

# Password Recovery Procedure for the Cisco Catalyst 8510 Campus Switch Router

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## Introduction

This document describes the procedure for recovering an **enable password** or **enable secret** passwords. These passwords are used to protect access to privileged EXEC and configuration modes. The **enable password** password can be recovered but the **enable secret** password is encrypted and can only be replaced with a new password using the procedure below.

**Note:** This password recovery procedure works for the following Cisco products:

• Cisco 806		• Catalyst
• Cisco 827	• Cisco 4700	2948G-L3
• Cisco uBR900	• Cisco AS5x00	• Catalyst 4840G
• Cisco 1003	• Cisco 6x00	• Catalyst 4908G-L3
• Cisco 1004	• Cisco 7000 (RSP7000)	• Catalyst 5500 (RSM)
• Cisco 1005	• Cisco 7100	• Catalyst 8510-CSR
• Cisco 1400	• Cisco 7200	• Catalyst 8510-MSR
• Cisco 1600	• Cisco 7500	• Catalyst 8540-CSR
	• Cisco uBR7100	• Catalyst 8540-MSR

• Cisco 1700	• Cisco uBR7200	• Cisco MC3810
• Cisco 2600	• Cisco	
• Cisco 3600	uBR10000	• Cisco NI-2
• Cisco 4500	• Cisco 12000	• Cisco VG200 Analog Gateway
	• Cisco LS1010	• Route Processor Module

## Before You Begin

### Conventions

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

### Prerequisites

There are no specific prerequisites for this document.

## Step-by-Step Procedure

To recover your password, follow the steps below:

1. Attach a terminal or PC with terminal emulation to the console port of the router.

Use the following terminal settings:

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

For additional information on cabling and connecting a terminal to the console port or the AUX port, refer to the following documents:

- ◆ Cabling Guide for Console and AUX Ports on Cisco Routers
- ◆ Connecting a Terminal to Catalyst 2948G-L3, 4908G-L3, and 4840G Series Switches
- ◆ Catalyst 8510CSR, and 8540CSR Switches Console Port Pinouts

2. If you still have access to the router, type **show version** and record the setting of the configuration register; it is usually 0x2102 or 0x102.

Click [here](#) to see the output of a **show version** command.

3. If you don't have access to the router (because of a lost login or TACACS password), you can safely consider that your configuration register is set to 0x2102.
4. Using the power switch, turn off the router and then turn it back on.

**Important:** To simulate step 4 on a Cisco 6400, pull out and then replace the Node Route Processor (NRP) or Node Switch Processor (NSP) card.

- Important:** To simulate step 4 on a Cisco 6x00 using NI-2, pull out and then replace the NI-2 card.
5. Press **Break** on the terminal keyboard within 60 seconds of the power-up to put the router into ROMMON.

If the break sequence doesn't work, see Possible Key Combinations for Break Sequence During Password Recovery for other key combinations.

6. Type **confreg 0x2142** at the rommon 1> prompt to boot from Flash without loading the configuration.
7. Type **reset** at the rommon 2> prompt.

The router reboots but ignores its saved configuration.

8. Type **no** after each setup question or press **Ctrl-C** to skip the initial setup procedure.
9. Type **enable** at the Router> prompt.

You'll be in enable mode and see the Router# prompt.

10. **Important:** Type **configure memory** or **copy startup-config running-config** to copy the nonvolatile RAM (NVRAM) into memory.

Do *not* type **configure terminal**.

11. Type **write terminal** or **show running-config**.

The **show running-config** and **write terminal** commands show the configuration of the router. In this configuration you see under all the interfaces the **shutdown** command, which means all interfaces are currently shutdown. Also, you can see the passwords (enable password, enable secret, vty, console passwords, and so on) either in encrypted or unencrypted format. The unencrypted passwords can be re-used, the encrypted ones will have to be changed with a new one.

12. Type **configure terminal** and make the changes.

The prompt is now **hostname(config)#**.

13. Type **enable secret < password >** to change the **enable secret** password, for example.
14. Issue the **no shutdown** command on every interface that is used.

If you issue a **show ip interface brief** command, every interface that you want to use should be "up up".

15. Type **config-register 0x2102**, or the value you recorded in step 2.
16. Press **Ctrl-z** or **end** to leave the configuration mode.

The prompt is now **hostname#**.

17. Type **write memory** or **copy running-config startup-config** to commit the changes.

## Example of Password Recovery Procedure

The example below presents an actual password recovery procedure. We created this example using a Cisco 2600. Even if you are not using a Cisco 2600, this example will be almost exactly what you experience on your product.

```
Router>enable
Password:
Password:
Password:
% Bad secrets
```

```
Router>show version
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-IS-M), Version 12.0(7)T, RELEASE SOFTWARE (fc2)
Copyright (c) 1986-1999 by cisco Systems, Inc.
Compiled Tue 07-Dec-99 02:21 by phanguye
```

Image text-base: 0x80008088, data-base: 0x80C524F8

ROM: System Bootstrap, Version 11.3(2)XA4, RELEASE SOFTWARE (fc1)

Router uptime is 3 minutes  
System returned to ROM by abort at PC 0x802D0B60  
System image file is "flash:c2600-is-mz.120-7.T"

cisco 2611 (MPC860) processor (revision 0x202) with 26624K/6144K bytes of memory.  
Processor board ID JAB031202NK (3878188963)  
M860 processor: part number 0, mask 49  
Bridging software.  
X.25 software, Version 3.0.0.  
Basic Rate ISDN software, Version 1.1.  
2 Ethernet/IEEE 802.3 interface(s)  
2 Serial(sync/async) network interface(s)  
1 ISDN Basic Rate interface(s)  
32K bytes of non-volatile configuration memory.  
8192K bytes of processor board System flash partition 1 (Read/Write)  
8192K bytes of processor board System flash partition 2 (Read/Write)

**Configuration register is 0x2102**

Router>

*!--- The router was just powercycled and during bootup a  
!--- break sequence was sent to the router.*

!

\*\*\* System received an abort due to Break Key \*\*\*

signal= 0x3, code= 0x500, context= 0x813ac158  
PC = 0x802d0b60, Vector = 0x500, SP = 0x80006030  
rommon 1 > **confreg 0x2142**

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

rommon 2 > **reset**

System Bootstrap, Version 11.3(2)XA4, RELEASE SOFTWARE (fc1)  
Copyright (c) 1999 by cisco Systems, Inc.  
TAC:Home:SW:IOS:Specials for info  
C2600 platform with 32768 Kbytes of main memory

program load complete, entry point: 0x80008000, size: 0x6fdb4c

Self decompressing the image : #####  
#####  
#####  
#####  
##### [OK]

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cisco Systems, Inc.

170 West Tasman Drive  
San Jose, California 95134-1706

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32K bytes of non-volatile configuration memory.  
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--- System Configuration Dialog ---

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

Press RETURN to get started!

```
00:00:19: %LINK-3-UPDOWN: Interface BRI0/0, changed state to up
00:00:19: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up
00:00:19: %LINK-3-UPDOWN: Interface Ethernet0/1, changed state to up
00:00:19: %LINK-3-UPDOWN: Interface Serial0/0, changed state to down
00:00:19: %LINK-3-UPDOWN: Interface Serial0/1, changed state to down
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0/0, changed state to down
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state to up
Router>
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed state to up
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to down
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to down
00:00:50: %SYS-5-RESTART: System restarted --
Cisco Internetwork Operating System Software
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00:00:50: %LINK-5-CHANGED: Interface BRI0/0, changed state to administratively down
00:00:52: %LINK-5-CHANGED: Interface Ethernet0/0, changed state to administratively down
00:00:52: %LINK-5-CHANGED: Interface Serial0/0, changed state to administratively down
00:00:52: %LINK-5-CHANGED: Interface Ethernet0/1, changed state to administratively down
00:00:52: %LINK-5-CHANGED: Interface Serial0/1, changed state to administratively down
00:00:53: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state to do
00:00:53: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed state to do
Router>
Router>enable
Router#copy startup-config running-config
Destination filename [running-config]?
1324 bytes copied in 2.35 secs (662 bytes/sec)
Router#
00:01:24: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0/0:1, changed state to down
00:01:24: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0/0:2, changed state to down
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 capi
Router(config)#^Z
00:01:54: %SYS-5-CONFIG_I: Configured from console by console
Router#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	10.200.40.37	YES	TFTP	<b>administratively down</b>	down
Serial0/0	unassigned	YES	TFTP	<b>administratively down</b>	down
BRI0/0	193.251.121.157	YES	unset	<b>administratively down</b>	down
BRI0/0:1	unassigned	YES	unset	<b>administratively down</b>	down
BRI0/0:2	unassigned	YES	unset	<b>administratively down</b>	down
Ethernet0/1	unassigned	YES	TFTP	<b>administratively down</b>	down
Serial0/1	unassigned	YES	TFTP	<b>administratively down</b>	down
Loopback0	193.251.121.157	YES	TFTP	up	up

Router#**configure terminal**

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

Router(config)#**interface Ethernet0/0**

Router(config-if)#**no shutdown**

Router(config-if)#

00:02:14: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up

00:02:15: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state to up

Router(config-if)#**interface BRI0/0**

Router(config-if)#**no shutdown**

Router(config-if)#

00:02:26: %LINK-3-UPDOWN: Interface BRI0/0:1, changed state to down

00:02:26: %LINK-3-UPDOWN: Interface BRI0/0:2, changed state to down

00:02:26: %LINK-3-UPDOWN: Interface BRI0/0, changed state to up

00:02:115964116991: %ISDN-6-LAYER2UP: Layer 2 for Interface BR0/0, TEI 68 changed to up

Router(config-if)#^Z

Router#

00:02:35: %SYS-5-CONFIG\_I: Configured from console by console

Router#**copy running-config startup-config**

Destination filename [startup-config]?

Building configuration...

[OK]

Router#**show version**

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2 Ethernet/IEEE 802.3 interface(s)

2 Serial(sync/async) network interface(s)

1 ISDN Basic Rate interface(s)

32K bytes of non-volatile configuration memory.

8192K bytes of processor board System flash partition 1 (Read/Write)

8192K bytes of processor board System flash partition 2 (Read/Write)

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

00:03:20: %SYS-5-CONFIG\_I: Configured from console by console

Router#**show version**

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

Router#

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## Related Information

- **Technical Support – Cisco Systems**

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