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

目录

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

本文档适用于基于Supervisor 1、Supervisor 2、Supervisor 720和虚拟交换系统(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的系统支持的软件是Cisco IOS®软件版本12.2(33)SXH1或更高版本。

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。重新通电后，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：从此开始，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。**它通常为0x2102或0x102。单击此处查看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. **注意：**只有在RP获得控制台端口的控制后，才必须启动中断序列。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>` **confreg 0x2142，以便在不装载配置的情况下从闪存处引导。**
7. 在 `rommon 2>` **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#`
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都已关闭。您会看到加密或未加密的密码。
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 : ##################################################]
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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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subject to restrictions as set forth in subparagraph
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Rights clause at FAR sec. 52.227-19 and subparagraph
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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_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) 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 00:02:13:
L3-MGR: l2 flush entry installed 00:02:13: L3-MGR: l3 flush entry installed 00:02:14: %SYS-5-
RESTART: System restarted -- 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 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                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>...

 !--- 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) 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 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.
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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

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
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 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
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 (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