

System Configuration Commands

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1 Command Line Interface Commands

1.1 alias

Use this command to configure a command alias in global configuration mode. Use the **no** form of this command to restore the default setting.

alias *mode command-alias original-command*

no alias *mode command-alias*

Parameter Description	Parameter	Description
	<i>mode</i>	Mode of the command represented by the alias
	<i>command-alias</i>	Command alias
	<i>original-command</i>	Syntax of the command represented by the alias

Defaults Some commands in user or privileged EXEC mode have default alias.

Command Global configuration mode.

Mode

Usage Guide The following table lists the default alias of the commands in privileged EXEC mode.

Alias	Actual Command
h	help
p	ping
s	show
u	undebug
un	undebug

The default alias cannot be removed by the **no alias exec** command.

After configuring the alias, you can use a word to replace a command. For example, you can create an alias to represent the first part of a command, and then type the rest part of the command.

The mode of the command represented by the alias is the command mode existing in the current system. In the global configuration mode, you can use the **alias ?** command to list all the modes under which you can configure alias for commands.

```
Orion_B54Q(config)# alias ?
aaa-gs          AAA server group mode
acl             acl configure mode
bgp            Configure bgp Protocol
config        goble configure mode
.....
```

The alias also has its help information that is displayed after * in the following format:

```
*command-alias=original-command
```

For example, in the privileged EXEC mode, the default alias s stands for show. You can enter s? to query the key words beginning with s and the help information of the alias.

```
Orion_B54Q#s?
*s=show show start-chat start-terminal-service
```

If an alias represents more than one word, the command will be displayed in brackets. For example, if you set sv stand for show version in the privileged EXEC mode, then:

```
Orion_B54Q#s?
*s=show *sv="show version" show start-chat
start-terminal-service
```

The alias must begin with the first letter of the command. The first letter of the command cannot be a space. The space before the command cannot be used as a valid alias.

```
Orion_B54Q# s?
show start-chat start-terminal-service
```

The command alias also has its help information. For example, if the alias ia represents ip address in the interface configuration mode, then:

```
Orion_B54Q(config-if)#ia ?
  A.B.C.D IP address
  dhcp    IP Address via DHCP
Orion_B54Q(config-if)# ip address
```

The above help information lists the parameters of **ip address** and shows the actual command name.

You must enter an entire alias; otherwise it cannot be recognized.

Use the **show aliases** command to show the aliases setting in the system.

Configuration Examples

The following example uses def-route to represent the default route setting of ip route 0.0.0.0 0.0.0.0 192.168.1.1 in the global configuration mode:

```
Orion_B54Q# configure terminal
Orion_B54Q(config)# alias config def-route ip route 0.0.0.0 0.0.0.0
192.168.1.1
Orion_B54Q(config)#def-route?
*def-route="ip route 0.0.0.0 0.0.0.0 192.168.1.1"
Orion_B54Q(config)# end
Orion_B54Q# show aliases config
globe configure mode alias:
def-route          ip route 0.0.0.0 0.0.0.0
192.168.1.1
```

Related Commands

Command	Description
show aliases	Displays the aliases settings.

Platform N/A
Description

1.2 privilege

Use this command to attribute the execution rights of a command to a command level in global configuration mode. Use the **no** form of this command to restore the default setting.

privilege *mode* [**all**] [**level** *level* | **reset**] *command-string*

no privilege *mode* [**all**] [**level** *level*] *command-string*

Parameter Description	Parameter	Description
	<i>mode</i>	CLI mode of the command to which the execution rights are attributed.
	all	Command alias
	level <i>level</i>	Specifies the execution right levels (0–15) of a command or sub-commands
	reset	Restores the command execution rights to its default level
	<i>command-string:</i>	Command string to be authorized

Defaults N/A

Command Mode Global configuration mode.

Usage Guide The following table lists some key words that can be authorized by the **privilege** command in CLI mode. The number of command modes that can be authorized may vary with different devices. In the global configuration mode, you can use the **privilege ?** command to list all CLI command modes that can be authorized.

Mode	Descriptor
config	Global configuration mode.
exec	Privileged EXEC mode
interface	Interface configuration mode
ip-dhcp-pool	DHCP address pool configuration mode
ip-dhcp-pool	DHCP address pool configuration mode
keychain	KeyChain configuration mode
keychain-key	KeyChain-key configuration mode

Configuration Examples The following example sets the password of CLI level 1 as **test** and attribute the **reload** rights to reset the device:

```
Orion_B54Q(config)#privilege exec level 1 reload
```

You can access the CLI window as level-1 user to usef the **reload** command:

```
Orion_B54Q>reload ?
LINE      Reason for reload
```

<cr> You can use the key word **all** to attribute all sub-commands of reload to level-1 users:

```
Orion_B54Q(config)# privilege exec all level 1 reload
```

After the above setting, you can access the CLI window as level-1 user to use all sub commands of the **reload** command:

```
Orion_B54Q>reload ?
LINE      Reason for reload
at                reload at a specific time/date
cancel            cancel pending reload scheme
in                reload after a time interval
<cr>
```

Related Commands

Command	Description
enable secret	Sets the CLI-level password.

Platform N/A.
Description

1.3 show aliases

Use this command to show all the command aliases or aliases in special command modes.

show aliases [mode]

Parameter Description

Parameter	Description
<i>mode</i>	Mode of the command represented by the alias.

Defaults N/A.

Command Mode Privileged EXEC mode.

Usage Guide This command displays the configuration of all aliases if no command mode is input.

Configuration Examples The following example displays the command alias in privileged EXEC mode:

```
Orion_B54Q#show aliases exec
exec mode alias:
h                help
p                ping
s                show
```

u	undebug
un	undebug

**Related
Commands**

Command	Description
alias	Sets a command alias.

Platform

N/A.

Description

2 Basic Configuration Management Commands

2.1 <1-99>

Use this command to restore the suspended Telnet Client session.

<1-99>

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode User EXEC mode

Usage Guide This command is used to restore the suspended Telnet Client session. Hot keys (ctrl+shift+6 x) are used to exit the Telnet Client session creation. The <1-99> command is used to restore the session. If the session is created, you can use the **show session** command to display the session.

Configuration Examples The following example restores the suspended Telnet Client session.

```
Orion_B54Q# 1
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.2 banner exec

Use this command to configure a message to welcome the user entering user EXEC mode through the line. Use the **no** form of this command to restore the default setting.

banner exec c message c

no banner exec

Parameter Description	Parameter	Description
	c	Separator of the message. Delimiters are not allowed in the

	message.
<i>message</i>	Contents of the message.

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command is used to configure the welcome message. The system discards all the characters next to the terminating symbol.

When you are logging in to the device, the MOTD message is displayed at first, and then the banner login message. After you have logged in, the EXEC message or the incoming message is displayed. If it's a reverse Telnet session, the incoming message is displayed. Otherwise, the EXEC message is displayed.

The messages are for all lines. If you want to disable display the EXEC message on a specific line, configure the **no exec-banner** command on the line.

Configuration Examples The following example configures a welcome message.

```
Orion_B54Q(config)# banner exec $ Welcome $
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.3 banner incoming

Use this command to configure a prompt message for reverse Telnet session. Use the **no** form of this command to remove the setting.

banner incoming c message c
no banner incoming

Parameter Description	Parameter	Description
	<i>c</i>	Separator of the message. Delimiters are not allowed in the message.
	<i>message</i>	Contents of the message.

Defaults N/A

Command Global configuration mode

Mode

Usage Guide This command is used to configure a prompt message. The system discards all the characters next to the terminating symbol.

When you are logging in to the device, the MOTD message is displayed at first, and then the banner login message. After you have logged in, the welcome message or the prompt message is displayed. If it's a reverse Telnet session, the prompt message is displayed. Otherwise, the welcome message is displayed.

Configuration Examples The following example configures a prompt message for reverse Telnet session.

```
Orion_B54Q(config)# banner incoming $ Welcome $
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.4 banner login

Use this command to configure a login banner. Use **no** form of this command to remove the setting.

banner login c message c

no banner login

Parameter Description

Parameter	Description
<i>c</i>	Separator of the message contained in the login banner. Delimiters are not allowed in the MOTD.
<i>message</i>	Contents of the login banner

Defaults

N/A

Command Mode

Global configuration mode

Usage Guide

This command sets the login banner message, which is displayed at login. The system discards all the characters next to the terminating symbol.

Configuration Examples

The following example configures a login banner.

```
Orion_B54Q(config)# banner login $ enter your password $
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.5 banner motd

Use this command to set the Message-of-the-Day (MOTD) . Use the **no** form of this command to remove the setting.

banner [motd] c message c

no banner [motd]

Parameter Description	Parameter	Description
	<i>c</i>	Separator of the MOTD. Delimiters are not allowed in the MOTD.
	<i>message</i>	Contents of an MOTD

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command sets the MOTD, which is displayed at login. The letters that follow the separator will be discarded.

Configuration The following example configures the MOTD.

Examples Orion_B54Q(config)# **banner motd \$ hello,world \$**

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.6 banner prompt-timeout

Use this command to configure the prompt-timeout message to notify timeout. Use the **no** form of this command to remove the setting.

banner prompt-timeout c message c

no banner prompt-timeout**Parameter
Description**

Parameter	Description
<i>c</i>	Separator of the message. Delimiters are not allowed in the message.
<i>message</i>	Contents of the message.

Defaults N/A**Command
Mode** Global configuration mode**Usage Guide** The system discards all the characters next to the terminating symbol.
When authentication times out, the banner prompt-timeout message is displayed.**Configuration Examples** The following example configures the prompt-timeout message to notify timeout.**n Examples**

```
Orion_B54Q(config)# banner exec $ authentication timeout $
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

2.7 banner slip-ppp

Use this command to configure the slip-ppp message for the SLIP/PPP session. Use the **no** form of this command to remove the setting.**banner slip-ppp c message c****no banner slip-pp****Parameter
Description**

Parameter	Description
<i>c</i>	Separator of the message. Delimiters are not allowed in the message.
<i>message</i>	Contents of the message.

Defaults N/A**Command
Mode** Global configuration mode

Usage Guide This command is used to configure the slip-ppp message for the SLIP/PPP session. The system discards all the characters next to the terminating symbol.

When the SLIP/PPP session is created, the slip-ppp message is displayed on the corresponding terminal.

Configuration Examples The following example configures the banner slip-ppp message for the SLIP/PPP session.

```
Orion_B54Q(config)# banner slip-ppp $ Welcome $
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.8 configure

Use this command to enter global configuration mode.

configure [terminal]

Parameter Description

Parameter	Description
N/A	N/A

Defaults

N/A

Command Mode

Privileged EXEC mode

Usage Guide

N/A

Configuration Examples The following example enters global configuration mode.

```
Orion_B54Q# configure
Orion_B54Q(config)#
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.9 disable

Use this command to switch from privileged EXEC mode to user EXEC mode or lower the privilege level.

disable [*privilege-level*]

Parameter Description	Parameter	Description
	privilege-level	Privilege level

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide Use this command to switch to user EXEC mode from privileged EXEC mode. If a new privilege level is added, the current privilege level will be lowered.
The privilege level that follows the **disable** command must be lower than the current level.

Configuration Examples The following example lowers the current privilege level of the device to level 10.

```
Orion_B54Q# disable 10
```

Related Commands	Command	Description
	enable	Moves from user EXEC mode enter to privileged EXEC mode or reaches a higher level of authority.

Platform Description N/A

2.10 disconnect

Use this command to disconnect the Telnet Client session.

disconnect *session-id*

Parameter Description	Parameter	Description
	<i>session-id</i>	Telnet Client session ID.

Defaults N/A

Command Mode User EXEC mode

Usage Guide This command is used to disconnect the Telnet Client session by setting the session ID.

Configuration Examples The following example disconnects the Telnet Client session by setting the session ID.

```
Orion_B54Q# disconnect 1
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.11 enable

Use this command to enter privileged EXEC mode.

enable

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode N/A

Usage Guide N/A

Configuration Examples N/A

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.12 enable password

Use this command to configure passwords for different privilege levels. Use the **no** form of this command to restore the default setting.

enable password [level *level*] { password | [0 | 7] *encrypted-password* }

no enable password [level *level*]

Parameter Description	Parameter	Description
	password	Password for the user to enter the EXEC configuration layer
	level	User's level.
	0 7	Password encryption type, "0" for no encryption, "7" for simple encryption (Optional) Orion_B54Q's private algorithm will be used for password encryption. If the password type is 0, the password is in plain text. If the type is 7, the password is encrypted by a Orion_B54Q device.
	encrypted-password	Password text.

Defaults N/A

Command Mode Global configuration mode

Usage Guide No encryption is required in general. The encryption type must be specified for copying and pasting a encrypted password for the device.

A valid password is defined as follows:

- Consists of 1-26 upper/lower case letters and numbers
- Leading spaces are allowed but usually ignored. Spaces in between or at the end are regarded as part of the password.

If an encryption type is specified and a plaintext password is entered, you cannot enter privileged EXEC mode. A lost password that has been encrypted using any method cannot be restored. In this case, you can only reconfigure the device password.

Configuration Examples The following example configures the password as **pw10**.

```
Orion_B54Q(config)# enable password pw10
```

Related Commands	Command	Description
	enable secret	Sets the security password

Platform N/A

Description

enable secret Sets the security password

2.13 enable secret

Use this command to configure a security password for different privilege levels. Use the **no** form of this command to restore the default setting.

enable secret [level *level*] { **secret** | [0 | 5] **encrypted-secret** }

no enable secret [level *level*]

Parameter Description

Parameter	Description
secret	Password for the user to enter the EXEC configuration layer
level	User's level.
0 5	Password encryption type, "0" for no encryption, "5" for security encryption
encrypted-password	Password text

Defaults N/A

Command Mode Global configuration mode

Usage Guide A password comes under two categories: "password" and "security". "Password" indicates a simple password, which can be set only for level 15. "Security" means a security password, which can be set for levels 0-15. If both types of passwords coexist in the system, no "password" type is allowed. If a "password" type password is set for a level other than 15, the system gives an alert and the password is automatically converted into a "security" password. If a "password" type password is set for level 15 and the same as a "security" password, an alert is given. The password must be encrypted, with simple encryption for "password" type passwords and security encryption for "security" type passwords.

Configuration Examples The following example configures the security password as **pw10**.

```
Orion_B54Q(config)# enable secret 0 pw10
```

Related Commands

Command	Description
enable password	Sets passwords for different privilege levels.

Platform Description N/A

2.14 enable service

Use this command to enable or disable a specified service such as **SSH Server/Telnet Server/Web Server/SNMP Agent**.

enable service { ssh-sesrver | telnet-server | web-server [http | https | all] | snmp-agent }

Parameter Description	Parameter	Description
	ssh-server	Enables SSH Server. IPv4 and IPv6 services are enabled at the same time.
	telnet-server	Enables Telnet Server. IPv4 and IPv6 services are enabled at the same time.
	web-server [http https all]	Enables HTTP Server. IPv4 and IPv6 services are enabled at the same time.
	snmp-agent	Enables SNMP Agent. IPv4 and IPv6 services are enabled at the same time.

Defaults N/A

Command Mode Global configuration mode

Usage Guide Use this command to enable or disable a specified service. Use the **no enable service** command to disable the specified service.

The **enable service web-server** command is followed by three optional keywords: [http | https | all].

If the command is followed by no keyword or by **all**, the command enables http and https services.

Followed by **http**, the command enables http service only. Followed by **https**, the command enables https service only.

Configuration Examples The following example enables the SSH Server.

```
Orion_B54Q(Config)# enable service ssh-sesrver
```

Related Commands	Command	Description
	show service	Displays the service status in the current system.

Platform Description N/A

2.15 exec-banner

Use this command to enable display of the EXEC message on a specific line. Use the **no** form of this command to restore the default setting.

exec-banner

no exec-banner

Parameter Description	Parameter	Description
	N/A	N/A

Defaults The EXEC message is displayed on all lines by default.

Command Mode LINE configuration mode

Usage Guide After you configure the **banner exec** and the **banner motd** commands, the EXEC and the MOTD messages are displayed on all lines by default. If you want to disable display of the EXEC and the MOTD messages on a specific line, configure the **no** form of this command on the line. This command does not work for the banner incoming message. If you configure the **banner incoming** command, the banner incoming message is displayed on all reverse Telnet sessions and the display cannot be disabled on a specific line.

Configuration Examples The following example disables display of the EXEC message on line VTY 1.

```
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)no exec-banner
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.16 exec-timeout

Use this command to configure connection timeout for this device in LINE mode. Use the **no** form of this command to restore the default setting and the connection never expires.

exec-timeout *minutes* [*seconds*]

no exec-timeout

Parameter	Parameter	Description
-----------	-----------	-------------

Description		
	<i>minutes</i>	Timeout in minutes.
	seconds	(Optional) Timeout in minutes

Defaults The default is 10 minutes.

Command Mode Line configuration mode

Usage Guide If there is no input or output for this connection within a specified time, this connection will expire, and this LINE will be restored to the free status.

Configuration Examples The following example sets the connection timeout to 5'30".

```
Orion_B54Q(config-line)#exec-timeout 5 30
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.17 help

Use this command to display the help information.

help

Parameter Description	Parameter	Description
	N/A	N/A

Defaults Any mode

Command Mode

Usage Guide This command is used to display brief information about the help system. You can use "?" to display all commands or a specified command with its parameters.

Configuration Examples The following example displays brief information about the help system.

```
Orion_B54Q#help
```

```
Help may be requested at any point in a command by entering a question mark '?'. If nothing matches, the help list will
```

be empty and you must backup until entering a '?' shows the available options.

Two styles of help are provided:

1. Full help is available when you are ready to enter a command argument (e.g. 'show ?') and describes each possible argument.
2. Partial help is provided when an abbreviated argument is entered and you want to know what arguments match the input (e.g. 'show pr?'.)

The following example displays all available commands in interface configuration mode.

```
Orion_B54Q(config-if-GigabitEthernet 0/0)#?
```

Interface configuration commands:

```
arp                ARP interface subcommands
bandwidth          Set bandwidth informational parameter
carrier-delay     Specify delay for interface transitions
dampening         Enable event dampening
default           Set a command to its defaults
description       Interface specific description
lldp              Exec data link detection command
duplex            Configure duplex operation
efm               Config efm for an interface
end               Exit from interface configuration mode
exit              Exit from interface configuration mode
expert            Expert extended ACL
flowcontrol       Set the flow-control value for an interface
full-duplex       Force full duplex operation
global            Global ACL
gvrp              GVRP configure command
half-duplex       Force half duplex operation
help              Description of the interactive help system
ip                Interface Internet Protocol config commands
ipv6              Internet Protocol Version 6
isis              Intermediate System - Intermediate System (IS-IS)
l2                Config L2 attribute
label-switching   Enable interface process mpls packet
lacp              LACP interface subcommands
lldp              Link Layer Discovery Protocol
load-interval     Specify interval for load calculation for an interface
mac               Mac extended ACL
mac-address       Set mac-address
mpls              Multi-Protocol Label Switching
mtu               Set the interface Maximum Transmission Unit (MTU)
no                Negate a command or set its defaults
ntp               Configure NTP
```

port-group	Aggregateport/port bundling configuration
redirect	Redirect packets
rmon	Rmon command
security	Configure the Security
show	Show running system information
shutdown	Shutdown the selected interface
snmp	Modify SNMP interface parameters
speed	Configure speed operation
switchport	Set switching mode characteristics
vrf	Multi-af VPN Routing/Forwarding parameters on the interface
vrrp	VRRP interface subcommands
xconnect	Xconnect commands

The following example displays the parameters of a specified command.

```
Orion_B54Q(config)#access-list 1 permit ?
A.B.C.D Source address
any Any source host
host A single source host
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.18 hostname

Use this command to specify or modify the hostname of a device.

hostname *name*

Parameter Description	Parameter	Description
	<i>name</i>	Device hostname, string, number or hyphen, up to 63 characters.

Defaults The default is Orion_B54Q.

Command Mode Global configuration mode

Usage Guide This hostname is mainly used to identify the device and is taken as the username for the local device during dialup and CHAP authentication.

Configuration Examples The following example configures the hostname of the device as BeiJingAgenda.

```
Orion_B54Q(config)# hostname BeiJingAgenda
BeiJingAgenda(config)#
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.19 ip telnet source-interface

Use this command to configure the IP address of an interface as the source address for Telnet connection.

ip telnet source-interface *interface-name*

Parameter Description	Parameter	Description
	<i>interface-name</i>	

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command is used to specify the IP address of an interface as the source address for global Telnet connection. When using the telnet command to log in a Telnet server, apply the global setting if no source interface or source address is specified. Use the **no ip telnet source-interface** command to restore it to the default setting.

Configuration Examples The following example configures the IP address of the *Loopback1* interface as the source address for global Telnet connection.

```
Orion_B54Q(Config)# ip telnet source-interface Loopback 1
```

Related Commands	Command	Description
	telnet	

Platform Description N/A

2.20 lock

Use this command to set a temporary password for the terminal.

lock

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide You can lock the terminal interface and maintain the session continuity to prevent access to the interface by setting a temporary password. Take the following steps to lock the terminal interface:

- Enter the **lock** command, and the system will prompt you for a password:
- Enter the password, which can be any character string. The system will prompt you to confirm the password, clear the screen, and display the "Locked" information.
- To access the terminal, enter the preset temporary password.
- To lock the terminal, run the **lockable** command in line configuration mode and enable terminal locking in the corresponding line.

Configuration Examples The following example locks a terminal interface.

```
Orion_B54Q(config-line)# lockable
Orion_B54Q(config-line)# end
Orion_B54Q# lock
Password: <password>
Again: <password>
Locked
Password: <password>
Orion_B54Q#
```

Related Commands	Command	Description
	lockable	Supports terminal locking in the line.

Platform Description N/A

2.21 lockable

Use this command to support the **lock** command at the terminal. Use the **no** form of this command to restore the default setting.

lockable

no lockable

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command This function is disabled by default.

Mode

Usage Guide This command is used to lock a terminal interface in the corresponding line. To lock the terminal, run the lock command in EXEC mode.

Configuration Examples The following example enables terminal locking at the console port and locks the console.

```
Orion_B54Q(config)# line console 0
Orion_B54Q(config-line)# lockable
Orion_B54Q(config-line)# end
Orion_B54Q# lock
Password: <password>
Again: <password>
Locked
Password: <password>
```

Related Commands	Command	Description
	lock	Locks the terminal.

Platform Description N/A

2.22 login

Use this command to enable simple login password authentication on the interface if AAA is disabled. Use the **no** form of this command to restore the default setting.

login

no login

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Line configuration mode

Usage Guide If the AAA security server is inactive, this command enables simple password authentication at login. The password is configured for a VTY or console interface.

Configuration Examples The following example sets a login password authentication on VTY..

```
Orion_B54Q(config)# no aaa new-model
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# password 0 normatest
Orion_B54Q(config-line)# login
```

Related Commands	Command	Description
	password	Configures the line login password

Platform Description N/A

2.23 login authentication

If the AAA is enabled, login authentication must be performed on the AAA server. Use this command to associate login authentication method list. Use the **no** form of this command to restore the default setting.

login authentication { default | *list-name* }

no login authentication { default | *list-name* }

Parameter Description	Parameter	Description
	default	Name of the default authentication method list
	<i>list-name</i>	Name of the method list

Defaults N/A

Command Mode Line configuration mode

Usage Guide If the AAA security server is active, this command is used for login authentication using the specified method list.

Configuration Examples The following example associates the method list on VTY and perform login authentication on a radius server.

```
Orion_B54Q(config)# aaa new-model
Orion_B54Q(config)# aaa authentication login default radius
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# login authentication default
```

Command	Description
aaa new-model	Enables the AAA security service.
aaa authentication login	Configures the login authentication method list.

Platform Description N/A

2.24 login local

Use this command to enable local user authentication on the interface if AAA is disabled. Use the **no** form of this command to restore the default setting.

login local
no login local

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Line configuration mode

Usage Guide If the AAA security server is inactive, this command is used for local user login authentication. The user is allowed to use the **username** command.

Configuration Examples The following example sets local user authentication on VTY.

```
Orion_B54Q(config)# no aaa new-model
Orion_B54Q(config)# username test password 0 test
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# login local
```

**Related
Commands**

Command	Description
<code>username</code>	Configures local user information.

**Platform
Description**

N/A

2.25 motd-banner

Use this command to enable display of the MOTD message on a specified line. Use the **no** form of this command to restore the default setting.

motd-banner**no motd-banner****Parameter
Description**

Parameter	Description
N/A	N/A

Defaults

The MOTD message is displayed on all lines by default.

**Command
Mode**

Line configuration mode

Usage Guide

After you configure the **banner exec** and the **banner motd** commands, the EXEC and the MOTD messages are displayed on all lines by default. If you want to disable display of the EXEC and the MOTD messages on a specific line, configure the **no** form of this command on the line.

This command does not work for the incoming message. If you configure the **banner incoming** command, the banner incoming message is displayed on all reverse Telnet sessions and the display cannot be disabled on a specific line.

**Configuratio
n Examples**

The following example disables display of the MOTD message on VTY 1.

```
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)no motd-banner
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

2.26 password

Use this command to configure a password for line login, run the **password** command. Use the **no** form of this command to restore the default setting.

password { *password* | [0 | 7] *encrypted-password* }

no password

Parameter Description	Parameter	Description
	<i>password</i>	Password for remote line login
	0 7	Password encryption type, "0" for no encryption, "7" for simple encryption (Optional) Orion_B54Q's private algorithm will be used for password encryption. If the password type is 0, the password is in plain text. If the type is 7, the password is encrypted by a Orion_B54Q device.
	<i>encrypted-password</i>	Password text

Defaults N/A

Command Mode Line configuration mode

Usage Guide This command is used to configure a authentication password for remote line login.

Configuration Examples The following example configures the line login password as "red".

```
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# password red
```

Related Commands	Command	Description
	login	Moves from user EXEC mode to privileged EXEC mode or enables a higher level of authority.

Platform Description N/A

2.27 prompt

Use this command to set the **prompt** command. Use the **no** form of this command to restore the default setting.

prompt string

Parameter Description	Parameter	Description
		string

Defaults N/A

Command Mode Global configuration mode

Usage Guide If no prompt string is configured, the system name applies and varies with the system name. The **prompt** command is valid only in EXEC mode.

Configuration Examples The following example sets the prompt string to rgnos.

```
Orion_B54Q(config)# prompt rgnos
Orion_B54Q(config)# end
NOS
```

Related Commands	Command	Description
		N/A

Platform Description N/A

2.28 secret

Use this command to set a password encrypted by irreversible MD5 for line login. Use the **no** form of this command to restore the default setting.

```
secret { [ 0 ] password | 5 encrypted-secret }
no secret
```

Parameter Description	Parameter	Description
	0	(Optional) sets the plaintext password text and encrypts it with irreversible MD5 after configuration.
	<i>password</i>	Sets the password plaintext, a string ranging from 1 to 25 characters.
	5 <i>encrypted-secret</i>	Sets the password text encrypted by irreversible MD5 and saves it as the encrypted password after configuration.

Defaults N/A

Command Line configuration mode

mode

Usage Guide This command is used to set a password encrypted by irreversible MD5 that is authenticated by a remote user through line login.

If the specified encryption type is 5, the logical length of the cipher text to be entered must be 24 and the 1st, 3rd and 8th characters of the password text must be \$.

In general, the encryption type does not need to be specified as 5 except when the encrypted password is copied and pasted.

Line mode allows configuration of both “password” and “secret” types passwords at the same time. When the two passwords are the same, the system will send alert notification but the configuration will be permitted. When the system is configured with the two passwords, if the user enters a password that does not match the “secret” type password, it will not continue to match the “password” type password and login fails, enhancing security for the system password.

Configuration Examples The following example sets the password encrypted by irreversible MD5 for line login to vty0.

```
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# secret vty0
```

The following displays the encryption outcome by running the **show** command.

```
secret 5 $1$X834$wvx6y794uAD8svzD
```

Related Commands

Command	Description
login	Sets simple password authentication on the interface as the login authentication mode

Platform N/A

Description**2.29 session**

Use this command to connect to the management module or the service module through session in VSU master-slave environment (card-type device).

```
session { master | [ device device-number ] slot { m1 | m2 | slot-number } }
```

Use this command to connect to another device in VSU multiple-device environment (box-type device).

```
session { master | device device-number }
```

Parameter Description

Parameter	Description
master	Configures the slave host to connect with the master host or the slave management module with the master management module.
device <i>device-number</i>	Sets the device number.
slot { m1 m2 }	Sets the management module to either m1 or m2.

slot <i>slot-number</i>	Sets the device slot ID for service module connection.
--------------------------------	--

Defaults N/A

Command Mode User EXEC mode

Usage Guide N/A

Configuration Examples The following example configures the slave host to connect with the master host in VSU environment.

```
Orion_B54Q# session master
```

The following example connects to device1 through session in VSU multiple-device environment (box-type device).

```
Orion_B54Q# session device 1
```

The following example connects to management module m1 of device1 through session in VSU master-slave environment (card-type device).

```
Orion_B54Q# session device 1 slot m1
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.30 session-timeout

Use this command to configure the session timeout for a remote terminal. Use the **no** form of this command to restore the default setting and the session never expires.

session-timeout *minutes* [**output**]

no session-timeout

Parameter Description

Parameter	Description
<i>minutes</i>	Timeout in minutes.
output	Regards data output as the input to determine whether the session expires.

Defaults The default timeout is 0.

Command Mode LINE configuration mode

Usage Guide If no input or output in current LINE mode is found on the remote terminal for the session within a specified time, this connection will expire, and this LINE will be restored to the free status.

Configuration Examples The following example specifies the timeout as 5 minutes.

```
Orion_B54Q(config-line)#exec-timeout 5 output
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.31 show clock

Use this command to display the system time.

show clock

Parameter Description

Parameter	Description
N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command is used to display the current system clock.

Configuration Examples The following example displays a result of the **show clock** command.

```
Orion_B54Q# show clock
clock: 2003-3-17 10:27:21
```

Related Commands

Command	Description
clock set	Sets the system clock.

Platform Description N/A

2.32 show line

Use this command to display the configuration of a line.

show line { **console line-num** | **vt** *line-num* | *line-num* }

Parameter Description	Parameter	Description
	console	Display s the configuration of a console line.
	aux	Checks configuration information relating to the aux line.
	vt	Display s the configuration of a vty line.
	<i>line-num</i>	Number of the line.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command displays the configuration of a line.

Configuration Examples The following example displays the configuration of a console port.

```
Orion_B54Q# show line console 0
CON      Type      speed  Overruns
* 0      CON        9600   45927
Line 0, Location: "", Type: "vt100"
Length: 24 lines, Width: 79 columns
Special Chars: Escape  Disconnect  Activation
                ^^x      none        ^M
Timeouts:      Idle EXEC    Idle Session
                never      never
History is enabled, history size is 10.
Total input: 53564 bytes
Total output: 395756 bytes
Data overflow: 27697 bytes
stop rx interrupt: 0 times
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.33 show reload

Use this command to display the system restart settings.

show reload

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command is used to display the restart settings of the system.

Configuration Examples The following example displays the restart settings of the system.

```
Orion_B54Q# show reload
Reload scheduled in 595 seconds.
At 2003-12-29 11:37:42
Reload reason: test.
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.34 show running-config

Use this command to display how the current device system is configured..

show running-config

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples N/A

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.35 show service

Use this command to display the service status.

show service

Parameter Description

Parameter	Description
N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays whether the service is enabled or disabled.

```
Orion_B54Q# show service
web-server      : disabled
web-server(https): disabled
snmp-agent      : enabled
ssh-server      : enabled
telnet-server   : disabled
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.36 show sessions

Use this command to display the Telnet Client session information.

show sessions

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode User EXEC mode

Usage Guide Telnet Client session information includes the VTY number and the server IP address.

Configuration Examples The following example displays the Telnet Client session information.

```
Orion_B54Q#show sessions
Conn  Address
*1    127.0.0.1
*2    192.168.21.122
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.37 show startup-config

Use this command to display the device configuration stored in the Non Volatile Random Access Memory (NVRAM).

show startup-config

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Privileged EXEC mode

Mode

Usage Guide The device configuration stored in the NVRAM is executed while the device is starting.

On a device that does not support **boot config**, **startup-config** is contained in the default configuration file **/config.text** in the built-in flash memory.

On a device that supports **boot config**, configure **startup-config** as follows:

If you have specified a boot configuration file using the **boot config** command and the file exists, **startup-config** is stored in the specified configuration file.

If the boot configuration file you have specified using the **boot config** command does not exist or you have not specified a boot configuration file using the command, **startup-config** is contained in **/config.text** in the built-in flash memory.

Configuration Examples N/A

Related Commands	Command	Description
	boot config	Sets the name of the boot configuration file.

Platform Description N/A

2.38 show this

Use this command to display effective configuration in the current mode.

show this

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command All modes.

Mode

Usage Guide The configuration in the following range modes cannot be displayed. If the **show this** command is run, the outcome is NULL.

1. Use the **line first-line last-line** command to configure lines in a continuous group and enter LINE configuration mode.
2. Use the **vlan range** command to configure VLANs and enter vlan range configuration mode.
3. Use the **interface range** command to configure interfaces and enter interface range configuration mode.

Configuration Examples

```
Use this command to display effective configuration on interface
fastEthernet 0/1.Orion_B54Q (config)#interface fastEthernet 0/1
Orion_B54Q (config-if-FastEthernet 0/1)#show this
Building configuration...
!
spanning-tree link-type point-to-point
spanning-tree mst 0 port-priority 0
!
end
Orion_B54Q (config-if-FastEthernet 0/1)#
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.39 speed

Use this command to set the speed at which the terminal transmits packets. Use the **no** form of this command to restore the default setting.

speed *speed***no speed****Parameter Description**

Parameter	Description
<i>speed</i>	Transmission rate (bps) on the terminal. For serial ports, optional rates include 9600, 19200, 38400, 57600, and 115200 bps. The default rate is 9600 bps.

Defaults

The default is 9600.

Command Mode

Global configuration mode

Usage Guide

This command is used to set the speed at which the terminal transmits packets.

Configuration Examples

The following example sets the rate of the serial port to 57600 bps.

```
Orion_B54Q(config)# line console 0
Orion_B54Q(config-line)# speed 57600
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

2.40 telnet

Use this command to log in a server that supports telnet connection.

```
telnet host [ port ] [ /source { ip A.B.C.D | ipv6 X:X:X:X::X | interface interface-name } ] [ /vrf vrf-name ] [ via mgmt-name ]
```

**Parameter
Description**

Parameter	Description
Host	The IP address of the host or host name you want to log in.
Port	Selects the TCP port number for login, 23 by default.
/source	Specifies the source IP address or source interface used by the Telnet client.
ip A.B.C.D	Specifies the source IPv4 address used by the Telnet client.
ipv6 X:X:X:X::X	Specifies the source IPv6 address used by the Telnet client.
interface interface-name	Specifies the source interface used by the Telnet client.
/vrf vrf-name	Specifies the VRF routing table you want to query.
via mgmt-name	Specifies the MGMT port for the oob option used by the Telnet client.

Defaults

N/A

**Command
Mode**

Privileged EXEC mode

Usage Guide

This command is used to log in a telnet server.

- The **/vrf** keyword only applies to the RSR series of routers.
- The **/ipv6** keyword only applies to IPv6-supported devices, such as S3760, S57 and S86.

**Configuratio
n Examples**

The following example sets telnet to IPv4 address 192.168.1.11. The port number is the default, and the source interface is Gi 0/1. The queried VRF routing table is vpn1.

```
Orion_B54Q# telnet 192.168.1.11 /source-interface gigabitEthernet 0/1 /vrf vpn1
```

The following example sets telnet to IPv6 address 2AAA:BBBB::CCCC.

```
Orion_B54Q# telnet 2AAA:BBBB::CCCC
```

The following example sets telnet to IPv4 address 192.168.1.1 and specifies the MGMT port for the

oob option used by the Telnet client.

```
Orion_B54Q# telnet oob 192.168.1.1 via mgmt 0
```

Related Commands

Command	Description
ip telnet source-interface	Specifies the IP address of the interface as the source address for Telnet connection.
show sessions	Displays the currently established Telnet sessions.
exit	Exits current connection.

Platform

N/A

Description

2.41 username

Use this command to set a local username and optional authorization information.. Use the **no** form of this command to restore the default setting.

```
username name [ login mode { aux | console | ssh | telnet } ] [ online amount number ] [ permission oper-mode path ] [ privilege privilege-level ] [ reject remote-login ] [ web-auth ] [ pwd-modify ] [ nopassword | password [ 0 | 7 ] text-string ]
```

no username *name*

Parameter Description

Parameter	Description
<i>name</i>	Username
login mode	Sets the login mode.
aux	Sets the login mode to aux.
console	Sets the login mode to console.
ssh	Sets the login mode to ssh.
telnet	Sets the login mode to telnet.
online amount <i>number</i>	Sets the amount of users online simultaneously.
permission <i>oper-mode path</i>	Sets the permission on the specified file. <i>op-mode</i> refers to the operation mode and <i>path</i> to the file or the directory path.
privilege <i>privilege-level</i>	Sets the privilege level, in the range from 0 to 15.
reject remote-login	Confines the account to remote login.
web-auth	Confines the account to web authentication.
pwd-modify	Allows the web authentication user of this account to change the password. It works only when the web-auth command is configured.
nopassword	The account is not configured with a password.
password [0 7] <i>text-string</i>	If the password type is 0, the password is in plain text. If the type is 7, the password is encrypted. The password is in plain text by

	default.
--	----------

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command is used to establish a local user database for authentication.

- If encryption type is 7, the cipher text you enter should contain seven characters to be valid. In general, do not set the encryption type 7. Instead, specify the type of encryption as 7 only when the encrypted password is copied and pasted.

Configuration Examples The following example configures a username and password and binds the user to level 15.

```
Orion_B54Q(config)# username test privilege 15 password 0 pw15
```

The following example configures the username and password exclusive to web authentication.

```
Orion_B54Q(config)# username user1 web-auth password 0 pw
```

The following example configures user test with read and write permissions on all files and directories.

```
Orion_B54Q(config)# username test permission rw /
```

The following example configures user test with read, write and execute permissions on all files and directories except the config.text file.

```
Orion_B54Q(config)# username test permission n /config.text
Orion_B54Q(config)# username test permission rwx /
```

Related Commands

Command	Description
login local	Enables local authentication

Platform Description N/A

2.42 username import

Use this command to import user information from the file.

username import filename

Parameter Description

Parameter	Description
filename	The file name.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command is used to import user information from the file.

Configuration Examples The following example imports user information from the file.

```
Orion_B54Q# username import user.csv
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.43 username export

Use this command to export user information to the file.

username export *filename*

Parameter Description

Parameter	Description
<i>filename</i>	The file name.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command is used to export user information to the file.

Configuration Examples The following example exports user information to the file.

```
Orion_B54Q# username export user.csv
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.44 write

Use this command to save **running-config** at a specified location.

write [**memory** | **terminal**]

Parameter Description	Parameter	Description
	memory	Writes the system configuration (running-config) into NVRAM, which is equivalent to copy running-config startup-config .
	terminal	Displays the system configuration, which is equivalent to show running-config .

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide Despite the presence of alternative commands, these commands are widely used and accepted. Therefore, they are reserved to facilitate user operations.

The system automatically creates the specified file and writes it into system configuration if the device that stores the file exists;

The system will ask you whether to save the current configuration in default boot configuration file /config.text and perform an action as required if the device that stores the file does not exist possibly because the boot configuration file is stored on a removable storage device such as USB drive or SD card, and the device has not been loaded when you run the **write [memory]** command.

Configuration Examples The following example saves **running-config** at a specified location.

```
Orion_B54Q# write
Building configuration...
[OK]
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3 LINE Commands

3.1 access-class

Use this command to control login into the terminal through IPv4 ACL. Use the **no** form of this command to restore the default setting.

access-class { *access-list-number* | *access-list-name* } { **in** | **out** }

no access-class { *access-list-number* | *access-list-name* } { **in** | **out** }

Parameter Description	Parameter	Description
	<i>access-list-number</i>	Specifies the ACL number. Standard IP ACL number is from 1 to 99 and from 1300 to 1999. Extended IP ACL number is from 100 to 199 and from 2000 to 2699.
	<i>access-list-name</i>	Specifies the ACL name.
	in	Filters the incoming connections.
	out	Filters the outgoing connections.

Defaults N/A

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example uses ACL 20 to filter the incoming connections in line VTY 0 5.

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)access-list 20 in
```

The following example uses the ACL named "test" to filter the outgoing connections in line VTY 6 7.

```
Orion_B54Q(config)# line vty 6 7
Orion_B54Q(config-line)access-list test out
```

Related Commands	Command	Description
	show running	Displays status information

Platform Description N/A

3.2 accounting commands

Use this command to enable command accounting in the line. Use the **no** form of this command to restore the default setting.

accounting commands *level* { **default** | *list-name* }

no accounting commands *level*

Parameter Description	Parameter	Description
	<i>level</i>	Command level ranging from 0 to 15. The command of this level is accounted when it is executed.
	default	Default authorization list name.
	<i>list-name</i>	Optional list name.

Defaults This function is disabled by default.

Command Mode Line configuration mode

Usage Guide This function is used together with AAA authorization. Configure AAA command accounting first, and then apply it on the line.

Configuration Examples The following example enables command accounting in line VTY 1 and sets the command level to 15.

```
Orion_B54Q(config)# aaa new-model
Orion_B54Q(config)# aaa accounting commands 15 default start-stop group tacacs+
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)# accounting commands 15 default
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.3 accounting exec

Use this command to enable user access accounting in the line. Use the **no** form of this command to restore the default setting.

accounting commands *level* { **default** | *list-name* }

no accounting commands *level*

Parameter Description

Parameter	Description
<i>level</i>	Command level ranging from 0 to 15. The command of this level is accounted when it is executed.
default	Default authorization list name.
<i>list-name</i>	Optional list name.

Defaults This function is disabled by default.

Command Mode Line configuration mode

Usage Guide This function is used together with AAA authorization. Configure AAA EXEC accounting first, and then apply it on the line.

Configuration Examples The following example enables user access accounting in line VTY 1.

```
Orion_B54Q(config)# aaa new-model
Orion_B54Q(config)# aaa accounting exec default start-stop group radius
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)# accounting exec default
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.4 authorization commands

Use this command to enable authorization on commands, Use the **no** form of this command to restore the default setting.

authorization commands *level* { **default** | *list-name* }

no authorization commands *level*

Parameter Description

Parameter	Description
<i>level</i>	Command level ranging from 0 to 15. The command of this level is executed after authorization is performed.
default	Default authorization list name,
<i>list-name</i>	Optional list name.

Defaults This function is disabled by default.

Command Mode Line configuration mode

Usage Guide This function is used together with AAA authorization. Configure AAA authorization first, and then apply it on the line.

Configuration Examples The following example enables authorization on commands of level 15 in line VTY 1.

```
Orion_B54Q(config)# aaa new-model
Orion_B54Q(config)# aaa authorization commands 15 default group tacacs+
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)# authorization commands 15 default
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.5 authorization exec

Use this command to enable EXEC authorization for the line. Use the **no** form of this command to restore the default setting.

authorization { default | list-name }

no authorization exec

Parameter Description

Parameter	Description
default	Default authorization list name,
<i>list-name</i>	Optional list name.

Defaults This function is disabled by default,

Command Mode Line configuration mode

Usage Guide This function is used together with AAA authorization. Configure AAA EXEC authorization first, and then apply it on the line.

Configuration The following example performs EXEC authorization to line VTY 1.

n Examples

```
Orion_B54Q(config)# aaa new-model
Orion_B54Q(config)# aaa authorization exec default group radius
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)# authorization exec default
```

**Related
Commands**

Command	Description
N/A	N/A

Platform

N/A

Description

3.6 clear line

Use this command to clear connection status of the line.

clear line { **aux** *line-num* | **console** *line-num* | **tty** *line-num* | **vty** *line-num* | *line-num* }

**Parameter
Description**

Parameter	Description
aux	Clears connection status of auxiliary port line. This parameter is on routers generally.
console	Clears connection status of the console line.
tty	Clears connection status of the asynchronous port line. This parameter is on routers generally.
vty	Clears connection status of the virtual terminal line.
<i>line-num</i>	Specifies the line to be cleared.

Defaults

N/A

Command

Privileged EXEC mode

Mode**Usage Guide**

This command is used to clear connection status of the line and restore the line to the unoccupied status to create new connections.

**Configuratio
n Examples**

The following example clears connection status of line VTY 13. The connected session on the client (such as Telnet and SSH) in the line is disconnected immediately.

```
Orion_B54Q# clear line vty 13
```

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A
Description

3.7 disconnect-character

Use this command to set the hot key that disconnects the terminal service connection. Use the **no** form of this command to restore the default setting.

disconnect-character *ascii-value*

no disconnect-character

Parameter Description	Parameter	Description
	<i>ascii-value</i>	ASCII decimal value of the hot key that disconnects the terminal service connection, in the range from 0 to 255.

Defaults The default hot key is **Ctrl+D** and the ASCII decimal value is 0x04.

Command Mode Line configuration mode

Usage Guide This command is used to set the hot key that disconnects the terminal service connection. The hot key cannot be the commonly used ASCII node such as characters ranging from a to z, from A to Z or numbers ranging from 0 to 9. Otherwise, the terminal service cannot operate properly.

Configuration Examples The following example sets the hot key that disconnects the terminal service connection on line VTY 0 5 to **Ctrl+E** (0x05).

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)# disconnect-character 5
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.8 escape-character

Use this command to set the escape character for the line. Use the **no** form of this command to restore the default setting.

escape-character *escape-value*

no escape-character

Parameter Description	Parameter	Description
	<i>escape-value</i>	Sets the ASCII value corresponding to the escape character for the line, in the range from 0 to 255.

Defaults The default escape character is **Ctrl+^ (Ctrl+Shift+6)** and the ASCII decimal value is 30.

Command Mode Line configuration mode

Usage Guide After configuring this command, press the key combination of the escape character and then press **x**, the current session is disconnected to return to the original session.

Configuration Examples The following example sets the escape character for the line to 23 (**Ctrl+w**).

```
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# escape-character 23
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.9 exec

Use this command to enable the line to enter the command line interface. Use the **no** form of this command to disable the function.

exec

no exec

Parameter Description	Parameter	Description
	N/A	N/A

Defaults This function is enabled by default.

Command Mode Line configuration mode

Usage Guide The **no exec** command is used to ban the line from entering the command line interface. You have to enter the command line interface through other lines,

Configuration Examples The following example bans line VTY 1 from entering the command line interface.

```
Orion_B54Q(config)# line vty 1
Orion_B54Q(config-line)# no exec
Orion_B54Q# show users
Line                User                Host(s)                Idle                Location
-----
* 0 con 0          ---                idle                00:00:00          ---
  1 vty 0          ---                idle                00:01:03          20.1.1.2
  3 vty 2          ---                idle                00:00:13
20.1.1.2
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.10 history

Use this command to enable command history for the line or set the number of commands in the command history. Use the **no history** command to disable command history. Use the **no history size** command to restore the number of commands in the command history to the default setting.

history [size size]

no history

no history size

Parameter Description

Parameter	Description
size size	The number of commands, in the range from 0 to 256.

Defaults This function is enabled by default, The default *size* is 10.

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example sets the number of commands in the command history to 20 for line VTY 0 5.

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)# history size 20
```

The following example disables the command history for line VTY 0 5.

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)# no history
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.11 ipv6 access-class

Use this command to configure access to the terminal through IPv6 ACL. Use the **no** form of this command to restore the default setting.

```
ipv6 access-class access-list-name { in | out }
no ipv6 access-class access-list-name { in | out }
```

Parameter Description	Parameter	Description
	<i>access-list-name</i>	
in		Filters the incoming connections.
out		Filters the outgoing connections.

Defaults N/A

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example uses the ACL named “test” to filter the outgoing IPv6 connections in line VTY 0 4.

```
Orion_B54Q(config)# line vty 0 4
Orion_B54Q(config-line)ipv6 access-list test out
```

Related Commands	Command	Description
	show running	

Platform N/A
Description

3.12 length

Use this command to set the screen length for the line. Use the **no** form of this command to restore the default setting.

length *screen-length*

no length

Parameter Description	Parameter	Description
	<i>screen-length</i>	Sets the screen length, in the range from 0 to 512.

Defaults The default is 24.

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example sets the screen length to 10.

```
Orion_B54Q(config-line)# length 10
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.13 line

Use this command to enter the specified LINE mode.

line [*aux* | *console* | *tty* | *vty*] *first-line* [*last-line*]

Parameter Description	Parameter	Description
	aux	Auxiliary port, on the routers.
	console	Console port
	tty	Asynchronous port, on the routers.
	vty	Virtual terminal line, applicable for telnet/ssh connection.
	<i>first-line</i>	Number of first-line to enter

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command is used to enter the specified LINE mode.

Configuration Examples The following example enters the LINE mode from LINE VTY 1 to 3:

```
Orion_B54Q(config)# line vty 1 3
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.14 line vty

Use this command to increase the number of VTY connections currently available. Use the **no** form of this command to restore the default setting.

line vty *line-number*

no line vty *line-number*

Parameter Description

Parameter	Description
N/A	N/A

Defaults By default, there are five available VTY connections, numbered 0 to 4.

Command Mode Global configuration mode.

Usage Guide When you need to increase or decrease the number of available VTY connections, use the above commands.

Configuration Examples The following example increases the number of available VTY connections to 20. The available VTY connections are numbered 0 to 19.

```
Orion_B54Q(config)# line vty 19
```

Decrease the number of available VTY connections to 10. The available VTY connections are numbered 0-9.

```
Orion_B54Q(config)# line vty 10
```

Related

Command	Description
---------	-------------

Commands		
	N/A	N/A

Platform N/A
Description

3.15 location

Use this command to configure the line location description. Use the **no** form of this command to restore the default setting.

location *location*
no location

Parameter Description	Parameter	Description
	<i>location</i>	Line location description

Defaults N/A

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example describes the line location as Switch's Line VTY 0.

```
Orion_B54Q(config)# line vty 0
Orion_B54Q(config-line)# location Switch's Line Vty 0
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.16 monitor

Use this command to enable log display on the terminal. Use the **no** form of this command to restore the default setting,

monitor
no monitor

Parameter Description	Parameter	Description
	N/A	N/A
Defaults	N/A	
Command Mode	Line configuration mode	
Usage Guide	N/A	
Configuration Examples	The following example enables log display on the terminal in VTY line 0 5. <pre>Orion_B54Q(config)# line vty 0 5 Orion_B54Q(config-line)# monitor</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

3.17 privilege level

Use this command to set the privilege level for the line. Use the **no** form of this command to restore the default setting.

privilege level *level*

no privilege level

Parameter Description	Parameter	Description
	<i>level</i>	Privilege level, in the range from 0 to 15.
Defaults	The default is 1.	
Command Mode	Line configuration mode	
Usage Guide	N/A	
Configuration Examples	The following example sets the privilege level for the line VTY 0 4 to 14. <pre>Orion_B54Q(config)# line vty 0 4 Orion_B54Q(config-line)privilege level 14</pre>	

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A
Description

3.18 refuse-message

Use this command to set the login refusal message for the line. Use the **no** form of this command to restore the default setting.

refuse-message [*c message c*]

no refuse-message

**Parameter
Description**

Parameter	Description
<i>c</i>	Delimiter of the login refusal message, which is not allowed within the message.
<i>message</i>	Login refusal message.

Defaults N/A

**Command
Mode** Line configuration mode

Usage Guide This command is used to set the login refusal message for the line. The characters entered after the ending delimiter are discarded directly, The login refusal message is displayed when the user has been refused to login.

Configuration Examples The following example sets the login refusal message for the line to "Unauthorized user cannot login to the Orion_B54Q device".

```
Orion_B54Q(config-line)#vacant-message @ Unauthorized user cannot login to
the Orion_B54Q device @
```

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A
Description

3.19 show history

Use this command to display the command history of the line.

show history

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the command history of the line.

```
Orion_B54Q# show history
exec:
sh privilege
sh run
show user
sh user all
show history
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.20 show line

Use this command to display line configuration.

show line { aux line-num | console line-num | tty line-num | vty line-num | line-num }

Parameter Description	Parameter	Description
	aux	Displays configuration for the auxiliary port line. This parameter is on routers generally.
	console	Displays configuration for the console line.

tty	Displays configuration for the asynchronous port line. This parameter is on routers generally.
vty	Displays configuration for the virtual terminal line.
<i>line-num</i>	Displays the line.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays configuration for the console port.

```
Orion_B54Q# show line console 0
CON      Type      speed  Overruns
* 0      CON        9600   45927
Line 0, Location: "", Type: "vt100"
Length: 24 lines, Width: 79 columns
Special Chars: Escape Disconnect Activation
                ^^x      none      ^M
Timeouts:      Idle EXEC      Idle Session
                never      never
History is enabled, history size is 10.
Total input: 53564 bytes
Total output: 395756 bytes
Data overflow: 27697 bytes
stop rx interrupt: 0 times
```

Field	Description
CON	Terminal type. CON indicates console; 0 indicates terminal line number and * ahead of the number means that the terminal is in use.
Type	Terminal type, including CON, AUX, TTY, and VTY.
speed	Asynchronous speed.
Overruns	The number of overrun errors received by the flash.
Line 0	Terminal line number.
Location: ""	Line location configuration.
Type: "vt100"	Compatibility standard.
Special Chars	Special characters, including Escape, Disconnect, and Activation characters.
Timeouts	Timeout value; "never" indicates no timeout.
History	Whether to enable command history; the number of commands in the command history.
Total input	Data volume received from the drive.
Total output	Date volume sent to the drive.

Data overflow	Overflowing data volume.
stop rx interrupt	Data reception interruption times.

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.21 show privilege

Use this command to display the privilege level of the line.

show privilege

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the privilege level of the line.

```
Orion_B54Q# show privilege
Current privilege level is 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.22 show users

Use this command to display the login user information.

show users [all]

Parameter Description	Parameter	Description
	all	Displays line user information, including users logging into the line and users not logging into the line.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the information about users logging into the line,

```
Orion_B54Q# show users
Line           User           Host (s)           Idle           Location
-----
0 con 0       ---           idle              00:00:46     ---
1 vty 0       ---           idle              00:00:29     20.1.1.2
* 2 vty 1     ---           idle              00:00:00     20.1.1.2
```

The following example displays all line user information,

```
Orion_B54Q(config)# show users all
Line           User           Host (s)           Idle           Location
-----
0 con 0       ---           idle              00:00:49     ---
1 vty 0       ---           idle              00:00:32     20.1.1.2
* 2 vty 1     ---           idle              00:00:00     20.1.1.2
3 vty 2       ---           idle              00:00:00     ---
4 vty 3       ---           idle              00:00:00     ---
5 vty 4       ---           idle              00:00:00     ---
6 vty 5       ---           idle              00:00:00     00:00:00
---
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.23 speed

Use this command to configure the baud rate for the specified line. Use the **no** form of this command to restore the default setting,

speed *baudrate*

no speed

Parameter Description	Parameter	Description
	<i>baudrate</i>	Sets the baud rate, in the range from 9600 to 115200.

Defaults The default is 9600.

Command Mode LINE configuration mode

Usage Guide N/A

Configuration Examples The following example sets the baud rate to 115200,

```
Orion_B54Q(config-line)# speed 115200
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.24 terminal escape-character

Use this command to set the escape character for the current terminal. Use the **no** form of this command to restore the default setting.

terminal escape-character *escape-value*

terminal no escape-character

Parameter Description	Parameter	Description
	<i>escape-value</i>	Sets the ASCII value corresponding to the escape character for the current terminal, in the range from 0 to 255.

Defaults The default escape character is **Ctrl+^ (Ctrl+Shift+6)** and the ASCII decimal value is 30.

Command Privileged EXEC mode
Mode

Usage Guide After configuring this command, press the key combination of the escape character and then press **x**, the current session is disconnected to return to the original session.

Configuration Examples The following example sets the escape character for the current terminal to 23 (**Ctrl+w**).

```
Orion_B54Q# terminal escape-character 23
```

Related Commands

Command	Description
N/A	N/A

Platform N/A
Description

3.25 terminal history

Use this command to enable command history for the current terminal or set the number of commands in the command history. Use the **no history** command to disable command history. Use the **no history size** command to restore the number of commands in the command history to the default setting.

terminal history [size size]

terminal no history

terminal no history size

Parameter Description

Parameter	Description
size size	Sets the number of commands, in the range from 0 to 256.

Defaults This function is enabled by default, The default *size* is 10.

Command Privileged EXEC mode
Mode

Usage Guide N/A

Configuration Examples The following example sets the number of commands in the command history to 20 for the current terminal.

```
Orion_B54Q# terminal history size 20
```

The following example disables the command history for the current terminal.

```
Orion_B54Q# terminal no history
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.26 terminal length

Use this command to set the screen length for the current terminal. Use the **no** form of this command to restore the default setting.

terminal length *screen-length*

terminal no length

Parameter Description	Parameter	Description
		<i>screen-length</i>

Defaults The default is 24.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example sets the screen length for the current terminal to 10.

```
Orion_B54Q# terminal length 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.27 terminal location

Use this command to configure location description for the current device. Use the **no** form of this command to restore the default setting.

terminal location *location*

terminal no location

Parameter Description	Parameter	Description
	<i>location</i>	Configures location description of the current device.
Defaults	N/A	
Command Mode	Privileged EXEC mode	
Usage Guide	N/A	
Configuration Examples	The following example configures location description of the current device as "Switch's Line Vty 0". <pre>Orion_B54Q# terminal location Switch's Line Vty 0</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

3.28 terminal speed

Use this command to configure the baud rate for the current terminal. Use the **no** form of this command to restore the default setting,

terminal speed *baudrate*

terminal no speed

Parameter Description	Parameter	Description
	<i>baudrate</i>	Sets the baud rate, in the range from 9600 to 115200.
Defaults	The default is 9600.	
Command Mode	Privileged EXEC mode	
Usage Guide	N/A	
Configuration Examples	The following example sets the baud rate for the current terminal to 115200, <pre>Orion_B54Q# terminal speed 115200</pre>	
Related	Command	Description

Commands		
	N/A	N/A

Platform N/A

Description

3.29 terminal width

Use this command to set the screen width for the terminal.

terminal width *screen-width*

terminal no width

Parameter Description	Parameter	Description
	<i>screen-width</i>	Sets the screen width for the terminal, in the range from 0 to 256.

Defaults The default is 79.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example sets the screen width for the terminal to 10.

```
Orion_B54Q# terminal width 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.30 timeout login

Use this command to set the login authentication timeout for the line. Use the **no** form of this command to restore the default setting.

timeout login response *seconds*

no timeout login response

Parameter Description	Parameter	Description

response	The time period during which the line waits for the user to enter any message.
<i>seconds</i>	Timeout value, in the range from 1 to 300 in the unit of seconds.

Defaults The default is 30.

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example sets the login authentication timeout to 300 seconds for line VTY 0 5.

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)login timeout response 300
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.31 transport input

Use this command to set the specified protocol under Line that can be used for communication. Use the **no** form of this command to restore the default setting.

transport input { all | ssh | telnet | none }

no transport input { all | ssh | telnet | none }

Parameter Description

Parameter	Description
all	Allows all the protocols under Line to be used for communication
ssh	Allows only the SSH protocol under Line to be used for communication
telnet	Allows only the Telnet protocol under Line to be used for communication
none	Allows none of protocols under Line to be used for communication

Defaults **all**, **ssh** and **telnet** protocols are allowed.

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example specifies that only the Telnet protocol is allowed to login in line vty 0 4.

```
Orion_B54Q(config)# line vty 0 5
Orion_B54Q(config-line)transport input ssh
```

Related Commands

Command	Description
show running	Displays status information

Platform N/A

Description

3.32 vacant-message

Use this command to set the logout message. Use the **no** form of this command to restore the default setting.

vacant-message [*c message c*]

no vacant-message

Parameter Description

Parameter	Description
<i>c</i>	Delimiter of the logout message, which is not allowed within the message.
<i>message</i>	Logout message.

Defaults N/A

Command Mode Line configuration mode

Usage Guide This command is used to set the logout message for the line. The characters entered after the ending delimiter are discarded directly. The logout message is displayed when the user logs out.

Configuration Examples The following example sets the logout message to "Logout from the Orion_B54Q device".

```
Orion_B54Q(config-line)#vacant-message @ Logout from the Orion_B54Q device
@
```

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

3.33 width

Use this command to set the screen width for the line. Use the **no** form of this command to restore the default setting,

width *screen-width*

no width

Parameter Description	Parameter	Description
	<i>screen-width</i>	Sets the screen width for the line, in the range from 0 to 256,

Defaults The default is 79.

Command Mode Line configuration mode

Usage Guide N/A

Configuration Examples The following example sets the screen width for the line to 10.

```
Orion_B54Q(config-line)# width 10
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

4 File System Commands

4.1 cd

Use this command to set the present directory for the file system.

cd [*filesystem:*] [*directory*]

Parameter	Parameter	Description
Description	<i>filesystem:</i>	The URL of filesystem, followed by a colon (:). The filesystem includes flash: , usb: , and tmp: .
	<i>directory</i>	The path name. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default directory is the flash root directory.

Command Privileged EXEC mode.

Mode The specified path of the file system support URLs. For details of URL prefixes, see description of the **copy** command.

Usage Guide Change the above parameter to the directory you want to enter. Use the **pwd** command to view the present directory.

Configuration Examples N/A

Related	Command	Description
Commands	pwd	Displays the present word directory.

Platform N/A.
Description

4.2 copy

Use this command to copy a file from the specified source directory to the specified destination directory.

copy *source-url* *destination-url*

Parameter	Parameter	Description
Description	<i>source-url</i>	Source file URL, which can be local or remote.
	<i>destination-url</i>	Destination file URL, which can be local or remote.

Defaults N/A.

Command Mode Privileged EXEC mode.

Usage Guide when the file to be copied exists on the target URL, the target file system determines the action, such as error report, overwrite, or offering you the choice.

The following table lists the URL:

Prefix	Description
running-config	Running configuration file.
startup-config	startup configuration file.
flash:	local FLASH file system.
tftp:	The URL of TFTP network server, in the format as follows: tftp:[[/location]/directory]/filename
oob_tftp: [via mgmt. { number }]	The URL of TFTP network server connected with the Out-of-Band port, If there are multiple MGMT ports, you can specify one.
xmodem:	Files on the network device using the xmodem protocol.

Configuration Examples The following example copies the netconfig file from device 192.168.64.2 to the FLASH disk and the netconfig file exists locally.

```
Orion_B54Q#copy tftp://192.168.64.2/netconfig flash:/netconfig
The file [flash:/netconfig] exists,override it? [Y/N]: y
Copying: !!!!!!!!

Accessing tftp://192.168.64.2/netconfig finished, 2399bytes prepared
Flushing data to flash:/netconfig...
Flush data done
```

Related Commands

Command	Description
delete	Deletes the file.
rename	Renames the file.
dir	Displays the file list of the specified directory.

Platform Description N/A

4.3 delete

Use this command to delete the files in the present directory.

delete [*filesystem:*] *file-url* [**/force** | **/recursive**]

Parameter	Parameter	Description
Description	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>file-url</i>	The file name containing the path. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.
	/force	Deletes the file without the user's confirmation.
	/recursive	Deletes all files in a directory recursively, including the directory itself.

Defaults The default *filesystem:* is **flash:**.

Command Privileged EXEC mode.

Mode

Usage Guide This command is used to delete the specified file in the URL. This command supports deleting the files stores in the local storage media, i.e., the URL must be one of the flash:/ usb0:/ or usb1:/ slave:/. If the prefix is not specified in the URL, it indicates to delete the file in the system. In VSU mode, URLs do not support sw1-m1-disk0:/ series. For details of the supported prefixes, see the description of the **copy** command. This command does not support wildcard.

Configuration Examples The following example deletes the fstab file on the FLASH disk.

```
Orion_B54Q#pwd
flash:/
Orion_B54Q#dir
Directory of flash:/
1  -rw-          336  Jan 03 2012 18:53:42  fstab
2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
3  -rw-       10485760  Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,192 bytes total (13,192,656 bytes free)
Orion_B54Q#delete flash:/fstab
Orion_B54Q#dir
Directory of flash:/
1  -rw-          4096  Jan 03 2012 12:32:09  rc.d
2  -rw-       10485760  Jan 03 2012 18:13:37  rpmdb
2 files, 0 directories
10,489,856 bytes total (13,192,992 bytes free)
```


The following example deletes the non-null file on the FLASH disk recursively.

```
Orion_B54Q#pwd
flash:/
Orion_B54Q#dir
Directory of flash:/
  1 drwx          0  Thu Jan  1 02:02:25 1970  file
  2 -rw-          610019  Tue Aug 14 02:21:13 2012  file-5.11.tar.gz
1 file, 1 directory
58,720,256 bytes total (28,577,792 bytes free)
Orion_B54Q#delete /recursive flash:/file
Orion_B54Q#dir
Directory of flash:/
  1 -rw-          610019  Tue Aug 14 02:21:13 2012  file-5.11.tar.gz
1 file, 0 directories
58,720,256 bytes total (31,358,976 bytes free)
```

Related Commands	Command	Description
	copy	Copies the file.
	dir	Displays the file list of the specified directory.

Platform N/A
Description

4.4 dir

Use this command to display the files in the present directory.

dir [*filesystem*:] [*directory*]

Parameter	Parameter	Description
Description	<i>filesystem</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>directory</i>	The path name. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults By default, only the information under the present working path is displayed.

Command Mode Privileged EXEC mode.

Usage Guide Enter the specified directory to show the information of all the files in that directory. If no parameter is specified, the information of the files in the present directory is shown by default.
This command does not support wildcard.

Configuration Examples The following example displays the file information of the root directory in the FLASH disk.

```
Orion_B54Q#dir flash:/
Directory of flash:/
1  -rw-          336   Jan 03 2012 18:53:42  fstab
2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
3  -rw-    10485760  Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,192 bytes total (13,192,656 bytes free)
```

Field	Description
1, 2, 3...	Index number
-rw-	Permissions on a file include: <ul style="list-style-type: none"> ● d: directory ● r: read ● w: write ● x: executable
10485760	File size
rpmdb	File name
files	File number
directories	Directory number
total	Total size
free	Available space

Related Commands	Command	Description
	<code>pwd</code>	Displays the present directory.
	<code>cd</code>	Sets the present directory of the file system.

Platform N/A.
Description

4.5 erase

Use this command to erase the device or file that doesn't have a file system.

erase *filesystem*

Parameter	Parameter	Description
Description	<i>filesystem:</i>	Name of the file system, followed by a colon (:). For example, usb0:.

Defaults N/A

Command Privileged EXEC mode
Mode

Usage Guide N/A

Configuration Examples The following example erases the USB filesystem.

```
Orion_B54Q#erase usb0:
Sure to erase usb0:? [Y/N] y
Erasing disk usb0 ...
Erase disk usb0 done!
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

4.6 file

Use this command to display the information about a file.

file [*filesystem:*] *file-url*

Parameter Description	Parameter	Description
	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>file-url</i>	The file name containing the path. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default *filesystem:* is **flash:**.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the information about gcc executable file.

```
Orion_B54Q#file flash:/gcc
/usr/bin/gcc-4.6: ELF 32-bit LSB executable, Intel 80386, version 1
(SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.15,
stripped
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

4.7 file prompt

Use this command to set the prompt mode.

file prompt [**noisy** | **quiet**]

Parameter	Parameter	Description
Description	noisy	Displays prompt for all operation.
	quiet	Displays prompt rarely.

Defaults The default mode is noisy.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example sets the prompt mode to noisy.

```
Orion_B54Q#file prompt noisy
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

4.8 mkdir

Use this command to create a directory.

mkdir [*filesystem:*] *directory*

Parameter	Parameter	Description
Description	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>directory</i>	The path name. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default *filesystem:* is **flash:**.
The default *directory* is the root directory.

Command Privileged EXEC mode.

Mode

Usage Guide Simply enter the name of the directory you want to create (including the path).

If the created file has been existed, the creation will fail. If the upper-level for the directory to be created is inexistent, it fails to create the specified directory. For example, if the directory of flash:/backup is inexistent, the creation of the directory of flash:/backup/temp will fail. The solution is that the directory of flash:/backup shall be created before the creation of the directory of flash:/backup/temp.

Configuration Examples The following example creates a directory named newdir:

```
Orion_B54Q#dir
Directory of flash:/
 1  -rw-          336   Jan 03 2012 18:53:42  fstab
 2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
 3  -rw-    10485760   Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,132 bytes total (13,192,656 bytes free)
Orion_B54Q#mkdir newdir
Created dir flash:/newdir
Orion_B54Q#dir
Directory of flash:/
 1  -rw-          336   Jan 03 2012 18:53:42  fstab
 2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
 3  -rw-    10485760   Jan 03 2012 18:13:37  rpmdb
 4  drw-          4096  Jan 03 2012 18:13:37  newdir
3 files, 1 directories
10,494,228 bytes total (13,188,560 bytes free)
```

Related Commands

Command	Description
rmdir	Deletes the directory.
pwd	Displays the present directory.

Platform N/A

Description

4.9 more

Use this command to display the content of a file.

more [/ascii | /binary] [filesystem:] file-url

Parameter	Parameter	Description
Description	<code>/ascii</code>	Displays the file content in the ASCII format.
	<code>/binary</code>	Displays the file content in the
	<code>filesystem:</code>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<code>file-url</code>	The file name containing the path. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The file is displayed in its own format by default.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the content of the netconfig file under root directory of FLASH disk.

```
Orion_B54Q#more flash:/netconfig
#
# The network configuration file. This file is currently only used in
# conjunction with the TI-RPC code in the libtirpc library.
#
# Entries consist of:
#
#     <network_id> <semantics> <flags> <protofamily> <protoname> \
#         <device> <nametoaddr_libs>
#
# The <device> and <nametoaddr_libs> fields are always empty in this
# implementation.
#
udp      tpi_clts      v      inet      udp      -      -
tcp      tpi_cots_ord v      inet      tcp      -      -
udp6     tpi_clts      v      inet6     udp      -      -
tcp6     tpi_cots_ord v      inet6     tcp      -      -
rawip    tpi_raw       -      inet      -        -      -
local   tpi_cots_ord -   loopback -      -      -
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

4.10 pwd

Use this command to display the working path.

pwd

	Parameter	Description
Parameter		
Description	N/A.	N/A.

Defaults N/A.

Usage Guide This command displays the present working path

Configuration N/A

Examples

	Command	Description
Related Commands	cd	Changes the file system in the present directory.

Platform N/A.

Description

4.11 rename

Use this command to move or rename the specified file.

rename *src-url dst-url*

	Parameter	Description
Parameter		
Description	<i>src-url</i>	The source file URL to move.
	<i>dst-url</i>	The URL of the destination file or directory.

Defaults N/A.

Command Privileged EXEC mode.

Mode

Usage Guide N/A

Configuration Examples The following example renames the fstab file in the root directory on the FLASH disk as new-fstab.

```
Orion_B54Q#dir
Directory of flash:/
1  -rw-      336  Jan 03 2012 18:53:42  fstab
2  -rw-     4096  Jan 03 2012 12:32:09  rc.d
```

```

3  -rw-  10485760  Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,192 bytes total (13,192,656 bytes free)
Orion_B54Q#rename flash:/fstab flash:/new-fstab
Renamed file flash:/new-fstab
Orion_B54Q#dir
Directory of flash:/
1  -rw-      336  Jan 03 2012 18:53:42  new-fstab
2  -rw-     4096  Jan 03 2012 12:32:09  rc.d
3  -rw-  10485760  Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,192 bytes total (13,192,656 bytes free)

```

Related Commands	Command	Description
	delete	Deletes the file.
	copy	Copies the file.

Platform N/A
Description

4.12 rmdir

Use this command to delete an empty directory.

rmdir [*filesystem:*] *directory*

Parameter Description	Parameter	Description
	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>directory</i>	The path name. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default *filesystem:* is **flash:**.

Command Mode Privileged EXEC mode.

Usage Guide This command does not support the wildcards, and the directory to be deleted must be empty. Since this command supports abbreviations, you can also use the **rm** command to delete empty directories.

Configuration Examples The following example deletes the null test directories.

```

Orion_B54Q#mkdir newdir
Orion_B54Q#dir

```



```

Directory of flash:/
1  -rw-          336   Jan 03 2012 18:53:42  fstab
2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
3  -rw-    10485760   Jan 03 2012 18:13:37  rpmdb
4  drw-          4096  Jan 03 2012 18:13:37  newdir
3 files, 1 directories
10,494,228 bytes total (13,188,560 bytes free)
Orion_B54Q#rmdir newdir
removed dir flash:/newdir
Orion_B54Q#dir
Directory of flash:/
1  -rw-          336   Jan 03 2012 18:53:42  fstab
2  -rw-          4096  Jan 03 2012 12:32:09  rc.d
3  -rw-    10485760   Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,132 bytes total (13,192,656 bytes free)
    
```

Related Commands	Command	Description
	N/A.	N/A.

Platform N/A.

Description

4.13 show file systems

Use this command to display the file system information.

show file systems

Parameter Description	Parameter	Description
	N/A.	N/A.

Defaults N/A.

Command Mode Privileged EXEC mode.

Usage Guide Use this command to display the file systems supported in the present devices and the available space condition in the file system.

Configuration Examples The following example displays the file system information:

```

Orion_B54Q#show file systems
      Size(KB)      Free(KB)      Type  Flags  Prefixes
      NA            NA            ram   rw    tmp:
    
```

NA	NA	network	rw	tftp:
NA	NA	network	rw	oob_tftp:
NA	NA	xmodem	rw	xmodem:
8192	2416	disk	rw	flash:
1048576	548576	disk	rw	usb0:

Field	Description
Size(KB)	File system space, in the unit of KB.
Free(KB)	Available file system space, in the unit of KB.
Type	File system type
Flags	Permissions on the file system include: <ul style="list-style-type: none"> ● ro: read-only ● wo: write-only ● rw: read and write
Prefixes	File system prefix

Related Commands	Command	Description
	N/A.	N/A.

Platform N/A.
Description

4.14 show mount

Use this command to display the mounted information.

show mount

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode N/A

Usage Guide N/A

Configuration Examples The following example displays the mounted information.

```
Orion_B54Q#show mount
/dev/sda1 on / type ext4 (rw,errors=remount-ro,commit=0)
proc on /proc type proc (rw,noexec,nosuid,nodev)
```

```

sysfs on /sys type sysfs (rw,noexec,nosuid,nodev)
fusectl on /sys/fs/fuse/connections type fusectl (rw)
none on /sys/kernel/debug type debugfs (rw)
none on /sys/kernel/security type securityfs (rw)
udev on /dev type devtmpfs (rw,mode=0755)
devpts on /dev/pts type devpts (rw,noexec,nosuid,gid=5,mode=0620)
tmpfs on /run type tmpfs (rw,noexec,nosuid,size=10%,mode=0755)
none on /run/lock type tmpfs (rw,noexec,nosuid,nodev,size=5242880)
none on /run/shm type tmpfs (rw,nosuid,nodev)
/dev/sda3 on /hao-share type ext3 (rw,commit=0)
binfmt_misc on /proc/sys/fs/binfmt_misc type binfmt_misc
(rw,noexec,nosuid,nodev)
    
```

Field	Description
proc	Source address of mount.
on	-
/proc	Destination address of mount.
type	-
proc	Mount type.
(rw,noexec,nosuid,nodev)	Mount property.

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

4.15 tree

Use this command to display the file tree of the current directory.

```
tree [ filesystem: ] [ directory ]
```

Parameter Description	Parameter	Description
	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>directory</i>	The path name. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default *filesystem:* is **flash:**.

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the file tree of flash:/echo

```
Orion_B54Q#tree flash:/echo
+-- client_module
+-- client_userspace
+-- echo_cli.c
+-- echo_client.c
+-- echo_client.h
+-- echo_client.o
+-- echo_cli.o
+-- echo_flag.h
+-- echo.h
+-- echo.ko
+-- echo_server.h
+-- exec_set_echo.h
+-- exec_show_echo.h
+-- Makefile
+-- module
|   +-- echo.ko
|   +-- echo.mod.c
|   +-- echo.mod.o
|   +-- echo_module.c
|   +-- echo_module.o
|   +-- echo.o
|   +-- echo_server.c
|   +-- echo_server.o
|   +-- echo_sysfs.c
|   +-- echo_sysfs.h
|   +-- echo_sysfs.o
|   +-- Makefile
|   +-- modules.order
|   +-- Module.symvers
|   +-- msg_fd.c
|   +-- msg_fd.o
+-- readme
+-- server_module
+-- server_userspace
+-- sys_NOS.ko
+-- user_space
    +-- echo_server.c
    +-- echo_server.o
    +-- Makefile
    +-- msg_fd.c
```

```
+++ msg_fd.o 10,490,132 bytes total (13,192,656 bytes free)
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

4.16 verify

Use this command to compute, display and verify Message Digest 5 (MD5).

verify [*/md5 md5-value*] *filesystem:* [*file-url*]

Parameter	Parameter	Description
Description	<i>/md5</i>	Computes and displays MD5.
	<i>md5-value</i>	The file MD5, which is compared with the computed MD5.
	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , usb: , and tmp: .
	<i>file-url</i>	The file name containing the path. A file name starts with "/" is an absolute path. Otherwise, it is a relative path.

Defaults The default *filesystem:* is **flash:**.

Command Mode Privileged EXEC mode.

Usage Guide N/A

Configuration Examples The following example computes MD5 of flash:/gcc.

```
Orion_B54Q#verify flash:/gcc
8b072de7db7affd8b2ef824e7e4d716c
```

The following example

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

4.17 show disk

Use this command to display USB/Flash information.

show disk usb/flash

Parameter Description	Parameter	Description
		usb
	flash	Displays FLASH information.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays USB information.

```
Orion_B54Q#show disk usb
Disk /dev/sdb: 8159 MB, 8159477760 bytes
252 heads, 62 sectors/track, 1020 cylinders
Units = cylinders of 15624 * 512 = 7999488 bytes
```

The following example displays FLASH information.

```
Orion_B54Q#show disk flash
Nand flash size: 512MB
Nor flash size: 1MB
```

Related Commands	Command	Description
		N/A

Platform Description N/A

5 SYS Commands

5.1 calendar set

Use this command to set the hardware calendar.

calendar set { *hour* [*:minute* [*:second*]] } [*month* [*day* [*year*]]]

Parameter Description	Parameter	Description
	<i>hour</i> [<i>:minute</i> [<i>:second</i>]]	Sets hardware time in the format of hour: minute: second. Only the specified parameters (hour, minute, or second) can be reset. The unspecified parameters keep the current system values.
	<i>month</i>	Sets month. The range is from 1 to 12.
	<i>day</i>	Sets date. The range is from 1 to 31. If the day does not exist in the current month, the date is calculated backward.
	<i>year</i>	Sets year. The range is from 1970 to 2069.

Defaults -

Command Mode Privileged EXEC mode

Default Level -

Usage Guide

- The time parameter is mandatory. After setting time, set month, day, and year, which can be neglected according to your needs. The parameter that is neglected keeps the current system value. For example, if the current hardware time is "2012-02-29 09:33:44" and you want to change month and hour and keep values of other parameters, use the **calendar set 12 5** command to change the current time into "2012-05-29 12:33:44".
- If the value of parameter *day* is between 1 and 31, but the current month does not contain that day, the value will be calculated backward. For example, February 2012 has 29 days. If you use the **calendar set 11:30 2 31 2012** command to set the date to February 31, by default, the system adds two days backwards. Therefore, the current hardware time is "2012-03-02 11:30:23".

• The hardware time of the system is used as the UTC time, while the software time of the system refers to the local time of the device.

• This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration Examples 1: The following example changes the current hardware time of the system (for example, 2012-02-01 18:23:06) into 6 o'clock and keeps the values of other parameters.

```
Orion_B54Q# calendar set 6
06:41:39 UTC Fri, Jul 6, 2012
```

2: The following example changes the current hardware time of the system (for example, 2012-02-01 18:23:06) into 06:42 and keeps the values of other parameters.

```
Orion_B54Q# calendar set 6:42
06:42:27 UTC Fri, Jul 6, 2012
```

3: The following example changes the current hardware time of the system (for example, 2012-02-01 18:23:06) into March 2 and keeps the values of other parameters.

```
Orion_B54Q# calendar set 18 3 2
18:43:05 UTC Fri, Mar 2, 2012
```

▲ Because the *hour* parameter is mandatory, set it to the current time if you do not need to change its value. As shown in the last example, enter **18** (hour), and then enter **3** (month) and **2** (day).

Check Method -

Platform -

Description -

5.2 clock read-calendar

Use this command to enable the system to synchronize the software time with the hardware time.

clock read-calendar

Parameter Description	Parameter	Description
	-	-

Defaults -

Command Mode Privileged EXEC mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported. After you configure this command, the system will synchronize the software time with the current hardware time according to the time zone and summer time settings of the device.

Configuration Examples 1: The following example enables the system to synchronize the software time with the hardware time.

```
Orion_B54Q# clock read-calendar
Set the system clock from the hardware time.
```


Check Method -

Platform -

Description -

5.3 clock set

Use this command to set the system software clock.

```
clock set { hour [ :minute [ :second ] ] } [ month [ day [ year ] ] ]
```

**Parameter
Description**

Parameter	Description
<i>hour</i> [<i>:minute</i> [<i>:second</i>]]	Sets software time in the format of hour: minute: second. Only the specified parameters (hour, minute, or second) can reset. The unspecified parameters keep the current system values.
<i>month</i>	Sets month. The range is from 1 to 12.
<i>day</i>	Sets date. The range is from 1 to 31. If the day does not exist in the current month, the date is calculated backward.
<i>year</i>	Sets year. The range is from 1970 to 2069.

Defaults -

**Command
Mode** Privileged EXEC mode

Default Level -

Usage Guide

- The time parameter is mandatory. After setting time, set month, day, and year, which can be neglected according to your needs. The parameter that is neglected keeps the current system value.
 - For example, if the current hardware time is "2012-02-29 09:33:44" and you want to change month and hour and keep values of other parameters, use the **clock set 12 5** command to change the current time into "2012-05-29 12:33:44".
- If the value of parameter *day* is between 1 and 31, but the current month does not contain that day, the value will be calculated backward.
 - For example, February 2012 has 29 days. If you use the **clock set 11:30 2 31 2012** command to set the date to February 31, by default, the system adds two days backward. Therefore, the current hardware time is "2012-03-02 11:30:23".

This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration 1: The following example changes the current software time of the system (for example, 2012-02-01

Examples

18:23:06) into 6 o'clock and keeps the values of other parameters.

```
Orion_B54Q# clock set 6
06:48:13 CST Fri, Mar 2, 2012
```

2: The following example changes the current software time of the system (for example, 2012-02-01 18:23:06) into 06:42 and keeps the values of other parameters.

```
Orion_B54Q# clock set 6:42
06:42:31 CST Fri, Mar 2, 2012
```

3: The following example changes the current software time of the system (for example, 2012-02-01 18:23:06) into March 2 and keeps the values of other parameters.

```
Orion_B54Q# clock set 18 3 2
18:42:48 CST Fri, Mar 2, 2012
```

▲ Because the *hour* parameter in this command is mandatory, set it to the current time if you do not need to change its value. As shown in the last example, enter **18** (hour), and then enter **3** (month) and **2** (day).

Check Method -

Platform -

Description -

5.4 clock summer-time

Use this command to set the summer time.

clock summer-time zone start start-month [week|last] start-date hh:mm end end-month [week|last] end-date hh:mm [ahead hours-offset [minutes-offset]

Use this command to disable the summer time.

no clock summer-time

Parameter Description

Parameter	Description
zone	Summer time name. It can only be a letter between A and Z or between a and z, which is not case sensitive. The summer time name contains 3 to 31 characters.
start	Indicates the start time of the summer time.
<i>start-month</i>	Start month. Value range: January, February, March, April, May, June, July, August, September, October, November, and December. The value is not case sensitive and you are allowed to enter an incomplete word, for example, Febr and FebRu.
<i>week</i>	Start week in the start month. The range is from 1 to 5.

last	The last week of the specified month.
<i>start-date</i>	Day in the start week of the start month. Value range: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. The value is not case sensitive and you are allowed to enter an incomplete word, for example, Web and WeDne.
hh:mm	Time, in the format of hour : minute.
end	Indicates the end time of the summer time.
<i>end-month</i>	End month. Value range: January, February, March, April, May, June, July, August, September, October, November, and December. The value is not case sensitive and you may enter an incomplete word, for example, Febr and FebRu.
ahead	Indicates how much time for the summer time ahead of the standard time during the effective period of the summer time. By default, the summer time is one hour ahead of the standard time.
<i>hours-offset</i>	Hours ahead of the standard time. The range is from 0 to 12. You are not allowed to set it to 00:00.
<i>minutes-offset</i>	Minutes ahead of the standard time. The range is from 0 to 59. If <i>hours-offset</i> has been set to 0, you are not allowed to set <i>minutes-offset</i> to 0.

Defaults

-

Command Mode

Global configuration mode

Default Level

-

Usage Guide

This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration Examples

1: Assume that the time zone name of your living place is ABC and the standard time is 8:15 ahead of UTC, namely, GMT+08:15. The summer time period starts from the first Saturday in February to the third Monday in May and the summer time is 01:20 ahead of the standard time. In this case, the summer time is 09:35 ahead of the UTC time, but non-summer time is still 08:15 ahead of the UTC time.

```

Orion_B54Q(config)# clock timezone ABC 8 15
Set time zone name: ABC (GMT+08:15)
Orion_B54Q(config)#show clock
16:39:16 ABC Wed, Feb 29, 2012
Orion_B54Q(config)#show calendar
08:24:35 GMT Wed, Feb 29, 2012

Orion_B54Q(config)# clock summer-time TZA start Feb 1 sat 2:00 end May 3 Monday 18:30 ahead 1
20
*May 10 03:45:58: %SYS-5-CLOCKUPDATE: Set summer-time: TZA from February the 1st Saturday at
2:00 TO May the 3rd Monday at 18:30, ahead 1 hour 20 minute

```

```
Set summer-time: TZA from February the 1st Saturday at 2:00 TO May the 3rd Monday at 18:30,
ahead 1 hour 20 minute

Orion_B54Q# show clock
18:00:08 TZA Wed, Feb 29, 2012

# If the time is set to non-summer time, the time zone name is restored to ABC.
Orion_B54Q#clo set 18 1 1
*Jan 1 18:00:09: %SYS-5-CLOCKUPDATE: Set system clock: 18:00:09 ABC Sun, Jan 1, 2012
Set system clock: 18:00:09 ABC Sun, Jan 1, 2012
Orion_B54Q#show clock
18:00:12 ABC Sun, Jan 1, 2012
```

2: If the system uses the default summer time that is one hour ahead of the standard time, ahead and the parameters behind ahead can be neglected. For example, set the summer time to start from 2:00 a.m. of the first Sunday in April to 2:00 a.m. of the last Sunday in October and set the summer time to one hour ahead of the standard time.

```
Orion_B54Q(config)#clo summer-time PDT start April 1 sunday 2:00 end October last Sunday 2:00
*May 10 03:15:05: %SYS-5-CLOCKUPDATE: Set summer-time: PDT from April the 1st Sunday at 2:00
TO October the last Sunday at 2:00, ahead 1 hour
Set summer-time: PDT from April the 1st Sunday at 2:00 TO October the last Sunday at 2:00,
ahead 1 hour
```

3: Disable summer time.

```
Orion_B54Q(config)#no clock summer-time
*Jan 1 18:01:09: %SYS-5-CLOCKUPDATE: Set no summer time.
Set no summer time.
```

Check Method -

Platform -

Description -

5.5 clock timezone

Use this command to set the time zone.

clock timezone [*name hours-offset* [*minutes-offset*]]

Use this command to remove the time zone settings.

no clock timezone

Parameter Description

Parameter	Description
<i>name</i>	Time zone name. It can only be a letter between A and Z or between a

	and z, which is not case sensitive. The name contains 3 to 31 characters.
<i>hours-offset</i>	Hours of time difference. It indicates whether the time is faster or smaller than the hardware UTC time. The range is from -12 to 12. The negative digit indicates that the time is slower than the hardware time, while the positive digit indicates that the time is faster than the hardware time. <div style="border: 1px dashed gray; padding: 2px;"> i If the time is slower than the UTC time, add "-" before <i>hours-offset</i>. </div>
<i>minutes-offset</i>	Minutes of time difference. The range is from 0 to 59.

Defaults -

Command Mode Global configuration mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration Examples 1: The following example sets the time zone name to CST. The software time is 8 hours faster than the hardware time.

```
Orion_B54Q(config)# clock timezone CST 8
Set time zone name: CST (GMT+08:00)

Orion_B54Q# show clock
18:00:17 CST Wed, Dec 5, 2012
```

2: The following example sets the time zone name TZA. The software time is 06:13 slower than the hardware time.

```
Orion_B54Q(config)# clock timezone TZA -6 13
Set time zone name: TZA (GMT-06:13)
```

3. The following example removes the time zone settings.

```
Orion_B54Q(config)# no clock timezone
Set no clock timezone.
```

Check Method -

Platform Description -

5.6 clock update-calendar

Use this command to enable the system to synchronize the hardware time with the software time.

clock update-calendar

Parameter Description	Parameter	Description
	-	-

Defaults -

Command Mode Privileged EXEC mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported. After you configure this command, the system will synchronize the hardware time with the current software time according to the time zone and summer time settings of the device.

Configuration Examples 1: The following example enables the system to synchronize the hardware time with the software time.

```
Orion_B54Q# clock update-calendar
Set the hardware time from the system clock.
```

2: The following example sets the time zone of the hardware time to GMT+5:10, which indicates that the hardware time is 5:10 slower than the software time. The summer time is not set.

```
Orion_B54Q# show clock
09:30:21 TSZ Wed, Feb 29, 2012

Orion_B54Q# clock update-calendar
Set the hardware time from the system clock.

Orion_B54Q#show calendar
04:20:25 UTC Wed, Feb 29, 2012
```

3: The following example sets the hardware time. If it is set to GMT+5:10 and the summer time is set to be 1:15 faster from the first Monday in February 1 to the second Sunday in June 1, it indicates that the hardware time is 6:25 slower than the software time during the effective period of the summer time.

```
Orion_B54Q# show clock
09:30:02 TSZ Wed, Feb 29, 2012

Orion_B54Q# clock update-calendar
Set the hardware time from the system clock.
```

```
Orion_B54Q#show calendar
03:05:08 UTC Wed, Feb 29, 2012
```

Check Method -

Platform -

Description -

5.7 cpu high-watermark set

Use this command to set the high watermark of the CPU usage of the control core and enable CPU usage monitoring.

cpu high-watermark set [[*high high-value*] [*range range-value*]]

Use this command to disable CPU usage monitoring.

no cpu high-watermark set

Use this command to restore the default settings.

default cpu high-watermark set

Parameter Description

Parameter	Description
high <i>high-value</i>	Sets the high watermark of the CPU usage. The range is from 2 to 99.
range <i>range-value</i>	Sets the watermark fluctuation range. The range is from 1 to 20.

Defaults

By default, the watermark of the CPU usage is 80% and the watermark fluctuation range is 5% (namely, the range of the CPU usage watermark is from 75% and 85%).

Command Mode

Global configuration mode

Default Level -

Usage Guide

This command is supported only in VSD0 mode. Multiple VSDs are not supported. You can use this command to set the high watermark of the CPU usage and enable CPU usage monitoring. When detecting that the CPU usage exceeds the fluctuation range of the highest watermark, the system prints prompts.

Configuration Examples

1: The following example sets the CPU usage watermark to the default value and enables CPU usage monitoring (if it is disabled).

```
Orion_B54Q(config)# default cpu high-watermark set
Reset default cpu watermark monitor
```

```
set system cpu watermark high 80%(75%~85%)
```

2: The following example disables CPU usage monitoring.

```
Orion_B54Q(config)# no cpu high-watermark set
Close cpu watermark monitor
```

3: The following example enables CPU usage monitoring. Keep the defined watermark value.

```
Orion_B54Q(config)# cpu high-watermark set
Open cpu watermark monitor
set system cpu watermark high 80%(75%~85%)
```

4: The following example enables CPU usage monitoring and sets the high watermark to 88% and fluctuation range to 3%.

```
Orion_B54Q(config)# cpu high-watermark set high 88 range 3
Open cpu watermark monitor
set system cpu watermark high 88%(85%~91%)
```

In this case, the high watermark is set to 88%. The upper limit of the high watermark is 91% (88%+3%) and the lower limit is 85% (88%-3%).

Check Method -

Prompt Message If the high watermark of the CPU usage is allowed to fluctuate from 85% to 91%, the system will print the following warning message when the CPU usage exceeds the upper limit of the high watermark:

```
*Jan 19 16:23:01: %RG_SYSMON-4-CPU_WATERMARK_HIGH: warning! system cpu usage above high watermark(85%),current cpu usage 100%
```

When the CPU usage is less than the lower limit of the high watermark, the system will print the following message about warning release:

```
*Jan 20 07:02:52: %RG_SYSMON-5- CPU_WATERMARK:withdraw warning! system cpu usage below high watermark(85%), current cpu usage 36%
```

Platform -

Description -

5.8 memory low-watermark set

Use this command to set the low watermark threshold of the memory and enable the memory low watermark detection.

memory low-watermark set *mem-value*

Use this command to disable the detection of memory low watermark.

no memory low-watermark set

Parameter Description

Parameter	Description
-----------	-------------

<i>mem-value</i>	Memory watermark threshold. The range is from 1 KB to 4,294,967,295 KB.
------------------	---

Defaults	By default, the detection of memory low watermark is disabled.
Command Mode	Global configuration mode
Default Level	-
Usage Guide	You can use this command to enable the detection of the memory low watermark and set the memory watermark threshold. When the system memory is less than this threshold, the system will print prompts.
Configuration Examples	1: The following example sets the low watermark threshold of the memory to 500,000 KB and enables detection. <pre>Orion_B54Q(config)#memory low-watermark 500000</pre>
Check Method	-
Prompt Message	When the system memory is less than the defined watermark value (such as 500000 KB), the system prints the following message: <pre>Orion_B54Q(config)#<187> Jan 1 00:18:59 syslog: Free Memory has dropped below 500000k</pre>
Platform Description	-

5.9 memory history clear

Use this command to clear the history of the memory usage.

memory history clear [one-fourth | half | all]

Parameter Description	Parameter	Description
	one-fourth	Clears one fourth entries.
	half	Clears a half of entries.
	all	Clears all the entries.

Defaults	-
Command Mode	Global configuration mode
Default Level	-

Usage Guide -

Configuration 1: The following example clears a half of the history of the memory usage.

Examples

```
Orion_B54Q# show memory history

Time Thu Jan 1 00:24:45 1970
Used(k) 148516
Maxinum memory users for this period
Process Name    Holding
tcpip.elf       270028
cli-memory      60600
rg_syslogd      36640

Time Thu Jan 1 00:24:41 1970
Used(k) 148492
Maxinum memory users for this period
Process Name    Holding
tcpip.elf       270028
cli-memory      52408
rg_syslogd      36640

Time Thu Jan 1 00:24:41 1970
Used(k) 148444
Maxinum memory users for this period
Process Name    Holding
tcpip.elf       270028
cli-memory      44088
rg_syslogd      36640

Orion_B54Q(config)#memory history clear half
2 out of 5 records in the history table to be cleared...
Clear done !
```

Check Method -

Prompt -

Message -

Platform -

Description -

5.10 reload

Use this command to reload the device.

reload [at { hour [:minute [:second]] } [month [day [year]]]]

Parameter Description	Parameter	Description
	<i>hour</i> [: <i>minute</i> [: <i>second</i>]]	Sets the restart time in the format of hour : minute : second. Other neglected parameters keep the current system values.
	<i>month</i>	Sets the month in the range from 1 to 12.
	<i>day</i>	Sets the day in the range from 1 to 31.
	<i>year</i>	Sets the year in the range from 1970 to 2069.

Defaults -

Command Mode Privileged EXEC mode

Default Level -

Usage Guide -

Configuration The following example reloads the device.

```

Examples Orion_B54Q# reload
Reload system?(Y/N) Y
Sending all processes the TERM signal... [ OK ]
Sending all processes the KILL signal... [ OK ]
Restarting system...
    
```

Check Method -

Prompt -

Message -

Platform -

Description -

5.11 show calendar

Use this command to display the hardware calendar.

show calendar

Parameter	Parameter	Description
-----------	-----------	-------------

Description	
Command	Privileged EXEC mode/ global configuration mode
Mode	
Default Level	-
Usage Guide	-
Configuration	The following example displays the hardware calendar.
Examples	<pre>Orion_B54Q# show calendar 21:57:48 GMT Sun, Feb 28, 2012</pre>
Prompt	-
Message	-
Platform	-
Description	-

5.12 show clock

Use this command to display the system software clock.

show clock

Parameter Description	Parameter	Description
	-	-
Command	Privileged EXEC mode / global configuration mode	
Mode		
Default Level	-	
Usage Guide	-	
Configuration	1. The following example displays the software clock when the time zone is disabled.	
Examples	<pre>Orion_B54Q# show clock 18:22:20 UTC Tue, Dec 11, 2012</pre>	
	2. The following example displays the software clock when the time zone is enabled.	
	<pre>Orion_B54Q# show clock 03:07:49 TSZ Wed, Feb 29, 2012</pre>	

Prompt -
Message -
Platform -
Description -

5.13 show memory

Use this command to display the system memory.

show memory [**sorted total** | **history** | **low-watermark** | *process-id* | *process-name*]

Parameter Description	Parameter	Description
	sorted total	Ranked according to the memory usage.
	history	Displays the history of memory usage.
	low-watermark	Displays the memory low watermark threshold of the system.
	<i>process-id</i>	Displays the memory usage of the task specified by <i>process-id</i> .
	<i>process-name</i>	Displays the memory usage of the task specified by <i>process-name</i> .

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide Every time when the **show memory history** command is used, the number of displayed entries increases by one. Up to 10 entries can be displayed. You can use the **memory history clear** command to clear history entries.

Configuration Examples 1: The following example displays the memory usage of each task and the ranking (based on the total memory usage).

```
Orion_B54Q# show memory sorted
System Memory: 508324K total, 481560K used, 26764K free, 31.5% used rate
Used detail: 149112K active, 247776K inactive, 30460K mapped, 50460K slab, 3752K others

PID      Text (K)  Rss (K)  Data (K)      Stack (K)  Total (K)      Process
807      1568     4584    264728         84        270028        tcpip.elf
854       40      1436    246076         84        248840        cli-fileSystem
1237     52      1492    123260         84        126036        cli-memory
803       56      1104    74064          84         76920        ping.elf
727       84      1276    33812          84         36640        rg_syslogd
733       84       796    33536          84         36364        rg_syslogd
```

```

776      224      1416      16896          84      19800          lsmdemo
858      40       1324      16844          84      19612          orion-tty-admin
769      40       3600      11052          84      13812          skbdemo
--More--

```

Description of some keywords in the command:

Keyword	Description
total	Total system memory
used	Used memory
free	Remaining memory
used rate	Memory usage (percentage)
Active	Active page
inactive	Inactive page
mapped	Mapped memory
slab	Memory consumed by Slab
others	Memory capacity of the used memory except the memory used by active and inactive pages, mapped memory, and slab memory.

Description of the displayed information on each task:

Field	Description
PID	Process ID
Text	Code segment size
Rss	Resident memory size
Data	Data segment size
Stack	Stack size
Total	Total used memory
Process	Task name

Prompt

-

Message

Platform

-

Description

5.14 show pci-bus

Use this command to display the information on the device mounted to the PCI bus.

show pci-bus

Parameter

Parameter	Description
-----------	-------------

Description	
-	-

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide -

Configuration Examples 1: The following example displays the information on the device mounted to the PCI bus.

```

Orion_B54Q# show pci-bus
NO:0
Vendor ID          : 0x1131
Device ID          : 0x1561
Domain:bus:dev.func : 0000:00:05.0
Status / Command   : 0x2100000
Class / Revision   : 0xc031030
Latency            : 0x0
first 64 bytes of configuration address space:
00: 31 11 61 15 00 00 10 02 30 10 03 0c 20 00 80 00
10: 00 00 00 f0 00 00 00 00 00 00 00 00 00 00 00 00
20: 00 00 00 00 00 00 00 00 00 00 00 00 31 11 61 15
30: 00 00 00 00 dc 00 00 00 00 00 00 00 29 01 01 2a

NO:1
Vendor ID          : 0x1131
Device ID          : 0x1562
Domain:bus:dev.func : 0000:00:05.1
Status / Command   : 0x2100156
Class / Revision   : 0xc032030
Latency            : 0x30
First 64 bytes of configuration address space:
00: 31 11 62 15 56 01 10 02 30 20 03 0c 20 30 80 00
10: 00 10 00 f0 00 00 00 00 00 00 00 00 00 00 00 00
20: 00 00 00 00 00 00 00 00 00 00 00 00 31 11 62 15
30: 00 00 00 00 dc 00 00 00 00 00 00 00 29 01 02 10
    
```

Prompt Message -

Platform Description -

5.15 show processes cpu

Use this command to display system task information.

show processes cpu [history [table] | [5sec | 1min | 5min | 15min] [nonzero]]

Parameter Description	Parameter	Description
	5sec 1min 5min 15min	Displays lists of tasks in descending order of CPU usage within the last five seconds, one minute, five minutes, and 15 minutes.
	Nonzero	Does not display the task with 0 CPU usage.
	History	Displays the CPU usage of the control core within the last 60 seconds, 60 minutes, and 72 hours in histogram.
	Table	Displays the CPU usage of the control core within the last 60 seconds, 60 minutes, and 72 hours in table.

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration Examples 1: The following example displays the tasks listed in ascending order of task IDs.

```
Orion_B54Q# show processes cpu
System Uptime: 19:08.6
CPU utilization for five seconds:1.2%; one minute:0.8%; five minutes:0.8%
set system cpu watermark (open): high 80%(85%~75%)

Tasks Statistics: 375 total, 10 running, 365 sleeping, 0 stopped, 0 zombie
  Pid Vsd S  PRI  P    5Sec    1Min    5Min    15Min Process
   1  0 S   20  0  0.0(0.0)  0.0(0.0)  0.0(0.0)  0.0(0.0) init
   2  0 S   20  1  0.0(0.0)  0.0(0.0)  0.0(0.0)  0.0(0.0) kthreadd
   3  0 S  -100 0  0.0(0.0)  0.0(0.0)  0.0(0.0)  0.0(0.0) migration/0
   4  0 S   20  0  0.0(0.0)  0.0(0.0)  0.0(0.0)  0.0(0.0) ksoftirqd/0
   5  0 S  -100 1  0.0(0.0)  0.0(0.0)  0.0(0.0)  0.0(0.0) migration/1

--More--
```

2: The following example displays the tasks listed in ascending order of task IDs without displaying the tasks with 0 CPU usage within 15 minutes.

```
Orion_B54Q# show processes cpu nonzero
```

Description of the information displayed in this command:

Field	Description
System Uptime	Total running time of the device, precious to seconds.
CPU Utilization	Total CPU usage of the control core within the last five seconds, one minute, and five minutes.
Virtual CPU usage	Total CPU usage of the virtual control core within the last five seconds, one minute, and five minutes.
Tasks Statistics	Task statistics information, including the total number of statistics tasks and the task status.
set system cpu watermark	CPU watermark value and status of the control core.

The task running statuses are listed below:

Task Running Status	Description
running	Running task
sleeping	Suspended task
stopped	Stopped task
zombie	Terminated task, but not reclaimed by the system

Description of each task:

Field	Description
Pid	Task ID
Vsd	VSD ID
S	Task status. Five statuses in total: R (running), T (stopped), S (sleeping), D (waiting), and Z (zombie).
PRI	Task running priority
P	The core of the CPU on which the task runs
5sec/1min/5min/15min	CPU usage of the task within the last five seconds, one minute, five minutes, and 15 minutes. The value in the round brackets is the CPU usage that is not divided by the total number of cores where the task runs.
Process	Task name. Only the first 15 characters are displayed. The remaining characters are truncated.

3: The following example displays the CPU usage in ascending order of task IDs and only the processes with non-zero CPU usage within 15 minutes are displayed.

```
Orion_B54Q #show processes cpu nonzero
```

4: The following example displays the CPU usage in descending order within five seconds and the tasks with zero CPU usage within one second are not displayed.

```
Orion_B54Q #show processes cpu 5sec nonzero
```

5: The following example displays the CPU usage of the control core in histograms within the last 60

seconds, 60 minutes, and 72 hours.

The first histogram displays the CPU usage of the control core within 300 seconds. Every segment in the x-coordinate is five seconds, and every segment in the y-coordinate is 5%. The symbol "*" indicates the CPU usage at the last specified second. In other words, the first segment on the x-coordinate nearest to 0 is the CPU usage in the last five seconds, measured in %.

The second histogram displays the CPU usage of the control core within the last 60 minutes, measured in %. Every segment on the x-coordinate is 1 minute.

The third histogram displays the CPU usage of the control core within the last 72 hours, measured in %. Every segment on the x-coordinate is 1 hour.

Example:

```
Orion_B54Q#show processes cpu history

      system cpu percent usage(%) [last 300 second]

 100|
    95|
    90|
    85|
    80|
    75|
    70|
    65|
    60|
    55|
    50|
    45|
    40|*****
    35| |||||
    30| |||||*
    25| |||||
    20| |||||
    15| |||||
    10| |||||
     5| |||||*****
     0| |||||
      #-----#-----#-----*-->
      0         50        100       second

      system cpu percent usage(%) per 5second (last 125 second)
-----
      system cpu percent usage(%) [last 60 minute]

 100|
```

```

95|
90|
85|
80|
75|
70|
65|
60|
55|
50|
45|
40|
35|
30|*
25||
20||
15||
10||
5||*
0|||
#==*==>
0    minute
      system cpu percent usage(%) per 1minute (last 2 minute)
-----

```

6: The following example displays the CPU usage of the core 0 in tables within the last 60 seconds, 60 minutes, and 72 hours.

The first table lists the CPU usage within 300 seconds. The first cell indicates the CPU usage within the last five seconds.

The second table lists the CPU usage within the last 60 minutes, measured in %. The two adjacent cells show the CPU usage measured at an interval of one minute.

The third table lists the CPU usage within the last 72 hours, measured in %. The two adjacent cells show the CPU usage measured at an interval of one hour.

Example:

```

Orion_B54Q #show processes cpu history table
      system cpu percent usage(%) [last 300 second]
#-----#
|      | 1| 2| 3| 4| 5| 6| 7| 8| 9| 10|
#-----#
#-----#
|      0| 2.0| 2.4| 2.3| 2.3| 2.8| 3.0| 2.7| 3.2| 2.6| 2.4|
#-----#
|      1| 2.7| 2.5| 2.7| 2.2| 2.4| 2.6| 2.2| 2.7| 2.3| 2.5|
#-----#
|      2| 2.9| 2.0| 2.4| 2.5| 2.7| 2.4| 2.4| 2.6| 2.6| 2.5|

```

```

#-----#
|      3|  2.7|  2.8|  2.8|  3.2|  2.5|  3.2|  3.1|  4.0|  2.7|  2.7|
#-----#
|      4|  4.0|  2.3|  2.1|  2.2|  2.7|  2.4|  2.5|  2.6|  2.4|  2.6|
#-----#
|      5|  2.4|  3.2|  2.5|  2.3|  2.3|  3.6|  2.8|  2.5|  2.2|  2.4|
#-----#

                system cpu percent usage(%) [last 60 minute]
#-----#
|      |  1|  2|  3|  4|  5|  6|  7|  8|  9| 10|
#-----#
#-----#
|      0|  2.6|  2.5|  3.0|  2.4|  2.6|
#-----#

```

Prompt -
Message -

Platform -
Description -

5.16 show processes cpu detailed

Use this command to display the details of the specified task.
show processes cpu detailed { *process-id* | *process-name* }

Parameter Description	Parameter	Description
	<i>process-id</i>	Displays the information on the task of the specified task ID.
	<i>process-name</i>	Displays the information on the task of the specified task name.

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported.

Configuration Examples 1: The following example displays the information on the task of the specified task name.

```

Orion_B54Q# show processes cpu detailed demo
Process Id      : 1820
Process Name    : demo

```

```
Vsdid      : 0
Process Ppid : 1

State      : R(running)
On CPU     : 0
Priority    : 20
Age Time   : 24:06.5
Run Time   : 00:01.0
Cpu Usage  :
  Lass 5 sec  0.3% (0.6%)
  Lass 1 min  0.3% (0.6%)
  Lass 5 min  0.3% (0.6%)
  Lass 15 min 0.3% (0.6%)
Tty        : ?
```

- **Code Usage: 209.6 KB.** If the specified task name is not unique, the system displays the following message:

```
Orion_B54Q# show processes cpu detailed demo
duplicate process, choose one by id not name.
name: demo, id: 1089, state: S(sleeping)
name: demo, id: 1091, state: R(running)
process name: monitor_procs, do NOT exist, or NOT only one.
```

Description of the displayed information:

Field	Description
Process Id	Task ID
Vsdid	VSD ID of the task
Process Name	Task name
Process Ppid	Parent process task ID
State	Task running status
On CPU	CPU where the task is running
Priority	Task priority
Age Time	Duration for the task from self-startup to now
Run Time	Duration for the task from self-startup to being executed
Cpu Usage	CPU usage of the task within the last five seconds, one minute, five minutes, and 15 minutes. The value in the round brackets is the CPU usage that is not divided by the total number of cores where the task runs. For example, the demo task is running on No.0 core, which is the control core and the system has two control cores. In this case, the CPU usage is 0.3% (0.6%).
Tty	Tty ID, in the format of "Primary device ID, secondary device ID". If it is 0, the value is ?.

Code Usage	Size occupied by the task code segment
------------	--

2: The following example displays the information on the task of the specified task ID.

```
Orion_B54Q# show process cpu detailed 1715
```

Prompt -
Message -
Platform -
Description -

5.17 show usb-bus

Use this command to display the information on the device mounted to the USB bus.

show usb-bus

Parameter Description	Parameter	Description
	-	-

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide -

Configuration Examples 1: The following example displays the information on the device mounted to the USB bus.

```
Orion_B54Q# show usb-bus
Device: Linux Foundation 2.0 root hub
Bus 001 Device 001: ID 1d6b:0002
```

Prompt -
Message -
Platform -
Description -

5.18 show version

Use this command to display the system version information.

show version

Parameter Description	Parameter	Description
	-	-

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide -

Usage Guide The following example displays the system version information.

```
Orion_B54Q# show version
System description      : Orion_B54Q Indoor AP320-
I (802.11a/n and 802.11b/g/n) By Orion_B54Q Networks
System start time      : 2012-12-06 00:00:00
System uptime          : 0:03:20:07
System hardware version : 1.0.0
System software version : AP_NOS11.0(1B1)
System serial number    : 1234942570018
System boot version     : 1.0.0
```

Prompt Message -

Platform Description -

5.19 show cpu

Use this command to display the information on the system task running on the control core instead of the non-virtual core.

show cpu

Parameter Description	Parameter	Description
	-	-

Command Privileged EXEC mode/ global configuration mode
Mode

Default Level -

Usage Guide This command is supported only in VSD0 mode. Multiple VSDs are not supported.
If the system is equipped with a virtual core, you can use the **show processes cpu** command to check the CPU usage of the virtual core.

Configuration Examples 1: The following example displays the information on the system task running on the control core instead of the non-virtual core.

```
Orion_B54Q#show cpu
=====
CPU Using Rate Information
CPU utilization in five seconds:  4.80%
CPU utilization in one minute:    4.10%
CPU utilization in five minutes:  4.00%

NO      5Sec   1Min   5Min Process
  1  0.00%  0.00%  0.00% init
  2  0.00%  0.00%  0.00% kthreadd
  3  0.00%  0.00%  0.00% ksoftirqd/0
  4  0.00%  0.00%  0.00% events/0
--More--
```

Prompt -
Message

Platform -
Description

6 Time Range Commands

6.1 absolute

Use this command to configure an absolute time range.

absolute { [*start time date*] [*end time date*] }

Use the **no** form of this command to remove the absolute time range.

no absolute

Parameter Description	Parameter	Description
	start time date	Indicates the start time of the range.
	end time date	Indicates the end time of the range.

Defaults The default absolute time range is the maximum range, which is from 00:00 January 1, 0 to 23:59 December 31, 9999.

Command Mode Time range configuration mode

Default Level 14

Usage Guide Use the **absolute** command to configure a time absolute time range between a start time and an end time to allow a certain function to take effect within the absolute time range.
The maximum absolute time range is from 00:00 January 1, 0 to 23:59 December 31, 9999.

Configuration Examples The following example creates a time range and enters time range configuration mode.

```
Orion_B54Q(config)# time-range no-http
Orion_B54Q(config-time-range)#
```

The following example configures an absolute time range.

```
Orion_B54Q(config-time-range)# absolute start 1:1 1 JAN 2013 end 1:1 1 JAN
2014
```

Check Method Use the **show time-range** [*time-range-name*] command to display the time range configuration.

Prompt Message -

Platform
Description

-

6.2 periodic

Use this command to configure periodic time.

periodic *day-of-the-week time to [day-of-the-week] time*

Use the **no** form of this command to remove the configured periodic time.

no periodic *day-of-the-week time to [day-of-the-week] time*

Parameter
Description

Parameter	Description
<i>day-of-the-week</i>	Indicates the week day when the periodic time starts or ends.
<i>time</i>	Indicates the exact time when the periodic time starts or ends.

Defaults No periodic time is configured by default.

Command Time range configuration mode
Mode

Default Level 14

Usage Guide Use the **periodic** command to configure a periodic time interval to allow a certain function to take effect within the periodic time.

Configuration Examples The following example creates a time range and enters time range configuration mode.

```
Orion_B54Q(config)# time-range no-http
Orion_B54Q(config-time-range)#
```

The following example configures a periodic time interval.

```
Orion_B54Q(config-time-range)# periodic Monday 1:1 to Tuesday 2:2
```

Check
Method

Use the **show time-range** [*time-range-name*] command to display the time range configuration.

Prompt
Message

-

Platform
Description

-

6.3 show time-range

Use this command to display the time range configuration.

show time-range [*time-range-name*]

Parameter Description	Parameter	Description
	<i>time-range-name</i>	Displays a specified time range.

Command Mode Privileged EXEC mode

Default Level 14

Usage Guide Use this command to check the time range configuration.

Configuration Examples The following example displays the time range configuration.

```
Orion_B54Q# show time-range
time-range entry: test (inactive)
  absolute end 01:02 02 February 2012
```

Prompt Message -

Platform Description -

6.4 time-range

Use this command to create a time range and enter time range configuration mode.

time-range *time-range-name*

Use the **no** form of this command to remove the configured time range.

no time-range *time-range-name*

Parameter Description	Parameter	Description
	<i>time-range-name</i>	Time range name

Defaults No time range is configured by default.

Command Mode	Global configuration mode
Default Level	2
Usage Guide	Some applications (such as ACL) may run based on time. For example, an ACL can be effective within certain time ranges of a week. To this end, first you must configure a time range. After the time range is created, you can configure relevant time control in time range mode.
Configuration Examples	<p>The following example creates a time range.</p> <pre>Orion_B54Q(config)# time-range no-http Orion_B54Q(config-time-range)#</pre>
Check Method	Use the show time-range [<i>time-range-name</i>] command to display the time range configuration.
Prompt Message	-
Platform Description	-

7 USB Commands

7.1 show usb

Use this command to display the information about the inserted USB device in the system.

show usb

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode.

Usage Guide Device information is displayed if there is a USB device. Otherwise, there is no output. If the USB disk is connected to the USB port on the device, the ID displayed by running the **show usb** command is X, the USB port number. If the USB disk is connected to the USB port on the device via a HUB, the ID displayed by running the **show usb** command is X-Y, in which X stands for the USB port number and Y for the HUB slot number.

Configuration Examples The following example displays the information about the USB device:

```
Orion_B54Q# show usb
Device: Mass Storage:
ID: 0
URL prefix: usb0
Disk Partitions:
usb0 (type:FAT32)
Size : 131,072,000B (125MB)
Available size: 1,260,020B (1.2MB)
```

In above information, the Mass Storage Device is the name of the device.

The meaning of the information is as below:

Table 1: the description of the field.

Field	Description
URL	Prefix used to access the USB device.
Size	Accessible size of the USB device.
Available size	Available size of the USB device.

Related	Command	Description
---------	---------	-------------

Commands		
	N/A	N/A

Platform N/A
Description

7.2 usb remove

Use this command to remove the USB device.

usb remove *device_id*

Parameter Description	Parameter	Description
	device_id	Device ID of USB to be removed.

Defaults N/A

Command Mode Privileged EXEC mode.

Usage Guide Before pulling out the USB device, you need to remove the device using a command, so as to prevent errors that may occur because the system is using the device. If the device is removed successfully, the system will show a prompt, when you can pull out the device. If the device cannot be pulled out, it indicates that the system is using this USB device, so you have to wait a moment before removing it again.

Configuration Examples The following example removes the USB device.

```
Orion_B54Q# usb remove 0
OK, now you can pull out the device 0.
*Jan 1 00:18:16: %USB-5-USB_DISK_REMOVED: USB Disk <Mass Storage> has
been removed from USB port 0!
```

At this moment, the USB device can be plugged out.

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

8 UFT Commands

8.1 switch-mode mode_type slot slot_number

Use this command to switch the UFT operating mode for a line card in stand-alone mode.

switch-mode *mode_type* **slot** *slot_num*

Use this command to restore the Default UFT operating mode for the specified line card in stand-alone mode.

no switch-mode *mode_type* **slot** *slot_num*

Parameter Description

Parameter	Description
<i>mode_type</i>	<p>Indicates the UFT operating mode.</p> <p>In stand-alone mode, the line card can operate in the following modes:</p> <ul style="list-style-type: none"> ● Default: Default mode, which is applied to most of application scenarios. ● bridge: Bridge mode, which is applied to the application scenarios where pure Layer 2 services dominate. ● gateway: Gateway mode, which is applied to the application scenario in which Layer 3 services dominate. ● gateway-max: Gateway-max mode, which is applied to the application scenarios in which a large number of terminals are deployed. ● gateway-ndmax: Gateway-ndmax mode, which is applied to the application scenarios in which a large number of IPv6 terminals are deployed. ● label: Label mode, which is applied to the application scenarios that require a great amount of MPLS labels. ● route-v4max: IPv4 routing mode, which is applied to the application scenarios that require a great number of IPv4 routes. ● route-v6max: IPv6 routing mode, which is applied to the application scenarios that require a great number of IPv6 routes. ● vxlan: vxlan mode, which is applied to the vxlan scenarios.
<i>slot_num</i>	Indicates the corresponding line card installed in the chassis.

Defaults The Default UFT operating mode is **Default**.

Command Global configuration mode

Mode**Default** 14**Level****Usage Guide** N/A**Configuration Examples** The following example switches the UFT operating mode of the line card in slot 3 of the switch to bridge mode in stand-alone mode.

```
Orion_B54Q(config)#switch-mode bridge slot 3
Please save current config and restart your device!
Orion_B54Q(config)#show run

Building configuration...
Current configuration : 1366 bytes

version 11.0(1B2)
!
cwmpp
!
install 3 M8600E-24XS4QXS-DB
!
sysmac 1414.4b34.5624
!
nfpp
!
switch-mode bridge slot 3
```

Verification Use the **show switch-mode status** command to display the current operating mode.

```
Orion_B54Q(config)#show switch-mode status
Slot No           Switch-Mode
3                 bridge
```

Prompt Messages N/A**Common Errors** N/A**Platforms** N/A

8.2 switch-mode mode_type switch switch_id slot slot_num

Use this command to switch the UFT mode for a line card in VSU mode.

switch-mode *mode_type* **switch** *switch_num* **slot** *slot_num*

Use this command to delete the UFT mode for the specified line card in VSU mode.

no switch-mode *mode_type* **switch** *switch_num* **slot** *slot_num*

Parameter Description	Parameter	Description
	<i>mode_type</i>	<p>Indicates the UFT operating mode.</p> <p>In VSU mode, the line card can operate in the following modes:</p> <ul style="list-style-type: none"> ● Default: Default mode, which is applied to most of application scenarios. ● bridge: Bridge mode, which is applied to the application scenarios where pure Layer 2 services dominate. ● gateway: Gateway mode, which is applied to the application scenarios in which Layer 3 services dominate. ● gateway-max: Gateway-max mode, which is applied to the application scenarios in which a large number of terminals are deployed. ● gateway-ndmax: Gateway_ndmax mode, which is applied to the application scenarios in which a large number of IPv6 terminals are deployed. ● label: Label mode, which is applied to the application scenarios that require a great amount of MPLS labels. ● route-v4max: IPv4 routing mode, which is applied to the application scenarios that require a great number of IPv4 routes. ● route-v6max: IPv6 routing mode, which is applied to the application scenarios that require a great number of IPv6 routes. ● vxlan: vxlan mode, which is applied to the vxlan scenarios.
	<i>switch_num</i>	Indicates the chassis or box device number in VSU mode.
	<i>slot_num</i>	Indicates the line card installed in the chassis device.

Defaults The default UFT operating mode is **default configuration**.

Command Global configuration mode

Mode

Default Level 14

Usage Guide	N/A
Configuration Examples	<p>The following example switches the UFT operating mode of the line card in slot 3 of switch1 to bridge mode in VSU mode.</p> <pre>Orion_B54Q(config)#switch-mode bridge switch 1 slot 3 Please save current config and restart your device! Orion_B54Q(config)#show run Building configuration... Current configuration : 1485 bytes version 11.0(1B2) ! cswmp ! install switch 1 Orion_B54Q install 1/3 orion-b54q-DB ! sysmac 1414.4b34.5624 ! nfp ! switch-mode bridge switch 1 slot 3</pre>
Verification	<p>Use the show switch-mode status command to display the UFT mode.</p> <pre>Orion_B54Q(config)#show switch-mode status Slot No Switch-Mode switch 1 slot 3 bridge</pre>
Prompt Messages	N/A
Common Errors	N/A
Platforms	N/A

8.3 show switch-mode status

Use this command to display the UFT mode of a switch.

show switch-mode status

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Privileged EXEC mode/global configuration mode/interface configuration mode

Default Level 14

Usage Guide N/A

Configuration Examples The following example displays the UFT mode of the switch in stand-alone mode.

```
Orion_B54Q(config)#show switch-mode status
Slot No          Switch-Mode
3                bridge
```

2The following example displays the UFT mode of the switch in VSU mode.

```
Orion_B54Q(config)#show switch-mode status
Slot No          Switch-Mode
switch 1 slot 3  bridge
```

Field Description:

Field	Description
Slot No	Displays only slot No. in stand-alone mode; displays both device No. and slot No. in VSU mode.
Switch-Mode	Indicates the UFT operating mode.

Prompt Messages N/A

Platforms N/A

9 Module Hot-plugging/ unplugging Commands

9.1 sysmac

Use this command to configure a MAC address for the system. Use the **no** form of this command to remove the setting.

sysmac

no sysmac

Parameter Description	Parameter	Description
	<i>mac-address</i>	Configures a MAC address for the system.
Defaults	N/A	
Command Mode	Global configuration mode	
Usage Guide	<ol style="list-style-type: none"> 1. In general, the MAC address is programmed on the management board or the chassis flash. In virtual switching unit (VSU) mode, the system saves the MAC address in use in the configuration file to avoid flow interruption caused by MAC address change. The valid MAC address saved in the configuration file validates in preference after the device is restarted, 2. The MAC address of the gateway may be bound on some downstream devices. If the system is configured with the auth-mode gateway command, you can use the sysmac command to replace the MAC address of the gateway without changing the MAC address configuration on the downstream devices. 3. The configuration takes effect after the device is restarted. 	
Configuration Examples	<p>The following example deletes the MAC address saved in the configuration file.</p> <pre>Orion_B54Q#no sysmac</pre> <p>The following example configures MAC address 00d0.f822.33e2 for the system.</p> <pre>Orion_B54Q#sysmac 00d0.f822.33e2</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

9.2 remove configuration device device-id

Use this command to remove the configuration on a VSU device, which validates in VSU mode after restart.

remove configuration device *device-id*

Parameter Description	Parameter	Description
	<i>device-id</i>	The chassis number.

Defaults N/A

Command Mode Global configuration mode

Usage Guide This command is used to remove the configuration on a VSU device. It validates after the device is restarted.

Configuration Examples The following example clears the configuration on device 1.

```
Orion_B54Q(config)# remove configuration device 1
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

9.3 show manuinfo

Use this command to display asset information about all independent components in the system for asset management, including the chassis, fan, power, management board, and line card. The information covers the ID, slot number, name, serial number (SN), software and hardware version, and MAC address. Not all devices support display of the same information and only supported information is printed.

show manuinfo

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Privileged EXEC mode
Mode

Usage Guide This command is used to display asset information about all independent components in the system

Configuration The following example displays asset information of the single physical device.

Examples

```
Orion_B54Q#show manuinfo
Device 1
  Location:                Chassis
  Device name:             RG S12006
  Device Serial Number:    62150129A8B0DAF0F0321
  Hardware Version:       V1.0
  Mac Address:             00.D0.F8.00.11.22

Device 2
  Location:                Slot-M1
  Device name:             M12000 CM
  Device Serial Number:    32150129A8B0DAF0F0321
  Hardware Version:       V1.0
  Software Version:        NOS 10.4(3b17) Release 129646
  Mac Address:             00.D0.F8.00.11.34

Device 3
  Location:                Slot-1
  Device name:             M12000-04XFP-EA
  Device Serial Number:    32150129A8B0DAF0F0322
  Hardware Version:       V1.0
  Software Version:        NOS 10.4(3b17) Release 129646

Device 4
  Location:                Slot-2
  Device name:             M12000-04XFP-EA
  Device Serial Number:    32150129A8B0DAF0F0323
  Hardware Version:       V1.0
  Software Version:        NOS 10.4(3b17) Release 129646

Device 5
  Location:                Power 1
  Device name:             RG PD1200I
  Device Serial Number:    42150129A8B0DAF0F0321
  Hardware Version:       V1.0

Device 6
```

```
Location:                Power 2
Device name:             RG PD1200I
Device Serial Number:    42150129A8B0DAF0F0322
Hardware Version:        V1.0
```

Device 7

```
Location:                FAN
Device name:             M12000 FAN
Device Serial Number:    52150129A8B0DAF0F0321
Hardware Version:        V1.0
```

The following example displays asset information in VSU mode.

```
Orion_B54Q#show manuinfo
```

Device 1

```
Location:                Chassis 1
Device name:             RG S12006
Device Serial Number:    62150129A8B0DAF0F0321
Hardware Version:        V1.0
Mac Address:             00.D0.F8.00.11.22
```

Device 2

```
Location:                Slot-1/M1
Device name:             M12000 CM
Device Serial Number:    32150129A8B0DAF0F0321
Hardware Version:        V1.0
Software Version:        NOS 10.4(3b17) Release 129646
Mac Address:             00.D0.F8.00.11.56
```

Device 3

```
Location:                Slot-1/1
Device name:             M12000-04XFP-EA
Device Serial Number:    32150129A8B0DAF0F0322
Hardware Version:        V1.0
Software Version:        NOS 10.4(3b17) Release 129646
```

Device 4

```
Location:                Slot-1/2
Device name:             M12000-04XFP-EA
Device Serial Number:    32150129A8B0DAF0F0323
Hardware Version:        V1.0
Software Version:        NOS 10.4(3b17) Release 129646
```

Device 5

```
Location:                Power 1/1
Device name:             RG PD1200I
```

```
Device Serial Number: 42150129A8B0DAF0F0321
Hardware Version:     V1.0
```

Device 6

```
Location:             Power 1/2
Device name:          RG PD1200I
Device Serial Number: 42150129A8B0DAF0F0322
Hardware Version:     V1.0
```

Device 7

```
Location:             FAN 1
Device name:          M12000 FAN
Device Serial Number: 52150129A8B0DAF0F0322
Hardware Version:     V1.0
```

Device 8

```
Location:             Chassis 2
Device name:          RG S12006
Device Serial Number: 62150129A8B0DAF0F0322
Hardware Version:     V1.0
Software Version:     NOS 10.4(3b17) Release 129646
Mac Address:          00.D0.F8.00.11.33
```

Device 9

```
Location:             Slot-2/M1
Device name:          M12000 CM
Device Serial Number: 32150129A8B0DAF0F0324
Hardware Version:     V1.0
Software Version:     NOS 10.4(3b17) Release 129646
Mac Address:          00.D0.F8.00.11.22
```

Device 10

```
Location:             Slot-2/1
Device name:          M12000-04XFP-EA
Device Serial Number: 32150129A8B0DAF0F0325
Hardware Version:     V1.0
Software Version:     NOS 10.4(3b17) Release 129646
```

Device 11

```
Location:             Slot-2/2
Device name:          M12000-04XFP-EA
Device Serial Number: 32150129A8B0DAF0F0326
Hardware Version:     V1.0
Software Version:     NOS 10.4(3b17) Release 129646
```



```

Device 12
  Location:                Power 2/1
  Device name:             RG PD1200I
  Device Serial Number:    42150129A8B0DAF0F0323
  Hardware Version:        V1.0

Device 13
  Location:                Power 2/2
  Device name:             RG PD1200I
  Device Serial Number:    42150129A8B0DAF0F0324
  Hardware Version:        V1.0

Device 14
  Location:                FAN 2
  Device name:             M12000 FAN
  Device Serial Number:    52150129A8B0DAF0F0322
  Hardware Version:        V1.0

```

Related
Commands

Command	Description
N/A	N/A

Platform
Description

N/A

9.4 show sysmac

9.5

Use this command to display the MAC address of the current system.

show sysmac

Parameter
Description

Parameter	Description
N/A	N/A

Defaults

N/A

Command
Mode

Privileged EXEC mode.

Usage Guide N/A

Configuration Examples The following example displays the MAC address of the current system.

```
Orion_B54Q#show sysmac
00d0.f822.33e2
```

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

9.6 show version module detail [*module-num*]

Use this command to display the details of the module.

show version module detail [*module-num*]

Parameter Description

Parameter	Description
<i>module-num</i>	(Optional) Module number.

Defaults N/A

Command Mode Privileged EXEC mode.

Usage Guide Use this command to display details of the module

Configuration Examples

```
Orion_B54Q# show version module detail 2
Device : 1
Slot : 2
User Status : none
Software Status: none
Online Module :
Type :
Ports : 0
Version :
Configured Module :
Type :
Ports :
Version :
Orion_B54Q#
```

Related Commands	Command	Description
		show version slots

Platform N/A
Description

9.7 show version slots [*slot-num*]

Use this command to display the details of the slot.

show version slots [*slot-num*]

Parameter Description	Parameter	Description
		<i>num</i>

Defaults N/A

Command Mode Privileged EXEC mode.

Usage Guide N/A

Configuration Examples

```

Orion_B54Q# show version slots
Dev Slot  Configured Module Online Module  User Status  Software Status
-----
1 1      none          none
1 2  M8606-24SFP/12GT M8606-24SFP/12GT installed none
1 3  M8606-2XFP M8606-2XFP  uninstalled  cannot startup
1 4  M8606-24GT/12SFP M8606-24GT/12SFP installed ok
1 M1  M8606-CM   M8606-CM           master
1  M2
    
```

Related Commands	Command	Description
		show version moduel detail

Platform N/A
Description

10 Supervisor Module Redundancy Commands

10.1 auto-sync time-period

Use this command to configure the auto-sync time-period of running-config and startup-config when the dual supervisor module is redundant. Use the **no** form of this command to disable automatic synchronization for the dual supervisor modules. Use the **default** form of this command to restore the default automatic synchronization time period for the dual supervisor modules.

auto-sync time-period *value*

no auto-sync time-period

default auto-sync time-period

Parameter Description	Parameter	Description
	<i>value</i>	Automatic synchronization time interval measured in seconds, in the range from one second to one month (2,678,400 seconds).

Defaults The default is one hour (3600 seconds) by default.

Command Mode Redundancy configuration mode

Usage Guide N/A

Configuration Examples The following example sets the automatic synchronization interval to 60 seconds.

```
Orion_B54Q(config)# redundancy
Orion_B54Q(config-red)# auto-sync time-period 60
Redundancy auto-sync time-period: enabled (60 seconds).
Orion_B54Q(config-red)# exit
```

The following example disables automatic synchronization.

```
Orion_B54Q(config)# redundancy
Orion_B54Q(config-red)# no auto-sync time-period
Redundancy auto-sync time-period: disabled.
Orion_B54Q(config-red)# exit
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

10.2 redundancy

Use this command to enter redundancy configuration mode.

redundancy

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Global configuration mode

Usage Guide N/A

Configuration Examples The following example enters redundancy configuration mode.

```
Orion_B54Q# config terminal
Orion_B54Q(config)# redundancy
Orion_B54Q(config-red)# exit
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

10.3 redundancy forceswitch

Use this command to perform active/standby supervisor module switchover.

redundancy forceswitch

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide If this command is executed on the active supervisor module, the module will be reset and the standby supervisor module will act as an active supervisor module.

The following conditions are required to perform hot backup switchover:

- This command is executed on the active supervisor module. There is a standby supervisor module.
- Hot backups on all virtual switch devices (VSDs) are in real-time status.
- Hot backup switchovers on VSDs are not prevented temporarily by any service entity.

When there are multiple VSDs, the system judges whether the hot backup on each VSD allows active/standby switchover; If any VSD does not allow the switchover, the command fails. Otherwise, active/standby switchovers are enforced on all VSDs.

Configuration Examples The following example performs active/standby supervisor module switchover.

```
Orion_B54Q# redundancy forceswitch
This operation will reload the master unit and force switchover to the
slave unit. Are you sure to continue? [N/y] y
```

Related Commands

Command	Description
reload	Resets the active supervisor module.

Platform Description N/A

10.4 redundancy reload

Use this command to reset the supervisor module.

redundancy reload { peer | shelf [switchid] }

Parameter Description

Parameter	Description
peer	Resets the standby supervisor module.
shelf	Resets both the active and standby supervisor modules on the device which works as a single physical device. The device ID should be specified on the device which works as a Virtual Switching Unit (VSU) device.
<i>switchid</i>	VSU device ID, supported on a VSU device. This parameter is not supported in stand-alone mode. It must be contained in the redundancy reload shelf command in VSU mode.

Defaults N/A

Command Privileged EXEC mode
Mode

Usage Guide Resetting the supervisor module does not affect data forwarding. Data forwarding will not be interrupted and the user session information will not be missing.

The **redundancy reload shelf** command is used to reset the device which works as a single physical device. The **redundancy reload shelf *switchid*** command is used to reset the specified device which works as a VSU device.

Configuration Examples The following example resets the standby supervisor module.

```
Orion_B54Q# redundancy reload peer
```

```
This operation will reload the current slave unit. Are you sure to
continue? [N/y] y
```

```
Preparing to reload peer!
```

The following example resets device 2 which works as a VSU device.

```
Orion_B54Q# redundancy reload shelf 2
```

```
This operation will reload the device 2. Are you sure to continue? [N/y] y
Preparing to reload device 2!
```

Related Commands

Command	Description
N/A	N/A

Platform N/A
Description

10.5 show redundancy states

Use this command to display the current redundancy state.

show redundancy states

Parameter Description

Parameter	Description
states	Displays the redundancy status of the active or the standby devices.

Defaults N/A

Command User EXEC mode / Privileged EXEC mode
Mode

Usage Guide Currently, only 1:1 hot backup (for the global active module and standby module) is supported in the VSU mode. Therefore, only the hot backup state of the local and peer device is displayed.

If the system is configured with multiple VSDs, the hot backup state of all VSDs is displayed in VSD 0 in global configuration mode.

Configuration Examples

The following example displays the redundancy states of active supervisor module.

```
Orion_B54Q> enable
Orion_B54Q# show redundancy states
Redundancy role: master
Redundancy state: realtime
Auto-sync time-period: 3600 s
```

The following example displays the redundancy state of the standby supervisor module.

```
Orion_B54Q> enable
Orion_B54Q# show redundancy states
Redundancy role: slave
Redundancy state: realtime
```

The following example displays the redundancy state of the candidate supervisor module.

```
Orion_B54Q> enable
Orion_B54Q# show redundancy states
Redundancy role: candidate
Redundancy state: none
```

The following example displays the redundancy state of the active supervisor module with VSD1 and VSD2 configured.

```
Orion_B54Q> enable
Orion_B54Q# show redundancy states
Redundancy role: master
Redundancy state: realtime
Auto-sync time-period: 3600 s

VSD vsd1 redundancy state: realtime
VSD vsd2 redundancy state: realtime
```

Field	Description
role	The role of the supervisor module.
state	The state of the supervisor module.
Auto-sync time-period	Displayed on the active supervisor module. The configuration file synchronizes the time interval automatically. "disabled" indicates no automatic synchronization.
VSD <vsd name> redundancy state	Displays hot backup state of the specified VSD in VSD 0.

Related Commands

Command	Description
---------	-------------

N/A	N/A
-----	-----

Platform N/A

Description

11 Syslog Commands

11.1 clear logging

Use this command to clear the logs from the buffer in privileged EXEC mode.

clear logging

Parameter	Parameter	Description
Description	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide This command clears the log packets from the memory buffer. You cannot clear the statistics of the log packets.

Configuration The following example clears the log packets from the memory buffer.

Examples Orion_B54Q# **clear logging**

Related Commands	Command	Function
	logging on	Turns on the log switch.
	show logging	Displays the logs in the buffer.
	logging buffered	Records the logs in the memory buffer.

Platform Description N/A

11.2 logging

Use this command to send the log message to the specified syslog server.

logging { *ip-address* | **ipv6** *ipv6-address* } [**udp-prot** *port*] [**vrf** *vrf-name*]

Use this command to delete the specified syslog server.

no logging { *ip-address* [**vrf** *vrf-name*] | **ipv6** *ipv6-address* }

Use this command to restore the default port 514.

no logging { *ip-address* [**vrf** *vrf-name*] | **ipv6** *ipv6-address* } **udp-prot**

Parameter	Parameter	Description
-----------	-----------	-------------

Description	
<i>ip-address</i>	Sets the IP address of the host receiving log messages.
<i>vrf-name</i>	Sets the VRF instance connecting with the host.
<i>ipv6-address</i>	Sets the IPv6 address of the host receiving log messages.
udp-port <i>port</i>	Sets the port number of the host receiving log messages. The default is 514.

Defaults No log message is sent to syslog server by default.

Command Global configuration mode

Mode

Usage Guide This command is used to configure a syslog server to receive log messages from the device. You can configure up to five syslog servers, log messages are sent to all configured syslog servers simultaneously,

Configuration Examples The following example configures a syslog server with IP address 202.101.11.1.

```
Orion_B54Q(config)# logging 202.101.11.1
```

The following example configures a syslog server with IP address 10.1.1.100 and port number 8099.

```
Orion_B54Q(config)# logging 202.101.11.1 udp-port 8099
```

The following example configures a syslog server with IPv6 address AAAA:BBBB::FFFF.

```
Orion_B54Q(config)# logging ipv6 AAAA:BBBB::FFFF
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

11.3 logging buffered

Use this command to set the memory buffer parameters (log severity, buffer size) for logs at global configuration layer. Use the **no** form of the command to disable recording logs in the memory buffer. Use the **default** form of this command to restore the default setting.

logging buffered [*buffer-size* | *level*]

no logging buffered

default logging buffered

Parameter	Parameter	Description
Description	<i>buffer-size</i>	Size of the buffer is related to the specific device type: 1. For the kernel / aggregation switches, 4 K to 10 M bytes.

	2. For the access switches, 4 K to 1 M Bytes. 3. For other devices, 4 K to 128 K Bytes.
<i>level</i>	Severity of logs, from 0 to 7. The name of the severity or the numeral can be used.

Defaults The buffer size is related to the specific device type.

1. kernel switches: 1 M Bytes;
2. aggregation switches: 256 K Bytes;
3. access switches: 128 K Bytes;
4. other devices: 4 K Bytes

The log severity is 7.

Command

Mode Global configuration mode

Usage Guide

The memory buffer for log is used in recycled manner. That is, when the memory buffer with the specified size is full, the oldest information will be overwritten. To show the log information in the memory buffer, run the **show logging** command in privileged user mode.

The logs in the memory buffer are temporary, and will be cleared in case of device restart or the execution of the **clear logging** command in privileged user mode. To trace a problem, it is required to record logs in flash or send them to Syslog Server.

The log information is classified into the following 8 levels (Table 1):

Table-1

Keyword	Level	Description
Emergencies	0	Emergency case, system cannot run normally
Alerts	1	Problems that need immediate remedy
Critical	2	Critical conditions
Errors	3	Error message
warnings	4	Alarm information
Notifications	5	Information that is normal but needs attention
informational	6	Descriptive information
Debugging	7	Debugging messages

Lower value indicates higher level. That is, level 0 indicates the information of the highest level.

When the level of log information to be displayed on devices is specified, the log information at or below the set level will be allowed to be displayed.

➤ After running the system for a long time, modifying the log buffer size especially in condition of large buffer may fails due to the insufficient available continuous memory. The failure

message will be shown. It is recommended to modify the log buffer size as soon as the system starts.

Configuration Examples The following example allows logs at and below severity 6 to be recorded in the memory buffer sized 10,000 bytes.

```
Orion_B54Q(config)# logging buffered 10000 6
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	show logging	Displays the logs in the buffer.
	clear logging	Clears the logs in the log buffer.

Platform Description N/A

11.4 logging console

Use this command to set the severity of logs that are allowed to be displayed on the console in global configuration mode. Use the **no** form of this command to prohibit printing log messages on the console.

logging console [*level*]

no logging console

Parameter Description	Parameter	Description
	<i>level</i>	Severity of log messages, 0 to 7. The name of the severity or the numeral can be used. For the details of log severity, see table 1.

Defaults The default is debugging (7).

Command Mode Global configuration mode

Usage Guide When a log severity is set, the log messages at or below that severity will be displayed on the console.
The **show logging** command displays the related setting parameters and statistics of the log.

Configuration Examples The following example sets the severity of log that is allowed to be displayed on the console as 6:

```
Orion_B54Q(config)# logging console informational
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	show logging	Displays the logs and related log configuration parameters in the buffer.

Platform Description N/A

11.5 logging count

Use this command to enable the log statistics function in global configuration mode. Use the **no** form of this command to restore the default setting.

logging count

no logging count

Parameter Description	Parameter	Description
	N/A	N/A

Defaults The log statistics function is disabled by default.

Command Mode Global configuration mode

Usage Guide This command enables the log statistics function. The statistics begins when the function is enabled. If you run the **no logging count** command, the statistics function is disabled and the statistics data is deleted.

Configuration Examples The following example enables the log statistics function:

```
Orion_B54Q(config)# logging count
```

Related Commands	Command	Description
	show logging count	Displays log information about modules of the system.
	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform Description N/A

11.6 logging facility

Use this command to configure the device value of the log information in global configuration mode.

Use the **no** form of the command to restore the default setting.

logging facility *facility-type*

no logging facility

Parameter	Parameter	Description
Description	<i>facility-type</i>	Syslog device value. For specific settings, refer to the usage guide.

Defaults The default is 23 if the RFC5424 format is enabled (Local7, local use).
The default is 16 if the RFC5424 format is disabled (Local0, local use).

Command Mode Global configuration mode

Usage Guide The following table (Table-2) is the possible device values of Syslog:

Numerical Code	Facility
0 (kern)	Kernel messages
1 (user)	User-level messages
2 (mail)	Mail system
3 (daemon)	System daemons
4 (auth1)	security/authorization messages
5 (syslog)	Messages generated internally by syslogd
6 (lpr)	Line printer subsystem
7 (news)	USENET news
8 (uucp)	Unix-to-Unix copy system
9 (clock1)	Clock daemon
10 (auth2)	security/authorization messages
11 (ftp)	FTP daemon
12 (ntp)	NTP subsystem
13 (logaudit)	log audit
14 (logalert)	log alert
15 (clock2)	clock daemon
16 (local0)	Local use
17 (local1)	Local use
18 (local2)	Local use

19 (local3)	Local use
20 (local4)	Local use
21 (local5)	Local use
22 (local6)	Local use
23 (local7)	Local use

The default device value of NOS is 23 (local 7).

Configuration The following example sets the device value of **Syslog** as **kernel**:

Examples Orion_B54Q(config)# logging facility kern

Related Commands	Command	Description
	logging console	Sets the severity of logs that are allowed to be displayed on the console.

Platform Description N/A

11.7 logging file

Use this command to save log messages in the log file, which can be saved in hardware, expanded FLASH, USB or SD card. Use the **no** form of this command to restore the default setting,
logging file { flash:filename | usb0:filename | usb1:filename} [max-file-size] [level]
no logging file

Parameter Description	Parameter	Description
	flash	Saves the log file in expanded FLASH.
	usb0	Saves the log file in USB0. This parameter is supported by the device with one USB connector and the USB extension device.
	usb1	Saves the log file in USB1, This parameter is supported by the device with two USB connectors and the USB extension device.
	<i>filename</i>	Sets the file name. The file type is omitted, which is fixed as txt.
	<i>max-file-size</i>	Sets the maximum file size, in the range from 128K to 6M bytes, The default is 128K,
	<i>level</i>	Sets the level of the log message saved in the log file, which can be either the level name or the level number. The default is 6. See Usage Guide for details.

Defaults Log messages are not saved in expanded FLASH by default.

Command Global configuration mode

Mode

Usage Guide You can save log messages in expanded FLASH if you don't want to transmit log messages on the network or there is no syslog server,

The log file cannot be configured with the suffix, which is fixed as txt.

If there is no expanded FLASH, the **logging file flash** command is hidden automatically and cannot be configured.

Keyword	Level	Description
Emergencies	0	Emergency case. The system fails to run.
Alerts	1	Problem that call for immediate solution.
Critical	2	Critical message.
Errors	3	Error message.
warnings	4	Alarm message.
Notifications	5	message that is normal but calls for attention.
informational	6	Descriptive message.
Debugging	7	Debugging message

Configuration Examples The following example saves the log message in expanded FLASH and sets file name, file size and log level to syslog.txt, 128K and 6 respectively.

```
Orion_B54Q(config)# logging file flash:syslog
```

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description**11.8 logging flash flush**

Use this command to write log messages in the system buffer into the flash file immediately.

logging flash flush**Parameter Description**

Parameter	Description
N/A	N/A

Defaults N/A

Command Mode Global configuration mode

Usage Guide In general, the log messages are cached in the log buffer. Only when the buffer is full or the timer expires are log messages written into the flash file. This command is used to write log messages in the system buffer into the flash file immediately.

The **logging flash flush** command takes effect only once for each configuration. The log messages cached in the buffer are written into the flash file immediately after configuration.

Configuration Examples The following example writes log messages in the system buffer into the flash file immediately.

```
Orion_B54Q(config)# logging flash flush
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

11.9 logging flash interval

Use this command to set the interval to write log messages into the flash file, Use the **no** form of this command to restore the default setting.

logging flash interval *seconds*

no logging flash interval

Parameter Description

Parameter	Description
interval <i>seconds</i>	The interval to write log messages into the flash file, in the range from 1 to 57840 in the unit of seconds.

Defaults The default is 3600.

Command Mode Global configuration mode

Usage Guide This command is used to set the interval to write log messages into the flash file. The timer starts after configuration, If you want to restore the interval to 3600 seconds, use the **no logging flash interval** command.

To avoid writing log messages into the flash file too frequently, it is not recommended to set a short interval.

Configuration Examples The following example sets the interval to write log messages into the flash file to 300 seconds.

```
Orion_B54Q(config)# logging flash interval 300
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

11.10 logging filter direction

Use this command to filter the log messages destined to a certain direction. Use the **no** form of this command to restore the default setting.

logging filter direction { all | buffer | file | server | terminal }

no logging filter direction { all | buffer | file | server | terminal }

Parameter Description

Parameter	Description
all	Log messages destined to all directions are filtered, including console, VTY terminal, log buffer, log file and log server.
buffer	Log messages destined to the log buffer are filtered, including log messages displayed by running the show logging command.
file	Log messages destined to the log file are filtered.
server	Log messages destined to the log server are filtered.
terminal	Log messages destined to the console and the VTY terminal (including Telnet and SSH).

Defaults Log messages destined to all directions are filtered by default.

Command Mode Global configuration mode

Usage Guide In general, log messages destined to all directions are filtered, including console, VTY terminal, log buffer, log file and log server. If you want to filter log messages destined to a certain direction, the terminal for instance, configure the **terminal** parameter.

Configuration Examples The following example filters log messages destined to the terminal (including the console and the VTY terminal).

```
Orion_B54Q(config)# logging filter direction terminal
```

Related

Command	Description
---------	-------------

Commands		
	N/A	N/A

Platform N/A

Description

11.11 logging filter type

Use this command to configure the filter type of log messages. Use the **no** form of this command to restore the default setting.

logging filter type { contains-only | filter-only }

no logging filter type

Parameter Description	Parameter	Description
	contains-only	The log message containing the key word of the filter rule is printed.
	filter-only	The log message containing the key word of the filter rule is filtered.

Defaults The default filter type is filter-only.

Command Global configuration mode

Mode

- Usage Guide**
1. When too many log messages are printed, the terminal screen keeps being refreshed. If you are not concerned with these log messages, use the “filter-only” filter type to filter the log messages,
 2. If you are concerned with certain log messages, use the “contains-only” filter type to print log messages containing the key word of the filter rule, so as to monitor whether certain events happen.

In real operation, the contains-only and the filter-only filter types cannot be configured at the same time.

If you configure the filter direction and the filter type without configuring the filter rule, the log messages are not filtered.

Configuration Examples The following example sets the filter type to contains-only.

```
Orion_B54Q(config)# logging filter type contains-only
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

11.12 logging filter rule

Use this command to configure the filter rule of the log message,

logging filter rule { **exact-match** **module** *module-name* **mnemonic** *mnemonic-name* **level** *level* | **single-match** [**level** *level* | **mnemonic** *mnemonic-name* | **module** *module-name*] }

Use this command to delete the “exact-match” filter rule.

no logging filter rule exact-match [**module** *module-name* **mnemonic** *mnemonic-name* **level** *level*]

Use this command to delete the “single-match” filter rule.

no logging filter rule single-match [**level** *level* | **mnemonic** *mnemonic-name* | **module** *module-name*]

Parameter Description	Parameter	Description
	exact-match	Exact-match filter rule. Fill in all the following three parameters.
	single-match	Single-match filter rule. Fill in one of the following three parameters.
	module <i>module-name</i>	Module name.
	mnemonic <i>mnemonic-name</i>	Mnemonic name.
	level <i>level</i>	Log level,

Defaults No filter rule is configured by default,

Command Mode Global configuration mode

Usage Guide If you want to filter a specific log message, use the “exact-match” filter rule and fill in all three parameters, namely, module name, mnemonic name and log level.
 If you want to filter a specific kind of log messages, use the “single-match” filter rule and fill in one of three parameters, namely, module name, mnemonic name and log level.
 When configured with the same module name, mnemonic name or log level, the “single-match” filter rule has a higher priority than the “exact-match” filter rule,

Configuration Examples The following example configures the “exact-match” filter rule with parameters of module name LOGIN, log level 5 and mnemonic name LOGOUT.

```
Orion_B54Q(config)# logging filter rule exact-match module LOGIN mnemonic LOGOUT level 5
```

The following example configures the “single-match” filter rule with the parameter of module name SYS.

```
Orion_B54Q(config)# logging filter rule single-match module SYS
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

11.13 logging life-time

Use this command to configure the preservation duration of logs in expanded FLASH. Use the **no** form of this command to restore the default setting.

logging life-time level *level days*

no logging life-time level *level*

Parameter Description	Parameter	Description
	<i>level</i>	Sets the log level, which can be either the level name or the level number.
	<i>days</i>	Sets the preservation duration of logs.

Defaults No preservation duration is set by default.

Command Mode Global configuration mode

Usage Guide Due to difference in expanded FLASH size and log level, logs with different levels can be configured with different preservation durations.
 Once log preservation based on time is enabled, log preservation based on file size is disabled automatically. The log files are stored under the `syslog/` directory of the expanded FLASH,

Configuration Examples The following example sets the preservation duration of logs whose level is 6 to 10 days.

```
Orion_B54Q(config)# logging life-time level 6 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

11.14 logging monitor

Use this command to set the severity of logs that are allowed to be displayed on the VTY window (telnet window, SSH window, etc.) in global configuration mode. Use the **no** form of this command to disable this function.

logging monitor [*level*]

no logging monitor

Parameter	Parameter	Description
Description	<i>level</i>	Severity of the log message. The name of the severity or the numeral can be used. For the details of log severity, see Table-1.

Defaults The default is debugging (7).

Command Mode Global configuration mode

Usage Guide To print log information on the VTY window, run the **terminal monitor** command in privileged EXEC mode. The level of logs to be displayed is defined by **logging monitor**. The log level defined with "Logging monitor" is for all VTY windows.

Configuration Examples The following example sets the severity of log that is allowed to be printed on the VTY window as 6:

```
Orion_B54Q(config)# logging monitor informational
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	show logging	Displays the log messages and related log configuration parameters in the buffer.

Platform N/A

Description

11.15 logging on

Use this command globally to allow logs to be displayed on different devices. Use the **no** form of this command to disable this function.

logging on

no logging on

Parameter	Parameter	Description
Description	N/A	N/A

Defaults Logs are allowed to be displayed on different devices.

Command Global configuration mode

Mode

Usage Guide Log information can not only be shown in the Console window and VTY window, but also be recorded in different equipments such as the memory buffer, the expanded FLASH and the Syslog Server. This command is the total log switch. If this switch is turned off, no log will be displayed or recorded unless the severity level is greater than 1.

Configuration The following example disables the log switch on the device.

Examples `Orion_B54Q(config)# no logging on`

Related Commands	Command	Description
	logging buffered	Records the logs to a memory buffer.
	logging server	Sends logs to the Syslog server.
	logging file flash:	Records logs on the expanded FLASH.
	logging console	Allows the log level to be displayed on the console.
	logging monitor	Allows the log level to be displayed on the VTY window (such as telnet window) .
	logging trap	Sets the log level to be sent to the Syslog server.

Platform Description N/A

11.16 logging rate-limit

Use this command to enable log rate limit function to limit the output logs in a second in the global configuration mode. Use the **no** form of this command to disable this function.

logging rate-limit { *number* | **all** *number* | **console** { *number* | **all** *number* } } [**except** *severity*]

no logging rate-limit

Parameter Description	Parameter	Description
	<i>number</i>	The number of logs that can be processed in a second in the range from 1 to 10000.
	all	Sets rate limit to all the logs with severity level 0 to 7.
	console	Sets the amount of logs that can be shown in the console in a second.
	except	By default, the severity level is error (3). The rate of the log whose severity level is less than or equal to error (3) is not controlled.
	<i>severity</i>	Log severity level in the range from 0 to 7. The lower the level is, the higher the severity is.

Defaults The log rate limit function is disabled by default.

Command Mode Global configuration mode

Usage Guide Use this command to control the syslog output to prevent the massive log output.

Configuration Examples The following example sets the number of the logs (including debug) that can be processed in a second as 10. However, the logs with warning or higher severity level are not controlled:

```
Orion_B54Q(config)#logging rate-limit all 10 except warnings
```

Related Commands	Command	Description
	show logging count	Displays log information about modules of the system.
	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform Description N/A

11.17 logging rd on

Use this command in global configuration mode on the host to enable the log re-direction function and allow re-directing logs on slave or backup devices to the host in the VSU environment. Use **no** form of this command to disable this function.

logging rd on

no logging rd on

Parameter	Parameter	Description
Description	N/A	N/A

Defaults The log re-direction function is enabled by default.

Command Mode Global configuration mode

Usage Guide The log information on slave or back devices not only can be shown on the Console window of slave or backup devices, but also can be re-directed to the host and exported to the Console and VTY windows of the host, and recorded in cache, expanded FLASH and Syslog Server of the host.

Configuration Examples The following example enables the log re-direction function on a device:

```
Orion_B54Q(config)#logging rd on
```

Related Commands	Command	Description
	show logging count	Displays log information about modules of the system.
	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform
Description

N/A

11.18 logging rd rate-limit

Use this command in global configuration mode on the host to enable the log re-direction rate limiting function to limit the number of logs that can be re-directed from a slave or backup device to the host each second in the VSU environment.

Use the **no** form of this command to disable this function.

logging rd rate-limit *number* [**except** [*severity*]]

no logging rd rate-limit

Parameter	Parameter	Description
Description	<i>number</i>	Log information that can be re-directed each second, ranging from 1 to 10,000 logs
	except	Log information on or lower than the severity level will not be limited; error (3) by default, log information on or lower than the error level is not limited.
	<i>severity</i>	Log information severity level; lower the level is, higher the severity is, ranging from 0 to 7

Defaults The maximum number of logs that can be re-directed each second is 200 by default.

Command Mode Global configuration mode

Usage Guide This command is used to control the output of log information by system re-direction. You can use this command to prevent a slave or backup device from re-directing a large number of logs to the host.

Configuration Examples The following example sets the maximum number of logs (including debug) that can be re-directed from a slave device to the host each second at 10, excepting logs on and above the warning severity level:

```
Orion_B54Q(config)#logging rd rate-limit 10 except warnings
```

Related Commands	Command	Description
	show logging count	Displays log information about modules of the system.
	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform
Description

N/A

11.19 logging server

Use this command to send the logs to the specified Syslog Sever in global configuration mode. Use the **no** form of this command to remove the setting. Use the **default** form of this command to restore the default setting.

logging server [**oob**] { *ip-address* | **ipv6** *ipv6-address* } [**via** *mgmt-name*] [**udp-prot** *port*] [**vrf** *vrf-name*]

no logging server [**oob**] { *ip-address* [**vrf** *vrf-name*] | **ipv6** *ipv6-address* } [**via** *mgmt-name*]

no logging server { *ip-address* [**vrf** *vrf-name*] | **ipv6** *ipv6-address* } [**via** *mgmt-name*] **udp-prot**

Parameter	Parameter	Description
Description	oob	Specifies out-of-band communication for the logging server. (logs are sent through the MGMT port to the logging server.)
	<i>ip-address</i>	IP address of the host that receives log information.
	<i>vrf-name</i>	Specifies the VRF instance (VPN device forwarding table) connecting to the log host.
	<i>ipv6-address</i>	Specifies IPV6 address for the host receiving the logs.
	via <i>mgmt-name</i>	Specifies the MGMT port for the oob option.
	udp-port <i>port</i>	Specifies the port number for the specified host (The default port number is 514).

Defaults No log is sent to any syslog server by default.

Command Mode Global configuration mode

Usage Guide This command specifies a Syslog server to receive the logs of the device. Users are allowed to configure up to 5 Syslog Servers. The log information will be sent to all the configured Syslog Servers at the same time.

Only when the **oob** option is enabled can the **via** parameter be specified. Meanwhile, the **vrf** parameter cannot be set.

Configuration Examples The following example specifies a syslog server of the address 202.101.11.1:

```
Orion_B54Q(config)# logging server 202.101.11.1
```

The following example specifies an ipv6 address as AAAA:BBBB:FFFF:

```
Orion_B54Q(config)# logging server ipv6 AAAA:BBBB:FFFF
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	show logging	Displays log messages and related log configuration parameters in the buffer.
	logging trap	Sets the level of logs allowed to be sent to Syslog server.

Platform Description N/A

11.20 logging source interface

Use this command to configure the source interface of logs in global configuration mode. Use the **no** form of this command to restore the default setting.

logging source [interface] interface-type interface-number

no logging source [interface]

Parameter Description	Parameter	Description
	<i>interface-type</i>	Interface type.
	<i>interface-number</i>	Interface number.

Defaults No source interface is configured by default.

Command Mode Global configuration mode

Usage Guide By default, the source address of the log messages sent to the syslog server is the address of the sending interface. For easy tracing and management, this command can be used to fix the source address of all log messages as an interface address, so that the administrator can identify which device is sending the message through the unique addresses. If the source interface is not configured on the device, or no IP address is configured for the source interface, the source address of the log messages is the address of the sending interface.

Configuration Examples The following example specifies loopback 0 as the source address of the syslog messages:

```
Orion_B54Q(config)# logging source interface loopback 0
```

Related Commands	Command	Description
	logging server	Sends logs to the Syslog server.

Platform Description N/A

11.21 logging source ip | ipv6

Use this command to configure the source IP address of logs in global configuration mode. Use the **no** form of this command to restore the default setting.

logging source {ip *ip-address* | ipv6 *ipv6-address*}

no logging source { ip | ipv6 }

Parameter	Parameter	Description
Description	<i>ip-address</i>	Specifies the source IPV4 address sending the logs to IPV4 log server.
	<i>ipv6-address</i>	Specifies the source IPV6 address sending the logs to IPV6 log server.

Defaults No source address is configured by default.

Command Mode Global configuration mode

Usage Guide By default, the source address of the log messages sent to the syslog server is the address of the sending interface. For easy tracing and management, this command can be used to fix the source address of all log messages as an address, so that the administrator can identify which device is sending the message through the unique addresses. If this IP address is not configured on the device, the source address of the log messages is the address of the sending interface.

Configuration Examples The following example specifies 192.168.1.1 as the source address of the syslog messages:

```
Orion_B54Q(config)# logging source ip 192.168.1.1
```

Related Commands	Command	Description
	logging server	Sends the logs to the Syslog server.

Platform Description N/A

11.22 logging synchronous

Use this command to enable synchronization function between user input and log output in line configuration mode to prevent interruption when the user is keying in characters. Use the **no** form of this command to restore the default setting.

logging synchronous

no logging synchronous

Parameter	Parameter	Description
Description	N/A	N/A

Defaults The synchronization function between user input and log output is disabled by default.

Command Mode Line configuration mode

Usage Guide This command enables synchronization function between user input and log output, preventing the user from interrupting when keying in the characters.

Configuration Examples

```
Orion_B54Q(config)#line console 0
Orion_B54Q(config-line)#logging synchronous
```

Print UP-DOWN logs on the port when keying in the command, the input command will be output again:

```
Orion_B54Q# configure terminal
Oct 9 23:40:55 %LINK-5-CHANGED: Interface GigabitEthernet 0/1, changed
state to down
Oct 9 23:40:55 %LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet 0/1, changed state to DOWN
Orion_B54Q# configure terminal//----the input command by the user is
output again rather than being intererupted.
```

Related Commands	Command	Description
	show running-config	Displays the configuration.

Platform Description N/A

11.23 logging trap

Use this command to set the severity of logs that are allowed to be sent to the syslog server in global configuration mode. Use the **no** form of this command to prohibit sending log messages to the Syslog server.

logging trap [*level*]

no logging trap

Parameter	Parameter	Description
Description	<i>level</i>	Severity of the log message. The name of the severity or the numeral can be used. For the details of log severity, see Table 1.

Defaults The default is informational(6)

Command Mode Global configuration mode

Usage Guide To send logs to the Syslog Server, run the **logging** command in global configuration mode to configure the **Syslog Server**. Then, run the **logging trap** command to specify the severity level of logs to be sent.
The **show logging** command displays the configured related parameters and statistics of the log.

Configuration Examples The following example enables logs at severity 6 to be sent to the Syslog Server with the address of 202.101.11.22:

```
Orion_B54Q(config)# logging 202.101.11.22
Orion_B54Q(config)# logging trap informational
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	logging	Sends logs to the Syslog server.
	show logging	Displays the log messages and related log configuration parameters in the buffer.

Platform Description N/A

11.24 logging userinfo

Use this command to enable the logging function to record user log/exit. Use the **no** form of this command to restore the default setting.

logging userinfo
no logging userinfo

Parameter Description	Parameter	Description
	N/A	N/A

Defaults No log message is printed recording user log/exit by default.

Command Mode Global configuration mode

Usage Guide This command is used to print the log message to remind the administrator of user login. The log message is in the format as follows:

```
Mar 22 14:05:45 %LOGIN-5-LOGIN_SUCCESS: User login from vty0
(192.168.23.68) OK.
```

Configuration Examples The following example enables the logging function to record user log/exit.

```
Orion_B54Q(config)# logging user-info
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

11.25 logging userinfo command-log

Use this command to enable the logging function to record user operation. Use the **no** form of this command to restore the default setting.

logging userinfo command-log

no logging userinfo command-log

Parameter Description

Parameter	Description
N/A	N/A

Defaults No log message is printed recording user operation by default.

Command Mode Global configuration mode

Usage Guide This command is used to print the log message to remind the administrator of configuration change. The log message is in the format as follows:

```
Mar 22 14:10:40 %CLI-5-EXEC_CMD: Configured from vty0 (192.168.23.68)
command-log: logging server 192.168.23.68.
```

Configuration Examples The following example enables the logging function to record user operation.

```
Orion_B54Q(config)# logging user-info command-log
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

11.26 service private-syslog

Use this command to set the syslog format to the private syslog format. Use the **no** form of this command to restore the default setting.

service private-syslog
no service private-syslog

Parameter Description	Parameter	Description
	N/A	N/A

Defaults The syslog is displayed in the default format.

Command Mode Global configuration mode

Usage Guide By default, the syslog is displayed in the format as follows:
 *timestamp: %facility-severity-mnemonic: description
 Here is an example:
 *May 31 23:25:21: %SYS-5-CONFIG_I: Configured from console by console

With this function enabled, the syslog is displayed in the format as follows:
 timestamp facility-severity-mnemonic: description

Here is an example:
 May 31 23:31:28 SYS-5-CONFIG_I: Configured from console by console

The difference between the private syslog format and the default syslog format lies in the following marks:

The private syslog does not have "*" before the timestamp, ":" after the timestamp and "%" before the identifying string.

Configuration Examples The following example sets the private syslog format.
 Orion_B54Q(config)# service private-syslog

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

11.27 service sequence-numbers

Use this command to attach serial numbers into the logs in global configuration mode. Use the **no** form of this command to restore the default setting.

service sequence-numbers

no service sequence-numbers

Parameter	Parameter	Description
Description	N/A	N/A

Defaults No serial number is contained in the logs by default.

Command Mode Global configuration mode

Usage Guide In addition to the timestamp, you can add serial numbers to the logs, numbering from 1. Then, it is clearly known whether the logs are lost or not and their sequence.

Configuration The following example adds serial numbers to the logs.

Examples Orion_B54Q(config)# **service sequence-numbers**

Related Commands	Command	Description
	logging on	Turns on the log switch.
	service timestamps	Attaches timestamps to the logs.

Platform Description N/A

11.28 service standard-syslog

Use this command to set the syslog format to the standard syslog format defined in RFC3164. Use the **no** form of this command to restore the default setting.

service standard-syslog

no service standard-syslog

Parameter	Parameter	Description
Description	N/A	N/A

Defaults The syslog is displayed in the default format.

Command Global configuration mode
Mode

Usage Guide By default, the syslog is displayed in the format as follows:
 *timestamp: %facility-severity-mnemonic: description
 Here is an example:

```
*May 31 23:25:21: %SYS-5-CONFIG_I: Configured from console by console
```

 With this function enabled, the syslog is displayed in the format as follows:
 timestamp %facility-severity-mnemonic: description
 Here is an example:

```
May 31 23:31:28 %SYS-5-CONFIG_I: Configured from console by console
```

 The difference between the standard syslog format and the default syslog format lies in the following marks:
 The standard syslog does not have "*" before the timestamp and ":" after the timestamp.

Configuration Examples The following example sets the standard syslog format.

```
Orion_B54Q(config)# service standard-syslog
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

11.29 service sysname

Use this command to attach system name to logs in global configuration mode. Use the **no** form of this command to restore the default setting.

service sysname

no service sysname

Parameter Description	Parameter	Description
	N/A	N/A

Defaults No system name is attached to logs by default.

Command Global configuration mode
Mode

Usage Guide This command allows you to decide whether to add system name in the log information.

Configuration The following example adds a system name in the log information:

```

Examples Mar 22 15:28:02 %SYS-5-CONFIG: Configured from console by console
Orion_B54Q #config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Orion_B54Q (config)#service sysname
Orion_B54Q (config)#end
Orion_B54Q #
Mar 22 15:35:57 S3250 %SYS-5-CONFIG: Configured from console by console
    
```

Related Commands	Command	Function
	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform Description N/A

11.30 service timestamps

Use this command to attach timestamp into logs in global configuration mode. Use the **no** form of this command to remove the timestamp from the logs. Use the **default** form of this command to restore the default setting.

service timestamps [*message-type* [**uptime** | **datetime** [**msec** | **year**]]]

no service timestamps [*message-type*]

default service timestamps [*message-type*]

Parameter Description	Parameter	Description
	<i>message-type</i>	The log type, including Log and Debug . The log type indicates the log information with severity levels of 0 to 6. The debug type indicates that with severity level 7.
	uptime	Device start time in the format of *Day*Hour*Minute*Second, for example, 07:00:10:41.
	datetime	Current time of the device in the format of Month*Date*Hour*Minute*Second, for example, Jul 27 16:53:07.
	msec	Current time of the device in the format of Month*Date*Hour*Minute*Second*milisecond, for example, Jul 27 16:53:07.299
	year	Current time of the device in the format of Year*Month*Date*Hour*Minute*Second, for example, 2007 Jul 27 16:53:07

Defaults The time stamp in the log information is the current time of the device. If the device has no RTC, the time stamp is automatically set to the device start time.

Command Mode Global configuration mode

Usage Guide When the **uptime** option is used, the time format is the running period from the last start of the device to the present time, in seconds. When the **datetime** option is used, the time format is the date of the current device, in the format of YY-MM-DD, HH:MM:SS.

Configuration Examples The following example enables the timestamp for **log** and **debug** information, in format of Datetime, supporting millisecond display.

```
Orion_B54Q(config)# service timestamps debug datetime msec
Orion_B54Q(config)# service timestamps log datetime msec
Orion_B54Q(config)# end
Orion_B54Q(config)# Oct 8 23:04:58.301 %SYS-5-CONFIG I: configured from
console by console
```

Related Commands	Command	Description
	logging on	Turns on the log switch.
	service sequence-numbers	Enables serial numbers of logs.

Platform Description N/A

11.31 show logging

Use this command to display configured parameters and statistics of logs and log messages in the memory buffer at privileged user layer. The log messages are sorted by the timestamp from before to now.

show logging

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration The following command displays the result of the **show logging** command with RFC5424 format disabled.

Examples

```

Orion_B54Q# show logging
Syslog logging: enabled
  Console logging: level debugging, 15495 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 15496 messages logged
  Standard format: false
  Timestamp debug messages: datetime
  Timestamp log messages: datetime
  Sequence-number log messages: enable
  Sysname log messages: enable
  Count log messages: enable
  Trap logging: level informational, 15242 message lines logged,0 fail
    logging to 202.101.11.22
    logging to 192.168.200.112
Log Buffer (Total 131072 Bytes): have written 1336,
015487: *Sep 19 02:46:13: Orion_B54Q %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to up.
015488: *Sep 19 02:46:13: Orion_B54Q %LINEPROTO-5-UPDOWN: Line protocol
on Interface FastEthernet 0/24, changed state to up.
015489: *Sep 19 02:46:26: Orion_B54Q %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to down.
015490: *Sep 19 02:46:26: Orion_B54Q %LINEPROTO-5-UPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to down.
015491: *Sep 19 02:46:28: Orion_B54Q %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to up.
015492: *Sep 19 02:46:28: Orion_B54Q %LINEPROTO-5-UPDOWN: Line protocol
on Interface FastEthernet 0/24, changed state to up.

```

Log information description:

Field	Description
Syslog logging	Logging flag: enabled or disabled
Console logging	Level of the logs printed on the console, and statistics
Monitor logging	Level of the logs printed on the VTY window, and statistics
Buffer logging	Level of the logs recorded in the memory buffer, and statistics.
Standard format	Standard log format.
Timestamp debug messages	Timestamp format of the Debug messages

Timestamp log messages	Timestamp format of the Log messages
Sequence-number log messages	Serial number switch
Sequence log messages	Attaches system names to the logs.
Count log messages	Log statistics function
Trap logging	Level of the logs sent to the syslog server, and statistics
Log Buffer	Log files recorded in the memory buffer

The following example displays the result of the **show logging** command with RFC5424 format enabled.

```
Orion_B54Q# show logging
Syslog logging: enabled
  Console logging: level debugging, 4740 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 4745 messages logged
  Statistic log messages: disable
  Statistic log messages to terminal: disable
  Delay-send file name:syslog_ftp_server, Current write index:3, Current
send index:3, Cycle:10 seconds
  Count log messages: enable
  Trap logging: level informational, 2641 message lines logged,4155 fail
logging to 192.168.23.89
logging to 2000::1
  Delay-send logging: 2641 message lines logged
logging to 192.168.23.89 by tftp
Log Buffer (Total 4096 Bytes): have written 4096, Overwritten 3292
<135>1 2013-07-24T12:19:33.130290Z Orion_B54Q - 7 - - Please config the
IP address for capwap.
<132>1 2013-07-24T12:20:02.80313Z Orion_B54Q CAPWAP 4 NO_IP_ADDR - No ip
address for capwap.
<135>1 2013-07-24T12:20:02.80343Z Orion_B54Q - 7 - - Please config the IP
address for capwap.
<132>1 2013-07-24T12:20:32.250265Z Orion_B54Q CAPWAP 4 NO_IP_ADDR - No ip
address for capwap.
<134>1 2013-07-24T12:29:33.410123Z Orion_B54Q SYS 6 SHELL_LOGIN
[USER@4881 name="" type="" from="console"] user login success.
<134>1 2013-07-24T12:29:34.343763Z Orion_B54Q SYS 6 SHELL_CMD
[USER@4881 name=""][CMD@4881 task="rl_con" cmd="enable"]
```

Field	Description
Syslog logging	Logging flag: enabled or disabled
Console logging	Level of the logs printed on the console, and statistics

Monitor logging	Level of the logs printed on the VTY window, and statistics
Buffer logging	Level of the logs recorded in the memory buffer, and statistics.
Count log messages	Log statistics function
Statistic log messages	Enables/disables log sending periodically
Statistic log messages to terminal	Enables/ disables log sending to console and remote terminal
Delay-send file name	Local filename of log delay-sending cache, index of write file and delay interval
Trap logging	Level of the logs sent to the syslog server and statistics
Delay-send logging	The server address, log sending mode and statistics
Log Buffer	Log files recorded in the memory buffer

Related Commands	Command	Function
	logging on	Turns on the log switch.
	clear logging	Clears the log messages in the buffer.

Platform Description N/A

11.32 show logging config

Use this command to display log configuration and statistics.

show logging config

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following example displays the outcome of running the **show logging config** command with RFC5424 disabled.

```
Orion_B54Q# show logging config
Syslog logging: enabled
```



```

Console logging: level debugging, 15495 messages logged
Monitor logging: level debugging, 0 messages logged
Buffer logging: level debugging, 15496 messages logged
Standard format: false
Timestamp debug messages: datetime
Timestamp log messages: datetime
Sequence-number log messages: enable
Sysname log messages: enable
Count log messages: enable
Trap logging: level informational, 15242 message lines logged,0 fail
logging to 202.101.11.22
logging to 192.168.200.112

```

Field	Description
Syslog logging	Whether the logging function is enabled or disabled.
Console logging	The level and statistics of the log message printed on the console.
Monitor logging	The level and statistics of the log message printed on the VTY window.
Buffer logging	The level and statistics of the log message recorded in the memory buffer.
Standard format	Standard log format.
Timestamp debug messages	Timestamp format of debugging message.
Timestamp log messages	Timestamp format of log message.
Sequence-number log messages	Whether the sequence number function is enabled or disabled.
Sysname log messages	Adds the system name to the log message.
Count log messages	Log-counting function
Trap logging	The level and statistics of the log message sent to the syslog server.

The following example displays the outcome of running the **show logging config** command with RFC5424 enabled.

```

Orion_B54Q# show logging
Syslog logging: enabled
  Console logging: level debugging, 4740 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 4745 messages logged
  Statistic log messages: disable
  Statistic log messages to terminal: disable
  Delay-send file name:syslog_ftp_server, Current write index:3, Current
send index:3, Cycle:10 seconds
  Count log messages: enable
  Trap logging: level informational, 2641 message lines logged,4155 fail
logging to 192.168.23.89

```

```
logging to 2000::1
Delay-send logging: 2641 message lines logged
logging to 192.168.23.89 by tftp
```

Field	Description
Syslog logging	Logging flag: enabled or disabled
Console logging	Level of the logs printed on the console, and statistics
Monitor logging	Level of the logs printed on the VTY window, and statistics
Buffer logging	Level of the logs recorded in the memory buffer, and statistics.
Count log messages	Log statistics function
Statistic log messages	Enables/disables log sending periodically
Statistic log messages to terminal	Enables/ disables log sending to output console and remove terminal
Delay-send file name	Local filename of log delay-sending cache, index of write file and delay interval
Trap logging	Level of the logs sent to the syslog server and statistics
Delay-send logging	The server address, log sending way and statistics

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

11.33 show logging count

Use this command to display the statistics about occurrence times, and the last occurrence time of each module log in the system in privileged mode.

show logging count

Parameter Description

Parameter	Description
N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide To use the log packet statistics function, run the **logging count** command in global configuration mode. The **show logging count** command can show the information of a specific log, occurrence times, and the last occurrence time.

You can use the **show logging** command to check whether the log statistics function is enabled.

Configuration The following example displays the result of the **show logging count** command:

Examples

```
Orion_B54Q# show logging count
Module Name    Message Name  Sev  Occur    Last Time
SYS            CONFIG_I      5    1        Jul 6 10:29:57
SYS TOTAL                                1
```

**Related
Commands**

Command	Function
logging count	Enables the log statistics function.
show logging	Displays basic configuration of log modules and log information in the buffer.
clear logging	Clears the logs in the buffer.

Platform

N/A

Description

11.34 terminal monitor

Use this command to show logs on the current VTY window. Use the **no** form of this command to restore the default setting.

terminal monitor

terminal no monitor

**Parameter
Description**

Parameter	Description
N/A	N/A

Defaults

Log information is not allowed to be displayed on the VTY window by default.

**Command
Mode**

Privileged EXEC mode

Usage Guide

This command only sets the temporary attributes of the current VTY. As the temporary attribute, it is not stored permanently. At the end of the VTY terminal session, the system will use the default setting, and the temporary setting is invalid. This command can be also executed on the console, but it does not take effect.

Configuration The following example allows log information to be printed on the current VTY window:

Examples Orion_B54Q# **terminal monitor**

Related	Command	Description
Commands	N/A	N/A

Platform
Description N/A

Command	Version	Description
History	N/A	N/A

12 MONITOR Commands

12.1 show power

Use this command to display power information including that of its basic condition, redundancy, allocation and version and etc.

show power [priority | version]

Parameter Description	Parameter	Description
	priority	Displays the power supply priority configuration of all boards and checks whether the automatic power-off function is enabled.
	version	Displays the serial number, hardware and software version as well as other information about each power.

Command Mode Privileged EXEC mode

Level 14

Usage Guide This command is used to display power information about the slave chassis, and the command without parameters is used to display the most fundamental power information including:

- Display the power redundancy mode and check whether power redundancy takes effect and the like.
- Display the model, on-off status, rated and out power, output current, input and output voltage, Fail/ alarm status (specific to input overvoltage / undervoltage alarm, output overvoltage/undervoltage alarm, temperature alarm, fan failure alarm and over-temperature alarm and etc.) of each power on every slot.
- Display the system's total power, allocated and occupied power and available power.
- Display the name, demanded power and allocated power of each board on every slot and power supply status of each slot.

Configuration Examples The following example displays the basic power information.

```
Orion_B54Q#show power
Chassis-type: RG_S8605E
Power-redun: no
Energy-saving: off
power-id power-type supply(W) status vol-in/out(V) cur-out(mA) supply-out(W)
-----
```

```

1   PA600I   600   ok   231 /12   3500   42
2   PA600I   600   ok   232 /12   1000   12
3   PA1600I_P 1600  ok   N/A /55    0     0

slot  card_type          status  require(W)  allocate(W)
-----
1   N/A                N/A    N/A         N/A
2   M18000-48GT-CB      power-off 349      0
3   N/A                N/A    N/A         N/A
M1   M18010-CM          power-on 40        40
M2   M18010-CM          power-on 40        40

system_supply(W)  card_allocate(W)  fan-allocate(W)  free-supply(W)
-----
1200             80                288              832
    
```

The following example displays the power version.

```

Orion_B54Q#show power version
Chassis-type: RG_S8605E
Power-id: 1
  Serial Number:  ZH40274
  Type:           PA600I
  Hardware Version:  1
  Software Version:  N/A
  Temperature(C):  44
Power-id: 2
  Serial Number:  ZJ47958
  Type:           PA600I
  Hardware Version:  2
  Software Version:  N/A
  Temperature(C):  44
Power-id: 3
  Serial Number:  LBLNPW12CS33014774
  Type:           PA1600I_P
  Hardware Version:  N/A
  Software Version:  N/A
  Temperature(C):  37
    
```

The following example displays the power supply priority of the board.

```

Orion_B54Q#show power priority
Chassis-type: RG_S8605E
Card Auto-down: off
    
```

```

slot  priority  status
-----
1      N/A      N/A
2      1        power-off
3      N/A      N/A
M1     N/A      power-on
M2     N/A      power-on
    
```

Prompt Messages N/A

Platforms N/A

12.2 show fan

Use this command to display the fan information in the slave chassis including the model number, serial number, operating status of every fan as well as the speed regulation pattern, actual rotating speed and other information.

show fan
show fan [attribute]

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Privileged EXEC mode

Level 14

Usage Guide Use the **show fan** command to display the fan information about fans in the slave chassis. Use the **show fan** command without parameters to display the module number, serial number, operating status and speed adjustment mode of all the fan trays.
 Use the show fan detail command to further displays detailed failure causes when the fan stray is in failure.

Configuration Examples The following example displays the fan information in S8605E slave chassis.

```

Orion_B54Q#show fan
fan-id type          status      Hardware Version Serial Number
-----
1      M6220-FAN-F ok        1.00          1234567890123456
    
```

Prompt Messages	N/A
Platforms	N/A

12.3 show temperature

Use this command to display board temperature, threshold configuration and other information.

show temperature

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Privileged EXEC mode

Level 14

Usage Guide Use the command to display the current temperature and threshold configuration of each board. The temperature threshold of CA products involves the alarm threshold and the hazard threshold. Alarm threshold: When the temperature of the board exceeds the alarm threshold, the active supervisor module generates a Syslog message and the Alarm LED on the panel becomes yellow. Hazard threshold: It indicates the power-off temperature. When the temperature of the board exceeds the hazard threshold, the board powers off automatically. In addition, the active supervisor module generates a Syslog message and the Alarm LED on the panel becomes red.

Configuration Examples The following example displays the temperature and threshold configuration of all boards.

```
Orion_B54Q#show temperature
Slot      Card_type                Temp_name
Current(C) Status
-----
-----
1         Orion_B54Q-H             air_outlet                34
OK
                                     air_inlet                 32
OK
                                     board                    34
OK
                                     cpu                      32
OK
                                     switch                   44
OK
```


Prompt
Messages N/A

Platforms N/A

12.4 power-mode dc

Use this command to configure DC/AC power input mode for the specified slot.

no power-mode dc [slotid]

Parameter	Parameter	Description
Description	N/A	N/A

Command Mode Global configuration mode

Level 14

Usage Guide The default input mode is AC. If you want to configure use DC input, please configure DC.

Configuration Examples

```
Orion_B54Q#config
Orion_B54Q(config)#power-mode dc 1
Orion_B54Q(config)#no power-mode dc
Orion_B54Q#
```

Prompt Messages N/A

Platforms N/A

13 PKG_MGMT Commands

13.1 show component

Use this command to display all components already installed on current device and their information.

show component [slot {*num* | **M1** | **M2** | **all** }] [*component_name*]

Parameter Description	Parameter	Description
	slot num	This parameter is used on a chassis device. It indicates a corresponding line card based on the slot number.
	slot all	This parameter is used on a chassis device. It indicates all devices.
	slot M1	This parameter is used on a chassis device. It specifies that the operation is performed on supervisor module M1.
	slot M2	This parameter is used on a chassis device. It specifies that the operation is performed on supervisor module M2.
	<i>component_name</i>	Name of the components When this parameter value is N/A, the command is used to display all components already installed on the device and basic information of these components. When this parameter value is not N/A, the command is used to display detailed information of the corresponding component, check whether the component is intact, and check whether this component works properly.

Command Mode Privileged EXEC mode

Default Level 2

Usage Guide This command includes one with *component_name* and one without *component_name*. During upgrade, it requires users to understand all components installed on current device and their version information before components deletion. This needs to use the **show component** command without *component_name*. The **show component** command with *component_name* is used to obtain details of the corresponding component. The detailed information enables users to easily realize components' operation and damage. It is significant to insure their troubleshooting, security and reliability.

Some components in use will change their defaults files. Though this is more possibly normal than malicious, the show component command is used only to judge whether component files change in

use. It is unable to distinguish natural damage from malicious one. It depends on users to make a further judgment.

Configuration Examples

The following example displays all components already installed on the box device and their information.

```
Orion_B54Q# show component
Package :sysmonit
    Version:1.0.1.23cd34aa      Build time: Wed Dec 7 00:58:56 2013
    Size:12877  Install time :Wed Mar 5 14:23:12 2012
    Description: this is a system monit package
    Required packages: None
-----
Package:bridge
    Version:2.0.1.37cd5cda      Build time: Wed Dec 7 00:54:56 2013
    Size:23245  Install time :Wed Mar 5 14:30:12 2012
    Description: this is a bridge package
    Required packages: None
-----
```

This command is used to obtain all components already installed on the device and their basic information. The information offers a basis for users to decide whether to upgrade or delete components.

Field	Description
Package	Name of the component
Version	Version number of the component
Build time	Compilation time of the component on the server
Size	Content size of the component
Install time	Installation time of the component
Description	Simple functional description of the component
Required packages	Name of required packages

The following example displays the information of all feature components already installed on the chassis device.

```
Orion_B54Q#show component slot 8
Orion_B54Q#*
[Slot 8]:
Package : utils-system
    Version: 1.0.0.433ef8d      Build time: Sun May 19 19:22:54 2013
    Size: 823936  Install time: Sun May 19 19:27:04 2013
    Description: utils system compile
    Required packages: None
-----
Package : tcl-expect
```

```
Version: 1.0.0.433ef8d      Build time: Sun May 19 19:19:18 2013
Size: 3474153              Install time: Sun May 19 19:27:04 2013
Description: tcl & expect packages
Required packages: None
-----
```

The following example displays the information of specified components already installed on the box device.

```
Orion_B54Q# show componentbridge
package:bridge
  Version: 2.3.1.1252ea      Build time: Wed Dec 7 00:54:56 2013
  Size:26945 Install time : Wed Mar 19:23:15 2012
  Description:this is a bridge package
  Required packages: None
  Package files:
    /lib64
    /lib64/libbridge.so
    /sbin
    /sbin/bridge

  Package file validate: [OK]
  Required relationship verify: [OK]
```

The other information except the basic information of components is listed as follows.

Field	Description
Package file validate	Checks whether the component files are intact. "OK" is displayed when all component files work properly; "ERR" is displayed together with their names when some component files are lost or revised.
Required package	Lists all required packages of the component. "OK" is labeled if required components are already installed; "ERR" is labeled if not together with detailed description about their names and versions.
Package files	Lists all files contained in the package.

Prompt

The execution is successful with all components information displayed.

Messages

```
Package :sysmonit
  Version:1.0.1.23cd34aa      Build time: Wed Dec 7 00:58:56 2013
  Size:12877 Install time :Wed Mar 5 14:23:12 2012
  Description: this is a system monit package
```

```

Required packages: None
-----
Package:bridge
  Version:2.0.1.37cd5cda      Build time: Wed Dec  7 00:54:56 2013
  Size:23245  Install time :Wed  Mar 5 14:30:12 2012
  Description: this is a bridge package
  Required packages: None
-----

```

13.2 show upgrade file

Use this command to display the information of the installation package files in the device file system.

show upgrade file *url*

Parameter Description	Parameter	Description
	<i>url</i>	The local <i>url</i> path indicates where an installation package file is stored.

Command Mode Privileged EXEC mode

Default Level 2

Usage Guide This command is used to preview main messages of an installation package after it is downloaded into local file system.

This command is not applied to a chassis package.

Configuration Examples The following example displays the information of an installation package file.

```

Orion_B54Q# show upgrade file flash://bridge_eg1000m_2.3.1.1252ea-
1.mips.rpm
Name      : bridge
Version:1.0.1.23cd34aa
Package type      : common component
Support target    : eg1000m
Size              : 26945
Build time        : Wed Dec  7 00:54:56 2013
Install date      : (not installed)
Description       : this is a bridge package
Package files :
  Package files:
    /lib64

```

```

/lib64/libbridge.so
/sbin
/sbin/bridge

```

This command is used to obtain the information in the package.

Field	Description
Name	Name of the package
Version	Version of the package
Package type	Type of the package
Support target	Supported product description
Size	Content size of the package
Build time	Compilation time of the package
Install date	Installation time of the package
Description	Description of the package
Package files	All contents in the package

Prompt The package information is displayed after running.

Messages

```

Name      : bridge
Version:1.0.1.23cd34aa
Package type      : common component
Support target   : eg1000m
Size             : 26945
Build time       : Wed Dec  7 00:54:56 2013
Install date     : (not installed)
Description      : this is a bridge package
Package files :
  Package files:
    /lib64
    /lib64/libbridge.so
    /sbin
    /sbin/bridge

```

13.3 show upgrade history

Use this command to display the upgrade history.

show upgrade history

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Privileged EXEC mode

Default Level 2

Configuration Examples The following example displays the upgrade history.

```
Orion_B54Q#show upgrade history
Last Upgrade Information:
  Time:          2014-08-31 12:15:03
  Method:       LOCAL
Package Name:   N18000_NOS11.0(1)B1_CM_01200616_install.bin
Package Type:  Distribution
```

Prompt Messages N/A

Platforms N/A

13.4 upgrade

Use this command to install and upgrade an installation package in the local file system.

upgrade [slot {*num* | **M1** | **M2** | **all** }]*url*[**force**]

Parameter Description	Parameter	Description
	<i>url</i>	The local path indicates where an installation package is stored. This command is used to upgrade an installation package on the device.
	slot num	This parameter is used on a chassis device. It indicates a corresponding line card based on the slot number.
	slot all	This parameter is used on a chassis device. It indicates all devices including VSU system.
	slot M1	This parameter is used on a chassis device. It specifies that the operation is performed on supervisor module M1.
	slot M2	This parameter is used on a chassis device. It specifies that the operation is performed on supervisor module M2.
	force	Mandatory upgrade

Command Mode Privileged EXEC mode

Default Level 2

Usage Guide This command is applicable to installation packages of all subsystem components, chassis devices,

feature components and hot patches. Before its use, run the **copy** command to copy feature packages into the file system in the device.

When there is no specified range of parameters, the command is used to upgrade the matched system components according to the auto-sync configuration.

Configuration Examples

The following example upgrades the main package on the device.

```
Orion_B54Q#upgrade usb0:/eg1000m_main_1.0.0.0f328e91.bin
Upgrade processing is 10%
Upgrade processing is 60%
Upgrade processing is 90%
Upgrade info [OK]
Kernel version[2.6.32.91f9d21->2.6.32.9f8b56f]
Rootfs version[1.0.0.2ad02537->1.0.0.1bcc12e8]
Upgrade processing is 100%
Reload system to take effect!
```

The following example upgrades the chassis package on the device.

```
Orion_B54Q# upgrade usb0:/ca-octeon_11.0(1B2)_20131106_main_install.bin
[Slot M1]:Upgrade processing is 10%

[Slot 1]:Upgrade processing is 10%

[Slot M1]:Upgrade processing is 60%

[Slot 1]:Upgrade processing is 60%

[Slot M1]:Upgrade processing is 90%

[Slot M1]:
Upgrade info [OK]
Kernel version[2.6.32.abb2b41f170c81->2.6.32.abb2b415749f40]
Rootfs version[1.0.0.d5f0de03->1.0.0.660e0085]

[Slot M1]:Restart to take effect !

[Slot M1]:Upgrade processing is 100%
[Slot 1]:Upgrade processing is 90%

[Slot 1]:
Upgrade info [OK]
Kernel version[2.6.32.9f8b56f1d45ab2 ->2.6.32.0f48cb9f170c81]
Rootfs version[1.0.0.2ad02537->1.0.0.1bcc12e8]

[Slot 1]:Restart to take effect !
```

```
[Slot 1]:Upgrade processing is 100%
[slot: M1]
  device_name: ca-octeon-cm
  status:      SUCCESS
[slot: 1]
  device_name: ca-octeon-lc
Status:       SUCCESS
```

Verification Run the **show version detail** command to check whether the upgrade of a subsystem component is successful.

Run the **show component** command to check whether the upgrade of a feature component is successful. upgrading a feature component

Run the **show patch** command to check whether the upgrade of a hot patch is successful.

Prompt The prompt message of successful running is displayed.

Messages Upgrade info [OK]

The installation package is invalid or damaged and needs to be regained for upgrade command.

```
Invalid package file
```

The installation package is not available on the device and needs to be regained for upgrade command.

```
Device don't support
```

There is no need to upgrade the device.

```
The version in device is newer or the same
```

When there is insufficient space for upgrade, check USB flash disk attached on the device.

```
No enough space for decompress
```

Contact the service center to solve the system problem.

```
No enough space,rootfs been destroyed. Please upgrade in uboot
```

The existing patch package needs to be uninstalled before upgrade.

```
Already exist patch, please uninstall before upgrade
```

The patch package is not applicable to this system and needs to be changed.

```
Patch compatibility err
```

The upgrade of a patch package is not available on this device and needs to be regained.

```
some origin cmpnt has change
```

13.5 upgrade download tftp

Use this command to download, install and upgrade installation packages from the tftp server.

upgrade download tftp:/path [force]

upgrade download oob_tftp:/path [force] [via mgmt {number}]

Parameter Description	Parameter	Description
	<i>path</i>	The path of installation packages on the tftp server This command is downloaded and upgraded automatically from the server.
	via mgmt <i>number</i>	If the transfer mode is <i>oob_tftp</i> and there are multiple MGMT ports, you can select a specific port.
	force	Enforces upgrade.

Command Mode Privileged EXEC mode

Default Level 2

Usage Guide This command is applicable to installation packages of all subsystem components, chassis devices, feature components and hot patches. This command is used to perform automatic installation, copy and upgrade of files.

Configuration Examples The following example upgrades the main package.

```
Orion_B54Q# upgrade download
tftp://192.168.201.98/eg1000m_main_1.0.0.0f328e91.bin
Accessing tftp://192.168.201.98/eg1000m_main_1.0.0.0f328e91.bin...
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Transmission finished, file length 21525888 bytes.
Upgrade processing is 10%
Upgrade processing is 60%
Upgrade processing is 90%
Upgrade info [OK]
    Kernel version[2.6.32.91f9d21->2.6.32.9f8b56f]
    Rootfs version[1.0.0.2ad02537->1.0.0.1bcc12e8]
Upgrade processing is 100%
Reload to take effect!
```

Verification Run the **show version detail** command to check whether the upgrade of a subsystem component is

successful.

Run the **show component** command to check whether the upgrade of a feature component is successful.

Run the **show patch** command to check whether the upgrade is successful of a hot patch package.

Prompt

The prompt message of successful running is displayed.

Messages

```
Upgrade info [OK];
```

The installation package is invalid or damaged and needs to be regained for upgrade command.

```
Invalid package file
```

The installation package is not available on the device and needs to be regained for upgrade command.

```
Device don't support
```

There is no need to upgrade the device.

```
The version in device is newer or the same
```

When there is insufficient space for upgrade, check USB flash disk attached on the device.

```
No enough space for decompress
```

Contact the service center to solve the system problem.

```
No enough space,rootfs been destroyed. Please upgrade in uboot
```

The existing patch package needs to be deleted.

```
Already exist patch, please uninstall before upgrade
```

The patch package is not compatible on this device. Replace the package..

```
Patch compatibility err
```

The upgrade of the patch package is not applied to the device. Regain the package.

```
Some origin component has change
```

13.6 clear storage

Use this command to remove an installation package on the local device.

clearstorage [*url*]

Parameter Description

Parameter	Description
<i>url</i>	A local <i>url</i> directory or full pathname indicates where the installation package is stored

Command Mode Privileged EXEC mode

Default Level 2

Usage Guide This command is used to remove an installation package or all packages in a directory and all installation packages on the local device.

Configuration Examples

```
Orion_B54Q#clear storage
Remove the whole storage directory?[y/n]y
Orion_B54Q#clear storage usb0
Remove the file or directory usb0 from the storage?[y/n]y
Orion_B54Q#
```

Verification Check specified *url*

Platforms N/A

14 OpenFlow Commands

14.1 of controller-ip

Use this command to enable OpenFlow.

of controller-ip *ip-address* [**port** *port-id*] **interface** [*interface-id*]

Use the **no** form of this command to disable OpenFlow.

no of controller-ip [*ip-address*]

Parameter Description	Parameter	Description
	<i>ip-address</i>	Controller IP address. If you configure the no form of this command without any parameter, all controllers are disabled. (OpenFlow1.3 supports connection to multiple controllers and OpenFlow1.0 supports connection to one single controller).
	port <i>port-id</i>	Controller access port ID. The default for OpenFlow1.0 is 6633 and for OpenFlow1.3 is 6653.
	Interface <i>interface-id</i>	Interface ID, whether out-of-band MGMT interface or in-band physical port (some devices may not have MGMT interfaces).

Command Mode Global configuration mode

Default Level N/A

Usage Guide N/A

Configuration Examples The following example enables OpenFlow.

```
Orion_B54Q#of controller-ip 172.18.2.35
```

Or

```
Orion_B54Q#of controller-ip 172.18.2.35 port 6633
```

Or

```
Orion_B54Q(config)#of controller-ip 192.168.21.57 interface
gigabitEthernet 0/1
```

The following example disables OpenFlow.

```
Orion_B54Q#no of controller-ip
```

14.2 of mode

Use this command to configure the controller mode.

of mode [single | multiple]

Use the **no** form of this command to restore the default setting.

no of mode

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Global configuration mode

Default Level The default is single mode.

Usage Guide Configure this command before enabling the controller.

Configuration Examples The following example enables the single mode.

```
Orion_B54Q(config)#of mode single
```

The following example enables the multiple mode.

```
Orion_B54Q(config)#of mode multiple
```

The following example restores the default setting.

```
Orion_B54Q(config)#no of mode
```

14.3 of stp

Use this command to enable/disable STP function for the SDN controller.

[no] of stp

Parameter Description	Parameter	Description
	N/A	N/A

Command Mode Global configuration mode

Default Level This function is disabled for SDN controller by default.

Usage Guide Use this command to enable/disable STP function for the SDN controller. This command takes effect only after enabling the OpenFlow function.

Configuration Examples The following example enables STP.

```
Orion_B54Q(config)#no of stp
```

The following example disables STP.

```
Orion_B54Q(config)#of stp
```

14.4 show of

Use this command to display the connection between the current device and the controller.

show of

Parameter Description

Parameter	Description
N/A	N/A

Command Mode Global configuration mode

Default Level N/A

Usage Guide Use this command to display the OpenFlow version on the device.

Configuration Examples The following example displays the connection between the current device and the controller.

```
Orion_B54Q#show of
```

14.5 show of flowtable

Use this command to display flow table entries of OpenFlow Device

show of flowtable

Parameter Description

Parameter	Description
N/A	N/A

Command Mode Global configuration mode

Default Level N/A

Usage Guide Running the **of controller-ip** command before configuring this command. Otherwise, the flow table entries are not displayed.

Configuration Examples The following example display flow table of OpenFlow 1.0.

```
Orion_B54Q#show of flowtable
openflow flow count = 1
*****FLOW START*****
KEY:
      SMAC          DMAC          SIP          DIP
00:d0:f8:56:d3:22  00:d0:f8:a3:62:13      NA          NA
      INPORT        VLANID        ETYPE        VLAN_PRIORITY
      26            NA            NA            NA
```



```

TCP/UDP_SPORT      TCP/UDP_DPORT      DSCP      IP_PROTOCOL
      NA              NA              NA              NA
WILDCARD           SIP_MASK           DIP_MASK
      3ffff2          NA              NA
PRIORITY           IDLE_TIMEOUT      HARD_TIMEOUT
SEND_FLOW_REM
      120             0              0              0
-----
ACTION:
ACTION_SIZE = 8
OUTPUT_PORT = 7
*****FLOW END*****
    
```

14.6 show of port

Use this command to display port information of OpenFlow device.

show of port

Parameter Description	Parameter	Description
	N/A	N/A

Command Global configuration mode

Mode

Default Level N/A

Usage Guide Running the **of controller-ip** command before configuring this command. Otherwise, the port information is not displayed.

Configuration Examples The following example displays port information of OpenFlow device.

```

OpenFlow1.0 Port:
Orion_B54Q#show of port
STP is controlled by SDN Controller.

ID      IFX      INTERFACE      CONFIG      SPEED      LINK
DUPLICATE
1       1       GigabitEthernet 0/1      0x0000      Unknown    DOWN
Unknown
2       2       GigabitEthernet 0/2      0x0000      Unknown    DOWN
Unknown
3       3       GigabitEthernet 0/3      0x0000      Unknown    DOWN
Unknown
4       4       GigabitEthernet 0/4      0x0000      Unknown    DOWN
Unknown
    
```

```

5      5      GigabitEthernet 0/5      0x0000      Unknown      DOWN
Unknown
6      6      GigabitEthernet 0/6      0x0000      Unknown      DOWN
Unknown
7      7      GigabitEthernet 0/7      0x0000      Unknown      DOWN
Unknown
8      8      GigabitEthernet 0/8      0x0000      Unknown      DOWN
Unknown
9      9      GigabitEthernet 0/9      0x0000      Unknown      DOWN
Unknown
10     10     GigabitEthernet 0/10     0x0000      Unknown      DOWN
Unknown
11     11     GigabitEthernet 0/11     0x0000      Unknown      DOWN
Unknown
12     12     GigabitEthernet 0/12     0x0000      Unknown      DOWN
Unknown
13     13     GigabitEthernet 0/13     0x0000      Unknown      DOWN
Unknown
14     14     GigabitEthernet 0/14     0x0000      Unknown      DOWN
Unknown
15     15     GigabitEthernet 0/15     0x0000      Unknown      DOWN
Unknown
16     16     GigabitEthernet 0/16     0x0000      Unknown      DOWN
Unknown
COFIG STATE LINKSPEEDDUPLEX

```

OpenFlow1.3 Port:

Orion_B54Q#show of port

STP is controlled by SDN Controller.

ID	IFX	INTERFACE	SPEED	LINK	DUPLEX	TX_PKT	RX_PKT
1	1	GigabitEthernet 0/1	Unknown	DOWN	Unknown	0	0
0		NA					
2	2	GigabitEthernet 0/2	Unknown	DOWN	Unknown	0	0
0		NA					
3	3	GigabitEthernet 0/3	Unknown	DOWN	Unknown	0	0
0		NA					
4	4	GigabitEthernet 0/4	Unknown	DOWN	Unknown	0	0
0		NA					
5	5	GigabitEthernet 0/5	Unknown	DOWN	Unknown	0	0
0		NA					
6	6	GigabitEthernet 0/6	Unknown	DOWN	Unknown	0	0
0		NA					
7	7	GigabitEthernet 0/7	Unknown	DOWN	Unknown	0	0
0		NA					

8	8	GigabitEthernet 0/8	Unknown	DOWN	Unknown	0
0		NA				
9	9	GigabitEthernet 0/9	Unknown	DOWN	Unknown	0
0		NA				
10	10	GigabitEthernet 0/10	Unknown	DOWN	Unknown	0
0		NA				
11	11	GigabitEthernet 0/11	Unknown	DOWN	Unknown	0
0		NA				
12	12	GigabitEthernet 0/12	Unknown	DOWN	Unknown	0
0		NA				
13	13	GigabitEthernet 0/13	Unknown	DOWN	Unknown	0
0		NA				
14	14	GigabitEthernet 0/14	Unknown	DOWN	Unknown	0
0		NA				
15	15	GigabitEthernet 0/15	Unknown	DOWN	Unknown	0
0		NA				
16	16	GigabitEthernet 0/16	Unknown	DOWN	Unknown	0
0		NA				