VRF MPLS
                    LDP BGP RSVP OSPF_TE EXTEND_ACL
                    PTP BFD SSM IPV6 OSPF6
                    PIM_SM6 MVR6 RIPNG TUNNEL_V6
```

**Related Commands**

None