

System 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** or **default** form of this command to restore the default setting.

alias *mode command-alias original-command*

no alias *mode command-alias*

default 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 Alpha A28X(config)# alias ?
aaa-gs          AAA server group mode
acl             acl configure mode
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 Alpha A28X#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 Alpha A28X#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 Alpha A28X# 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 Alpha A28X(config-if)#ia ?  
  A.B.C.D IP address  
  dhcp    IP Address via DHCP  
Orion Alpha A28X(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 Alpha A28X# configure terminal  
Orion Alpha A28X(config)# alias config def-route ip route 0.0.0.0 0.0.0.0  
192.168.1.1  
Orion Alpha A28X(config)#def-route?  
*def-route="ip route 0.0.0.0 0.0.0.0 192.168.1.1"  
Orion Alpha A28X(config)# end  
Orion Alpha A28X# 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	Descripton
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 Alpha A28X(config)#privilege exec level 1 reload
```

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

```
Orion Alpha A28X>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 Alpha A28X(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 Alpha A28X>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 Privileged EXEC mode.

Mode

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

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

Examples

```
Orion Alpha A28X#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 Alpha A28X# 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
	<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 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 The following example configures a welcome message.

Examples Orion Alpha A28X(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 Mode Global configuration 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 The following example configures a prompt message for reverse Telnet session.

Examples Orion Alpha A28X(config)# banner incoming \$ Welcome \$

**Related
Commands**

Command	Description
N/A	N/A

Platform

N/A

Description

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 The following example configures a login banner.

Examples Orion Alpha A28X(config)# banner login \$ enter your password \$

**Related
Commands**

Command	Description
N/A	N/A

Platform

N/A

Description

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 Alpha A28X(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** The following example configures the prompt-timeout message to notify timeout.**Examples**

```
Orion Alpha A28X(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>	
<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 Alpha A28X(config)# banner slip-ppp $ Welcome $
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.8 boot configure

Use this command to modify the path for saving startup configurations and the corresponding file name.

boot config { **flash:filename** }

no boot config

Parameter Description	Parameter	Description
	flash	Saves the startup configuration file in the extensible Flash.

Defaults By default, startup configuration file of a device is saved in **Flash:/config.text**

Command Mode Privileged EXEC mode

Usage Guide

-  The startup configuration file name follows a slash "/", for example, **Flash:/Orion Alpha A28X.text**.
-  The startup configuration file name consists of a path and a file name. The path is mandatory. Otherwise, configurations cannot be saved by using the **write** command. Take **Flash:/Orion Alpha A28X/Orion Alpha A28X.text** as examples, where the **Flash:/Orion Alpha A28X** folder must exist. In master-slave mode, all device paths are required.

Configuration Examples The following example sets the startup configuration file path to flash:/Orion Alpha A28X.text..

```
Orion Alpha A28X(config)#boot config flash:/Orion Alpha A28X.text
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.9 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 Alpha A28X# configure
Orion Alpha A28X(config)#
```

Related Commands	Command	Description
	N/A	N/A

Platform Description
N/A

2.10 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
User 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 The following example lowers the current privilege level of the device to level 10.

Examples Orion Alpha A28X# 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

2.11 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.	
	<pre>Orion Alpha A28X# disconnect 1</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

2.12 do telnet

Use this command to login to Telnet server.

do telnet *host* [*port*] [/**source** { **ip** *A.B.C.D* | **ipv6** *X:X:X:X::X* | **interface** *interface-name* }]

Parameter Description	Parameter	Description
	<i>host</i>	IPv4, IPv6 or host name of Telnet server.
	<i>port</i>	Configures TCP port ID. The default is 23.
	/source	Specifies source IP or source port for Telnet client.
	ip <i>A.B.C.D</i>	Specifies source IPv4 address for Telnet client.
	ipv6 <i>X:X:X:X::X</i>	Specifies source IPv6 address for Telnet client.
	interface <i>interface-name</i>	Specifies source port for Telnet client.
Defaults	N/A	
Command Mode	User EXEC mode/Privileged EXEC mode/Interface configuration mode	
Usage Guide	N/A	
Configuration Examples	The following example configures destination IPv6 address 2AAA:BBBB::CCCC.	
	<pre>Orion Alpha A28X(config)# do telnet 2AAA:BBBB::CCCC</pre>	
Related Commands	Command	Description
	N/A	N/A

Platform
Description

N/A

2.13 enable

Use this command to enter privileged EXEC mode.

Enable [*privilege-level*]

Parameter	Parameter	Description
Description	<i>privilege-level</i>	Privilege level

Defaults

N/A

Command
Mode

User EXEC mode

Usage Guide Use this command to enter privileged EXEC mode from User EXEC mode. You can raise or lower the privilege level by specifying the privilege level.

Configuration The following example lowers the privilege level to 14:

Examples Orion Alpha A28X> enable 14

Password:

Related	Command	Description
Commands	N/A	N/A

Platform
Description

N/A

2.14 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*] { [**0**] *password* | **7** *encrypted-password* }

no enable password [*level level*]

Parameter	Parameter	Description
Description	password	Password for the user to enter the EXEC configuration layer
	level	User's level.
	0	The password is in plain text.
	7 <i>encrypted-password</i>	The password is encrypted.

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 The following example configures the password as **pw10**.**Examples** Orion Alpha A28X(config)# **enable password** pw10**Related Commands**

Command	Description
enable secret	Sets the security password

Platform

N/A

Description**enable secret** Sets the security password

2.15 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] { [0] password | 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	The password is in plain text.
5 encrypted-password	The password is encrypted.

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

Examples Orion Alpha A28X(config)# **enable secret 0 pw10**

**Related
Commands**

Command	Description
enable password	Sets passwords for different privilege levels.

**Platform
Description** N/A

2.16 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-server | 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 telnet-server, snmp-agent and web-server are enabled. ssh-server is disabled.

Command Global configuration mode

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 The following example enables the SSH Server.

Examples Orion Alpha A28X(Config)# **enable service ssh-sesrver**

Related Commands

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

Platform Description N/A

2.17 end

Use this command to return to privileged EXEC mode.

end

Parameter Description

Parameter	Description
N/A	N/A

Defaults N/A

Command Mode All modes except privileged EXEC mode

Usage Guide Use this command to return to privileged EXEC mode.

Configuration The following example returns to privileged EXEC mode.

Examples Orion Alpha A28X#con
 Enter configuration commands, one per line. End with CNTL/Z.
 Orion Alpha A28X(config)#line vty 0
 Orion Alpha A28X(config-line)#end
 *May 20 09:49:38: %SYS-5-CONFIG_I: Configured from console by console
 Orion Alpha A28X#

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.18 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 LINE configuration mode

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

Examples

```
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)no exec-banner
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.19 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 Description	Parameter	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 The following example sets the connection timeout to 5'30".

Examples Orion Alpha A28X(config-line)#~~exec-timeout~~ 5 30

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.20 execute

Use this command to execute a command on the file.

execute { [flash:] filename }

Parameter Description	Parameter	Description
	filename	filename

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration The following example executes a command to configure an IP address for the specified interface.

Examples

```

Orion Alpha A28X#execute flash:mybin/config.text
executing script file mybin/config.text .....
executing done
Orion Alpha A28X#config
Enter configuration commands, one per line. End with CNTL/Z.
Orion Alpha A28X(config)#interface gigabitEthernet 0/1
Orion Alpha A28X(config-if-GigabitEthernet 0/1)#ip address 192.168.21.158
24
Orion Alpha A28X(config-if-GigabitEthernet 0/1)#end
*Sep 29 23:35:49: %SYS-5-CONFIG_I: Configured from console by console
Orion Alpha A28X#
    
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.21 exit

Use this command to return to the upper configuration mode.

exit

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode All configuration modes

Usage Guide N/A

Configuration The following example returns to the upper configuration mode.

Examples

```

Orion Alpha A28X#con
Enter configuration commands, one per line. End with CNTL/Z.
Orion Alpha A28X(config)#line vty 0
Orion Alpha A28X(config-line)#end
*May 20 09:49:38: %SYS-5-CONFIG_I: Configured from console by console
Orion Alpha A28X#con
Enter configuration commands, one per line. End with CNTL/Z.
Orion Alpha A28X(config)#line vty 0
Orion Alpha A28X(config-line)#exit
Orion Alpha A28X(config)#exit
*May 20 09:51:48: %SYS-5-CONFIG_I: Configured from console by console
Orion Alpha A28X#exit

Press RETURN to get started

```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.22 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 The following example displays brief information about the help system.

Examples

```
Orion Alpha A28X#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 Alpha A28X(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
dldp              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 Alpha A28X(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

2.23 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 Alpha A28X.

Command Global configuration mode

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

Examples

```
Orion Alpha A28X(config)# hostname BeiJingAgenda
BeiJingAgenda(config)#
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.24 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>	Configures the IP address of the interface, including AP port, Gi port, Loopback port, null port, Tunnel port and VLAN port, as the source address for Telnet connection.

Defaults N/A

Command Global configuration mode

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 Alpha A28X(Config)# ip telnet source-interface Loopback 1
```

Related Commands

Command	Description
telnet	Logs in a Telnet server.

Platform Description

N/A

2.25 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

User 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.

Examples

```
Orion Alpha A28X(config-line)# lockable
Orion Alpha A28X(config-line)# end
Orion Alpha A28X# lock
Password: <password>
Again: <password>
Locked
Password: <password>
Orion Alpha A28X#
```

Related Commands	Command	Description
		lockable

Platform Description N/A

2.26 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

Defaults This function is disabled by default.

Command Mode LINE configuration 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. Run the **lockable** command before running the **lock** command.

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

```

Orion Alpha A28X(config)# line console 0
Orion Alpha A28X(config-line)# lockable
Orion Alpha A28X(config-line)# end
Orion Alpha A28X# lock
Password: <password>
Again: <password>
Locked
Password: <password>

```

Related Commands	Command	Description
		lock

Platform Description N/A

2.27 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

Login is disabled for console and enabled for AUX, TTY and VTY by default.

Command

Line configuration mode

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

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

Examples

```
Orion Alpha A28X(config)# no aaa new-model
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(config-line)# password 0 normatest
Orion Alpha A28X(config-line)# login
```

**Related
Commands**

Command	Description
password	Configures the line login password

Platform

N/A

Description

2.28 login access non-aaa

Use this command to configure non-AAA authentication on line when AAA is enabled. Use the **no** form of this command to restore the default setting.

login access non-aaa

no login access non-aaa

**Parameter
Description**

Parameter	Description
N/A	N/A

Defaults

This function is disabled by default.

Command

Global configuration mode

Mode

Usage Guide

N/A

Configuration

The following example configures VTY line authentication with AAA enabled.

Examples

```

Orion Alpha A28X(config)#log access non-aaa
Orion Alpha A28X(config)#aaa new-model
Orion Alpha A28X(config)#line vty 0 4
Orion Alpha A28X(config-line)#login local
Orion Alpha A28X(config-line)#

```

Related Commands

Command	Description
N/A	N/A

Platform**Description**

N/A

2.29 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

Default authentication is used when AAA is enabled.

Command

Line configuration mode

Mode**Usage Guide****Configuration**

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

Examples

```

Orion Alpha A28X(config)# aaa new-model
Orion Alpha A28X(config)# aaa authentication login default radius
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(config-line)# login authentication default

```

Related Commands

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

Platform**Description**

N/A

2.30 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 Line configuration mode

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 The following example sets local user authentication on VTY.

Examples

```
Orion Alpha A28X(config)# no aaa new-model
Orion Alpha A28X(config)# username test password 0 test
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(config-line)# login local
```

Related Commands	Command	Description
	username	Configures local user information.

Platform N/A
Description

2.31 login privilege log

Use this command to log privilege change. Use the **no** form of this command to restore the default setting.

login privilege log

no login privilege log

Parameter Description	Parameter	Description
	N/A	N/A

Defaults This command is disabled by default.

Command Global configuration mode

Mode

Usage Guide N/A

Configuration The following example enables the function of logging privilege change.

```
Orion Alpha A28X(config)# login privilege log
```

The following example displays the log of privilege change failure.

```
Orion Alpha A28X>enable 10

Password:
Password:
Password:

% Access denied
Orion Alpha A28X>
*Sep 10 11:34:19: %SYS-5-PRIV_AUTH_FAIL: Authentication to
privilege level 10 from console failed
```

The following example displays the log of privilege change success.

```
Orion Alpha A28X>enable 10

Password:
Orion Alpha A28X#
*Sep 10 11:34:20: %SYS-5-PRIV_AUTH_SUCCESS: Authentication to
privilege level 10 from console success
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

2.32 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.

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

Examples

```
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)no motd-banner
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.33 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 { [**0**] *password* | **7** *encrypted-password* }

no password

Parameter Description	Parameter	Description
	<i>password</i>	Password for remote line login
	0	The password is in plain text.
	7 <i>encrypted-password</i>	The password is encrypted.

Defaults N/A

Command Mode Line configuration mode

Usage Guide

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

Examples

```
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(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

2.34 prompt

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

prompt string

Parameter	Parameter	Description
Description	string	Character string of the prompt command, containing up to 32 letters.

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 The following example sets the prompt string to rgnos.

Examples

```
Orion Alpha A28X(config)# prompt rgnos
Orion Alpha A28X(config)# end
```

Related Commands	Command	Description
	N/A	N/A

Platform
Description

N/A

2.35 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	Parameter	Description
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 mode Line configuration 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” type 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 The following example sets the password encrypted by irreversible MD5 for line login to vty0.

Examples

```
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(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

2.36 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 } }
```

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

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

Parameter

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

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 { <i>m1</i> <i>m2</i> }	Sets the management module to either m1 or m2.				
Defaults	N/A				
Command Mode	User EXEC mode				
Usage Guide	N/A				
Configuration Examples	<p>The following example configures the slave host to connect with the master host in VSU environment.</p> <pre>Orion Alpha A28X# session master</pre> <p>The following example connects to device1 through session in VSU multiple-device environment (box-type device).</p> <pre>Orion Alpha A28X# session device 1</pre> <p>The following example connects to management module m1 of device1 through session in VSU master-slave environment (card-type device).</p> <pre>Orion Alpha A28X# session device 1 slot m1</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>	Command	Description	N/A	N/A
Command	Description				
N/A	N/A				
Platform Description	N/A				

2.37 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 The following example specifies the timeout as 5 minutes.

Examples Orion Alpha A28X(config-line)#**exec-timeout 5 output**

Related Commands

Command	Description
N/A	N/A

Platform

Description

N/A

2.38 show boot config

Use this command to display the path for saving startup configurations and the corresponding file name.

show boot 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 path for saving startup configurations and the corresponding file name..

```
Orion Alpha A28X#show boot config
Boot config file: [flash:/Orion Alpha A28X.text]
```

Related Commands

Command	Description
N/A	N/A

Platform

Description

N/A

2.39 show debugging

Use this command to display debugging state.

show debugging

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration The following example displays debugging state.

```

Examples Orion Alpha A28X#show debugging

debug fw-group detect intf-state
    
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.40 show line

Use this command to display the configuration of a line.

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

Parameter Description	Parameter	Description
	console	Displays the configuration of a console line.
	aux	Checks configuration information relating to the aux line.
	tty	Displays the configuration of an Async line.
	vty	Displays the configuration of a vty line.
	<i>line-num</i>	Number of the line.

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

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

```

Examples Orion Alpha A28X# 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

2.41 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

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

Examples

```

Orion Alpha A28X# 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

2.42 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 N/A

Examples

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

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

Examples

```
Orion Alpha A28X# 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

2.44 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

The following example displays the Telnet Client session information.

Examples

```
Orion Alpha A28X#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

2.45 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 Mode Privileged EXEC 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.

Configuration Examples N/A

Related Commands

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

Platform Description N/A

2.46 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 Mode All modes.

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.

 In **vlan range** or **interface range** mode, if the number of VLANs or interfaces exceeds 50, the configuration of the first 50 VLANs or interfaces will be displayed.

Configuration Use this command to display effective configuration on interface fastEthernet 0/1.

Examples

```
Orion Alpha A28X (config)#interface fastEthernet 0/1
Orion Alpha A28X (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 Alpha A28X (config-if-FastEthernet 0/1)#
```

Use this command to display configuration on interface VLAN 1-3.

```
Orion Alpha A28X(config-if-range)#show this
Building configuration...
!
interface VLAN 1
ip address dhcp
interface VLAN 2
ip address 1.1.1.1 255.255.255.0
interface VLAN 3
ip address 3.3.3.3 255.255.255.0
!
end
Orion Alpha A28X(config-if-range)#
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.47 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

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

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

Examples

```
Orion Alpha A28X(config)# line console 0
Orion Alpha A28X(config-line)# speed 57600
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

2.48 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* | **interface** *interface-name* }]

Parameter Description	Parameter	Description
	<i>host</i>	The IP address of the host or host name you want to log in.
	<i>port</i>	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 <i>A.B.C.D</i>	Specifies the source IPv4 address used by the Telnet client.
	ipv6 <i>X:X:X::X</i>	Specifies the source IPv6 address used by the Telnet client.
	interface <i>interface-name</i>	Specifies the source interface used by the Telnet client.

Defaults N/A

Command Mode User EXEC mode

Usage Guide

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

Examples

```
Orion Alpha A28X# telnet 2AAA:BBBB::CCCC
```

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
Description

N/A

2.49 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* | **secret** [**0** | **5**] *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>oper-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.
secret [0 5] <i>text-string</i>	If the password type is 0, the password is in plain text. If the type is 5, 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 The following example configures a username and password and binds the user to level 15.**Examples** Orion Alpha A28X(config)# username test privilege 15 password 0 pw15

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

Orion Alpha A28X(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 Alpha A28X(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 Alpha A28X(config)# username test permission n /config.text

Orion Alpha A28X(config)# username test permission rwx /

Related Commands

Command	Description
login local	Enables local authentication

Platform Description N/A

2.50 username import

Use this command to import user information from the file.

username import *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 import user information from the file.

Configuration The following example imports user information from the file.

Examples Orion Alpha A28X# `username import user.csv`

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

2.51 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 The following example exports user information to the file.

Examples Orion Alpha A28X# `username export user.csv`

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

2.52 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, 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 Alpha A28X# write
Building configuration...
[OK]
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

2.53 zcm

Use this command to enable and disable the zero configuration function.

zcm { enable | disable }

Parameter Description

Parameter	Description
enable	Enables the zero configuration function.
disable	Disables the zero configuration function.

Defaults The zero configuration function is disabled by default.**Command Mode** Privileged EXEC mode**Usage Guide**

-  The zero configuration function is applicable to the ACS solution only.
-  The zero configuration function is applicable to standalone systems only.
-  With the zero configuration function, DHCP Snooping Trust is enabled only on the last two electrical ports and all SFP ports of the device by default, regardless of whether the device

supports the MGMT port.

-  Enabling and disabling the zero configuration function will delete the startup configuration file of the device and trigger device restart.

Configuration The following example enables the zero configuration function.

Examples

```
Orion Alpha A28X# zcm enable
%% Warning: After switching mode the device will automatically restart!
% Do you want to switch to zero configuration mode? [yes/no]:y
*Sep 29 12:36:20: %ZCM-5-MODE_SWITCH: The device is reloading due to zero
or non-zero configuration mode switch.
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

3 LINE Commands

3.1 absolute-timeout

Use this command to set the absolute timeout period. Use the **no** form of this command to restore the default setting.

absolute-timeout *minutes*

no absolute-timeout

Parameter Description	Parameter	Description
	<i>minutes</i>	Sets the absolute timeout period, in the range from 0 to 60.

Defaults No absolute timeout period is set by default.

Command LINE configuration mode

Mode

Usage Guide If the absolute timeout period is configured, the line is disconnected once the timeout timer expires. Before the terminal logs out, a message is displayed to prompt the remaining time.

```
Terminal will be login out after 20 second
```

Configuration The following example sets the timeout period for the line between two consoles to 2 minutes.

Examples

```
Orion Alpha A28X(config)# line console 0
```

```
Orion Alpha A28X(config-line)#absolute-timeout 2
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.2 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 Line configuration mode

Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(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 Alpha A28X(config)# line vty 6 7
Orion Alpha A28X(config-line)access-list test out
```

**Related
Commands**

Command	Description
show running	Displays status information

Platform N/A

Description

3.3 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 Line configuration mode

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 Alpha A28X(config)# aaa new-model
Orion Alpha A28X(config)# aaa accounting commands 15 default start-stop
group tacacs+
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)# accounting commands 15 default
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

3.4 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 { default | list-name }

no accounting commands

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 accounting first, and then apply it on the line.

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

```
Orion Alpha A28X(config)# aaa new-model
Orion Alpha A28X(config)# aaa accounting exec default start-stop group
radius
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)# accounting exec default
```

Related Commands

Command	Description
N/A	N/A

Platform N/A
Description

3.5 activation-character

Use this command to set the ASCII value of the character for activating the terminal session. Use the **no** form of this command to restore the default setting.

activation-character *ascii-value*

no activation-character

Parameter Description	Parameter	Description
	<i>ascii-value</i>	Sets the ASCII value of the character for activating the terminal session, in the range from 0 to 127.

Defaults The default is CR (ASCII: 0x0D).

Command Mode LINE configuration mode

Usage Guide If the current line is configured with the **autoselect** function, *ascii-value* must be set to 0x0D.

Configuration Examples The following example configures Ctrl+Y (ASCII: 25) for activating the terminal session.

```
Orion Alpha A28X(config)#line console 0
Orion Alpha A28X(config-line)#activation-character 25
Orion Alpha A28X(config-line)#end
Orion Alpha A28X#exit

Press CTRL+y to get started

Orion Alpha A28X>
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.6 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 Alpha A28X(config)# aaa new-model
Orion Alpha A28X(config)# aaa authorization commands 15 default group
tacacs+
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)# authorization commands 15
default
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.7 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.

```

Examples
Orion Alpha A28X(config)# aaa new-model
Orion Alpha A28X(config)# aaa authorization exec default group radius
Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)# authorization exec default
    
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

3.8 autocommand

Use this command to enable automatic command execution. Use the **no** form of this command to restore the default setting.

autocommand *autocommand-string*
no autocommand

Parameter Description	Parameter	Description
	<i>autocommand-string</i>	

Defaults This function is disabled by default.

Command Mode LINE configuration mode

Usage Guide This command is used to enable the dumb terminal to log in to the specified host through Telnet or to obtain the specified app-based terminal service.

Configuration The following example enables automatic command execution and connects to line vty 0.

```

Examples
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(config-line)# autocommand telnet 192.168.21.100

//Initiates connection to line vty 0:
Trying 192.168.21.100, 23...

Orion Alpha A28X#show users
Line           User           Host(s)         Idle           Location
-----
-----
    
```

```

0 con 0      ---      idle      00:01:31  ---
* 1 vty 0    ---      idle      00:00:00
192.168.21.200

```

Related Commands

Command	Description
N/A	N/A

Platform

N/A

Description

3.9 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 Mode

Privileged EXEC 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.

Configuration 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 Alpha A28X# clear line vty 13
```

Related Commands

Command	Description
N/A	N/A

Platform

N/A

Description

3.10 databits

Use this command to set the databit number for every character on the async line in flow communication mode. Use the **no** form of this command to restore the default setting.

databits *bit*

no databits

Parameter Description	Parameter	Description
	<i>bit</i>	Sets the databit number of every character, in the range from 5 to 8.

Defaults The default is 8.

Command Mode LINE configuration mode

Usage Guide The async line device generates 7 databits with parity check in flow communication mode. If parity check is enabled, the databit number is 7. Otherwise, the databit number is 8. The databit number may set to 5 or 6 on the earlier device.

Configuration Examples The following example sets the databit number for every character on the async line in flow communication mode to 7.

```
Orion Alpha A28X(config)# line console 0
Orion Alpha A28X(config-line)#databits 7
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.11 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). <pre>Orion Alpha A28X(config)# line vty 0 5 Orion Alpha A28X(config-line)# disconnect-character 5</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>	Command	Description	N/A	N/A
Command	Description				
N/A	N/A				
Platform Description	N/A				

3.12 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	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><i>escape-value</i></td> <td>Sets the ASCII value corresponding to the escape character for the line, in the range from 0 to 255.</td> </tr> </tbody> </table>	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.
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). <pre>Orion Alpha A28X(config)# line vty 0 Orion Alpha A28X(config-line)# escape-character 23</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> </tbody> </table>	Command	Description		
Command	Description				

N/A	N/A
-----	-----

Platform N/A

Description

3.13 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	Parameter	Description
Description	N/A	N/A

Defaults This function is enabled by default.

Command Line configuration mode

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

Examples

```

Orion Alpha A28X(config)# line vty 1
Orion Alpha A28X(config-line)# no exec
Orion Alpha A28X# 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 N/A

Description

3.14 exec-character-bits

Use this command to configure the coded character set for the async line. Use the **no** form of this

command to restore the default setting.

exec-character-bits { 7 | 8 }

no exec-character-bits

**Parameter
Description**

Parameter	Description
7	Configures a 7-bit coded character set.
8	Configures an 8-bit coded character set.

Defaults

The default is 8.

**Command
Mode**

LINE configuration mode

Usage Guide

If you want to enter Chinese characters in the command line or display Chinese characters, graphs or other international characters, configure the **exec-character-bits 8** command.

Configuration

The following example configures a 7-bit coded character set for the async line.

Examples

```
Orion Alpha A28X(config)# line console 0
Orion Alpha A28X(config-line)#exec-character-bits 7
```

**Related
Commands**

Command	Description
N/A	N/A

Platform

N/A

Description

3.15 flowcontrol

Use this command to configure the flow control mode for the async line. Use the **no** form of this command to restore the default setting.

flowcontrol { hardware | none | software }

no flowcontrol { hardware | none | software }

**Parameter
Description**

Parameter	Description
hardware	Configures hardware flow control.
none	Configures no flow control.
software	Configures software flow control.

Defaults

No flow control is configured by default.

**Command
Mode**

LINE configuration mode

Usage Guide

This command is used to control the data sending rate to make it consistent with the receiving rate at

the receiving end. The terminal cannot receive data while sending data, so this function prevent s data drop. Flow control is also configured for the communication between high speed device and low speed device (for example, printer and network interface). switch provides two flow control modes, namely, software flow control and hardware flow control. The stop and start characters are Ctrl+S (XOFF, ASCII: 19) and Ctrl+Q (XON, ASCII: 17) respectively.

Configuration The following example configures software flow control for the async line.

Examples

```
Orion Alpha A28X(config)#line console 0
Orion Alpha A28X(config-line)#flowcontrol software
```

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

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

Examples

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(config-line)# history size 20
```

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

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(config-line)# no history
```

Related Commands

Command	Description
N/A	N/A

Platform N/A
Description

3.17 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>	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 the ACL named “test” to filter the outgoing IPv6 connections in line VTY 0 4.

```
Orion Alpha A28X(config)# line vty 0 4
Orion Alpha A28X(config-line)ipv6 access-list test out
```

Related Commands

Command	Description
show running	Displays status information

Platform N/A
Description

3.18 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 Alpha A28X(config-line)# length 10
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.19 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

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

```
Orion Alpha A28X(config)# line vty 1 3
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

3.20 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
	<i>line-number</i>	VTY connection number, in the range from 0 to 35.

Defaults

Command Global configuration mode.

Mode

Usage Guide

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

```
Orion Alpha A28X(config)# line vty 19
```

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

```
Orion Alpha A28X(config)# line vty 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.21 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 Line configuration mode

Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X(config)# line vty 0
Orion Alpha A28X(config-line)# location Swtich's Line Vty 0
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.22 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 The following example enables log display on the terminal in VTY line 0 5.

Examples

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(config-line)# monitor
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.23 parity

Use this command to configure the parity for the async line. Use the **no** form of this command to restore the default setting.

parity { even | none | odd }
no parity

**Parameter
Description**

Parameter	Description
even	Configures even parity,
none	Configures no parity.
odd	Configures odd parity,

Defaults No parity check is configured by default.

**Command
Mode** LINE configuration mode

Usage Guide Parity is required in communication through some devices (such as async serial ports and console ports).

Configuration The following example configures even parity for the async line.

Examples

```
Orion Alpha A28X(config)#line console 0
Orion Alpha A28X(config-line)#parity even
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

3.24 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 The following example sets the privilege level for the line VTY 0 4 to 14.

Examples

```
Orion Alpha A28X(config)# line vty 0 4
```

```
Orion Alpha A28X(config-line)#privilege level 14
```

Related Commands

Command	Description
N/A	N/A

Platform

N/A

Description

3.25 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 Alpha A28X device".

```
Orion Alpha A28X(config-line)#vacant-message @ Unauthorized user cannot login to the Orion Alpha A28X device @
```

Related Commands

Command	Description
N/A	N/A

Platform

N/A

Description

3.26 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 The following example displays the command history of the line.

Examples

```
Orion Alpha A28X# 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

3.27 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 The following example displays configuration for the console port.

```

Orion Alpha A28X# 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

3.28 show privilege

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

show privilege

Parameter	Parameter	Description
Description	N/A	N/A

Defaults N/A

Command Privileged EXEC mode

Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X# show privilege
Current privilege level is 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.29 show users

Use this command to display the login user information.

show users [all]

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

Defaults N/A

Command Privileged EXEC mode

Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X# 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 Alpha A28X(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     -
--
```

**Related
Commands**

Command	Description
N/A	N/A

Platform

N/A

Description

3.30 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 The following example sets the baud rate to 115200,

Examples Orion Alpha A28X(config-line)# speed 115200

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

3.31 start-character

Use this command to

on the async line. Use the **no** form of this command to restore the default setting.

start-character *ascii-value*

no start-character

**Parameter
Description**

Parameter	Description
<i>ascii-value</i>	Sets the ASCII value corresponding to the start character for software flow control on the async line, in the range from 0 to 255.

Defaults The default is Ctrl+Q (ASCII: 17).

**Command
Mode** LINE configuration mode

Usage Guide The start character marks the start of the data transmission.

**Configuration
Examples** The following example configures Ctrl+Y (ASCII: 25) for starting software flow control on the async line,

```
Orion Alpha A28X(config)#line console 0
```

```
Orion Alpha A28X(config-line)#start-character 25
```

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

3.32 stopbits

Use this command to configure the stopbit number for every character for the async line. Use the **no** form of this command to restore the default setting.

stopbits { 1 | 2 }

no stopbits

Parameter Description	Parameter	Description
	1	Configures 1 stopbit.
	2	Configures 2 stopbits.
Defaults	The default is 2.	
Command Mode	LINE configuration mode	
Usage Guide	The stopbit is required in communication between the async line and the async device (such as the conventional numb terminals and modems).	
Configuration Examples	The following example sets the stopbit number of every character for the async line to 1.	
	<pre>Orion Alpha A28X(config)#line console 0 Orion Alpha A28X(config-line)#stopbits 1</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

3.33 stop-character

Use this command to configure the stop character for software flow control on the async line. Use the **no** form of this command to restore the default setting.

stop-character *ascii-value*

no stop-character

Parameter Description	Parameter	Description
	<i>ascii-value</i>	Sets the ASCII value corresponding to the stop character for software flow control on the async line, in the range from 0 to 255.
Defaults	The default is Ctrl+S (ASCII: 19).	
Command Mode	LINE configuration mode	
Usage Guide	The stop character marks the end of the data transmission.	
Configuration Examples	The following example configures Ctrl+Z (ASCII: 26) for stopping software flow control on the async line,	
	<pre>Orion Alpha A28X(config)#line console 0</pre>	

```
Orion Alpha A28X(config-line)#stop-character 26
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

3.34 terminal databits

Use this command to configure the databit number of the character for the current terminal in flow communication mode. Use the **no** form of this command to restore the default setting.

terminal databits *bit*

terminal no databits

**Parameter
Description**

Parameter	Description
<i>bit</i>	Configures the databit number of the character, in the range from 5 to 8.

Defaults

The default is 8.

**Command
Mode**

Privileged EXEC mode

Usage Guide

N/A

**Configuration
Examples**

The following example sets the databit number of every character for the current terminal in flow communication mode to 7.

```
Orion Alpha A28X#terminal databits 7
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

3.35 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 Mode	Privileged EXEC 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).	
	<pre>Orion Alpha A28X# terminal escape-character 23</pre>	
Related Commands	Command	Description
	N/A	N/A
Platform Description	N/A	

3.36 terminal exec-character-bits

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

terminal exec-character-bits { 7 | 8 }

terminal no exec-character-bits

Parameter Description	Parameter	Description
	7	Configures a 7-bit coded character set.
	8	Configures an 8-bit coded character set.
Defaults	The default is 8.	
Command Mode	Privileged EXEC mode	
Usage Guide	If you want to enter Chinese characters in the command line or display Chinese characters, graphs or other international characters, configure the exec-character-bits 8 command.	
Configuration Examples	The following example configures a 7-bit coded character set for the current terminal.	
	<pre>Orion Alpha A28X#terminal exec-character-bits 7</pre>	
Related Commands	Command	Description

N/A	N/A
-----	-----

Platform N/A

Description

3.37 terminal flowcontrol

Use this command to configure the flow control mode for the current terminal. Use the **no** form of this command to restore the default setting.

terminal flowcontrol { **hardware** | **none** | **software** }

terminal no flowcontrol { **hardware** | **none** | **software** }

Parameter	Parameter	Description
Description	hardware	Configures hardware flow control.
	none	Configures no flow control.
	software	Configures software flow control.

Defaults No flow control is configured by default.

Command Privileged EXEC mode

Mode

Usage Guide N/A

Configuration The following example configures software flow control for the current terminal.

Examples Orion Alpha A28X#terminal flowcontrol software

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.38 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	Parameter	Description
-----------	-----------	-------------

Description		
	size <i>size</i>	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 Mode Privileged EXEC 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 Alpha A28X# terminal history size 20
```

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

```
Orion Alpha A28X# terminal no history
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.39 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>	Sets the screen length, in the range from 0 to 512.

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 Alpha A28X# terminal length 10
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.40 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".

```
Orion Alpha A28X# terminal location Switch's Line Vty 0
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.41 terminal parity

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

terminal parity { **even** | **none** | **odd** }

terminal no parity

Parameter Description	Parameter	Description
	even	Configures even parity,
	none	Configures no parity.
	odd	Configures odd parity,

Defaults No parity check is configured by default.

Command Privileged EXEC mode

Mode

Usage Guide Parity is required in communication through some devices (such as async serial ports and console ports).

Configuration The following example configures even parity for the current terminal.

Examples Orion Alpha A28X#terminal parity even

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

3.42 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 The following example sets the baud rate for the current terminal to 115200,

Examples Orion Alpha A28X# terminal speed 115200

Related Commands

Command	Description
N/A	N/A

Platform N/A

Description

3.43 terminal start-character

Use this command to configure the start character for software flow control on the current terminal.

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

terminal start-character *ascii-value***terminal no start-character****Parameter
Description**

Parameter	Description
<i>ascii-value</i>	Sets the ASCII value corresponding to the start character for software flow control on the current terminal, in the range from 0 to 255.

Defaults The default is Ctrl+Q (ASCII: 17).**Command
Mode** Privileged EXEC mode**Usage Guide** N/A**Configuration
Examples** The following example configures Ctrl+Y (ASCII: 25) for starting software flow control on the current device,

```
Orion Alpha A28X#terminal start-character 25
```

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

3.44 terminal stopbits

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

terminal stopbits { 1 | 2 }**terminal no stopbits****Parameter
Description**

Parameter	Description
1	Configures 1 stopbit,
2	Configures 2 stopbits.

Defaults The default is 2.**Command
Mode** Privileged EXEC mode**Usage Guide** N/A**Configuration** The following example configures 1 stopbit for the current terminal.**Examples**

```
Orion Alpha A28X#terminal stopbits 1
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.45 terminal stop-character

Use this command to configure the stop character for software flow control on the current terminal.

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

terminal stop-character *ascii-value*

terminal no stop-character

Parameter Description	Parameter	Description
		<i>ascii-value</i>

Defaults The default is Ctrl+S (ASCII: 19).

Command Privileged EXEC mode

Mode

Usage Guide N/A

Configuration Examples The following example configures Ctrl+Z (ASCII: 26) for stopping software flow control on the current device.

```
Orion Alpha A28X#terminal stop-character 26
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.46 terminal terminal-type

Use this command to configure the simulated terminal type string for the current terminal. Use the **no** form of this command to restore the default setting.

terminal terminal-type *terminal-type-string*

terminal no terminal-type

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

Description		
	<i>terminal-type-string</i>	Sets the terminal type string, such as vt100 and ansi.

Defaults The default is vt100.

Command Privileged EXEC mode

Mode

Usage Guide N/A

Configuration The following example sets the simulated terminal type string for the current terminal to ansi.

Examples Orion Alpha A28X#terminal terminal-type ansi

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.47 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 Privileged EXEC mode

Mode

Usage Guide N/A

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

Examples Orion Alpha A28X# terminal width 10

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

3.48 terminal-type

Use this command to configure the simulated terminal type string of the async line.

terminal-type *terminal-type-string*

no terminal-type

Parameter Description	Parameter	Description
	<i>terminal-type-string</i>	Configures the terminal type string, such as vt100 and ansi.

Defaults The default is vt100.

Command Mode LINE configuration mode

Usage Guide You can use the **terminal-type vt100** command to restore the default terminal type. If you want to enable telnet connection, you should use the simulated terminal type to perform terminal type negotiation (Telnet: 0x18). See RFC 854 for details.

Configuration The following example sets the simulated terminal type of the async line to ansi.

Examples

```
Orion Alpha A28X(config)#line console 0
Orion Alpha A28X(config-line)#terminal-type ansi
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

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

Examples

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(config-line)login timeout response 300
```

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

3.50 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 Line configuration mode

Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X(config)# line vty 0 5
Orion Alpha A28X(config-line)transport input ssh
```

**Related
Commands**

Command	Description
show running	Displays status information

Platform N/A

Description

3.51 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 Alpha A28X device".

```
Orion Alpha A28X(config-line)#vacant-message @ Logout from the Orion Alpha
A28X device @
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

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

Examples Orion Alpha A28X(config-line)# width 10

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

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: , 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

Usage Guide

Configuration

Examples

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 Privileged EXEC mode.

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

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 Alpha A28X#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 Description

Parameter	Description
<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , 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**

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

Examples

```
Orion Alpha A28X#pwd
flash:/
Orion Alpha A28X#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 Alpha A28X#delete flash:/fstab
Orion Alpha A28X#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 Alpha A28X#pwd
flash:/
Orion Alpha A28X#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 Alpha A28X#delete /recursive flash:/file
Orion Alpha A28X#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: , 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

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

```
Orion Alpha A28X#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
	pwd	Displays the present directory.
	cd	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

Related	Command	Description
Commands	N/A	N/A

Platform N/A

Description

4.6 file

Use this command to display the information about a file.

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

Parameter	Parameter	Description
Description	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , 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 Privileged EXEC mode
Mode

Usage Guide N/A

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

Examples

```
Orion Alpha A28X#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	Command	Description
Commands	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 Privileged EXEC mode

Mode

Usage Guide N/A

Configuration The following example sets the prompt mode to noisy.

Examples Orion Alpha A28X#file prompt noisy

Related	Command	Description
Commands	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: , 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

Configuration The following example creates a directory named newdir:

Examples

```
Orion Alpha A28X#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 Alpha A28X#mkdir newdir
Created dir flash:/newdir
Orion Alpha A28X#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 Description	Parameter	Description
	/ascii	Displays the file content in the ASCII format.
	/binary	Displays the file content in the
	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , 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 file is displayed in its own format by default.

Command Mode Privileged EXEC mode

Usage Guide N/A

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

```

Examples Orion Alpha A28X#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> <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	Command	Description
Commands	N/A	N/A

Platform N/A

Description

4.10 pwd

Use this command to display the working path.

pwd

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

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration N/A

Examples

Related Commands	Command	Description
	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	Parameter	Description
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 The following example renames the fstab file in the root directory on the FLASH disk as new-fstab.

Examples

```
Orion Alpha A28X#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 Alpha A28X#rename flash:/fstab flash:/new-fstab
Renamed file flash:/new-fstab
Orion Alpha A28X#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	Parameter	Description
Description	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , 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 Privileged EXEC mode.

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 The following example deletes the null test directories.

Examples

```
Orion Alpha A28X#mkdir newdir
Orion Alpha A28X#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 Alpha A28X#rmdir newdir
removed dir flash:/newdir
Orion Alpha A28X#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 disk

Use this command to displayFlash information.

show disk *flash*

Parameter	Parameter	Description
Description	<i>flash</i>	Displays FLASH information.

Defaults N/A

Command Mode User EXEC mode/Privileged EXEC mode/Global configuration mode/Interface EXEC mode

Usage Guide N/A

Configuration The following example displays FLASH information.

Examples

```
Orion Alpha A28X#show disk flash
Nand flash size: 512MB
Nor flash size: 1MB
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

4.14 show file systems

Use this command to display the file system information.

show file systems

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

Defaults N/A.

Command Mode User EXEC mode/Privileged EXEC mode/Global configuration mode/Interface 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 The following example displays the file system information:

Examples

```
Orion Alpha A28X#show file systems
```

Size (KB)	Free (KB)	Type	Flags	Prefixes
NA	NA	ram	rw	tmp:
NA	NA	network	rw	tftp:
8192	2416	disk	rw	flash:

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

4.15 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 User EXEC mode/Privileged EXEC mode/Global configuration mode/Interface EXEC mode

Usage Guide N/A

Configuration The following example displays the mounted information.

Examples

```
Orion Alpha A28X#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

4.16 tftp-client source

Use this command to bind a source IP address or source interface with a TFTP client. Use the **no** or **default** form of this command to restore the default setting.

tftp-client source { **ip** *ip-address* | **ipv6** *ipv6-address* | *interface* }

no tftp-client source { **ip** *ip-address* | **ipv6** *ipv6-address* | *interface* }

default tftp-client source { **ip** *ip-address* | **ipv6** *ipv6-address* | *interface* }

Parameter	Parameter	Description
Description	<i>ip-address</i>	Specifies the IPv4 source address.
	<i>ipv6-address</i>	Specifies the IPv6 source address.
	<i>interface</i>	Specifies the source interface

Defaults No source interface or IP address is bound with the TFTP client by default.

Command Global configuration mode

Mode

Usage Guide N/A

Configuration The following example binds source IP address 192.168.23.236 with the TFTP client.

Examples Orion Alpha A28X(config)# tftp-client source ip 192.168.23.236

The following example binds source IPv6 address 2003:0:0:0::2 with the TFTP client.

Orion Alpha A28X(config)# tftp-client source ipv6 2003:0:0:0::2

The following example binds source interface gigabitEthernet 0/0 with the TFTP client.

Orion Alpha A28X(config)# tftp-client source gigabitEthernet 0/0

The following example removes the configuration.

```
Orion Alpha A28X(config)# no tftp-client source ip 192.168.23.236
```

The following example restores the default setting.

```
Orion Alpha A28X(config)# default tftp-client source ip 192.168.23.236
```

Related	Command	Description
Commands	N/A	N/A

Platform N/A

Description

4.17 tree

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

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

Parameter	Parameter	Description
Description	<i>filesystem:</i>	The URL of file system, followed by a colon (:). The file system includes flash: , 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 User EXEC mode/Privileged EXEC mode

Mode

Usage Guide N/A

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

```
Examples Orion Alpha A28X#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_switch.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	Command	Description
Commands	N/A	N/A
Platform	N/A	
Description		

4.18 verify

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

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

Parameter	Parameter	Description
Description	/md5	Computes and displays MD5.
	md5-value	The file MD5, which is compared with the computed MD5.
	filesystem:	The URL of file system, followed by a colon (:). The file system includes flash: , tmp: .
	file-url	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 Privileged EXEC mode.

Mode

Usage Guide N/A

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

Examples
 Orion Alpha A28X#verify flash:/gcc
 8b072de7db7affd8b2ef824e7e4d716c

The following example computes MD5 of flash:/gcc and makes a comparison.

```
Orion Alpha A28X#verify /md5 8b072de7db7affd8b2ef824e7e4d716c flash:/gcc
%SUCCESS verifying /mnt/flash/gcc = 8b072de7db7affd8b2ef824e7e4d716c
Orion Alpha A28X#verify /md5 8b072de7db7affd8b2ef824e7e4d71 flash:/gcc
%Error verifying flash:/gcc
Computed signature = 8b072de7db7affd8b2ef824e7e4d716c
Submitted signature = 8b072de7db7affd8b2ef824e7e4d71
```

Related

Commands

Command	Description
N/A	N/A

Platform

N/A

Description

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.

Configuration Examples 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 Alpha A28X# calendar set 6
06:41:39 UTC Fri, Jul 6, 2012
```

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 Alpha A28X# calendar set 6:42
```

```
06:42:27 UTC Fri, Jul 6, 2012
```

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 Alpha A28X# 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 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 The following example enables the system to synchronize the software time with the hardware time.

```
Orion Alpha A28X# 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 1. 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".

2. 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".

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

```
Orion Alpha A28X# clock set 6
06:48:13 CST Fri, Mar 2, 2012
```

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 Alpha A28X# clock set 6:42
06:42:31 CST Fri, Mar 2, 2012
```

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 Alpha A28X# 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

Configuration Assume that the time zone name of your living place is ABC and the standard time is 8:15 ahead of UTC,

Examples

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 Alpha A28X(config)# clock timezone ABC 8 15
Set time zone name: ABC (GMT+08:15)
Orion Alpha A28X(config)#show clock
16:39:16 ABC Wed, Feb 29, 2012
Orion Alpha A28X(config)#show calendar
08:24:35 GMT Wed, Feb 29, 2012

Orion Alpha A28X(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 Alpha A28X# 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 Alpha A28X#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 Alpha A28X#show clock
18:00:12 ABC Sun, Jan 1, 2012
```

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 Alpha A28X(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
```

The following example disables summer time.

```
Orion Alpha A28X(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.  If the time is slower than the UTC time, add "-" before <i>hours-offset</i> .
<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

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

```
Orion Alpha A28X(config)# clock timezone CST 8
```

```
Set time zone name: CST (GMT+08:00)
```

```
Orion Alpha A28X# show clock
```

```
18:00:17 CST Wed, Dec 5, 2012
```

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

```
Orion Alpha A28X(config)# clock timezone TZA -6 13
```

```
Set time zone name: TZA (GMT-06:13)
```

The following example removes the time zone settings.

```
Orion Alpha A28X(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	Parameter	Description
Description	-	-

Defaults -**Command Mode** Privileged EXEC mode**Default Level** -**Usage Guide** 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** The following example enables the system to synchronize the hardware time with the software time.**Examples**

```
Orion Alpha A28X# clock update-calendar
Set the hardware time from the system clock.
```

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 Alpha A28X# show clock
09:30:21 TSZ Wed, Feb 29, 2012

Orion Alpha A28X# clock update-calendar
Set the hardware time from the system clock.

Orion Alpha A28X#show calendar
04:20:25 UTC Wed, Feb 29, 2012
```

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 Alpha A28X# show clock
09:30:02 TSZ Wed, Feb 29, 2012

Orion Alpha A28X# clock update-calendar
Set the hardware time from the system clock.
```

```
Orion Alpha A28X#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 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 The following example sets the CPU usage watermark to the default value and enables CPU usage monitoring (if it is disabled).

```
Orion Alpha A28X(config)# default cpu high-watermark set
Reset default cpu watermark monitor
set system cpu watermark high 80%(75%~85%)
```

The following example disables CPU usage monitoring.

```
Orion Alpha A28X(config)# no cpu high-watermark set
Close cpu watermark monitor
```

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

```
Orion Alpha A28X(config)# cpu high-watermark set
Open cpu watermark monitor
set system cpu watermark high 80%(75%~85%)
```

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

```
Orion Alpha A28X(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 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:

Message

```
*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 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 Global configuration mode

Mode

Default Level -

Usage Guide -

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

Examples

```
Orion Alpha A28X# 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 Alpha A28X(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 -

5.9 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 the **no** or **default** form of 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** Global configuration mode
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 The following example sets the low watermark threshold of the memory to 500,000 KB and enables detection.

```
Orion Alpha A28X(config)#memory low-watermark 500000
```

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 [:minute [: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

Mode

Default Level -

Usage Guide -

Configuration Examples The following example reloads the device.

```
Orion Alpha A28X# 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 Description	Parameter	Description
	-	-

Command Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide -

Configuration Examples The following example displays the hardware calendar.

```
Orion Alpha A28X# show calendar
21:57:48 GMT Sun, Feb 28, 2012
```

Prompt Message -

Platform Description -

5.12 show clock

Use this command to display the system software clock.

show clock

Parameter Description	Parameter	Description
	-	-

Command Mode Privileged EXEC mode / global configuration mode

Default Level -

Usage Guide -

Configuration Examples The following example displays the software clock when the time zone is disabled.

```
Orion Alpha A28X# show clock
18:22:20 UTC Tue, Dec 11, 2012
```

The following example displays the software clock when the time zone is enabled.

```
Orion Alpha A28X# show clock
03:07:49 TSZ Wed, Feb 29, 2012
```

Prompt -
Message -
Platform -
Description -

5.13 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 Mode Privileged EXEC mode/ global configuration mode

Default Level -

Usage Guide 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 The following example displays the information on the system task running on the control core instead of the non-virtual core.

```
Orion Alpha A28X#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 -

5.14 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 The following example displays the memory usage of each task and the ranking (based on the total memory usage).

```
Orion Alpha A28X# 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-filessystem
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         rg-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

5.15 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

Privileged EXEC mode/ global configuration mode

Mode

Default Level

-

Usage Guide

-

Configuration

The following example displays the information on the device mounted to the PCI bus.

Examples

```
Orion Alpha A28X# 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

N0:1
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 -

5.16 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

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

Examples

```
Orion Alpha A28X# 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--
```

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 Alpha A28X# 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
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.

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 Alpha A28X #show processes cpu nonzero
```

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 Alpha A28X #show processes cpu 5sec nonzero
```

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.

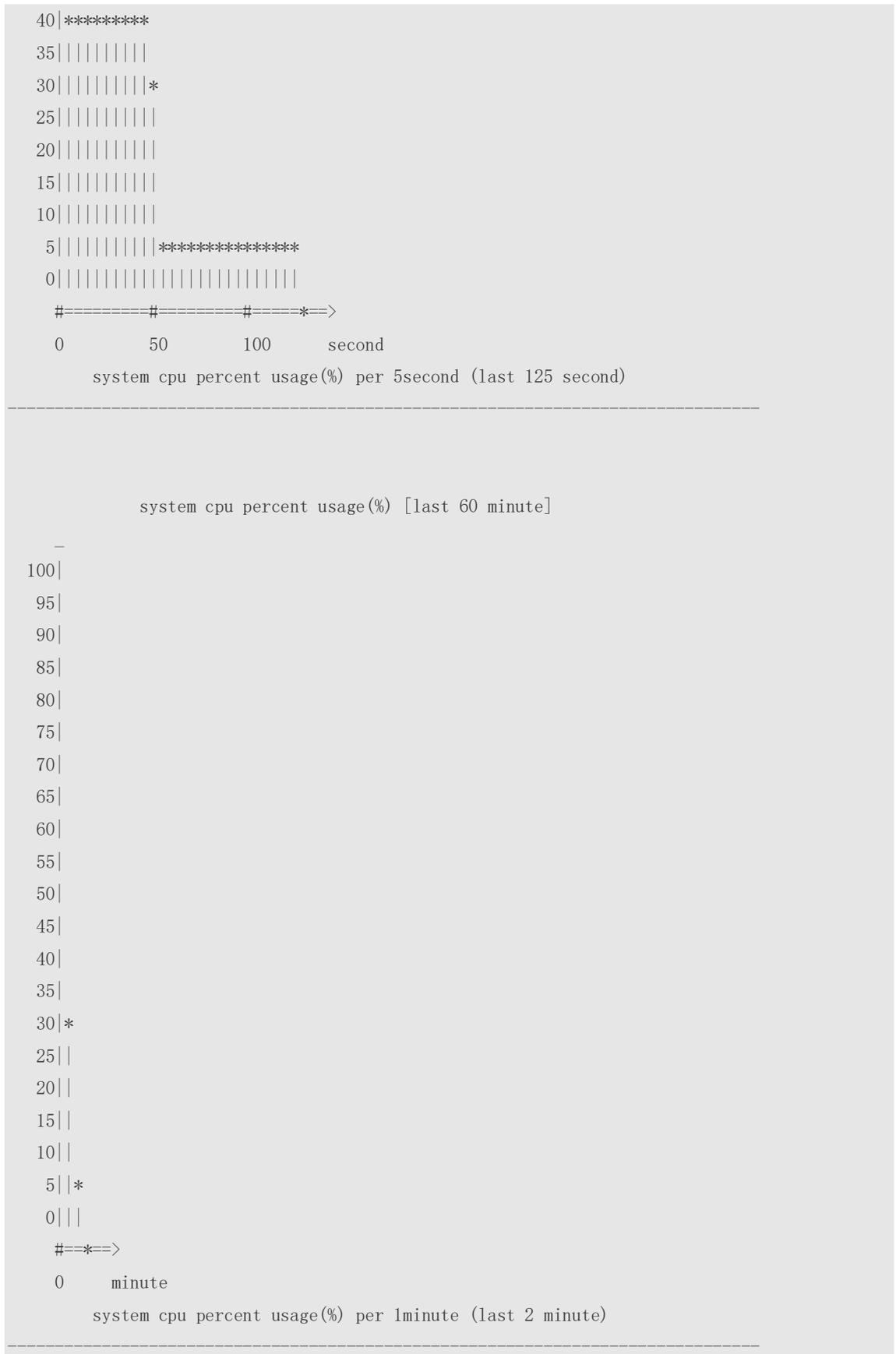
Example:

```
Orion Alpha A28X#show processes cpu history
```

```

system cpu percent usage(%) [last 300 second]
-
100|
 95|
 90|
 85|
 80|
 75|
 70|
 65|
 60|
 55|
 50|
 45|

```



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 Alpha A28X #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 -

5.17 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

Mode

Default Level -

Usage Guide

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

```
Orion Alpha A28X# 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 Alpha A28X# 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

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

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

```
Orion Alpha A28X# show process cpu detailed 1715
```

Prompt -
Message -
Platform -
Description -

5.18 show reboot-reason

Use this command to display the reboot reason.

show reboot-reason [*all*]

Parameter Description	Parameter	Description
	<i>all</i>	Displays the reboot reason of all devices/service modules

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

Default Level -

Usage Guide -

Configuration Examples The following example displays the reboot reason of the device.

```
Orion Alpha A28X#show reboot-reason
time: 1970-01-01 08:03:13
reason: reload cmd
info: /sbin/rg-sysmon/3844
```

```
Orion Alpha A28X#
```

Prompt -
Message -
Platform -
Description -

5.19 show version

Use this command to display the system version information.

show version

Parameter	Parameter	Description
Description	-	-

Command Privileged EXEC mode/ global configuration mode
Mode

Default Level -

Usage Guide -

Usage Guide The following example displays the system version information.

```
Orion Alpha A28X# show version
System description      : Orion Alpha A28X Indoor AP320-I (802.11a/n and 802.11b/g/n) By Orion Alpha
A28X 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_switch11.0(1B1)
System serial number   : 1234942570018
System boot version    : 1.0.0
```

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 <i>time date</i>	Indicates the start time of the range.
	end <i>time date</i>	Indicates the end time of the range.

Defaults The default absolute time range is the maximum range.

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

```
Orion Alpha A28X(config)# time-range no-http
Orion Alpha A28X(config-time-range)#
```

The following example configures an absolute time range.

```
Orion Alpha A28X(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 Mode Time range configuration 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 Alpha A28X(config)# time-range no-http
Orion Alpha A28X(config-time-range)#
```

The following example configures a periodic time interval.

```
Orion Alpha A28X(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 The following example displays the time range configuration.

Examples

```
Orion Alpha A28X# 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 The following example creates a time range.

Examples

```
Orion Alpha A28X(config)# time-range no-http
Orion Alpha A28X(config-time-range)#
```

Check

Method

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

Prompt -

Message

Platform

Description

7 HTTP Service Commands

7.1 enable service web-server

Use this command to enable the HTTP service function.

Use the **no** or **default** form of this command to disable the HTTP service function.

enable service web-server [**http** | **https** | **all**]

no enable service web-server [**http** | **https**]

default enable service web-server [**http** | **https**]

Parameter Description	Parameter	Description
	http	Enables the HTTP service.
	https	Enables the HTTPS service.
	all	Enables both the HTTP service and the HTTPS service.

Defaults By default, the HTTP service function is disabled.

Command mode Global configuration mode.

Usage Guide If run a command ends with the keyword **all** or without keyword, it indicates enabling both the HTTP service and the HTTPS service; if run a command ends with keyword **http**, it indicates enabling the HTTP service; if run a command ends with keyword **https**, it indicates enabling the HTTPS service. Use the command **no enable service web-server** to disable the corresponding HTTP service.

Configuration The following example enables both the HTTP service and the HTTPS service:

Examples

```
Orion Alpha A28X#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Orion Alpha A28X(config)#enable service web-server
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

7.2 http port

Use this command to configure the HTTP port number.

Use the **no** form of this command to restore the default HTTP port number.

http port *port-number*

no http port

Parameter Description	Parameter	Description
	<i>port-number</i>	Configures the HTTP port number. The value includes 80, 1025 to 65,535.

Defaults The default HTTP port number is 80.

Command mode Global configuration mode.

Usage Guide Use this command to configure the HTTP port number.

Configuration The following example configures the HTTP port number as 8080:

Examples Orion Alpha A28X(config)#http port 8080

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

7.3 http secure-port

Use this command to configure the HTTPS port number.

Use the **no** form of this command to restore the default HTTPS port number.

http secure-port *port-number*

no http secure-port

Parameter Description	Parameter	Description
	<i>port-number</i>	Configures the HTTPS port number. The value includes 443, 1025 to 65,535.

Defaults The default HTTP port number is 443.

Command mode Global configuration mode.

Usage Guide Use this command to configure the HTTPS port number.

Configuration The following example configures the HTTPS port number as 4443:

Examples Orion Alpha A28X(config)#http secure-port 4443

Related Commands	Command	Description
	enable service web-server	Enables the HTTP service.

show web-server status	Displays the configuration and status of the Web service.
-------------------------------	-----------------------------------------------------------

Platform N/A

Description

7.4 show web-server status

Use this command to display the configuration and status of the Web service.

show web-server status

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command mode Privileged EXEC mode

Usage Guide N/A

Configuration The following example displays the configuration and status of the Web service:

Examples

```
Orion Alpha A28X#show web-server status
http server status : enabled
http server port : 80
https server status: enabled
https server port: 443
```

Related Commands	Command	Description
	enable service web-server	Enables the HTTP service.
	http port	Configures the HTTP port number.
	http secure-port	Configures the HTTPS port number.

Platform N/A

Description

7.5 upgrade web

Use this command to upgrade the Web package in local file system.

upgrade web *uri*

Parameter Description	Parameter	Description
	<i>uri</i>	The storage path of the Web package.

Defaults N/A**Command mode** Privileged EXEC mode**Usage Guide** Please use the **copy** command to copy the Web package into the file system before you use this command to upgrade the Web package.**Configuration** The following example copies a Web package into the file system and upgrades the package.**Examples**

```
Orion Alpha A28X#copy tftp://192.168.23.24/web.upd flash:/web.upd
Orion Alpha A28X#upgrade web flash:/web.upd
```

Related Commands

Command	Description
enable service web-server	Enables the HTTP service.

Platform Description N/A

7.6 upgrade web download

Use this command to download the Web package from the TFTP server and upgrade the package automatically.

upgrade web download tftp: path

Parameter Description

Parameter	Description
tftp: path	<i>path</i> indicates the storage path of the Web package on the TFTP server. tftp indicates the system downloads the Web package from the TFTP server through the physical port and upgrades the Web package automatically.

Defaults N/A**Command mode** Global configuration mode.**Usage Guide** N/A**Configuration Examples** The following example downloads a Web package from the TFTP server and upgrades the package automatically.

```
Orion Alpha A28X#upgrade web download tftp://192.168.23.24/web.upd
```

Related Commands

Command	Description
enable service web-server	Enables the HTTP service.

Platform N/A

Description

7.7 webmaster level

Use this command to configure the username and password for Web login authentication. Use the **no** form of this command to restore the default setting.

webmaster level *privilege-level* **username** *name* **password** { *password* | [**0** | **7**] *encrypted-password* }

no webmaster level *privilege-level* [**username** *name*]

Parameter Description

Parameter	Description
<i>privilege-level</i>	Configures the user privilege-level.
<i>name</i>	Username.
<i>password</i>	Password.
0 7	Password type; 0 indicates plaintext, 7 indicates ciphertext.
<i>encrypted-password</i>	Password text.

Defaults

By default, two users are configured.

1. User1 is configured with privilege level 1, username of admin and plaintext password of admin.
2. User2 is configured with privilege level 2, username of guest and plaintext password of guest.

Command mode

Global configuration mode.

Usage Guide

When HTTP is enabled, users can log in to the Web interface only after being authenticated. Use this command to configure the username and password for Web login authentication.

Use the **no webmaster level** *privilege-level* command to delete all the usernames and passwords with a specified *privilege-level*.

Use the **no webmaster level** *privilege-level* **username** *name* command to delete the specified username and password.



Usernames and passwords come with three permission levels, each of which includes at most 10 usernames and passwords.

Configuration

The following example configures the username and password for Web login authentication,

Examples

```
Orion Alpha A28X(config)#webmaster level 0 username Orion Alpha A28X
password admin
```

Related Commands

Command	Description
enable service web-server	Enables the HTTP service.

Platform

N/A

Description

8 Syslog Commands

8.1 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 Alpha A28X# **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

8.2 logging

Use this command to send the log message to the specified syslog server.

logging { *ip-address* | **ipv6** *ipv6-address* } [**udp-prot** *port*]

Use this command to delete the specified syslog server.

no logging { *ip-address*] | **ipv6** *ipv6-address* }

Use this command to restore the default port 514.

no logging { *ip-address* | **ipv6** *ipv6-address* } **udp-prot**

Parameter Description	Parameter	Description
	<i>ip-address</i>	Sets the IP address of the host receiving log messages.
	<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 The following example configures a syslog server with IP address 202.101.11.1.

Examples Orion Alpha A28X(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 Alpha A28X(config)# logging 202.101.11.1 udp-port 8099

The following example configures a syslog server with IPv6 address AAAA:BBBB::FFFF.

Orion Alpha A28X(config)# logging ipv6 AAAA:BBBB::FFFF

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

8.3 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 Description	Parameter	Description
	<i>buffer-size</i>	
<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.
access switches: 128 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

The following example allows logs at and below severity 6 to be recorded in the memory buffer sized 10,000 bytes.

Examples

```
Orion Alpha A28X(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

8.4 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	Parameter	Description
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 Alpha A28X(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

8.5 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	Parameter	Description
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 Alpha A28X(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

8.6 logging delay-send file

Use this command to set the name of the log file saved locally for delay sending. Use the **no** form of this command to restore the default setting.

logging delay-send file flash:filename

no logging delay-send file

Parameter Description	Parameter	Description
	flash:filename	Sets the name of the log file saved locally for delay sending.

Defaults The default name format is as follows: file size_device IP address_index.txt. If you want to change the file name, the file sent to the remote server should be named as follows: prefix_file size_device IP address_index.txt; the file saved locally should be named as follows: prefix_index.txt. The default prefix is syslog_ftp_server.

Command Mode Global configuration mode

Usage Guide The file name cannot contain special symbols including . \ : * " < > and |.
For example, the file name is log_server, file index 5, file size 1000B and device IP address 10.2.3.5. The log file sent to the remote server is named log_server_1000_10.2.3.5_5.txt and the log file saved locally is named log_server_5.txt.
If the device has an IPv6 address, the colon (:) in the IPv6 address is replaced by the hyphen (-).
For example, the is log_server, file index 6, file size 1000B and device IPv6 address 2001::1. The log file sent to the remote server is named log_server_1000_2001-1_6.txt and the log file saved locally

is named log_server_6.txt.

Configuration The following example sets the name of the log file saved locally to log_server.

Examples Orion Alpha A28X(config)# logging delay-send file flash:log_server

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

8.7 logging delay-send interval

Use this command to set the interval at which log sending is delayed. Use the **no** form of this command to restore the default setting.

logging delay-send interval *seconds*

no logging delay-send interval

**Parameter
Description**

Parameter	Description
<i>seconds</i>	Sets the interval at which log sending is delayed, in the range from 600 to 65535 seconds.

Defaults

The default is 3600.

**Command
Mode**

Global configuration mode

Usage Guide

N/A

Configuration The following example sets the the interval at which log sending is delayed to 600 seconds.

Examples Orion Alpha A28X(config)# logging delay-send interval 600

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description**

N/A

8.8 logging delay-send server

Use this command to configure the serve address and log sending mode. Use the **no** form of this command to restore the default setting.

logging delay-send server { *ip-address* | **ipv6** *ipv6-address* } **mode** { **ftp user** *username password* [**0** | **7**] *password* | **tftp** }

no logging delay-send server { *ip-address* | **ipv6** *ipv6-address* }

Parameter Description	Parameter	Description
	<i>ip-address</i>	Specifies the IP address of the server.
	ipv6 <i>ipv6-address</i>	Specifies the IPv6 address of the server.
	<i>username</i>	Sets the FTP server username.
	<i>password</i>	Sets the FTP server password.
	0	(Optional) The password is displayed in plaintext.
	7	The password are encrypted.

Defaults This function is disabled by default,

Command Mode Global configuration mode

Usage Guide This command is used to specify an FTP/TFTP server to receive logs. You can configure five FTP/TFTP servers. Logs are sent to all configured servers simultaneously.

Configuration Examples The following example specifies an FTP server whose IP address is 192.168.23.12, username admin and password admin,

```
Orion Alpha A28X(config)# logging delay-send server 192.168.23.12 mode ftp
user admin password admin
```

The following example specifies a TFTP server whose IPv6 address is 2000::1.

```
Orion Alpha A28X(config)# logging delay-send server ipv6 2000::1 mode tftp
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

8.9 logging delay-send terminal

Use this command to enable delay in sending logs to console and remote terminal. Use the **no** form of this command to restore the default setting.

logging delay-send terminal

no logging delay-send terminal

Parameter Description	Parameter	Description
	N/A	N/A

Defaults This function is disabled by default.

Command Mode Global configuration mode

Usage Guide N/A

Configuration The following example enables delay in sending logs to console and remote terminal.

Examples Orion Alpha A28X(config)# logging delay-send terminal

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

8.10 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
Description**

Parameter	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 switch is 23 (local 7).

Configuration The following example sets the device value of **Syslog** as **kernel**:

Examples Orion Alpha A28X(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

8.11 logging file

Use this command to save log messages in the log file, which can be saved in hardware disk, expanded FLASH, USB or SD card. Use the **no** form of this command to restore the default setting,

logging file { flash:filename } [max-file-size] [level]

no logging file

**Parameter
Description**

Parameter	Description
flash	Saves the log file in expanded FLASH.
<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
Mode** Global configuration 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 Alpha A28X(config)# logging file flash:syslog
```

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

8.12 logging file numbers

Use this command to set the number of log files written into FLASH. Use the **no** form of this command to restore the default setting.

logging file numbers *numbers*

no logging file numbers

Parameter Description

Parameter	Description
<i>numbers</i>	Sets the number of log files written into FLASH, in the range from 2 to 32.

Defaults The default is 16.

Command Global configuration mode

Mode

Usage Guide The system does not delete previously generated log files even if you change this configuration, Therefore, you need to delete the log files manually to save FLASH size (you can send log files to the server through TFTP before that). For example, 16 log files are generated by default before you want to change the number to 2. New logs are overwritten constantly in log files indexed 0 to 1. However, log files indexed from 2 to 16 remain. You can delete these log files manually as needed.

Configuration The following example sets the number of log files written into FLASH to 8.

Examples Orion Alpha A28X(config)# logging file numbers 8

Related Commands

Command	Description
N/A	N/A

Platform Description N/A

8.13 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 Global configuration mode

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 Alpha A28X(config)# logging filter direction terminal

Related Commands

Command	Description
N/A	N/A

Platform

N/A

Description

8.14 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 Alpha A28X(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 Alpha A28X(config)# logging filter rule single-match module SYS
```

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

8.15 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 Mode Global configuration 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 The following example sets the filter type to contains-only.

Examples Orion Alpha A28X(config)# logging filter type contains-only

Related Commands	Command	Description
	N/A	N/A

Platform N/A
Description

8.16 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 Global configuration mode

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 The following example writes log messages in the system buffer into the flash file immediately.

Examples Orion Alpha A28X(config)# logging flash flush

Related Commands	Command	Description
	N/A	N/A

Platform N/A

Description

8.17 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 Global configuration mode

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 The following example sets the interval to write log messages into the flash file to 300 seconds.

Examples Orion Alpha A28X(config)# logging flash interval 300

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

8.18 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 The following example sets the preservation duration of logs whose level is 6 to 10 days.

Examples Orion Alpha A28X(config)# logging life-time level 6 10

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

8.19 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 Alpha A28X(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

8.20 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 Mode Global configuration 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 Alpha A28X(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

8.21 logging policy

Use this command to configure the severity ranking policy. Use the **no** form of this command to remove one policy, Use the **no logging policy** command to remove all policies.

logging policy module *module-name* [**not-lesser-than**] *level* **direction** { **all** | **server** | **file** | **console** | **monitor** | **buffer** }

no logging policy module *module-name* [**not-lesser-than**] *level* **direction** { **all** | **server** | **file** | **console** | **monitor** | **buffer** }

no logging policy

Parameter Description

Parameter	Description
<i>module-name</i>	The name of the module applying the ranking policy.
not-lesser-than	If this parameter is specified, only when the log's level is not lower than the configured level can the log be sent. Otherwise, the log is filtered. If this parameter is not specified, only when the log's level is not higher than the configured level can the log be sent. Otherwise, the log is filtered.
<i>level</i>	Severity level

all	Applies the ranking policy in all directions.
server	Applies the ranking policy to the direction toward the server.
file	Applies the ranking policy to the direction toward the log file.
console	Applies the ranking policy to the direction toward the console.
monitor	Applies the ranking policy to the direction toward the remote server.
buffer	Applies the ranking policy to the direction toward the buffer.

Defaults This function is disabled by default.

Command Global configuration mode

Mode

Usage Guide This command is used to send logs to different destinations based on module and severity.

Configuration Examples The following example sends logs of the SYS module leveled above 5 to the console and sends logs of the SYS module leveled below 3 to the buffer.

```
Orion Alpha A28X(config)# logging policy module SYS not-lesser-than 5
direction console
Orion Alpha A28X(config)# logging policy module SYS 3 direction buffer
```

Related Commands

Command	Description
N/A	N/A

Platform Description

N/A

8.22 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 Alpha A28X(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

8.23 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 Description	Parameter	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 Alpha A28X(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

Related	Command	Description
		information in the buffer.

Platform Description N/A

8.24 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 Description	Parameter	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 Alpha A28X(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

8.25 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 { ip-address | ipv6 ipv6-address } [ udp-prot port ]
```

```
no logging server { ip-address| ipv6 ipv6-address }
```

```
no logging server { ip-address | ipv6 ipv6-address } udp-prot
```

Parameter	Parameter	Description
Description	<i>ip-address</i>	IP address of the host that receives log information.
	<i>ipv6-address</i>	Specifies IPV6 address for the host receiving the logs.
	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.

Configuration The following example specifies a syslog server of the address 202.101.11.1:

```
Orion Alpha A28X(config)# logging server 202.101.11.1
```

The following example specifies an ipv6 address as AAAA:BBBB:FFFF:

```
Orion Alpha A28X(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

8.26 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 Alpha A28X(config)# logging source interface loopback 0
```

	Command	Description
Related Commands	logging server	Sends logs to the Syslog server.

Platform Description N/A

8.27 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	Description
Parameter 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 The following example specifies 192.168.1.1 as the source address of the syslog messages:

Examples Orion Alpha A28X(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

8.28 logging statistic enable

Use this command to enable logging periodically. Use **no** form of this command to restore the default setting.

logging statistic enable

no logging statistic enable

Parameter Description	Parameter	Description
	N/A	N/A

Defaults This function is disabled by default.

Command Mode Global configuration mode

Usage Guide This command is used to send performance statistics at a certain interval for the server to monitor the system performance.

Configuration The following example enables logging periodically.

Examples Orion Alpha A28X(config)# **logging statistic enable**

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

8.29 logging statistic interval

Use this command to configure the interval at which logs are sent. Use the **no** form of this command to restore the default setting.

logging statistic mnemonic *mnemonic interval minutes*

no logging statistic mnemonic *mnemonic*

Parameter Description	Parameter	Description
	<i>mnemonic</i>	Sets the mnemonics to identify the object.
	<i>minutes</i>	Sets the interval at which logs are sent, in the unit of minutes.

Defaults The default is 15.

Command Mode Global configuration mode

Usage Guide The available settings include 0, 15, 30, 60 and 120. 0 indicates this function is disabled.

Configuration Examples The following example set the interval at which logs are sent to 30 minutes.

```
Orion Alpha A28X(config)# logging statistic mnemonic TUNNEL_STAT interval 30
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

8.30 logging statistic terminal

Use this command to enable logs to be sent to the console and the remote terminal periodically. Use the **no** form of this command to restore the default setting.

logging statistic terminal

no logging statistic terminal

Parameter Description	Parameter	Description
	N/A	N/A

Defaults This function is disabled by default.

Command Mode Global configuration mode

Usage Guide N/A

Configuration Examples The following example enable logs to be sent to the console and the remote terminal.

```
Orion Alpha A28X(config)# logging statistic terminal
```

Related Commands	Command	Description
	N/A	N/A

Platform
Description

N/A

8.31 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
Description

Parameter	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 Alpha A28X(config)#line console 0
```

```
Orion Alpha A28X(config-line)#logging synchronous
```

Print UP-DOWN logs on the port when keying in the command, the input command will be output again:

```
Orion Alpha A28X# 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 Alpha A28X# 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

8.32 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 Alpha A28X(config)# logging 202.101.11.22
Orion Alpha A28X(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

8.33 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	Parameter	Description
-----------	-----------	-------------

N/A	N/A
-----	-----

Defaults No log message is printed recording user log/exit by default.

Command Global configuration mode

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 The following example enables the logging function to record user log/exit.

Examples Orion Alpha A28X(config)# logging user-info

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

8.34 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 Global configuration mode

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 The following example enables the logging function to record user operation.

Examples Orion Alpha A28X(config)# logging user-info command-log

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

8.35 service log-format rfc5424

Use this command to enable the RFC5424 format. Use the **no** form of this command to restore the default setting.

service log-format rfc5424

no service log-format rfc5424

**Parameter
Description**

Parameter	Description
N/A	N/A

Defaults The RFC3164 format is used by default.

**Command
Mode** Global configuration mode

Usage Guide After the RFC5424 format is enabled, the service sequence-numbers, service sysname, **service timestamps**, **service private-syslog** and **service standard-syslog** commands become invalid and hidden.

After switching back to the RFC3164 format, the **logging delay-send**, **logging policy** and **logging statistic** commands become invalid and hidden.

After switching the log format, the results of running the **show logging** and **show logging config** commands change,

Configuration The following example enables the RFC5424 format.

Examples Orion Alpha A28X(config)# service log-format rfc5424

**Related
Commands**

Command	Description
N/A	N/A

**Platform
Description** N/A

8.36 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 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 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 The following example sets the private syslog format.

Examples Orion Alpha A28X(config)# service private-syslog

**Related
Commands**

Command	Description
N/A	N/A

Platform N/A

Description

8.37 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
Description**

Parameter	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 Alpha A28X(config)# **service sequence-numbers**

Related	Command	Description
Commands	logging on	Turns on the log switch.
	service timestamps	Attaches timestamps to the logs.

Platform N/A
Description

8.38 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 The following example sets the standard syslog format.

Examples Orion Alpha A28X(config)# **service standard-syslog**

Related	Command	Description
Commands	N/A	N/A

Platform N/A
Description

8.39 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	Parameter	Description
Description	N/A	N/A

Defaults No system name is attached to logs by default.

Command Mode Global configuration 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:

```
Mar 22 15:28:02 %SYS-5-CONFIG: Configured from console by console
Orion Alpha A28X #config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Orion Alpha A28X (config)#service sysname
Orion Alpha A28X (config)#end
Orion Alpha A28X #
Mar 22 15:35:57 S3250 %SYS-5-CONFIG: Configured from console by console
```

Related	Command	Function
Commands	show logging	Displays basic configuration of log modules and log information in the buffer.

Platform Description N/A

8.40 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	Parameter	Description
-----------	-----------	-------------

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*millisecond, 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 Alpha A28X(config) # service timestamps debug datetime msec
Orion Alpha A28X(config) # service timestamps log datetime msec
Orion Alpha A28X(config) # end
Orion Alpha A28X(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

8.41 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	Parameter	Description
Description	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide N/A

Configuration Examples The following command displays the result of the **show logging** command with RFC5424 format disabled.

```
Orion Alpha A28X# 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 Alpha A28X %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to up.
015488: *Sep 19 02:46:13: Orion Alpha A28X %LINEPROTO-5-UPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to up.
015489: *Sep 19 02:46:26: Orion Alpha A28X %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to down.
015490: *Sep 19 02:46:26: Orion Alpha A28X %LINEPROTON/A5N/AUPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to down.
015491: *Sep 19 02:46:28: Orion Alpha A28X %LINKN/A3N/AUPDOWN: Interface
FastEthernet 0/24, changed state to up.
015492: *Sep 19 02:46:28: Orion Alpha A28X %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 Alpha A28X# 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 Alpha A28X - 7 - - Please config
the IP address for capwap.
<132>1 2013-07-24T12:20:02.80313Z Orion Alpha A28X CAPWAP 4 NO_IP_ADDR -
No ip address for capwap.
<135>1 2013-07-24T12:20:02.80343Z Orion Alpha A28X - 7 - - Please config
the IP address for capwap.
<132>1 2013-07-24T12:20:32.250265Z Orion Alpha A28X CAPWAP 4 NO_IP_ADDR -
No ip address for capwap.

```

```
<134>1 2013-07-24T12:29:33.410123Z Orion Alpha A28X SYS 6 SHELL_LOGIN
[USER@4881 name="" type="" from="console"] user login success.
<134>1 2013-07-24T12:29:34.343763Z Orion Alpha A28X 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

8.42 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

The following example displays the outcome of running the **show logging config** command with

Examples

RFC5424 disabled.

```
Orion Alpha A28X# 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 Alpha A28X# 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

8.43 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:

```
Orion Alpha A28X# 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 Description N/A

8.44 show logging reverse

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 now to before.

show logging reverse

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode

Usage Guide

Configuration Examples The following command displays the result of the **show logging reverse** command with RFC5424 format disabled.

```
Orion Alpha A28X# show logging reverse
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,
015492: *Sep 19 02:46:28: Orion Alpha A28X %LINEPROTO-5-UPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to up.
015491: *Sep 19 02:46:28: Orion Alpha A28X %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to up.
015490: *Sep 19 02:46:26: Orion Alpha A28X %LINEPROTO-5-UPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to down.
015489: *Sep 19 02:46:26: Orion Alpha A28X %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to down.
015488: *Sep 19 02:46:13: Orion Alpha A28X %LINEPROTO-5-UPDOWN: Line
protocol on Interface FastEthernet 0/24, changed state to up.
015487: *Sep 19 02:46:13: Orion Alpha A28X %LINK-3-UPDOWN: Interface
FastEthernet 0/24, changed state to up.

```

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 reverse** command with RFC5424 format enabled.

```

Orion Alpha A28X# show logging reverse
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
<134>1 2013-07-24T12:29:34.343763Z Orion Alpha A28X SYS 6 SHELL_CMD
[USER@4881 name=""][CMD@4881 task="rl_con" cmd="enable"]
<134>1 2013-07-24T12:29:33.410123Z Orion Alpha A28X SYS 6 SHELL_LOGIN
[USER@4881 name="" type="" from="console"] user login success.
<132>1 2013-07-24T12:20:32.250265Z Orion Alpha A28X CAPWAP 4 NO_IP_ADDR -
No ip address for capwap.
<135>1 2013-07-24T12:20:02.80343Z Orion Alpha A28X - 7 - - Please config
the IP address for capwap.
<132>1 2013-07-24T12:20:02.80313Z Orion Alpha A28X CAPWAP 4 NO_IP_ADDR -
No ip address for capwap.
<135>1 2013-07-24T12:19:33.130290Z Orion Alpha A28X - 7 - -
Please config the IP address for capwap.

```

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	Description
N/A	N/A

Platform

N/A

Description

8.45 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	Parameter	Description
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 Examples The following example allows log information to be printed on the current VTY window:

```
Orion Alpha A28X# terminal monitor
```

Related Commands	Command	Description
	N/A	N/A

Platform Description N/A

Command History	Version	Description
	N/A	N/A

9 ZAM Commands

9.1 show zam

Use this command to display the current configuration and status of ZAM.

show zam

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Privileged EXEC mode/Global configuration mode/Interface configuration mode

Usage Guide N/A

Configuration Examples The following example displays the current configuration and status of ZAM.

```
Orion Alpha A28X#
Orion Alpha A28X#show zam
ZAM state          : disable
ZAM status         : Now is idle
ZAM manage interface: Mgmt 0

Orion Alpha A28X#
```

Platform Description N/A

9.2 zam

Use this command to enable ZAM. Use the **no** form of this command to disable ZAM.

zam

Parameter Description	Parameter	Description
	N/A	N/A

Defaults N/A

Command Mode Global configuration mode

Usage Guide

Configuration Examples The following example disables ZAM.
Orion Alpha A28X(config)# no zam
Orion Alpha A28X(config)#

Platform Description N/A

10 Monitoring Commands

10.1 show power

Use this command to display power information including that of its basic condition, redundancy, allocation and version and etc.

show power

Parameter Description	Parameter	Description
	N/A	N/A
Command Mode	Privileged EXEC mode	
Level	14	
Usage Guide	This command is used to display power information	
Configuration Examples	N/A	
Prompt Messages	N/A	
Platforms	N/A	

10.2 show fan

Use this command to display the operating status and speed adjustment mode of all the fan trays.

show fan [speed]

Parameter Description	Parameter	Description
	N/A	N/A
Command Mode	Privileged EXEC mode	
Level	14	
Usage Guide	Use the show fan command without parameters to display the operating status and speed adjustment mode of all the fan trays.	
Configuration Examples	The following example displays the power information of S29XS.	
	<pre>Orion Alpha A28X#show fan Fan-id Fan-type Status</pre>	

```

-----
1      RG_FAN    ok
Orion Alpha A28X#show fan speed
Fan-id Fan-type  Status      Speed (R/m) Speed-level
-----
1      RG_FAN    ok          5040      N/A

```

The following example displays the power information of S29XS PoE.

```

Orion Alpha A28X#show fan
Fan-id Fan-type  Status
-----
1      RG_FAN    ok
2      RG_FAN    ok
Orion Alpha A28X#show fan speed
Fan-id Fan-type  Status      Speed (R/m) Speed-level
-----
1      RG_FAN    ok          N/A        1
2      RG_FAN    ok          N/A        1
Orion Alpha A28X#

```

Prompt Messages N/A

Platforms N/A

10.3 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 of S29XS.

```
Orion Alpha A28X#show temperature
Slot      Card_type                Current (C)  Status
-----  -
1/0      S2910-48GT4XS-E              43          ok
         S2910-48GT4XS-E              42          ok
Orion Alpha A28X#
```

The following example displays the temperature and threshold configuration of all boards of S29XS PoE.

```
Orion Alpha A28X#show temperature
slot_type                Current (C)  Status
-----  -
0         S2910C-24GT2XS-HP-E          28          ok
Orion Alpha A28X#
```

Prompt Messages

N/A

Platforms

N/A