Contents

Device management commands

clock datetime

Use **clock datetime** to set the system time.

Syntax

clock datetime *time date*

Default

The system time is UTC time 00:00:00 01/01/2013.

Views

User view

Predefined user roles

network-admin

Parameters

time: Specifies a time in the *hh:mm:ss* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. The value range for *ss* is 0 to 59. The leading zero in a segment can be omitted. If the seconds segment is 0 (*hh*:*mm*:00), you can omit it. If both the minutes and seconds segments are 0 (*hh*:00:00), you can omit both of the segments. For example, to specify 08:00:00, you can enter 8.

date: Specifies a date in the *MM/DD/YYYY* or *YYYY/MM/DD* format. The value range for *YYYY* is 2000 to 2035. The value range for *MM* is 1 to 12. The value range for *DD* varies by month.

Usage guidelines

Correct system time is essential to network management and communication. You must configure the system time correctly before you run the device on the network.

For the device to use the local system time, execute the **clock protocol none** command and this command in turn. The specified system time takes effect immediately. Then, the device uses the clock signals generated by its built-in crystal oscillator to maintain the system time.

A device power cycling operation restores the local system time to the default. After the device is power cycled, you must execute this command again to set the local system time.

Examples

Set the system time to 08:08:08 01/01/2015.

```
<Sysname> clock datetime 8:8:8 1/1/2015
```

Set the system time to 08:10:00 01/01/2015.

```
<Sysname> clock datetime 8:10 2015/1/1
```

Related commands

clock protocol

clock summer-time

clock timezone

display clock

clock protocol

Use **clock protocol** to specify the system time source.

Use **undo clock protocol** to restore the default.

Syntax

clock protocol { **none** | **ntp** }

undo clock protocol

Default

The device obtains the UTC time from an NTP time source.

Views

System view

Predefined user roles

network-admin

Parameters

none: Uses the system time set by using the **clock datetime** command.

ntp: Uses NTP to obtain the UTC time. You must configure NTP correctly. For more information about NTP and NTP configuration, see *Network Management and Monitoring Configuration Guide*.

Usage guidelines

Correct system time is essential to network management and communication. You must configure the system time correctly before you run the device on the network.

The device can use the locally set system time, or obtain the UTC time from a time source on the network and calculate the system time.

If you configure the **clock protocol none** command, the device uses the locally set system time. The device then uses the clock signals generated by its built-in crystal oscillator to maintain the system time.

If you configure the **clock protocol ntp** command, the device obtains the UTC time through NTP and calculates the system time. The device then periodically synchronizes the UTC time and recalculates the system time.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure the device to use the local UTC time.

```
<Sysname> system-view
[Sysname] clock protocol none
```

clock summer-time

Use **clock summer-time** to set the daylight saving time.

Use **undo clock summer-time** to restore the default.

Syntax

clock summer-time *name start-time start-date end-time end-date add-time*

undo clock summer-time

Default

The daylight saving time is not set.

Views

System view

Predefined user roles

network-admin

Parameters

name: Specifies a name for the daylight saving time schedule, a case-sensitive string of 1 to 32 characters.

start-time: Specifies the start time in the *hh:mm:ss* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. The value range for *ss* is 0 to 59. The leading zero in a segment can be omitted. If the seconds segment is 0 (*hh*:*mm*:00), you can omit it. If both the minutes and seconds segments are 0 (*hh*:00:00), you can omit both of the segments. For example, to specify 08:00:00, you can enter 8.

start-date: Specifies the start date in one of the following formats:

- *MM/DD*. The value range for *MM* is 1 to 12. The value range for *DD* varies by month.
- *month week day*, where:
  - *month*—Takes **January**, **February**, **March**, **April**, **May**, **June**, **July**, **August**, **September**, **October**, **November** or **December**.
  - *week*—Represents week of the month. It takes **first**, **second**, **third**, **fourth**, **fifth**, or **last**.
  - *day*—Takes **Sunday**, **Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, or **Saturday**.

end-time: Specifies the end time in the *hh:mm:ss* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. The value range for *ss* is 0 to 59. The leading zero in a segment can be omitted. If the seconds segment is 0 (*hh*:*mm*:00), you can omit it. If both the minutes and seconds segments are 0 (*hh*:00:00), you can omit both of the segments. For example, to specify 08:00:00, you can enter 8.

end-date: Specifies the end date in one of the following formats:

- *MM/DD*. The value range for *MM* is 1 to 12. The value range for *DD* varies by month.
- *month week day*, where:
  - *month*—Takes **January**, **February**, **March**, **April**, **May**, **June**, **July**, **August**, **September**, **October**, **November** or **December**.
  - *week*—Represents week of the month. It takes **first**, **second**, **third**, **fourth**, **fifth**, or **last**.
  - *day*—Takes **Sunday**, **Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, or **Saturday**.

add-time: Specifies the time to be added to the standard time, in the *hh:mm:ss* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. The value range for *ss* is 0 to 59. The leading zero in a segment can be omitted. If the seconds segment is 0 (*hh*:*mm*:00), you can omit it. If both the minutes and seconds segments are 0 (*hh*:00:00), you can omit both of the segments. For example, to specify 08:00:00, you can enter 8.

Usage guidelines

Correct system time is essential to network management and communication. You must configure the system time correctly before you run the device on the network.

After you set the daylight saving time, the device recalculates the system time. To view the system time, use the **display clock** command.

Make sure all devices on the network are using the same daylight saving time as the local time.

Examples

Set the system time ahead 1 hour for the period between 06:00:00 on 08/01 and 06:00:00 on 09/01.

```
<Sysname> system-view
[Sysname] clock summer-time PDT 6 08/01 6 09/01 1
```

Related commands

clock datetime

clock timezone

display clock

clock timezone

Use **clock timezone** to set the time zone.

Use **undo clock timezone** to restore the default.

Syntax

clock timezone *zone-name* { **add** | **minus** } *zone-offset*

undo clock timezone

Default

The UTC time zone is used.

Views

System view

Predefined user roles

network-admin

Parameters

zone-name: Specifies a time zone by its name, a case-sensitive string of 1 to 32 characters.

add: Adds an offset to the UTC time.

minus: Decreases the UTC time by an offset.

zone-offset: Specifies an offset to the UTC time, in the *hh:mm:ss* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. The value range for *ss* is 0 to 59. The leading zero in a segment can be omitted. If the seconds segment is 0 (*hh:mm*:00), you can omit it. If both the minutes and seconds segments are 0 (*hh*:00:00), you can omit both of the segments. For example, to specify 08:00:00, you can enter 8.

Usage guidelines

Correct system time is essential to network management and communication. You must configure the system time correctly before you run the device on the network.

After you set the time zone, the device recalculates the system time. To view the system time, use the **display clock** command.

Make sure all devices on the network are using the same time zone as the local time.

Examples

Set the name of the time zone to **Z5**, and add 5 hours to the UTC time.

```
<Sysname> system-view
[Sysname] clock timezone Z5 add 5
```

Related commands

clock datetime

clock summer-time

display clock

command

Use **command** to assign a command to a job.

Use **undo command** to revoke a command.

Syntax

command *id command*

undo command *id*

Default

No command is assigned to a job.

Views

Job view

Predefined user roles

network-admin

Parameters

id: Specifies an ID for the command, in the range of 0 to 4294967295. A command ID uniquely identifies a command in a job. Commands in a job are executed in ascending order of their command IDs.

command: Specifies the command to be assigned to the job.

Usage guidelines

To assign a command (command A) to a job, you must first assign the job the command or commands for entering the view of command A.

If you specify the ID of an existing command for another command, the existing command is replaced.

Make sure all commands in a schedule are compliant to the command syntax. The system does not examine the syntax when you assign a command to a job.

If a command requires a yes or no answer, the system always assumes that a **Y** or **Yes** is entered. If a command requires a character string input, the system assumes that either the default character string (if any) or a null string is entered.

A job cannot contain the **telnet**, **ftp**, **ssh2**, or **monitor process** command.

Examples

Assign commands to the **backupconfig** job to back up the **startup.cfg** file to the TFTP server at 192.168.100.11.

```
<Sysname> system-view
[Sysname] scheduler job backupconfig
[Sysname-job-backupconfig] command 2 tftp 192.168.100.11 put flash:/startup.cfg
backup.cfg
```

Assign commands to the **shutdownGE** job to shut down GigabitEthernet 1/0/1.

```
<Sysname> system-view
```

```
[Sysname] scheduler job shutdownGE
[Sysname-job-shutdownGE] command 1 system-view
[Sysname-job-shutdownGE] command 2 interface gigabitethernet 1/0/1
[Sysname-job-shutdownGE] command 3 shutdown
```

Related commands

scheduler job

copyright-info enable

Use **copyright-info enable** to enable copyright statement display.

Use **undo copyright-info enable** to disable copyright statement display.

Syntax

copyright-info enable

undo copyright-info enable

Default

Copyright statement display is enabled.

Views

System view

Predefined user roles

network-admin

Examples

Enable copyright statement display.

```
<Sysname> system-view
[Sysname] copyright-info enable
```

The device will display the following statement when a user logs in:

```
*******************************************************************************
* Copyright (c) 2004-2019 New H3C Technologies Co., Ltd. All rights reserved.*
* Without the owner's prior written consent,                                 *
* no decompiling or reverse-engineering shall be allowed.                    *
*******************************************************************************
```

display clock

Use **display clock** to display the system time, date, time zone, and daylight saving time.

Syntax

display clock

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display the system time and date when the time zone is not specified.
```
<Sysname> display clock
10:09:00.258 UTC Fri 03/16/2015
```
The time is in the *hour*:*minute*:*second.milliseconds* format.

Display the system time and date when the time zone Z5 is specified.
```
<Sysname> display clock
15:10:00.152 Z5 Fri 03/16/2015
Time Zone : Z5 add 05:00:00
```
Display the system time and date when the time zone Z5 and daylight saving time PDT are specified.
```
<Sysname> display clock
15:11:00.211 Z5 Fri 03/16/2015
Time Zone : Z5 add 05:00:00
Summer Time : PDT 06:00:00 08/01 06:00:00 09/01 01:00:00
```

Related commands

clock datetime

clock timezone

clock summer-time

display copyright

Use **display copyright** to display the copyright statement.

Syntax

display copyright

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display the copyright statement.
```
<Sysname> display copyright
...
```

display cpu-usage

Use **display cpu-usage** to display the current CPU usage statistics.

Syntax

display cpu-usage [**summary**] [**slot** *slot-number* [**cpu** *cpu-number* [**core** { *core-number*| **all** }]]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

summary: Displays CPU usage statistics in table form. If you do not specify this keyword, the command displays CPU usage statistics in text form.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays CPU usage statistics for all member devices.

cpu *cpu-number*: Specifies a CPU by its number.

core *core-number*: Specifies a CPU core by its number.

core all: Specifies all CPU cores.

Examples

\# Display the current CPU usage statistics in text form.

```
<Sysname> display cpu-usage
Slot 1 CPU 0 CPU usage:
       1% in last 5 seconds
       1% in last 1 minute
       1% in last 5 minutes
```

\# Display the current CPU usage statistics in table form.

```
<Sysname> display cpu-usage
Slot CPU       Last 5 sec       Last 1 min       Last 5 min
1    0         17%              29%              28%
```

Table 1 Command output

Field	Description
x% in last 5 seconds Last 5 sec	Average CPU or CPU core usage during the most recent 5-second interval.
y% in last 1 minute Last 1 min	Average CPU or CPU core usage during the most recent 1-minute interval.
z% in last 5 minutes Last 5 min	Average CPU or CPU core usage during the most recent 5-minute interval.

display cpu-usage configuration

Use **display cpu-usage configuration** to display CPU usage monitoring settings.

Syntax

display cpu-usage configuration [**slot** *slot-number* [**cpu** *cpu-number*]]

Views

Any view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays the CPU usage monitoring settings for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Examples

Display the CPU usage monitoring settings.

```
<Sysname> display cpu-usage configuration
CPU usage monitor is enabled.
Current monitor interval is 60 seconds.
Current severe alarm threshold is 99%.
Current minor alarm threshold is 98%.
Current recovery-threshold is 50%.
```

Table 2 Command output

Field	Description
CPU usage monitor is *xxx*.	Whether CPU usage tracking is enabled.
Current monitor interval is *xxx*.	Sampling interval for CPU usage tracking.
Current severe alarm threshold is *xxx*.	Severe CPU usage alarm threshold.
Current minor alarm threshold is *xxx*.	Minor CPU usage alarm threshold.
Current recovery threshold is *xxx*.	CPU usage recovery threshold.

Related commands

monitor cpu-usage enable

monitor cpu-usage interval

monitor cpu-usage threshold

display cpu-usage history

Use **display cpu-usage history** to display the historical CPU usage statistics in a coordinate system.

Syntax

display cpu-usage history [**job** *job-id*] [**slot** *slot-number* [**cpu** *cpu-number*]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

job *job-id*: Specifies a process by its ID. The value range for *job-id* is 1 to 2147483647. If you do not specify a process, this command displays the statistics for the entire system's CPU usage (the total CPU usage of all processes). To view the IDs and names of the running processes, use the **display process** command. For more information, see *Network Management and Monitoring Configuration Guide*.

slot *slot-number*: Specifies an IRF member device by its member ID. If you specify a process but do not specify a member device, this command displays the statistics for the process on the master device. If you do not specify any options, this command displays the statistics for all processes on all member devices.

cpu *cpu-number*: Specifies a CPU by its number. If you specify a process but do not specify a CPU, this command displays the statistics for the default CPU. If you do not specify a process or CPU, this command displays the historical statistics for all CPUs.

Usage guidelines

After CPU usage monitoring is enabled, the system regularly samples CPU usage and saves the samples to the history record buffer. This command displays the most recent 60 samples in a coordinate system as follows:

The vertical axis represents the CPU usage. If a statistic is not a multiple of the usage step, it is rounded up or down to the closest multiple of the usage step. For example, if the CPU usage step is 5%, the statistic 53% is rounded up to 55%, and the statistic 52% is rounded down to 50%.

The horizontal axis represents the time.

Pound signs (#) indicate the CPU usage. The value on the vertical axis for the topmost pound sign at a specific time represents the CPU usage at that time.

Examples

Display the historical CPU usage statistics.

```
<Sysname> display cpu-usage history
100%|
 95%|
 90%|
 85%|
 80%|
 75%|
 70%|
 65%|
 60%|
 55%|
 50%|
 45%|
 40%|
 35%|
 30%|
 25%|
 20%|
 15%|              #
 10%|            ###  #
  5%|           ########
     -------------------------------------------------------------
             10        20        30        40        50        60  (minutes)
                   cpu-usage (Slot 1 CPU 0) last 60 minutes (SYSTEM)
```

The output shows the following items:

- Process name. The name **SYSTEM** represents the entire system.
- CPU that is holding the process: CPU 0 in slot 1.
- Historical CPU usage statistics for the entire system during the last 60 minutes.

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- o **12 minutes ago**—Approximately 5%.
- o **13 minutes ago**—Approximately 10%.
- o **14 minutes ago**—Approximately 15%.
- o **15 minutes ago**—Approximately 10%.
- o **16 and 17 minutes ago**—Approximately 5%.
- o **18 minutes ago**—Approximately 10%.
- o **19 minutes ago**—Approximately 5%.
- o **Other time**—2% or lower.

Related commands

```
monitor cpu-usage enable
monitor cpu-usage interval
```

display device

Use `display device` to display device information.

Syntax

`display device[ flash | usb ] [ slot slot-number | verbose ]`

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

`flash`: Displays flash memory information.

`usb`: Displays USB interface information.

`slot` *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays information for all member devices.

`verbose`: Displays detailed information. If you do not specify this keyword, this command displays brief information.

Usage guidelines

If you do not specify the `flash` and `usb` keywords, this command displays information about member devices.

Examples

Display device information.

```
<Sysname> display device
Slot 1
Slot Type            State    Subslot  Soft Ver           Patch Ver
1    S5560S-52P-EI   Master   0        S5560S-6103        None
```

Table 3 Command output

Field	Description
Type	Device type.

Field	Description
State	Role of the device in an IRF fabric: • **Master**—The device is the master. • **Standby**—The device is a subordinate member.
Soft Ver	Software version of the device.
Patch Ver	Most recently released patch image version that is running on the device. If no patch image is installed, this field displays **None**. If both incremental and non-incremental patch images are running on the device, this field displays the most recently released incremental patch image version. For more information about patch image types, see software upgrade in *Fundamentals Configuration Guide*.

display device manuinfo

Use **display device manuinfo** to display electronic label information for the device.

Syntax

display device manuinfo [**slot** *slot-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays electronic label information for all member devices.

Usage guidelines

An electronic label contains the permanent configuration information, including the hardware serial number, manufacturing date, MAC address, and vendor name. The data is written to the storage component during hardware debugging or testing. This command displays only part of the electronic label information.

Examples

Display electronic label information for the device.

```
<Sysname> display device manuinfo
...
```

display device manuinfo power

Use **display device manuinfo power** to display electronic label information for a power supply.

Syntax

display device manuinfo slot *slot-number* **power** *power-id*

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID.

power-id: Specifies a power supply by its ID.

Examples

Display electronic label information for a power supply.

```
<Sysname> display device manuinfo slot 1 power 1
...
```

display diagnostic-information

Use **display diagnostic-information** to display or save operating information for features and hardware modules.

Syntax

display diagnostic-information [**hardware** | **infrastructure** | **l2** | **l3** | **service**] [**key-info**] [*filename*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

hardware: Specifies hardware-related operating information.

infrastructure: Specifies operating information for the fundamental features.

l2: Specifies operating information for the Layer 2 features.

l3: Specifies operating information for the Layer 3 features.

service: Specifies operating information for Layer 4 and upper-layer features.

key-info: Displays or saves only critical operating information. The device might have a large amount of operating information if an exception occurs or after the device runs for a long period of time. Specifying this keyword reduces the command execution time and helps you focus on critical operating information. If you do not specify this keyword, the command displays or saves both critical and non-critical operating information.

filename: Saves the information to a file. The *filename* argument must use the **.tar.gz** extension. If you do not specify this argument, the command prompts you to choose whether to save the information to a file or display the information.

Usage guidelines

You can use one of the following methods to collect operating statistics for diagnostics and troubleshooting:

- Use separate **display** commands to collect operating information feature by feature or module by module.

- Use the **`display diagnostic-information`** command to collect operating information for multiple or all features and hardware modules.

To save storage space, this command automatically compresses the information before saving the information to a file. To view the file content:

1. Use the **`tar extract`** command to extract the file.

2. Use the **`gunzip`** command to decompress the extracted file.

3. Use the **`more`** command to view the content of the decompressed file.

If you abort the **`display diagnostic-information`** command, the **`gunzip`** command might not be able to decompress the extracted file. To decompress the extracted file, export the extracted file to a PC that is running Linux, and use the **`gunzip -c`** command.

If you do not specify a file name for the command, the system prompts you to choose whether to display or save the information. If you choose to save the information, the system automatically assigns a file name and displays the file name in brackets. For file name uniqueness, the file name includes the device name and the current system time. If the device name contains any of the following special characters, the system uses an underscore (_) to replace each special character: forward slashes (/), backward slashes (\), colons (:), asterisks (*), question marks (?), less than signs (<), greater than signs (>), pipeline signs (|), and quotation marks ("). For example, device name **A/B** will change to **A_B** in the file name, as in **flash:/diag_A_B_20160101-000438.tar.gz**.

If you do not specify any feature parameters, this command displays or saves the operating information for all features and modules.

This command does not support the │, **>**, and **>>** options.

While the device is executing this command, do not execute any other commands. Executing other commands might affect the collected operating information.

Examples

Display the operating information for all features and modules.
```
<Sysname> display diagnostic-information
Save or display diagnostic information (Y=save, N=display)? [Y/N]:n
===============================================
  ==============display clock==============
14:03:55 UTC Thu 01/05/2015
===============================================
  ==============display version==============
...
```

Save the operating information to the default file.
```
<Sysname> display diagnostic-information
Save or display diagnostic information (Y=save, N=display)? [Y/N]:y
Please input the file name(*.tar.gz)[flash:/diag_Sysname_20160101-024601.tar.gz]:
Diagnostic information is outputting to flash:/diag_Sysname_20160101-024601.tar.gz.
Please wait...
Save successfully.
```

Press **Enter** when the system prompts you to enter the file name.

Save the operating information for all features and modules to file **test.tar.gz**.
```
<Sysname> display diagnostic-information test.tar.gz
Diagnostic information is outputting to flash:/test.tar.gz.
Please wait...
Save successfully.
```

Related commands

```
gunzip

more

tar extract
```

display dying-gasp host

Use `display dying-gasp host` to display poweroff alarm destination host settings.

Syntax

```
display dying-gasp host
```

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display poweroff alarm destination host settings.

```
<Sysname> display dying-gasp host
IPv4 address: 1.1.1.0
Message type: SNMP Trap
Securityname: p1
Version: V1

IPv4 address: 1.1.1.1
Message type: Syslog
```

Table 4 Command output

Field	Description
IPv4 address	IPv4 address of the poweroff alarm destination host.
IPv6 address	IPv6 address of the poweroff alarm destination host.
VPN instance	VPN instance to which the poweroff alarm destination host belongs.
Message type	Message types that the poweroff alarm destination host supports: • **SNMP Trap**—SNMP notification. • **Syslog**—Log message.
Securityname	SNMPv1 or SNMPv2c community name. This field is displayed when the message type is **SNMP Trap**.
Version	SNMP version: • **v1**—SNMPv1. • **v2c**—SNMPv2c. This field is displayed when the message type is **SNMP Trap**.

Related commands

```
dying-gasp host
```

display environment

Use **display environment** to display temperature information.

Syntax

display environment [**slot** *slot-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays temperature information for all member devices.

Examples

Display information about all temperature sensors on the device.

```
<Sysname> display environment
System temperature information (degree centigrade):
-------------------------------------------------------------------
Slot   Sensor    Temperature  Lower  Warning  Alarm  Shutdown
1      hotspot 1 69           0      84       98     NA
1      hotspot 2 67           0      84       98     NA
1      hotspot 3 33           0      100      110    NA
1      hotspot 4 33           0      100      110    NA
1      hotspot 5 38           0      100      110    NA
1      hotspot 6 36           0      100      110    NA
1      hotspot 7 35           0      100      110    NA
1      hotspot 8 42           0      100      110    NA
```

Table 5 Command output

Field	Description
System Temperature information (degree centigrade)	Temperature information (°C).
sensor	Temperature sensor: **hotspot**—Hotspot sensor.
Slot	Sensor position.
Temperature	Current temperature.
Lower	Lower temperature limit. If the device does not support this field, this field displays **NA**.
Warning	Warning temperature threshold. If the device does not support this field, this field displays **NA**.
Alarm	Alarming temperature threshold. If the device does not support this field, this field displays **NA**.
Shutdown	Shutdown temperature threshold. When the sensor temperature reaches the limit, the system shuts down automatically. If the device does not

Field	Description
	support this field, this field displays **NA**.

display fan

Use **display fan** to display fan tray operating status information.

Syntax

display fan [**slot** *slot-number* [*fan-id*]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays fan tray operating status information for all member devices.

fan-id: Specifies a fan tray by its ID. If you do not specify a fan tray, this command displays operating status information for all fan trays at the specified position.

Examples

Display the operating states of all fan trays.

```
<Sysname> display fan
 Slot 1:
 Fan 1:
 State    : Normal
```

Table 6 Command output

Field	Description
Slot 1	Number of the member device.
Fan 1	Fan tray number.
State	Fan tray status: • **Absent**—The slot is not installed with a fan tray. • **Fault**—The fan tray is faulty. • **Normal**—The fan tray is operating correctly.

display memory

Use **display memory** to display memory usage information.

Syntax

display memory [**summary**] [**slot** *slot-number* [**cpu** *cpu-number*]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

summary: Displays brief information about memory usage. If you do not specify this keyword, the command displays detailed information about memory usage.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays memory usage for all member devices.

cpu *cpu-number*: Specifies a CPU by its number.

Examples

Display detailed memory usage information.

```
<Sysname> display memory
Memory statistics are measured in KB:
Slot 1:
             Total       Used       Free     Shared    Buffers     Cached   FreeRatio
Mem:        498284     293884     204400          0       1316      76332      41.0%
-/+ Buffers/Cache:     216236     282048
Swap:            0          0          0
```

Display brief memory usage information.

```
<Sysname> display memory summary
Memory statistics are measured in KB:
Slot CPU    Total       Used       Free     Buffers   Caches      FreeRatio
1    0     498284     293884     204400      1316      76332       41.0%
```

Table 7 Command output

Field	Description
Mem	Memory usage information.
Total	Total size of the physical memory space that can be allocated. The memory space is virtually divided into two parts. Part 1 is solely used for kernel code and kernel management functions. Part 2 can be allocated and used for such tasks as running service modules and storing files. The size of part 2 equals the total size minus the size of part 1.
Used	Used physical memory.
Free	Free physical memory.
Shared	Physical memory shared by processes. If this field is not supported, two hyphens (--) are displayed.
Buffers	Physical memory used for buffers. If this field is not supported, two hyphens (--) are displayed.
Cached Caches	Physical memory used for caches. If this field is not supported, two hyphens (--) are displayed.
FreeRatio	Free memory ratio.
-/+ Buffers/Cache	-/+ Buffers/Cache:used = Mem:Used – Mem:Buffers – Mem:Cached, which indicates the physical memory used by applications. -/+ Buffers/Cache:free = Mem:Free + Mem:Buffers + Mem:Cached, which indicates the physical memory available for applications.

Field	Description
Swap	Memory space for swapping.

display memory-threshold

Use **display memory-threshold** to display memory alarm thresholds and statistics.

Syntax

display memory-threshold [**slot** *slot-number* [**cpu** *cpu-number*]]

Views

Any view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays the memory usage thresholds and statistics for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

For more information about memory usage notifications, see log information containing **MEM_EXCEED_THRESHOLD** or **MEM_BELOW_THRESHOLD**.

Examples

Display memory alarm thresholds and statistics.

```
<Sysname> display memory-threshold
Memory usage threshold: 100%
Free-memory thresholds:
    Minor: 60M
    Severe: 56M
    Critical: 52M
    Normal: 64M

Current free-memory state: Normal
Free-memory event statistics:
 [Back to normal state]
    First notification: 0.0
    Latest notification: 0.0
    Total number of notifications sent: 0
 [Entered minor alarm state]
    First notification at: 0.0
    Latest notification at: 0.0
    Total number of notifications sent: 0
 [Back to minor alarm state]
    First notification at: 0.0
    Latest notification at: 0.0
    Total number of notifications sent: 0
```

```
[Entered severe alarm state]
   First notification at: 0.0
   Latest notification at: 0.0
   Total number of notifications sent: 0
[Back to severe alarm state]
   First notification at: 0.0
   Latest notification at: 0.0
   Total number of notifications sent: 0
[Entered critical alarm state]
   First notification at: 0.0
   Latest notification at: 0.0
   Total number of notifications sent: 0
```

display power

Use **display power** to display power supply information.

Syntax

display power [**slot** *slot-number* [*power-id*]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays power supply information for all member devices.

power-id: Specifies a power supply by its ID. If you do not specify a power supply, this command displays information about all power supplies at the specified position.

Examples

Display power supply information.

```
<Sysname> display power
Slot 1:
PowerID State     Mode    Current(A)  Voltage(V)  Power(W)
1        Absent   --       --          --          --
2        Normal   AC       --          --          --
```

Table 8 Command output

Field	Description
PowerID	Power supply ID. On a device that supports only one power supply, you need to view only information about power supply 1.
State	Power supply status. • **Absent**—The slot is not installed with a hot-swappable power supply. • **Fault**—The power supply is faulty or is not powered on. • **Normal**—The power supply is operating correctly.
Mode	Mode of the power supply:

Field	Description
	• **AC**—AC power supply. • **DC**—DC power supply.
Current(A)	Output current of the power supply, in amperes. If this field is not supported, two hyphens (--) are displayed.
Voltage(V)	Output voltage of the power supply, in volts. If this field is not supported, two hyphens (--) are displayed.
Power(W)	Output power of the power supply, in watts. If this field is not supported, two hyphens (--) are displayed.

display scheduler job

Use **display scheduler job** to display job configuration information.

Syntax

display scheduler job [*job-name*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

job-name: Specifies a job by its name, a case-sensitive string of 1 to 47 characters. If you do not specify a job, this command displays configuration information for all jobs.

Examples

Display configuration information for all jobs.

```
<Sysname> display scheduler job
Job name: saveconfig
 copy startup.cfg backup.cfg


Job name: backupconfig


Job name: creat-VLAN100
 system-view
 vlan 100
```

// The output shows that the device has three jobs: the first has one command, the second does not have any commands, and the third has two commands. Jobs are separated by blank lines.

display scheduler logfile

Use **display scheduler logfile** to display job execution log information.

Syntax

display scheduler logfile

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display job execution log information.

```
<Sysname> display scheduler logfile
Logfile Size: 1902 Bytes.

Job name        : shutdown
Schedule name   : shutdown
Execution time  : Tue Dec 27 10:44:42 2015
Completion time : Tue Dec 27 10:44:47 2015
------------------------------ Job output --------------------------------
<Sysname>system-view
System View: return to User View with Ctrl+Z.
[Sysname]interface rang gigabitethernet 1/0/1 to gigabitethernet 1/0/3
[Sysname-if-range]shutdown
```

Table 9 Command output

Field	Description
Logfile Size	Size of the log file, in bytes.
Schedule name	Schedule to which the job belongs.
Execution time	Time when the job was started.
Completion time	Time when the job was completed. If the job has never been executed or the job does not have any commands, this field is blank.
Job output	Commands in the job and their output.

Related commands

reset scheduler logfile

display scheduler reboot

Use **display scheduler reboot** to display the automatic reboot schedule.

Syntax

display scheduler reboot

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display the automatic reboot schedule.
```
<Sysname> display scheduler reboot
System will reboot at 16:32:00 05/23/2015 (in 1 hours and 39 minutes).
```

Related commands

scheduler reboot at

scheduler reboot delay

display scheduler schedule

Use **display scheduler schedule** to display schedule information.

Syntax

display scheduler schedule [*schedule-name*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

schedule-name: Specifies a schedule by its name, a case-sensitive string of 1 to 47 characters. If you do not specify a schedule, this command displays information about all schedules.

Examples

Display information about all schedules.
```
<Sysname> display scheduler schedule
Schedule name        : shutdown
Schedule type        : Run once after 0 hours 2 minutes
Start time           : Tue Dec 27 10:44:42 2015
Last execution time  : Tue Dec 27 10:44:42 2015
Last completion time : Tue Dec 27 10:44:47 2015
Execution counts     : 1
-------------------------------------------------------------------
Job name                                    Last execution status
shutdown                                    Successful
```

Table 10 Command output

Field	Description
Schedule type	Execution time setting of the schedule. If no execution time is specified, this field is not displayed.
Start time	Time to execute the schedule for the first time. If no execution time is specified, this field is not displayed.
Last execution time	Last time when the schedule was executed. If no execution time is specified, this field is not displayed. If the schedule has never been executed, "Yet to be executed" is displayed for this field.
Last completion	Last time when the schedule was completed. If no execution time is specified, this field

Field	Description
time	is not displayed.
Execution counts	Number of times the schedule has been executed. If the schedule has never been executed, this field is not displayed.
Job name	Name of a job under the schedule.
Last execution status	Result of the most recent execution: • **Successful**. • **Failed**. • **Waiting**—The device is executing the schedule and the job is waiting to be executed. • **In process**—The job is being executed. • **-NA-**—The execution time has not arrived yet. To view information about whether the commands in the job has been executed and the execution results, execute the **display scheduler logfile** command.

display system stable state

Use **display system stable state** to display system stability and status information.

Syntax

display system stable state

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

Usage guidelines

Before performing a switchover, execute this command multiple times to identify whether the system is operating stably. If the value of the **Redundancy Stable** field is not **Stable**, you cannot perform a switchover.

The device startup process takes some time. If the values of the status fields do not change to **Stable**, execute this command multiple times to identify the devices that are not in **Stable** state. You can also use other commands to identify the faulty components. For example:

● Use the **display device** command to identify the device operating status.

● Use the **display system internal process state** command in probe view to display service operating status.

Examples

Display system stability and status information.

```
<Sysname> display system stable state
System state    : Stable
Redundancy state: No redundance
  Slot   CPU   Role      State
 1     0     Active    Stable
```

Table 11 Command output

Field	Description
System state	System status: **Stable**—The system is operating stably.
Redundancy state	System redundancy status: • **Stable**—Member devices are operating stably. You can perform a switchover. • **No redundance**—The system has only one member device. You cannot perform a switchover. • **Not ready**—The system is not operating stably. You cannot perform a switchover.
Role	Role of the member device in the system: • **Active**—The member device is the master. • **Standby**—The member device is a subordinate member.
State	Member device status: • **Stable**—The member device is operating stably. • **Board inserted**—The member device has just been installed. • **Kernel initiating**—Member device kernel is being initialized. • **Service starting**—Services are starting on the member device. • **Service stopping**—Services are stopping on the member device. • **HA Batch backup**—An HA batch backup is going on. • **Interface data batch backup**—An interface data batch backup is in progress.
*	The object is not operating stably.

Related commands

`display device`

display transceiver alarm

Use **display transceiver alarm** to display transceiver alarms.

Syntax

display transceiver alarm interface [*interface-type interface-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface [*interface-type interface-number*]: Specifies an interface by its type and number. If no interface is specified, this command displays the alarms present on every transceiver module.

Usage guidelines

Table 12 shows the common transceiver alarm components. If no error occurs, "None" is displayed.

Table 12 Common transceiver alarm components

Field	Description
APD	Avalanche photo diode
PCS	Physical coding sublayer
PHY XS	PHY extended sublayer
PMA/PMD	Physical medium attachment/physical medium dependent
power	Optical power
REFCLK	Reference clock
RX	Receive
TEC	Thermoelectric cooler
Temp	Temperature
TX	Transmit
WIS	WAN interface sublayer

Examples

Display the alarms present on the transceiver module in interface GigabitEthernet 1/0/1.

```
<Sysname> display transceiver alarm interface gigabitethernet 1/0/1
GigabitEthernet1/0/1 transceiver current alarm information:
  RX loss of signal
  RX power low
```

Table 13 Command output

Field	Description
transceiver current alarm information	Alarms present on the transceiver module.
RX loss of signal	Received signals are lost.
RX power low	Received power is low.

display transceiver interface

Use **display transceiver interface** to display the key parameters of transceiver modules.

Syntax

display transceiver interface [*interface-type interface-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface-type interface-number: Specifies an interface by its type and number. If you do not specify an interface, this command displays the key parameters of every transceiver module.

Examples

Display the key parameters of the transceiver module in interface GigabitEthernet 1/0/1.

```
<Sysname> display transceiver interface gigabitethernet 1/0/1
...
```

display transceiver manuinfo

Use **display transceiver manuinfo** to display electronic label information for transceiver modules.

Syntax

display transceiver manuinfo interface [*interface-type interface-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface [*interface-type interface-number*]: Specifies an interface by its type and number. If no interface is specified, this command displays electronic label information for all transceiver modules.

Examples

Display electronic label information for the transceiver module in interface GigabitEthernet 1/0/1.

```
<Sysname> display transceiver manuinfo interface gigabitethernet 1/0/1
...
```

display version

Use **display version** to display system version information.

Syntax

display version

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display system version information.

```
<Sysname> display version
H3C Comware Software, Version 7.1.070, Release 6309P01
Copyright (c) 2004-2019 New H3C Technologies Co., Ltd. All rights reserved.
H3C S5560S-52P-EI uptime is 0 weeks, 2 days, 5 hours, 58 minutes
Last reboot reason : Cold reboot
```

```
Boot image: flash:/s5560s_ei-cmw710-boot-r6309p01.bin
Boot image version: 7.1.070, Release 6309P01
  Compiled Jan 21 2019 11:00:00
System image: flash:/s5560s_ei-cmw710-system-r6309p01.bin
System image version: 7.1.070, Release 6309P01
  Compiled Jan 21 2019 11:00:00
...
```

Table 14 Command output

Field	Description
Last reboot reason	Reason for the last reboot: • **User reboot**—The reboot was manually initiated from a user interface, such as the CLI or SNMP. • **Cold reboot**—The reboot was caused by a power cycle. • **Kernel abnormality reboot**—The reboot was caused by kernel exceptions. • **DeadLoop reboot**—The reboot was caused by a kernel thread dead loop. • **DEV HandShake reboot**—The reboot was caused by a device management handshake failure. • **SlaveSwitch reboot**—The reboot was caused by a master/subordinate switchover. • **IRF Merge reboot**—The reboot was caused by an IRF merge. • **Auto Update reboot**—The reboot was caused by an automatic software upgrade. • **Memory exhaust reboot**—The reboot was caused by a card-memory-exhausted event.

display version-update-record

Use **display version-update-record** to display startup software image upgrade records.

Syntax

display version-update-record

Views

Any view

Predefined user roles

network-admin

network-operator

Usage guidelines

The device records its current startup software version information whenever it starts up, and records all software version update information. Such information can survive reboots.

Examples

Display the startup software image upgrade records.

```
<Sysname> display version-update-record
Record 1  (updated on Apr 18 2019 at 06:23:54):
 *Name        : simware-cmw710-boot.bin
  Version     : 7.1.070 Release 6309P01
```

```
 Compile time: Mar 25 2019 15:52:43


*Name        : simware-cmw710-system.bin
 Version     : 7.1.070 Release 6309P01
 Compile time: Mar 25 2019 15:52:43
```

Table 15 Command output

Field	Description
Record *n*	Number of the startup software image upgrade record. Record 1 is the most recent record.
Name	Software image file name.
*	The software image version changed during the upgrade.

Related commands

reset version-update-record

dying-gasp host

Use **dying-gasp host** to configure poweroff alarm destination host settings.

Use **undo dying-gasp host** to remove poweroff alarm destination host settings.

Syntax

dying-gasp host { *ip-address* | **ipv6** *ipv6-address* } [**vpn-instance** *vpn-instance-name*] **snmp-trap version** { **v1** | **v2c** } **securityname** *security-string*

dying-gasp host { *ip-address* | **ipv6** *ipv6-address* } [**vpn-instance** *vpn-instance-name*] **syslog**

undo dying-gasp host { *ip-address* | **ipv6** *ipv6-address* } [**vpn-instance** *vpn-instance-name*] { **snmp-trap** | **syslog** }

Default

No poweroff alarm destination host settings are configured.

Views

System view

Predefined user roles

network-admin

Parameters

ip-address: Specifies the IPv4 address of the destination host to which the device sends the poweroff alarm.

ipv6 *ipv6-address*: Specifies the IPv6 address of the destination host to which the device sends the poweroff alarm.

vpn-instance *vpn-instance-name*: Specifies the MPLS L3VPN instance to which the destination host belongs. The *vpn-instance-name* argument represents the VPN instance name, a case-sensitive string of 1 to 31 characters. If the destination host belongs to the public network, do not specify this option.

snmp-trap: Uses an SNMP notification to send the poweroff alarm.

version: Specifies the SNMP version.

v1: Uses SNMPv1.

v2c: Uses SNMPv2c.

securityname *security-string*: Specifies an SNMPv1 or SNMPv2c community name, a case-sensitive string of 1 to 32 characters.

syslog: Uses a log message to send the poweroff alarm.

Usage guidelines

The device can send the poweroff alarm by using either or both of an SNMP notification and a log message.

The device can send the poweroff alarm to multiple destination hosts at the same time.

Examples

Configure the device to send the poweroff alarm to the host at 1.1.1.1 by using an SNMPv1 notification. The community name is **public**.

```
<Sysname> system-view
[Sysname] dying-gasp host 1.1.1.1 snmp-trap version v1 securityname public
```

Related commands

display dying-gasp host

dying-gasp source

dying-gasp source

Use **dying-gasp source** to specify the source interface for sending the poweroff alarm.

Use **undo dying-gasp source** to restore the default.

Syntax

dying-gasp source *interface-type interface-number*

undo dying-gasp source

Default

No source interface is specified. On an IPv4 network, the device uses the primary IPv4 address of the output interface for the route to the destination host as the source address. On an IPv6 network, the device selects a source IPv6 address as defined in RFC 3484.

Views

System view

Predefined user roles

network-admin

Parameters

interface-type interface-number: Specifies a Layer 3 interface by its type and number.

Usage guidelines

The device uses the IPv6 address or primary IPv4 address of the specified source interface as the source address for outgoing poweroff alarm packets. The destination hosts use this address to identify SNMP notifications or log messages received from the device.

If no address is configured for the specified source interface, this command does not take effect. For this command to take effect, assign an address to the source interface.

Examples

Use the Loopback 1 interface as the source interface for sending the poweroff alarm.
```
<Sysname> system-view
[Sysname] dying-gasp source loopback 1
```

Related commands

dying-gasp host

header

Use **header** to configure a banner.

Use **undo header** to delete a banner.

Syntax

header { **legal** | **login** | **motd** | **shell** } *text*

undo header { **legal** | **login** | **motd** | **shell** }

Default

The device does not have banners.

Views

System view

Predefined user roles

network-admin

Parameters

legal: Configures the banner to be displayed before a user inputs the username and password to access the CLI.

login: Configures the banner to be displayed before password or scheme authentication is performed for a login user.

motd: Configures the greeting banner to be displayed before the legal banner appears.

shell: Configures the banner to be displayed before a user accesses user view.

text: Specifies the banner message. You can enter the banner message on the same line as the keywords or on different lines. For more information, see *Fundamentals Configuration Guide*.

Examples

Configure the legal banner.
```
<Sysname> system-view
[Sysname] header legal
Please input banner content, and quit with the character '%'.
Welcome to use the legal banner%
```

job

Use **job** to assign a job to a schedule.

Use **undo job** to revoke a job.

Syntax

job *job-name*

```
            undo job job-name
```

Default

No job is assigned to a schedule.

Views

Schedule view

Predefined user roles

network-admin

Parameters

job-name: Specifies the job name, a case-sensitive string of 1 to 47 characters.

Usage guidelines

You can assign multiple jobs to a schedule. The jobs in a schedule are executed concurrently.

The jobs to be assigned to a schedule must already exist. To create a job, use the **scheduler job** command.

Examples

Assign job **save-job** to schedule **saveconfig**.
```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] job save-job
```

Related commands

scheduler job

scheduler schedule

memory-threshold

Use **memory-threshold** to set free-memory thresholds.

Use **undo memory-threshold** to restore the defaults.

Syntax

memory-threshold [**slot** *slot-number* [**cpu** *cpu-number*]] [**ratio**] **minor** *minor-value* **severe** *severe-value* **critical** *critical-value* **normal** *normal-value*

undo memory-threshold [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

Minor alarm threshold: 60 MB.

Severe alarm threshold: 56 MB.

Critical alarm threshold: 52 MB.

Normal state threshold: 64 MB.

Views

System view

Predefined user roles

network-admin

Parameters

ratio: Specifies free-memory thresholds in percentage. If you do not specify this keyword, the command sets free-memory thresholds in MB.

minor *minor-value*: Specifies the minor alarm threshold. To view the value range for this threshold, enter a question mark (?) in the place of the *minor-value* argument. Setting this threshold to 0 disables the minor alarm feature.

severe *severe-value*: Specifies the severe alarm threshold. To view the value range for this threshold, enter a question mark (?) in the place of the *severe-value* argument. Setting this threshold to 0 disables the severe alarm feature.

critical *critical-value*: Specifies the critical alarm threshold. To view the value range for this threshold, enter a question mark (?) in the place of the *critical-value* argument. Setting this threshold to 0 disables the critical alarm feature.

normal *normal-value*: Specifies the normal state threshold. To view the value range for this threshold, enter a question mark (?) in the place of the *normal-value* argument.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets free-memory thresholds for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

To ensure correct operation and improve memory efficiency, the system monitors the amount of free memory space in real time. If the amount of free memory space decreases to or below the minor, severe, or critical alarm threshold, the system issues an alarm to affected service modules or processes.

If a memory alarm occurs, delete unused configuration items or disable some features to increase the free memory space. Because the memory space is insufficient, some configuration items might not be able to be deleted.

For more information about the thresholds, see *Fundamentals Configuration Guide*.

Examples

Set the minor alarm, severe alarm, critical alarm, and normal state thresholds to 64 MB, 48 MB, 32 MB, and 96 MB, respectively.

```
<Sysname> system-view
[Sysname] memory-threshold minor 64 severe 48 critical 32 normal 96
```

Set the minor alarm, severe alarm, critical alarm, and normal state thresholds to 3%, 2%, 1%, and 5% of the total memory size, respectively.

```
<Sysname> system-view
[Sysname] memory-threshold ratio minor 3 severe 2 critical 1 normal 5
```

Related commands

display memory-threshold

memory-threshold usage

Use **memory-threshold usage** to set the memory usage threshold.

Use **undo memory-threshold usage** to restore the default.

Syntax

memory-threshold [**slot** *slot-number* [**cpu** *cpu-number*]] **usage** *memory-threshold*

```
undo memory-threshold [ slot slot-number [ cpu cpu-number ] ] usage
```

Default

The memory usage threshold is 100%.

Views

System view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets the memory usage threshold for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

memory-threshold: Specifies the memory usage threshold in percentage. The value range is 0 to 100.

Usage guidelines

The device samples memory usage at 1-minute intervals. If the sample is greater than the memory usage threshold, the device sends a trap.

Examples

Set the memory usage threshold to 80%.

```
<Sysname> system-view
[Sysname] memory-threshold usage 80
```

Related commands

display memory-threshold

monitor cpu-usage enable

Use **monitor cpu-usage enable** to enable CPU usage monitoring.

Use **undo monitor cpu-usage enable** to disable CPU usage monitoring.

Syntax

monitor cpu-usage enable [**slot** *slot-number* [**cpu** *cpu-number*]]

undo monitor cpu-usage enable [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

CPU usage monitoring is enabled.

Views

System view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command enables CPU usage monitoring for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

After CPU usage monitoring is enabled, the system samples and saves CPU usage at the interval specified by the `monitor cpu-usage interval` command. You can use the `display cpu-usage history` command to view recent CPU usage.

Examples

Enable CPU usage monitoring.

```
<Sysname> system-view
[Sysname] monitor cpu-usage enable
```

Related commands

display cpu-usage configuration

display cpu-usage history

monitor cpu-usage interval

monitor cpu-usage interval

Use `monitor cpu-usage interval` to set the sampling interval for CPU usage monitoring.

Use `undo monitor cpu-usage interval` to restore default settings.

Syntax

monitor cpu-usage interval *interval* [**slot** *slot-number* [**cpu** *cpu-number*]]

undo monitor cpu-usage interval [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

The system samples CPU usage every 1 minute.

Views

System view

Predefined user roles

network-admin

Parameters

interval: Specifies the sampling interval for CPU usage monitoring. Valid values include **5Sec** (5 seconds), **1Min** (1 minute), and **5Min** (5 minutes), case insensitive.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets the interval for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

After CPU usage monitoring is enabled, the system samples and saves CPU usage at the specified interval. You can use the `display cpu-usage history` command to view recent CPU usage.

Examples

Set the sampling interval for CPU usage monitoring to 5 seconds.

```
<Sysname> system-view
[Sysname] monitor cpu-usage interval 5Sec
```

Related commands

display cpu-usage configuration

```
display cpu-usage history

monitor cpu-usage enable
```

monitor cpu-usage threshold

Use **monitor cpu-usage threshold** to set CPU usage alarm thresholds.

Use **undo monitor cpu-usage threshold** to restore default settings.

Syntax

monitor cpu-usage threshold *severe-threshold* **minor-threshold** *minor-threshold* **recovery-threshold** *recovery-threshold* [**slot** *slot-number* [**cpu** *cpu-number*]]

undo monitor cpu-usage threshold minor-threshold recovery-threshold [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

Severe CPU usage alarm threshold: 99%.

Minor CPU usage alarm threshold: 98%.

CPU usage recovery threshold: 50%.

Views

System view

Predefined user roles

network-admin

Parameters

severe-threshold: Specifies the severe CPU usage alarm threshold in percentage. The value range for this argument is 2 to 100.

minor-threshold *minor-threshold*: Specifies the minor CPU usage alarm threshold in percentage. The value range for this argument is 1 to the severe CPU usage alarm threshold minus 1.

recovery-threshold *recovery-threshold*: Specifies the CPU usage recovery threshold in percentage. The value range for this argument is 0 to the minor CPU usage alarm threshold minus 1.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets the CPU usage threshold for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

The device samples CPU usage at 1-minute intervals. If the sample is greater than the CPU usage threshold, the device sends a trap.

Examples

Set the severe CPU usage alarm threshold to 90%, minor CPU usage alarm threshold to 80%, and CPU usage recovery threshold to 70%.

```
<Sysname> system-view
[Sysname] monitor cpu-usage threshold 90 minor-threshold 80 recovery-threshold 70
```

Related commands

display cpu-usage configuration

monitor resend cpu-usage

Use **monitor resend cpu-usage** to set CPU usage alarm resending intervals.

Use **undo monitor resend cpu-usage** to restore default settings.

Syntax

monitor   resend   cpu-usage {   **minor-interval** *minor-interval* | **severe-interval** *severe-interval* } * [**slot** *slot-number* [**cpu** *cpu-number*]]

undo monitor resend cpu-usage [**minor-interval** | **severe-interval**] [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

The minor alarm resending interval is 300 seconds. The severe alarm resending interval is 60 seconds.

Views

System view

Predefined user roles

network-admin

Parameters

minor-interval *minor-interval*: Specifies the minor alarm resending interval in seconds, a multiple of five in the range of 10 to 3600.

severe-interval *severe-interval*: Specifies the severe alarm resending interval in seconds, a multiple of five in the range of 10 to 3600.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets alarm resending intervals for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

The device samples CPU usage periodically and compares the sample with the CPU usage threshold. If the sample increases above an alarm threshold, the CPU usage enters an alarm state and the device sends an alarm.

While the CPU usage is in minor alarm state, the device sends minor alarms periodically until the CPU usage increases above the severe threshold or the minor alarm is removed.

While the CPU usage is in severe alarm state, the device sends severe alarms periodically until the severe alarm is removed.

You can use this command to change CPU usage alarm resending intervals.

If you do not specify the **minor-interval** or **severe-interval** keyword, the **undo monitor resend cpu-usage** command restores default settings for both the minor and severe alarm resending intervals.

Examples

Set the CPU usage minor alarm resending interval to 60 seconds for CPU 0 in slot 1.
```
<Sysname> system-view
[Sysname] monitor resend cpu-usage minor-interval 60 slot 1 cpu 0
```

monitor resend memory-threshold

Use **monitor resend memory-threshold** to set memory depletion alarm resending intervals.

Use **undo monitor resend memory-threshold** to restore default settings.

Syntax

monitor resend memory-threshold { **critical-interval** *critical-interval* | **minor-interval** *minor-interval* | **severe-interval** *severe-interval* } * [**slot** *slot-number* [**cpu** *cpu-number*]]

undo monitor resend memory-threshold [**critical-interval** | **minor-interval** | **severe-interval**] * [**slot** *slot-number* [**cpu** *cpu-number*]]

Default

- Minor alarm resending interval: 12 hours.
- Severe alarm resending interval: 3 hours.
- Critical alarm resending interval: 1 hour.

Views

System view

Predefined user roles

network-admin

Parameters

critical-interval *critical-interval*: Specifies the critical alarm resending interval in hours, in the range of 1 to 48.

minor-interval *minor-interval*: Specifies the minor alarm resending interval in hours, in the range of 1 to 48.

severe-interval *severe-interval*: Specifies the severe alarm resending interval in hours, in the range of 1 to 48.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command sets alarm resending intervals for the master device.

cpu *cpu-number*: Specifies a CPU by its number.

Usage guidelines

The device samples the amount of free memory space periodically and compares the sample with free-memory thresholds. If the sample decreases to or below a threshold, the device enters a memory depletion alarm state and sends an alarm.

In critical alarm state, the device sends critical alarm notifications periodically until the critical alarm is removed.

In a lower alarm state, the device sends notifications for the alarm state periodically until it enters a higher alarm state or the current alarm is removed.

You can use this command to change the alarm resending intervals.

If you do not specify any memory depletion alarm resending intervals, the **undo monitor resend memory-threshold** command restores default settings for all memory depletion alarm resending intervals.

Examples

Set the minor memory depletion alarm resending interval to 12 hours for CPU 0 in slot 1.

```
<Sysname> system-view
```

```
[Sysname] monitor resend memory-threshold minor-interval 12 slot 1 cpu 0
```

password-recovery enable

Use **password-recovery enable** to enable password recovery capability.

Use **undo password-recovery enable** to disable password recovery capability.

Syntax

password-recovery enable

undo password-recovery enable

Default

Password recovery capability is enabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

Password recovery capability controls console user access to the device configuration and SDRAM from BootWare menus.

If password recovery capability is enabled, a console user can access the device configuration without authentication to configure new passwords.

If password recovery capability is disabled, console users must restore the factory-default configuration before they can configure new passwords. Restoring the factory-default configuration deletes the next-startup configuration files.

To enhance system security, disable password recovery capability.

Availability of BootWare menu options depends on the password recovery capability setting. For more information, see the release notes.

Examples

Disable password recovery capability.
```
<Sysname> system-view
[Sysname] undo password-recovery enable
```

reboot

Use **reboot** to reboot the device.

Syntax

reboot [**slot** *slot-number*] [**force**]

Views

User view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify an IRF member device, the command reboots all IRF member devices.

force: Reboots the device immediately without performing software or hard disk check. If this keyword is not specified, the system first identifies whether the reboot might result in data loss or a system failure. For example, the system identifies whether the main system software image file exists and whether a write operation is in progress on a storage medium. If the reboot might cause problems, the system does not reboot the device.

Usage guidelines

⚠ **CAUTION:**

- A reboot might interrupt network services.

- Use the **force** keyword only when the device fails or a **reboot** command without the **force** keyword cannot perform a reboot correctly. A **reboot** command with the **force** keyword might result in file system corruption because it does not perform data protection.

If the main startup software images are corrupt or missing, you must re-specify a set of main startup software images before executing the **reboot** command.

For data security, the device does not reboot if you reboot the device while the device is performing file operations.

If the IRF fabric has only one member device, rebooting the member device reboots the entire IRF fabric. If the IRF fabric has a subordinate member and the member is operating correctly, rebooting the master triggers a master/subordinate switchover.

To ensure correct operation of the IRF fabric and member devices, do not trigger a switchover by rebooting the master if no subordinate member devices are in **Stable** state. To view the status of subordinate member devices, execute the **display system stable state** command.

Examples

Reboot the device. Save the running configuration at prompt.

```
<Sysname> reboot
Start to check configuration with next startup configuration file, please
wait.........DONE!
Current configuration will be lost after the reboot, save current configuration? [Y/N]:y
Please input the file name(*.cfg)[flash:/startup.cfg]
(To leave the existing filename unchanged, press the enter key):
flash:/startup.cfg exists, overwrite? [Y/N]:y
Validating file. Please wait...
Configuration is saved to mainboard device successfully.
This command will reboot the device. Continue? [Y/N]:y
Now rebooting, please wait...
```

Reboot the device immediately without performing software check.

```
<Sysname> reboot force
A forced reboot might cause the storage medium to be corrupted. Continue? [Y/N]:y
Now rebooting, please wait...
```

Related commands

display system stable state

reset scheduler logfile

Use **reset scheduler logfile** to clear job execution log information.

Syntax

reset scheduler logfile

Views

User view

Predefined user roles

network-admin

Examples

Clear job execution log information.

```
<Sysname> reset scheduler logfile
```

Related commands

display scheduler logfile

reset version-update-record

Use **reset version-update-record** to clear startup software image upgrade records.

Syntax

reset version-update-record

Views

System view

Predefined user roles

network-admin

Examples

Clear the startup software image upgrade records.

```
<Sysname> system-view
[Sysname] reset version-update-record
This command will delete all records of version update. Continue? [Y/N]:y
```

Related commands

display version-update-record

restore factory-default

Use **restore factory-default** to restore the factory-default configuration for the device.

Syntax

restore factory-default

Views

User view

Predefined user roles

network-admin

Usage guidelines

This command is disruptive. Use this command only when you cannot troubleshoot the device by using other methods, or you want to use the device in a different scenario.

Examples

Restore the factory-default configuration for the device.

```
<Sysname> restore factory-default
This command will restore the system to the factory default configuration and clear the
operation data. Continue [Y/N]:y
Restoring the factory default configuration. This process might take a few minutes. Please
wait............................................................................
.......................Done.
Please reboot the system to place the factory default configuration into effect.
```

Related commands

reboot

scheduler job

Use **scheduler job** to create a job and enter its view, or enter the view of an existing job.

Use **undo scheduler job** to delete a job.

Syntax

scheduler job *job-name*

undo scheduler job *job-name*

Default

No job exists.

Views

System view

Predefined user roles

network-admin

Parameters

job-name: Specifies the job name, a case-sensitive string of 1 to 47 characters.

Usage guidelines

A job can be referenced by multiple schedules. In job view, you can assign commands to the job.

Examples

Create a job named **backupconfig** and enter job view.

```
<Sysname> system-view
[Sysname] scheduler job backupconfig
[Sysname-job-backupconfig]
```

Related commands

command

scheduler schedule

scheduler logfile size

Use **scheduler logfile size** to set the size of the job execution log file.

Syntax

scheduler logfile size *value*

Default

The size of the job execution log file is 16 KB.

Views

System view

Predefined user roles

network-admin

Parameters

value: Specifies the size of the job execution log file, in KB. The value range is 16 to 1024.

Usage guidelines

The job execution log file saves the execution information of jobs. If the file is full, old records are deleted to make room for new records. If the size of the log information to be written to the file is greater than the file size, the excessive information is not written to the file.

Examples

Set the size of the job execution log file to 32 KB.

```
<Sysname> system-view
[Sysname] scheduler logfile size 32
```

Related commands

display scheduler logfile

scheduler reboot at

Use **scheduler reboot at** to specify the reboot date and time.

Use **undo scheduler reboot** to delete the reboot schedule configuration.

Syntax

scheduler reboot at *time* [*date*]

undo scheduler reboot

Default

No reboot date or time is specified.

Views

User view

Predefined user roles

network-admin

Parameters

time: Specifies the reboot time in the *hh:mm* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59.

date: Specifies the reboot date in the *MM/DD/YYYY* or *YYYY/MM/DD* format. The value range for *YYYY* is 2000 to 2035. The value range for *MM* is 1 to 12. The value range for *DD* varies by month.

Usage guidelines

△ **CAUTION:**

Device reboot interrupts network services.

When the *date* argument is not specified, the system uses the following rules to determine the reboot time:

- If the reboot time is later than the current time, a reboot occurs at the reboot time of the current day.
- If the reboot time is earlier than the current time, a reboot occurs at the reboot time the next day.

The device supports only one device reboot schedule. If you execute both the **scheduler reboot delay** and **scheduler reboot at** commands or execute one of the commands multiple times, the most recent configuration takes effect.

For data security, the system does not reboot at the reboot time if a file operation is being performed.

Examples

Configure the device to reboot at 12:00 p.m. This example assumes that the current time is 11:43 a.m. on June 6, 2015.

```
<Sysname> scheduler reboot at 12:00
Reboot system at 12:00:00 06/06/2015 (in 0 hours and 16 minutes). Confirm? [Y/N]:
```

Related commands

scheduler reboot delay

scheduler reboot delay

Use **scheduler reboot delay** to specify the reboot delay time.

Use **undo scheduler reboot** to delete the reboot schedule configuration.

Syntax

scheduler reboot delay *time*

undo scheduler reboot

Default

No reboot delay time is specified.

Views

User view

Predefined user roles

network-admin

Parameters

time: Specifies the reboot delay time in the *hh:mm* or *mm* format. This argument can contain up to six characters. When in the *hh:mm* format, *mm* must be in the range of 0 to 59.

Usage guidelines

△ **CAUTION:**

Device reboot interrupts network services.

The device supports only one device reboot schedule. If you execute both the **scheduler reboot delay** and **schedule reboot at** commands or execute one of the commands multiple times, the most recent configuration takes effect.

For data security, the system does not reboot at the reboot time if a file operation is being performed.

Examples

Configure the device to reboot after 88 minutes. This example assumes that the current time is 11:48 a.m. on June 6, 2015.

```
<Sysname> scheduler reboot delay 88
Reboot system at 13:16 06/06/2015(in 1 hours and 28 minutes). Confirm? [Y/N]:
```

scheduler schedule

Use **scheduler schedule** to create a schedule and enter its view, or enter the view of an existing schedule.

Use **undo scheduler schedule** to delete a schedule.

Syntax

scheduler schedule *schedule-name*

undo scheduler schedule *schedule-name*

Default

No schedule exists.

Views

System view

Predefined user roles

network-admin

Parameters

schedule-name: Specifies the schedule name, a case-sensitive string of 1 to 47 characters.

Usage guidelines

You can configure a schedule to have the device automatically run a command or a set of commands without administrative interference.

To configure a schedule:

1. Use the **scheduler job** command to create a job and enter job view.
2. Use the **command** command to assign commands to the job.
3. Use the **scheduler schedule** command to create a schedule and enter schedule view.
4. Use the **job** command to assign the job to the schedule. You can assign multiple jobs to a schedule. The jobs must already exist.
5. Use the **user-role** command to assign user roles to the schedule. You can assign up to 64 user roles to a schedule.
6. Use the **time at**, **time once**, or **time repeating** command to specify an execution time for the schedule. You can specify only one execution time for a schedule.

Examples

Create a schedule named **saveconfig**.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
```

Related commands

job

time at

time once

shutdown-interval

Use **shutdown-interval** to set the port status detection timer.

Use **undo shutdown-interval** to restore the default.

Syntax

shutdown-interval *interval*

undo shutdown-interval

Default

The port status detection timer setting is 30 seconds.

Views

System view

Predefined user roles

network-admin

Parameters

interval: Specifies the port status detection timer value in seconds. The value range is 0 to 300. To disable port status detection, set this argument to 0.

Usage guidelines

The device starts a port status detection timer when a port is shut down by a protocol. Once the timer expires, the device brings up the port so the port status reflects the port's physical status.

If you change the timer setting during port detection, the device compares the new setting (T1) with the time that elapsed since the port was shut down (T).

If T < T1, the port will be brought up after T1 – T seconds.

If T ≥ T1, the port is brought up immediately.

For example, the timer setting is 30 seconds. If you change it to 10 seconds 2 seconds after the port is shut down, the port will come up 8 seconds later. If you change the timer setting to 2 seconds 10 seconds after the port is shut down, the port comes up immediately.

Examples

Set the port status detection timer to 100 seconds.

```
<Sysname> system-view
[Sysname] shutdown-interval 100
```

sysname

Use **sysname** to set the device name.

Use **undo sysname** to restore the default.

Syntax

sysname *sysname*

```
undo sysname
```

Default

The device name is H3C.

Views

System view

Predefined user roles

network-admin

Parameters

sysname: Specifies a name for the device, a string of 1 to 64 characters.

Usage guidelines

A device name identifies a device in a network and is used in CLI view prompts. For example, if the device name is **Sysname**, the user view prompt is <Sysname>.

Examples

Set the name of the device to **R2000**.

```
<Sysname> system-view
[Sysname] sysname R2000
[R2000]
```

temperature-limit

Use **temperature-limit** to set the temperature alarm thresholds.

Use **undo temperature-limit** to restore the default.

Syntax

temperature-limit slot *slot-number* **hotspot** *sensor-number* *lowlimit* *warninglimit* [*alarmlimit*]

undo temperature-limit slot *slot-number* **hotspot** *sensor-number*

Default

The defaults vary by temperature sensor model. To view the defaults, execute the **undo temperature-limit** and **display environment** commands in turn.

Views

System view

Predefined user roles

network-admin

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID.

hotspot: Configures temperature alarm thresholds for hotspot sensors. A hotspot sensor is typically near the chip that generates a great amount of heat and used to monitor the chip.

sensor-number: Specifies a sensor by its number. To view the value range, enter a question mark (?) in the place of this argument.

lowlimit: Specifies the low-temperature threshold in Celsius degrees. The value range varies by temperature sensor. To view the value range, enter a question mark (?) in the place of this argument.

warninglimit: Specifies the high-temperature warning threshold in Celsius degrees. This threshold must be greater than the low-temperature threshold. To view the value range, enter a question mark (?) in the place of this argument.

alarmlimit: Specifies the high-temperature alarming threshold in Celsius degrees. This threshold must be greater than the warning threshold. To view the value range, enter a question mark (?) in the place of this argument.

Usage guidelines

When the device temperature drops below the low-temperature threshold or reaches the high-temperature warning or alarming threshold, the device performs the following operations:

- Sends log messages and traps.
- Sets LEDs on the device panel.

Examples

Set temperature alarm thresholds for hotspot sensor 1 in a slot.

```
<Sysname> system-view
[Sysname] temperature-limit slot 1 hotspot 1 -10 50 60
```

Related commands

display environment

time at

Use **time at** to specify an execution date and time for a non-periodic schedule.

Use **undo time** to delete the execution date and time configuration for a non-periodic schedule.

Syntax

time at *time date*

undo time

Default

No execution time or date is specified for a non-periodic schedule.

Views

Schedule view

Predefined user roles

network-admin

Parameters

time: Specifies the schedule execution time in the *hh:mm* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59.

date: Specifies the schedule execution date in the *MM/DD/YYYY* or *YYYY/MM/DD* format. The value range for *YYYY* is 2000 to 2035. The value range for *MM* is 1 to 12. The value range for *DD* varies by month.

Usage guidelines

The specified time (date plus time) must be later than the current system time.

The **time at** command, the **time once** command, and the **time repeating** command overwrite one another. The most recently configured command takes effect.

Examples

Configure the device to execute schedule **saveconfig** at 01:01 a.m. on May 11, 2015.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time at 1:1 2015/05/11
```

Related commands

scheduler schedule

time once

Use **time once** to specify one or more execution days and the execution time for a non-periodic schedule.

Use **undo time** to delete the execution day and time configuration for a non-periodic schedule.

Syntax

time once at *time* [**month-date** *month-day* | **week-day** *week-day*&<1-7>]

time once delay *time*

undo time

Default

No execution time or day is specified for a non-periodic schedule.

Views

Schedule view

Predefined user roles

network-admin

Parameters

at *time*: Specifies the execution time in the *hh:mm* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59.

month-date *month-day*: Specifies a day in the current month, in the range of 1 to 31. If you specify a day that does not exist in the current month, the configuration takes effect on that day in the next month.

week-day *week-day*&<1-7>: Specifies a space-separated list of up to seven week days for the schedule. Valid week day values include **Mon**, **Tue**, **Wed**, **Thu**, **Fri**, **Sat**, and **Sun**.

delay *time*: Specifies the delay time for executing the schedule, in the *hh:mm* or *mm* format. This argument can have up to six characters. When in the *hh:mm* format, *mm* must be in the range of 0 to 59.

Usage guidelines

If the specified time has already occurred, the schedule will be executed at the specified time the following day.

If the day in the month has already occurred, the schedule will be executed at the specified day in the following month.

If the specified day in a week has already occurred, the schedule will be executed at the specified day in the following week.

The **time at** command, the **time once** command, and the **time repeating** command overwrite one another. The most recently configured command takes effect.

Examples

Configure the device to execute schedule **saveconfig** once at 15:00.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time once at 15:00
Schedule starts at 15:00 5/11/2011.
```

Configure the device to execute schedule **saveconfig** once at 15:00 on the coming 15th day in a month.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time once at 15:00 month-date 15
```

Configure the device to execute schedule **saveconfig** at 12:00 p.m. on the coming Monday and Friday.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time once at 12:00 week-day mon fri
```

Configure the device to execute schedule **saveconfig** after 10 minutes.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time once delay 10
```

Related commands

scheduler schedule

time repeating

Use **time repeating** to specify an execution time table for a periodic schedule.

Use **undo time** to delete the execution time table configuration for a periodic schedule.

Syntax

time repeating [**at** *time* [*date*]] **interval** *interval*

time repeating at *time* [**month-date** [*month-day* | **last**] | **week-day** *week-day*&<1-7>]

undo time

Default

No execution time table is specified for a periodic schedule.

Views

Schedule view

Predefined user roles

network-admin

Parameters

at *time*: Specifies the execution time in the *hh:mm* format. The value range for *hh* is 0 to 23. The value range for *mm* is 0 to 59. If you do not specify this option, the current system time is used as the execution time.

date: Specifies the start date for the periodic schedule, in the *MM/DD/YYYY* or *YYYY/MM/DD* format. The value range for *YYYY* is 2000 to 2035. The value range for *MM* is 1 to 12. The value range for *DD* varies by month. If you do not specify this argument, the execution start date is the first day when the specified time arrives.

interval *interval*: Specifies the execution time interval in the *hh:mm or mm* format. This argument can have up to six characters. When in the *hh:mm* format, *mm* must be in the range of 0 to 59. When in the *mm* format, this argument must be equal to or greater than 1 minute.

month-date [*month-day* | **last**]: Specifies a day in a month, in the range 1 to 31. The **last** keyword indicates the last day of a month. If you specify a day that does not exist in a month, the configuration takes effect on that day in the next month.

week-day *week-day*&<1-7>: Specifies a space-separated list of up to seven week days for the schedule. Valid week day values include **Mon**, **Tue**, **Wed**, **Thu**, **Fri**, **Sat**, and **Sun**.

Usage guidelines

The **time repeating** [**at** *time* [*date*]] **interval** *interval* command configures the device to execute a schedule at intervals from the specified time on.

The **time repeating at** *time* [**month-date** [*month-day* | **last**] | **week-day** *week-day*&<1-7>] command configures the device to execute a schedule at the specified time on every specified day in a month or week.

The **time at** command, the **time once** command, and the **time repeating** command overwrite one another, whichever is configured most recently takes effect.

Examples

Configure the device to execute schedule **saveconfig** once an hour from 8:00 a.m. on.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time repeating at 8:00 interval 60
```

Configure the device to execute schedule **saveconfig** at 12:00 p.m. every day.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time repeating at 12:00
```

Configure the device to execute schedule **saveconfig** at 8:00 a.m. on the 5th of every month.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time repeating at 8:00 month-date 5
```

Configure the device to execute schedule **saveconfig** at 8:00 a.m. on the last day of every month.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time repeating at 8:00 month-date last
```

Configure the device to execute schedule **saveconfig** at 8:00 a.m. every Friday and Saturday.

```
<Sysname> system-view
[Sysname] scheduler schedule saveconfig
[Sysname-schedule-saveconfig] time repeating at 8:00 week-day fri sat
```

Related commands

scheduler schedule

user-role

Use **user-role** to assign user roles to a schedule.

Use **undo user-role** to remove user roles from a schedule.

Syntax

user-role *role-name*

undo user-role *role-name*

Default

A schedule has the user roles of the schedule creator.

Views

Schedule view

Predefined user roles

network-admin

Parameters

role-name: Specifies a user role name, a case-sensitive string of 1 to 63 characters. The user role can be user-defined or predefined. Predefined user roles include network-admin, network-operator, and level-0 to level-15.

Usage guidelines

A schedule must have one or more user roles. A command in a schedule can be executed if it is permitted by one or more user roles of the schedule. For more information about user roles, see the RBAC configuration in *Fundamentals Configuration Guide*.

A schedule can have a maximum of 64 user roles. After the limit is reached, you cannot assign additional user roles to the schedule.

Examples

Assign user role **rolename** to schedule **test**.

```
<Sysname> system-view
[Sysname] scheduler schedule test
[Sysname-schedule-test] user-role rolename
```

Related commands

command

scheduler schedule