Quidway S6700 Series Ethernet Switches

V100R006C00

Inspection Checklist

Issue 01

Date 2011-07-15

HUAWEI TECHNOLOGIES CO., LTD.

Huawei Technologies Co., Ltd.

Address:	Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China
Website:	http://www.huawei.com
Email:	support@huawei.com

About This Document

Intended Audience

This document describes the maintenance operations for S6700.

This document is intended for:

- Network monitoring engineers
- On-site maintenance engineers
- System maintenance engineers

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
⚠ DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazard with a medium or low level of risk, which if not avoided, could result in minor or moderate injury.
⚠ CAUTION	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
⌐ TIP	Indicates a tip that may help you solve a problem or save time.
📖 NOTE	Provides additional information to emphasize or supplement important points of the main text.

Command Conventions

The command conventions that may be found in this document are defined as follows.

Convention	Description
Boldface	The keywords of a command line are in **boldface**.
Italic	Command arguments are in *italics*.
[ ]	Items (keywords or arguments) in brackets [ ] are optional.
{ x | y | ... }	Optional items are grouped in braces and separated by vertical bars. One item is selected.
[x | y | ...]	Optional items are grouped in brackets and separated by vertical bars. One item is selected or no item is selected.
{ x | y | ... }*	Optional items are grouped in braces and separated by vertical bars. A minimum of one item or a maximum of all items can be selected.
[x | y | ...]*	Optional items are grouped in brackets and separated by vertical bars. Several items or no item can be selected.
&<1-n>	The parameter before the & sign can be repeated 1 to n times.
#	A line starting with the # sign is comments.

Change History

Updates between document issues are cumulative. Therefore, the latest document issue contains all updates made in previous issues.

Changes in Issue 01 (2011-07-15)

Initial commercial release.

Contents

1 Introduction to the Inspection Checklist

The stable running of switches depends on the proper network planning and routine maintenance and monitoring on the switches. It is necessary to find hidden hazards during routine maintenance and monitoring. The inspection checklist provides the routine maintenance recommendation for the S6700.

2 Checking the Running Conditions

A switch can work normally only after the following conditions are met.

No.	Check Item	Criteria and Remarks	Result
1	Position of the switch	The switch should be placed steadily in a flat position in a ventilated and dry environment. No sundries exist around the switch.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
2	Ambient temperature in the equipment room	The long-term ambient temperature in the equipment room should range from 0°C to 50°C; the short-term ambient temperature should range from -5°C to 55°C. **NOTE** Short-term operation means that the continuous working time does not exceed 48 hours and the accumulated time per year does not exceed 15 days.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
3	Ambient humidity	The ambient humidity in the equipment room should range from 10% RH to 90% RH.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
4	Air conditioner in the equipment room	The air conditioner keeps running steadily so that the temperature in the equipment room is within an acceptable range.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

No.	Check Item	Criteria and Remarks	Result
5	Grounding and the grounding resistance	The working grounding, protection grounding, and lightning protection grounding should be arranged separately in the equipment room. Joint grounding can be used if the equipment room is under limited conditions. Grounding is significant especially for outdoor devices because the outdoor devices are possibly struck by thunder.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
6	Connection to power supply	The power cable should be correctly and fixedly connected to the specified position of the switch. The power supply indicator on the switch should be always on (green).	☐ Satisfied ☐ Unsatisfied ☐ Not involved
7	Power supply system	The power supply system should run stably. The DC voltage should range from -48V DC to -60V DC. The AC voltage should range from 100V AC to 240V AC.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

3 Checking the Basic Device Information

The basic device information includes software version, patch information, and system time.

No.	Check Item	Command	Criteria	Result
1	Software version	\<Quidway\> **display version**	The PCB versions and software version are correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
2	Software package	\<Quidway\> **display startup**	The names of the software and configuration file that are in use and that will be loaded at next startup are correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
3	Patch information	\<Quidway\> **display patch-information**	● The installed patches meet the requirements. The latest patch of the product is recommended. ● The patches are valid. That is, the total number of patches is the same as the number of running patches.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

No.	Check Item	Command	Criteria	Result
4	System time	\<Quidway\> **display clock**	● The system time is the same as the local time (time difference is within 5 minutes). The correct system time makes fault locating accurate. ● If the system time is incorrect, run the **clock** command to change the system time or run NTP.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
5	Flash memory	\<Quidway\> **dir flash:**	All the files in the flash memory should be useful; otherwise, run the **delete / unreserved** command to delete unnecessary files.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
6	Configurations	\<Quidway\> **display current-configuration**	The current parameter settings on the switch are correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
7	Debugging	\<Quidway\> **display debugging**	All the debugging functions should be disabled when the switch runs normally.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
8	Saved configurations	\<Quidway\> **compare configuration**	All the service configurations should be saved. The configurations in use must be the same as the saved configurations.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

4 Checking the Device Running Status

The running status of a switch includes the running status of subcards, resetting information, and device temperature.

No.	Check Item	Command	Criteria	Result
1	Running status of subcards	<Quidway> **display device**	The subcards are in service and the running status is normal. ● The value of "Online" should be "Present." ● The value of "Power" should be "PowerOn." ● The value of "Register" should be "Registered." ● The value of "Status" should be "Normal."	☐ Satisfied ☐ Unsatisfied ☐ Not involved
2	Resetting	<Quidway> **display reboot-info**	The resetting information, including resetting time and service type, shows that no abnormal resetting occurs.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

No.	Check Item	Command	Criteria	Result
3	Device temperature	\<Quidway\> **display environment**	The temperature of each module should be between the upper limit and lower limit. That is, the value of "CurrentTemperature" is between "LowLimit" and "HighLimit."	☐ Satisfied ☐ Unsatisfied ☐ Not involved
4	Alarms	\<Quidway\> **display alarm urgent**	● No alarm is generated. ● If an alarm is generated, record it. If a major alarm or more serious alarm is generated, analyze and process it immediately.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
5	CPU usage	\<Quidway\> **display cpu-usage**	The CPU usage of each module is normal. If the CPU usage exceeds 80%, find out the reason.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
6	Memory usage	\<Quidway\> **display memory-usage**	The memory usage is normal. If the value of "Memory Using Percentage" exceeds 60%, find out the reason.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
7	Logs	\<Quidway\> **display logbuffer** \<Quidway\> **display trapbuffer**	No abnormal information is displayed.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

5 Checking the Interface Information

The interface information includes the negotiation mode, configurations, and status of the interface.

No.	Check Item	Command	Criteria	Result
1	Errored packet	\<Quidway\> **display interface**	No errored packets, including the CRC errored packets, exist on the interface during service running.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
2	Negotiation mode	\<Quidway\> **display interface**	The negotiation mode of the interface is correct. The negotiation modes of the two connected interfaces must be the same. No interface is in half-duplex mode.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
3	Interface configurations	\<Quidway\> **display current-configuration interface**	The interface configurations, such as the negotiation mode, rate, isolation, and rate limit, are proper.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
4	Interface status	\<Quidway\> **display interface brief**	The Up/Down status of the interface meets the requirements.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

No.	Check Item	Command	Criteria	Result
5	PoE power supply	\<Quidway\> **display poe power-state interface**	The status of POE power supply is normal. The status of the POE-enabled interfaces is "Powered."	☐ Satisfied ☐ Unsatisfied ☐ Not involved

6 Checking Services

All the services on the switch must run normally.

No.	Check Item	Command	Criteria	Result
1	Information about multicast member interfaces and router interfaces	\<Quidway\> **display igmp-snooping port-info**	Information about static member interfaces, dynamic member interfaces, static router interfaces, and dynamic router interfaces is correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
2	Multicast packet statistics	\<Quidway\> **display igmp-snooping statistics vlan**	The number of IGMP messages and PIM Hello messages received and sent by a VLAN is correct, and the number of Layer 2 events in all the VLANs is correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
3	DHCP snooping binding table	\<Quidway\> **display dhcp snooping user-bind all**	The static entries and dynamic entries are correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved
4	MAC address table	\<Quidway\> **display mac-address**	Information about the MAC address table is correct.	☐ Satisfied ☐ Unsatisfied ☐ Not involved

No.	Check Item	Command	Criteria	Result
5	Routing table information	\<Quidway\> **display ip routing-table**	● A default route or precise route exists for remote fault locating. ● On all the devices running the same routing protocol at the same layer of a network, the number of routing entries should be almost identical. If static routes are configured, the routing entries in the routing tables of different devices may differ.	☐ Satisfied ☐ Unsatisfied ☐ Not involved