

运行 12.2(17)SX 之前版本的 Cisco IOS 软件且配有 Supervisor 720 的 Catalyst 6500 的口令恢复过程

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简介

本文档介绍如何在运行 Cisco IOS® 系统软件 (版本低于 12.2(17)SX) 的 Catalyst 6500 系列交换机 (带有 Supervisor 720) 上恢复口令。

12.2(17)SX之前的Cisco IOS软件版本的操作步骤不同的原因是Cisco Bug ID [CSCec36997](#)(仅限[注册客户](#))(在sup720上恢复口令会导致交换机处理器(SP)崩溃。当您的交换机遇到此Bug时，在进入RP ROMMON后，您大约有10秒的时间将配置寄存器更改为0x2142。在这10秒后，交换机将重新加载软件强制重新加载。但是，如果您在崩溃前将配置寄存器更改为此值，则此值将在重新加载后生效，并且您可以继续执行剩余过程。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档适用于运行版本低于 12.2(17)SX 的 Cisco IOS 软件且基于 Supervisor 720 的系统。如果您的 Supervisor 720 运行 Cisco IOS 软件版本 12.2(17)SX 或更高版本，请参阅[运行 Cisco IOS 系统软件的 Catalyst 6000/6500 系列交换机的口令恢复程序文档](#)。

概述

由于硬件不同，运行 Cisco IOS 的 Catalyst 6500/6000 的启动顺序与 Cisco 7200 系列路由器的启动顺序不同。在为机箱重新通电后，SP 将启动。大约 25-60 秒后，它将控制台所有权转交给路由处理器 (RP (MSFC))。RP 继续加载捆绑的软件映像。请务必在 SP 将控制台控制权转交给 RP 之后立即按 **Ctrl-Break**。如果您太早发送中断序列，则您会进入 SP 的 ROMMON 模式，这不是您想要的模式。请在控制台上显示以下消息后发送中断序列：

```
00:00:03: %OIR-6-CONSOLE: Changing console ownership to route processor
```

在这之后，口令恢复过程与普通路由器一样。

注意：从此开始，运行 Cisco IOS 软件的 Catalyst 6500 系列交换机称为路由器。

规则

有关文件规则的更多信息请参见“Cisco 技术提示规则”。

分步过程

由于交换机上运行 Cisco IOS 操作系统，因此交换机的配置方式与路由器相同。口令恢复过程的步骤与 Cisco 7200 系列路由器相同。不同之处是在开始发送中断序列之前，您必须多等待 25-60 秒。

1. 将终端或带终端仿真功能的 PC 连接到路由器的控制台端口。使用以下终端设置：

```
9600 baud rate
No parity
8 data bits
1 stop bit
No flow control
```

电缆规格文档中描述了所需的控制台电缆规格。有关如何连接到控制台端口的说明，请参阅[模块安装指南](#)。[连接到控制台端口 - 仅 Supervisor 引擎部分提供了有用的信息。](#)

2. 如果您仍需要访问路由器，请发送 **show version** 命令，并且记录配置寄存器设置。它通常为 0x2102 或 0x102。单击[此处](#)查看 show version 命令的示例输出。
3. 如果您无法访问路由器（由于丢失登录口令或 TACACS 口令），则将配置寄存器设置为 0x2102 较安全。
4. 使用电源开关先关闭路由器电源，然后再将其打开。
5. 在 RP 获得控制台端口的控制权后，立即按终端键盘上的 **Break**。在运行 Cisco IOS 的 Catalyst 6500 上，SP 先启动。然后，它将控制权转交给 RP。在 RP 获得控制权后，启动中断序列。当显示此消息时，RP 已获得控制台端口的控制权。（在看见以下消息前，请不要发送中断顺序信号）：

```
00:00:03: %OIR-6-CONSOLE: Changing console ownership to route processor
```

由于 Cisco Bug ID [CSCec36997](#)（仅限注册客户）（在 sup720-native 上恢复口令会导致 SP 崩溃），因此在交换机崩溃之前，您有大约 10 秒的时间完成步骤 6。[如果中断序列不起作用，请参阅口令恢复过程中的标准 break 键序列组合，获取其他键组合。](#)

6. 请在 rommon 1> **confreg 0x2142**，以便在不装载配置的情况下从闪存处引导。
7. 交换机因软件强制崩溃而崩溃：

```
rommon 1 >
00:00:41: %SYS-SP-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure co.
00:00:41: %SYS-SP-2-INTSCHED: 't_idle' at level 7
-Process= "SCP Download Process", ipl= 7, pid= 57
-Traceback= 4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C
00:00:41: %SYS-SP-2-INTSCHED: 't_idle' at level 7
-Process= "SCP Download Process", ipl= 7, pid= 57
```

```
-Traceback= 4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C
00:00:41: %SYS-SP-2-INTSCHED: 't_idle' at level 7
-Process= "SCP Download Process", ipl= 7, pid= 57
-Traceback= 4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C
00:00:41: %OIR-SP-6-CONSOLE: Changing console ownership to switch processor
```

*** System received a Software forced crash ***

```
signal= 0x17, code= 0x24, context= 0x4269f6f4
PC = 0x401370d8, Cause = 0x3020, Status Reg = 0x34008002
```

路由器重新启动。但是，由于配置寄存器设置为0x2142，因此它会忽略其保存的配置。如果您看到路由器配置仍然存在（仍旧是以前的主机名），则表明在崩溃之前配置寄存器未及时更改为0x2142。如果出现这种情况，请重新启动（步骤4）。如果配置寄存器已正确地更改为0x2142，则重新加载后，会显示初始配置问题。

8. 在每个设置问题后面键入 **no**，或者按 **Ctrl-C** 跳过初始设置程序。
9. 在 `Router>` 提示符处键入 **enable**。现在您处于启用模式，且显示了 `Router#`
10. 发出 `configure memory` 或 `copy start running` 命令将非易失性 RAM (NVRAM) 复制到内存中，此操作很重要。请不要发出 `configure terminal` 命令。
11. 发出 `write terminal` 或 `show running` 命令。这些命令将显示路由器的配置。在此配置中，`shutdown` 命令显示在所有接口下面。这意味着所有接口当前已关闭。此外，口令都采用加密或未加密格式。
12. 发出 `configure terminal` 命令以进入全局配置模式并进行更改。当前的提示是
`hostname(config)#。`
13. 在全局配置模式下发出 `enable secret <password>` 以更改启用口令。
14. 发出 `config-register 0x2102` 命令或者在全局配置模式 (`Router(config)#`) 第 2 步记录的值，将配置值设置回最初值。
15. 更改所有虚拟终端口令（如果存在虚拟终端）：
`Router(config)#line vty 0 4`
`Router(config-line)#password cisco`
`Router(config-line)#^Z`
`Router#`
16. 在正常使用的每个接口上发出 `no shutdown` 命令。发出 `show ip interface brief` 命令查看接口及其当前状态的列表。您必须在启动模式 (`Router#`) 才能执行 `show ip interface brief` 命令。这里给出一个接口例子：
`Router#show ip interface brief`

Interface	IP-Address	OK?	Method	Status	Pro
Vlan1	172.17.10.10	YES	TFTP	administratively down	down
Vlan10	10.1.1.1	YES	TFTP	administratively down	down
GigabitEthernet1/1	unassigned	YES	unset	administratively down	down
GigabitEthernet1/2	unassigned	YES	TFTP	administratively down	down
GigabitEthernet2/1	unassigned	YES	TFTP	administratively down	down
GigabitEthernet2/2	unassigned	YES	TFTP	administratively down	down
FastEthernet3/1	172.16.84.110	YES	TFTP	administratively down	down

`<snip>...`
`Router#configure terminal`
Enter configuration commands, one per line. End with CNTL/Z.
`Router(config)#interface fastEthernet 3/1`
`Router(config-if)#no shutdown`
`Router(config-if)#exit`
`Router(config)# <do other interfaces as necessary...>`
17. 按下 **Ctrl-z** 离开配置模式。当前的提示 `hostname#。`
18. 发出 `write memory` 或 `copy running startup` 命令以提交更改。

示例输出

此处的示例显示一个实际口令恢复过程。本示例是在 Catalyst 6500 系列交换机上创建的。首先发出 **show version** 和 **show module** 命令查看本示例中使用的组件。

Press RETURN to get started.

sup720>**enable**

Password:

sup720#

sup720#**show version**

Cisco Internetwork Operating System Software
IOS (tm) s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY)
TAC Support: <http://www.cisco.com/tac>
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 27-May-03 20:40 by ccai
Image text-base: 0x40008C10, data-base: 0x41ACE000

ROM: System Bootstrap, Version 12.2(14r)S9, RELEASE SOFTWARE (fc1)

BOOTLDR: s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY)

sup720 uptime is 18 minutes
Time since sup720 switched to active is 17 minutes
System returned to ROM by power-on (SP by reload)
System image file is "disk0:s72033-ps-mz.122-14.SX1.bin"

cisco Catalyst 6000 (R7000) processor with 458752K/65536K bytes of memory.

Processor board ID

SR71000 CPU at 600Mhz, Implementation 0x504, Rev 1.2, 512KB L2 Cache

Last reset from power-on

X.25 software, Version 3.0.0.

Bridging software.

3 Virtual Ethernet/IEEE 802.3 interface(s)

96 FastEthernet/IEEE 802.3 interface(s)

58 Gigabit Ethernet/IEEE 802.3 interface(s)

1917K bytes of non-volatile configuration memory.

8192K bytes of packet buffer memory.

65536K bytes of Flash internal SIMM (Sector size 512K).

Configuration register is 0x2102

sup720#

sup720#**show module**

Mod	Ports	Card Type	Model	Serial No.
1	16	16 port GE RJ45	WS-X6316-GE-TX	SAD04100A9R
2	48	48 port 10/100 mb RJ-45 ethernet	WS-X6248-RJ-45	SAD041402P9
4	16	SFM-capable 16 port 1000mb GBIC	WS-X6516A-GBIC	SAL0705CD7X
5	2	Supervisor Engine 720 (Active)	WS-SUP720-BASE	SAD070600MU
7	24	aCEF720 24 port 1000mb SFP	WS-X6724-SFP	SAD0725035Y
9	48	48-port 10/100 mb RJ45	WS-X6148-RJ45V	SAL06282HGE

Mod	MAC addresses	Hw	Fw	Sw	Status
1	00d0.9738.702a to 00d0.9738.7039	0.202	5.3(1)	7.7(0.74)APP	Ok
2	0001.9709.5c90 to 0001.9709.5cbf	1.2	5.1(1)CSX	7.7(0.74)APP	Ok
4	0009.11f6.aa28 to 0009.11f6.aa37	1.0	7.2(1)	7.7(0.74)APP	Ok
5	000c.3042.844c to 000c.3042.844f	1.0	7.7(1)	12.2(14)SX1	Ok
7	0030.f272.2666 to 0030.f272.267d	1.0	12.2(14r)S5	12.2(14)SX1	PwrDown
9	0009.127c.8d40 to 0009.127c.8d6f	1.0	5.4(2)	7.7(0.74)APP	Ok

Mod	Sub-Module	Model	Serial	Hw	Status
5	Policy Feature Card 3	WS-F6K-PFC3A	SAD070601DR	1.0	Ok

5 MSFC3 Daughterboard	WS-SUP720	SAD070500YF	1.0	Ok
7 unknown FRU type (major = 0	WS-F6700-CFC	SAD073201KC	1.0	PwrDown
9 Inline Power Module	WS-F6K-PWR		1.0	Ok

Mod Online Diag Status

```

--- -----
1 Pass
2 Pass
4 Pass
5 Pass
7 Unknown
9 Pass

```

sup720#

sup720#

sup720#**reload**

Proceed with reload? [confirm]

```

!--- Here you turn off the power and then turn it back on. !--- Here it is done with a reload
instead of a hard power-cycle. *Sep 29 04:21:13: %SYS-5-RELOAD: Reload requested by console.
*Sep 29 04:21:16: %OIR-SP-6-CONSOLE: Changing console ownership to switch procer *Sep 29
04:21:18: %SYS-SP-5-RELOAD: Reload requested *Sep 29 04:21:18: %OIR-SP-6-CONSOLE: Changing
console ownership to switch procer *** ** SHUTDOWN NOW *** !--- First, the switch
processor comes up. System Bootstrap, Version 7.7(1) Copyright (c) 1994-2003 by cisco Systems,
Inc. Cat6k-Sup720/SP processor with 524288 Kbytes of main memory Autoboot executing command:
"boot disk0:s72033-ps-mz.122-14.SX1.bin" Self decompressing the image :
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Commercial Computer Software - Restricted Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS sec. 252.227-
7013. cisco Systems, Inc. 170 West Tasman Drive San Jose, California 95134-1706 Cisco
Internetwork Operating System Software IOS (tm) s72033_sp Software (s72033_sp-SP-M), Version
12.2(14)SX1, EARLY DEPLOY) TAC Support: http://www.cisco.com/tac Copyright (c) 1986-2003 by
cisco Systems, Inc. Compiled Tue 27-May-03 20:48 by ccai Image text-base: 0x40020C10, data-base:
0x40B98000 00:00:03: %PFREDUN-6-ACTIVE: Initializing as ACTIVE processor
00:00:03: %OIR-6-CONSOLE: Changing console ownership to route processor

```

```

!--- The RP now has control of the console. !--- This is when you send the break sequence.
System Bootstrap, Version 12.2(14r)S9, RELEASE SOFTWARE (fc1) TAC Support:
http://www.cisco.com/tac Copyright (c) 2003 by cisco Systems, Inc. Cat6k-Sup720/RP platform with
524288 Kbytes of main memory Download Start *** Mistral Interrupt on line 4 *** System memory 1
bit ECC correctable error interrupt .. PC = 0x8000841c, SP = 0x80007f00, RA = 0x80008488 Cause
Reg = 0x00004400, Status Reg = 0x3041c003 rommon 1 > !--- You are now in ROMMON mode on the RP.
Continue the password !--- recovery procedure just as on any router. Changing the configuration
!--- register from 0x2102 to 0x2142 causes the router to ignore the existing !--- configuration.
It needs to be ignored because it has passwords that are not !--- known. Due to Cisco bug ID
CSCec36997 : Password recovery on sup720-native leads to crash !--- on SP. You have about 10
seconds to change the configuration register to 0x2142. !--- After these 10 seconds, the SP
crashes. If the config register is not changed !--- in time, start again. rommon 1 > confreg
0x2142

```

You must reset or power cycle for new config to take effect.

rommon 2 >

```

!--- Without any intervention, the switch crashes in about 10 seconds !--- after you break into
RP ROMMON. 00:00:31: %SYS-SP-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure co.
00:00:31: %SYS-SP-2-INTSCHED: 't_idle' at level 7 -Process= "SCP Download Process", ipl= 7, pid=
57 -Traceback= 4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C 00:00:31:
%SYS-SP-2-INTSCHED: 't_idle' at level 7 -Process= "SCP Download Process", ipl= 7, pid= 57 -
Traceback= 4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C 00:00:31: %SYS-
SP-2-INTSCHED: 't_idle' at level 7 -Process= "SCP Download Process", ipl= 7, pid= 57 -Traceback=
4013991C 401232B4 402827F4 40282994 40283010 405CB010 402A9858 4013C 00:00:31: %OIR-SP-6-
CONSOLE: Changing console ownership to switch processor *** System received a Software forced
crash *** signal= 0x17, code= 0x24, context= 0x4269f6f4 PC = 0x401370d8, Cause = 0x3020, Status

```


!--- You go right into privilege mode without needing a password. !--- At this point, the configuration running-config is a default configuration *!--- with all the ports administratively down (shutdown).* Router#**copy startup-config running-config**
Destination filename [running-config]? <press enter>

!--- This pulls in your original configuration. Since you are already in privilege !--- mode, the passwords in this configuration (that are not known) do not affect you. 4864 bytes copied in 2.48 secs (2432 bytes/sec) sup720# **sup720#configure terminal**
Enter configuration commands, one per line. End with CNTL/Z.
sup720(config)#**enable secret < password > [Choose a strong password with at least one capital letter, one number, and one special character.]**

!--- Overwrite the password that you do not know. This is your new enable password. sup720#**show ip interface brief**

Interface	IP-Address	OK?	Method	Status	Pro
Vlan1	10.48.72.142	YES	TFTP	administratively down	dow
Vlan500	10.1.1.1	YES	TFTP	administratively down	dow
Vlan501	10.2.2.1	YES	TFTP	administratively down	dow
GigabitEthernet1/1	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/2	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/3	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/4	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/5	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/6	unassigned	YES	TFTP	administratively down	dow
GigabitEthernet1/7	unassigned	YES	TFTP	administratively down	dow

<snip>...

!--- Issue the no shut command on all interfaces that you want to bring up.

sup720#**configure terminal**
Enter configuration commands, one per line. End with CNTL/Z.
sup720(config)#**interface gig 1/1**
sup720(config-if)#**no shut**
sup720(config-if)#^Z
sup720#

!--- Overwrite the virtual terminal passwords. sup720#**configure terminal**
sup720(config)#**line vty 0 4**
sup720(config-line)#**password XXX**
sup720(config-line)#^Z
sup720#

!--- Restore the configuration register to its normal state !--- so that it no longer ignores the stored configuration file. sup720#**show version**

```
Cisco Internetwork Operating System Software
IOS (tm) s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 27-May-03 20:40 by ccai
Image text-base: 0x40008C10, data-base: 0x41ACE000
```

```
ROM: System Bootstrap, Version 12.2(14r)S9, RELEASE SOFTWARE (fc1)
BOOTLDR: s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY)
```

```
sup720 uptime is 4 minutes
Time since sup720 switched to active is 4 minutes
System returned to ROM by power-on (SP by error - a Software forced crash, PC 0)
System image file is "disk0:s72033-ps-mz.122-14.SX1.bin"
```

```
cisco Catalyst 6000 (R7000) processor with 458752K/65536K bytes of memory.
Processor board ID
SR71000 CPU at 600Mhz, Implementation 0x504, Rev 1.2, 512KB L2 Cache
Last reset from power-on
```

X.25 software, Version 3.0.0.
Bridging software.
3 Virtual Ethernet/IEEE 802.3 interface(s)
96 FastEthernet/IEEE 802.3 interface(s)
58 Gigabit Ethernet/IEEE 802.3 interface(s)
1917K bytes of non-volatile configuration memory.
8192K bytes of packet buffer memory.

65536K bytes of Flash internal SIMM (Sector size 512K).

Configuration register is 0x2142

sup720#

sup720#**configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

sup720(config)#**config-register 0x2102**

sup720(config)#

!--- Verify that the configuration register is changed for the next reload. sup720#**show version**

Cisco Internetwork Operating System Software
IOS (tm) s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY)
TAC Support: <http://www.cisco.com/tac>
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 27-May-03 20:40 by ccai
Image text-base: 0x40008C10, data-base: 0x41ACE000

ROM: System Bootstrap, Version 12.2(14r)S9, RELEASE SOFTWARE (fc1)
BOOTLDR: s72033_rp Software (s72033_rp-PS-M), Version 12.2(14)SX1, EARLY DEPLOY
sup720 uptime is 4 minutes
Time since sup720 switched to active is 4 minutes

System returned to ROM by power-on (SP by error - a Software forced crash, PC 0)
System image file is "disk0:s72033-ps-mz.122-14.SX1.bin"

cisco Catalyst 6000 (R7000) processor with 458752K/65536K bytes of memory.

Processor board ID

SR71000 CPU at 600Mhz, Implementation 0x504, Rev 1.2, 512KB L2 Cache

Last reset from power-on

X.25 software, Version 3.0.0.

Bridging software.

3 Virtual Ethernet/IEEE 802.3 interface(s)
96 FastEthernet/IEEE 802.3 interface(s)
58 Gigabit Ethernet/IEEE 802.3 interface(s)
1917K bytes of non-volatile configuration memory.
8192K bytes of packet buffer memory.

65536K bytes of Flash internal SIMM (Sector size 512K).

Configuration register is 0x2142 (will be 0x2102 at next reload)

sup720#

sup720#**copy running-config startup-config**

Destination filename [startup-config]?

Building configuration...

[OK]

sup720#

!--- Optional: If you want to test that the router operates properly and that you have changed the passwords, !--- reload and test. sup720#**reload**

Proceed with reload? [confirm]

相关信息

- [LAN 产品支持页](#)
- [LAN 交换技术支持页](#)
- [技术支持 - Cisco Systems](#)