Monitor Redundant Power Supply with SNMP

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Introduction

Some Cisco switches allow a redundant power supply (RPS) in addition to local power supply. This document provides information on how to monitor the status of the RPS in those switches using SNMP.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these hardware and software versions:

- Software images supporting CISCO−STACK−MIB Supported in all Catalyst OS versions and the IOS images.
- Software images supporting CISCO−C2900−MIB Supported in all software images for switches of the Cat2900XL and Cat3500XL family and IOS images.
- RPS 300
- RPS 600

Note: The contents of this document apply only to switches and not to any router models.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Background Information

No traps or syslog messages are currently sent by RPS devices notifying about a change of status. However, that status can be tracked by reading either of the following MIB objects, from the switch where the RPS is

attached:

- For switches supporting the CISCO−STACK−MIB, the object is chassisPs2Status (1.3.6.1.4.1.9.5.1.2.7)

```
chassisPs2Status OBJECT−TYPE
        SYNTAX        INTEGER {
                                other(1),       −− none of the following
                                ok(2),          −− status ok
                                minorFault(3),  −− minor problem
                                majorFault(4)   −− major problem
                                }
        MAX−ACCESS    read−only
        STATUS        current
        DESCRIPTION   "Status of power supply number 2. If the status is
                      not ok, the value of chassisPs2TestResult gives
                      more detailed information about the power supply's
                      failure condition(s)."
        ::= { chassisGrp 7 }
```

- For switches supporting the CISCO−2900−MIB, the object is c2900InfoRedunantPowerSupplyInfo (1.3.6.1.4.1.9.9.87.1.1.9)

```
c2900InfoRedunantPowerSupplyInfo OBJECT−TYPE
     SYNTAX  INTEGER {
             absent(1),
             connectedFunctional(2),
             connectedNotFunctional(3),
             functionalPrimaryFailed(4)
            }

     MAX−ACCESS  read−only
     STATUS current
     DESCRIPTION
            "The switch allows a redundant power supply in addition
             to its local power supply. Only one power source can be
             supplying power to a unit.

             absent(1) :the redundant power supply is not connected
                        to the switch.

             connectedFunctional(2) : the redundant power supply is
                       connected to the switch and operational.

             connectedNotFunctional(3): the redundant power supply
                       is connected to the switch, but cannot supply
                       power to the system.

             functionalPrimaryFailed(4): the redundant power supply
                       is installed, powered on, and operational,
                       but a failure exists in the local power
                       supply system."
     ::= { c2900SysInfo 9 }
```

Using the RMON alarms and events groups, you can configure the switch so that it sends an alarm in SNMP trap format to the specified management station.

Configure Change of Status Traps in Switches Supporting the CISCO−STACK−MIB

You should configure these commands in a switch supporting the CISCO−STACK−MIB in order to get an RMON event, forwarded as an SNMP trap to the NMS station, when the status of the RPS changes from ok(2)

to majorFault(4):

```
rmon event 65 trap public description "RPS is not ready" owner yourname
rmon event 66 trap public description "RPS is ready" owner yourname
rmon alarm 222 1.3.6.1.4.1.9.5.1.2.7.0 10
   absolute rising−threshold 4 65 falling−threshold 2 66 owner yourname
```

Configure Change of Status Traps in Switches Supporting the CISCO−C2900−MIB

You should configure these commands in a switch supporting the CISCO−C2900−MIB in order to get an RMON event, forwarded as a trap to the NMS station, when the status of the RPS changes from connectedFunctional(2) to absent(1):

```
rmon event 67 trap public description "RPS not ready" owner yourname
rmon event 68 trap public description "RPS ready" owner yourname
rmon alarm 444 1.3.6.1.4.1.9.9.87.1.1.9.0 5
   absolute rising−threshold 2 68 falling−threshold 1 67 owner yourname
```

Related Information

- **Configuring RMON Alarm and Event Settings from the Command Line Interface (CLI)**
- **Technical Support − Cisco Systems**

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