

运行 Cisco IOS 系统软件的 Catalyst 6500/6000 系列交换机的口令恢复过程

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简介

本文档描述如何在运行 Cisco IOS® 系统软件的 Catalyst 6500/6000 系列交换机和 Cisco 7600 系列路由器上恢复口令。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文适用于 Supervisor 1、Supervisor 2、Supervisor 720 和基于虚拟交换系统 (VSS) 1440 的系统。对于基于 Supervisor 720 的系统，仅当它运行 Cisco IOS 软件版本 12.2(17)SX 或更高版本时，本文档才适用。如果您的 Supervisor 720 运行的版本低于此版本，请参阅 [带有 Supervisor 720 且其运行的 Cisco IOS 系统软件版本低于 12.2\(17\)SX 的 Catalyst 6500 的口令恢复过程](#)。

注意：基于虚拟交换系统 (VSS) 1440 的系统的支持的软件是 Cisco IOS 软件版本 12.2(33)SXH1 或以后。

背景

在运行 Cisco IOS 系统软件的 Catalyst 6500/6000 和 Cisco 7600 上，其启动顺序与 Cisco 7200 系列路由器有所不同，因为两者的硬件不一样。在您关机并重新开机方框后，交换机处理器 (SP) 首先启动。在一小段时间 (大约 25 到 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-brk**。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：从此时起，运行 Cisco IOS 系统软件的 Catalyst 6000 系列交换机称为路由器。

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

逐步程序

由于交换机上运行的操作系统，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 系列路由器基本相同，唯一的不同是在开始中断序列之前，您必须等待大约 25 到 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。通常是 0x2102 或 0x102。点击[此处](#)查看 **show version** 命令的输出。
3. 如果您无权访问路由器（由于丢失登录或 TACACS 口令），则您的配置寄存器被设置为 0x2102。
4. 请使用电源开关关闭并重新打开该路由器。
5. **警告：**只有在 RP 获得控制台端口的控制权后才能启动中断序列。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 软件的 Catalyst 6500 上，SP 将首先启动。在它启动后，会将控制权转交给 RP。在 RP 获得控制权后，启动中断序列。在显示此消息时，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
从这点后，密码恢复程序就同其他路由器一样了。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> 键入 **confreg 0x2142**，以便在不装载配置的情况下从闪存处引导。
7. 在 rommon 2> 提示符处键入 **reset**。路由器重新启动。但是，它会忽略已保存的配置。
8. 在每个设置问题后键入 **no** 或按 Ctrl-C 跳过初始设置步骤。
9. 在 Router> 提示符处键入 **enable**。您处于**启用模式**下，并且会看到 Router# 提示。
10. **重要信息：**发出 **configure memory** 或 **copy start running** 命令，将非易失性 RAM (NVRAM) 复制到内存中。请不要发出 **configure terminal** 命令。
11. 发出 **write term** 或 **show running** 命令。**show running** 和 **write terminal** 命令显示路由器的配置。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 >** 命令以更改启用口令。
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. 更改虚拟终端口令 (如果存在) : 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          Prol
Vlan1                    172.17.10.10   YES TFTP    administratively down dow
Vlan10                   10.1.1.1       YES TFTP    administratively down dow
GigabitEthernet1/1      unassigned     YES unset   administratively down dow
GigabitEthernet1/2      unassigned     YES TFTP    administratively down dow
GigabitEthernet2/1      unassigned     YES TFTP    administratively down dow
GigabitEthernet2/2      unassigned     YES TFTP    administratively down dow
FastEthernet3/1         172.16.84.110 YES TFTP    administratively down dow
<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 6000 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.
```

```
Router>enable
```

```
Password:
```

```
Router#show version
```

```
Cisco Internetwork Operating System Software
IOS (tm) c6sup1_rp Software (c6sup1_rp-JSV-M), Version 12.1(6)E, EARLY DEPLOYME
TAC Support: http://www.cisco.com/cgi-bin/ibld/view.pl?i=support
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Sat 17-Mar-01 00:14 by eaarmas
Image text-base: 0x60020950, data-base: 0x6165E000
```

```
ROM: System Bootstrap, Version 12.0(3)XE, RELEASE SOFTWARE
```

```
BOOTFLASH: MSFC Software (C6MSFC-BOOT-M), Version 12.1(6)E, EARLY DEPLOYMENT RE)
```

```
Router uptime is 14 minutes
```

```
System returned to ROM by power-on (SP by reload)
```

```
System image file is "sup-bootflash:c6sup11-jsv-mz.121-6.E"
```

```
Cisco Catalyst 6000 (R5000) processor with 114688K/16384K bytes of memory.
```

```
Processor board ID SAD04281AF6
```

```
R5000 CPU at 200Mhz, Implementation 35, Rev 2.1, 512KB L2 Cache
```

```
Last reset from power-on
```

```
Bridging software.
```

```
X.25 software, Version 3.0.0.
```

```
SuperLAT software (copyright 1990 by Meridian Technology Corp).
```

```
TN3270 Emulation software.
```

24 Ethernet/IEEE 802.3 interface(s)
2 Virtual Ethernet/IEEE 802.3 interface(s)
48 FastEthernet/IEEE 802.3 interface(s)
4 Gigabit Ethernet/IEEE 802.3 interface(s)
381K bytes of non-volatile configuration memory.
4096K bytes of packet SRAM memory.

16384K bytes of Flash internal SIMM (Sector size 256K).
Configuration register is 0x2102

Router#

Router#**show module**

Slot	Ports	Card Type	Model	Serial Number
1	2	Cat 6000 sup 1 Enhanced QoS (active)	WS-X6K-SUP1A-2GE	SAD043301JS
2	2	Cat 6000 sup 1 Enhanced QoS (standby)	WS-X6K-SUP1A-2GE	SAD03510114
3	48	48 port 10/100 mb RJ45	WS-X6348-RJ-45	SAD04230FB6
6	24	24 port 10baseFL	WS-X6024-10FL-MT	SAD03413322

Slot	MAC addresses	Hw	Fw	Sw
1	00d0.c0d2.5540 to 00d0.c0d2.5541	3.2	unknown	6.1(0.105)OR
2	00d0.bcf1.9bb8 to 00d0.bcf1.9bb9	3.2	unknown	6.1(0.105)OR
3	0002.7ef1.36e0 to 0002.7ef1.370f	1.1	5.3(1) 1999-	6.1(0.105)OR
6	00d0.9738.5338 to 00d0.9738.534f	0.206	5.3(1) 1999-	6.1(0.105)OR

Router#

Router#**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. 00:15:28: %SYS-SP-3-LOGGER_FLUSHING: System pausing to ensure console debugging. 00:15:27: %C6KPWR-SP-4-DISABLED: power to module in slot 2 set off (admin reque) 00:15:28: %C6KPWR-SP-4-DISABLED: power to module in slot 3 set off (admin reque) 00:15:28: %C6KPWR-SP-4-DISABLED: power to module in slot 6 set off (admin reque) 00:15:28: %OIR-SP-6-CONSOLE: Changing console ownership to switch processor 00:15:28: %SYS-SP-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure co. 00:15:30: %SYS-SP-3-LOGGER_FLUSHING: System pausing to ensure console debugging. *** --- SHUTDOWN NOW --- *** 00:15:30: %SYS-SP-5-RELOAD: Reload requested 00:15:30: %OIR-SP-6-CONSOLE: Changing console ownership to switch processor 00:15:30: %SYS-SP-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure co. 00:15:31: %OIR-SP-6-REMCARD: Card removed from slot 1, interfaces disabled *!--- First, the switch processor comes up.* System Bootstrap, Version 5.3(1) Copyright (c) 1994-1999 by cisco Systems, Inc. c6k_sup1 processor with 65536 Kbytes of main memory Autoboot executing command: "boot bootflash:c6sup11-jsv-mz.121-6.E" Self decompressing the image : #####] Restricted Rights Legend Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c) of the 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) c6sup1_sp Software (c6sup1_sp-SPV-M), Version 12.1(6)E, EARLY DEPLOYME) TAC Support: http://www.cisco.com/cgi-bin/ibld/view.pl?i=support Copyright (c) 1986-2001 by cisco Systems, Inc. Compiled Sat 17-Mar-01 00:52 by eaarmas Image text-base: 0x60020950, database: 0x605FC000 Start as Primary processor 00:00:03: %SYS-3-LOGGER_FLUSHING: System pausing to ensure console debugging ou. 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 12.0(3)XE, RELEASE SOFTWARE Copyright (c) 1998 by cisco Systems, Inc. *** Address Error (Load/Fetch) Exception *** Access address = 0x5e PC = 0x5e, Cause = 0x10, Status Reg = 0x3040d003 ROM Monitor Can Not Recover From Exception A Board Reset Is Issued *** Software NMI *** PC = 0xbfc0b6b0, SP = 0x00002a90 Cat6k-MSFC platform with 131072 Kbytes of main memory Self decompressing the image : #####] *** System received an abort due to Break Key *** signal= 0x3, code= 0x0, context= 0x6049ed68 PC = 0x601011ac, Cause = 0x20, Status Reg = 0x34008002 *!--- 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. You want it to be ignored because it has passwords that you do not !--- know. rommon 1 > **confreg 0x2142**

You must reset or power cycle for new config to take effect
rommon 2 > **reset**

System Bootstrap, Version 12.0(3)XE, RELEASE SOFTWARE
Copyright (c) 1998 by cisco Systems, Inc.
Cat6k-MSFC platform with 131072 Kbytes of main memory

Self decompressing the image : #####]

Attempt to download 'sup-bootflash:c6sup11-jsv-mz.121-6.E' ... okay
Starting download of 'sup-bootflash:c6sup11-jsv-mz.121-6.E': 8722810 bytes!!!!!!
Chksum: Verified!

Self decompressing the image : #####]

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Cisco Systems, Inc.
170 West Tasman Drive
San Jose, California 95134-1706

Cisco Internetwork Operating System Software
IOS (TM) c6sup1_RP Software (c6sup1_rp-JSV-M), Version 12.1(6)E, EARLY DEPLOYME
TAC Support: <http://www.cisco.com/cgi-bin/ibld/view.pl?i=support>
Copyright (c) 1986-2001 by Cisco Systems, Inc.
Compiled Sat 17-Mar-01 00:14 by eaarmas
Image text-base: 0x60020950, database: 0x6165E000

Cisco Catalyst 6000 (R5000) processor with 114688K/16384K bytes of memory.
Processor board ID SAD04281AF6
R5000 CPU at 200Mhz, Implementation 35, Rev 2.1, 512KB L2 Cache
Last reset from power-on
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
TN3270 Emulation software.
24 Ethernet/IEEE 802.3 interface(s)
1 Virtual Ethernet/IEEE 802.3 interface(s)
48 FastEthernet/IEEE 802.3 interface(s)
4 Gigabit Ethernet/IEEE 802.3 interface(s)
381K bytes of nonvolatile configuration memory.
4096K bytes of packet SRAM memory.

16384K bytes of Flash internal SIMM (Sector size 256K).

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: n

!--- The router ignores the saved configuration and enters !--- the initial configuration mode.
Press RETURN to get started! 00:00:03: %SYS-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure conso. 00:00:04: %C6KPWR-4-PSINSERTED: power supply inserted in slot 1. 00:00:04: %C6KPWR-4-PSOK: power supply 1 turned on. 00:02:08: %SYS-SP-5-RESTART: System restarted -- Cisco

Internetwork Operating System Software IOS (TM) c6supl_SP Software (c6supl_sp-SPV-M), Version 12.1(6)E, EARLY DEPLOYME) TAC Support: http://www.cisco.com/cgi-bin/ibld/view.pl?i=support Copyright (c) 1986-2001 by cisco Systems, Inc. Compiled Sat 17-Mar-01 00:52 by eaarmas 00:02:13: L3-MGR: 12 flush entry installed 00:02:13: L3-MGR: 13 flush entry installed 00:02:14: %SYS-5-RESTART: System restarted -- Cisco Internetwork Operating System Software IOS (TM) c6supl_RP Software (c6supl_rp-JSV-M), Version 12.1(6)E, EARLY DEPLOYME) TAC Support: http://www.cisco.com/cgi-bin/ibld/view.pl?i=support Copyright (c) 1986-2001 by Cisco Systems, Inc. Compiled Sat 17-Mar-01 00:14 by eaarmas 00:02:17: %C6KPWR-SP-4-DISABLED: power to module in slot 1 set off (admin reque) 00:02:18: %C6KPWR-SP-4-ENABLED: power to module in slot 3 set on 00:02:18: %C6KPWR-SP-4-ENABLED: power to module in slot 6 set on 00:02:28: sm_set_moduleFwVersion: nonexistent module (1) 00:02:38: %SNMP-5-MODULETRAP: Module 1 [Up] Trap 00:02:38: %OIR-SP-6-INSCARD: Card inserted in slot 1, interfaces are now online 00:02:56: %SNMP-5-MODULETRAP: Module 6 [Up] Trap 00:02:56: %OIR-SP-6-INSCARD: Card inserted in slot 6, interfaces are now online 00:02:59: SP: SENDING INLINE_POWER_DAUGHTERCARD_MSG SCP MSG 00:02:59: %SNMP-5-MODULETRAP: Module 3 [Up] Trap 00:02:59: %OIR-SP-6-INSCARD: Card inserted in slot 3, interfaces are now online Router>**enable**
Router#

!--- 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 the original configuration. Since you are already in privilege !--- mode, the passwords in this configuration do not affect you. 4864 bytes copied in 2.48 secs (2432 bytes/sec) Router#**configure terminal**
Enter configuration commands, one per line. End with CNTL/Z.
Router(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.
Router(config)#**^Z**
Router#

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>...

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

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**

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

!--- Restore the configuration register to its normal state so that it !--- no longer ignores the stored configuration file. Router#**show version**
Cisco Internetwork Operating System Software
IOS (tm) c6supl_rp Software (c6supl_rp-JSV-M), Version 12.1(6)E, EARLY DEPLOYME)
TAC Support: http://www.cisco.com/cgi-bin/ibld/view.pl?i=support
Copyright (c) 1986-2001 by cisco Systems, Inc.

Compiled Sat 17-Mar-01 00:14 by eaarmas
Image text-base: 0x60020950, data-base: 0x6165E000

ROM: System Bootstrap, Version 12.0(3)XE, RELEASE SOFTWARE
BOOTFLASH: MSFC Software (C6MSFC-BOOT-M), Version 12.1(6)E, EARLY DEPLOYMENT RE)

Router uptime is 7 minutes
System returned to ROM by power-on (SP by reload)
System image file is "sup-bootflash:c6sup11-jsv-mz.121-6.E"

Cisco Catalyst 6000 (R5000) processor with 114688K/16384K bytes of memory.
Processor board ID SAD04281AF6
R5000 CPU at 200Mhz, Implementation 35, Rev 2.1, 512KB L2 Cache
Last reset from power-on
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
TN3270 Emulation software.
24 Ethernet/IEEE 802.3 interface(s)
2 Virtual Ethernet/IEEE 802.3 interface(s)
48 FastEthernet/IEEE 802.3 interface(s)
4 Gigabit Ethernet/IEEE 802.3 interface(s)
381K bytes of non-volatile configuration memory.
4096K bytes of packet SRAM memory.

16384K bytes of Flash internal SIMM (Sector size 256K).

Configuration register is 0x2142

Router#**configure terminal**
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#**config-register 0x2102**
Router(config)#**^Z**
Router#

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

Cisco Internetwork Operating System Software
IOS (tm) c6sup1_rp Software (c6sup1_rp-JSV-M), Version 12.1(6)E, EARLY DEPLOYME)
TAC Support: <http://www.cisco.com/cgi-bin/ibld/view.pl?i=support>
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Compiled Sat 17-Mar-01 00:14 by eaarmas
Image text-base: 0x60020950, data-base: 0x6165E000

ROM: System Bootstrap, Version 12.0(3)XE, RELEASE SOFTWARE
BOOTFLASH: MSFC Software (C6MSFC-BOOT-M), Version 12.1(6)E, EARLY DEPLOYMENT RE)

Router uptime is 8 minutes
System returned to ROM by power-on (SP by reload)
System image file is "sup-bootflash:c6sup11-jsv-mz.121-6.E"

Cisco Catalyst 6000 (R5000) processor with 114688K/16384K bytes of memory.
Processor board ID SAD04281AF6
R5000 CPU at 200Mhz, Implementation 35, Rev 2.1, 512KB L2 Cache
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TN3270 Emulation software.
24 Ethernet/IEEE 802.3 interface(s)
2 Virtual Ethernet/IEEE 802.3 interface(s)
48 FastEthernet/IEEE 802.3 interface(s)
4 Gigabit Ethernet/IEEE 802.3 interface(s)
381K bytes of non-volatile configuration memory.
4096K bytes of packet SRAM memory.

```
16384K bytes of Flash internal SIMM (Sector size 256K).  
Configuration register is 0x2142 (will be 0x2102 at next reload)  
Router#  
Router#copy running-config startup-config  
Destination filename [startup-config]? <press enter>  
Building configuration...  
[OK]  
Router#
```

```
!--- Optional: If you want to test that the router !--- operates properly and that you have  
changed !--- the passwords, then reload and test. Router#reload  
Proceed with reload? [confirm] <press enter>
```

相关信息

- [LAN 交换技术支持页](#)
- [LAN 产品支持页](#)
- [Catalyst LAN 和 ATM 交换机产品支持](#)
- [技术支持 - Cisco Systems](#)