

# Password Recovery Procedure



**for the Cisco 827, 1000, 1400, 1600, 2600, 3600, 4500, 4700, AS5x00, 6x00(NI-2), 6400 (NRP, NSP), 7000 (RSP7000), 7100, 7200, uBR7200, 7500, 12000, MC3810, LightStream1010, Catalyst 2948G-L3, 4840G, 4908G-L3, 5500 (RSM), 8500, Cisco VG200 Analog Gateway, and Route Processor Module**

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## Description

This document describes the password recovery procedure for the following Cisco products:

- Cisco 827
- Cisco 1003
- Cisco 1004
- Cisco 1005
- Cisco 1400
- Cisco 1600
- Cisco 1700
- Cisco 2600
- Cisco 3600
- Cisco 4500
- Cisco 4700
- Cisco AS5x00
- Cisco 6x00
- Cisco 7000
- Cisco 7100
- Cisco 7200
- Cisco 7500
- Cisco uBR7200
- Cisco 12000
- Cisco LS1010
- Catalyst 2948G-L3
- Catalyst 4840G
- Catalyst 4908G-L3
- Catalyst 5500 (RSM)
- Catalyst 8510-CSR
- Catalyst 8510-MSR
- Catalyst 8540-CSR
- Catalyst 8540-MSR
- Cisco MC3810
- Cisco NI-2
- Cisco VG200 Analog Gateway
- Route Processor Module

## Step-by-Step Procedure

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

The required console cable specifications are described in the [Cabling Guide for RJ-45 Console and AUX Ports \(Cisco's 1000 series, 2500 series, and AS5100\)](#).

2. Type **show version** and record the setting of the configuration register. Click [here](#) to see output of a **show version** command.

The configuration register setting is usually 0x2102 or 0x102.

3. Using the power switch, turn off the router and then turn it on.

**Important:** To simulate step 3 on a Cisco 6400, pull out then replace the Node Route Processor (NRP) or Node Switch Processor (NSP) card.

**Important:** To simulate step 3 on a Cisco 6x00 using NI-2, pull out then replace the NI-2 card.

4. Press **Break** on the terminal keyboard within 60 seconds of the powerup 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.

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

The router reboots but ignores its saved configuration.

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

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

9. **Important:** Type **config mem** or **copy start running** to copy the nonvolatile RAM (NVRAM) into memory. Do *not* type **config term**.
10. Type **wr term** or **show running**.

The **show running** and **wr term** 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 either in encrypted or unencrypted format.

11. Type **config term** and make the changes.

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

12. Type **enable secret <password>**.

13. 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".

14. Type **config-register 0x2102**, or the value you recorded in step 2.

15. Press **Ctrl-z** to leave the configuration mode.

The prompt is now **hostname#**.

16. Type **write mem** or **copy running startup** to commit the changes.

## Example of Password Recovery on a Cisco 2600

The following example shows password recovery on a Cisco 2600.

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

Router>sh ver
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.
--More-- 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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8192K bytes of processor board System flash partition 2 (Read/Write)
```

```
--- 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 t
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed st
Router>
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed st
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed stat
00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed stat
00:00:50: %SYS-5-RESTART: System restarted --
Cisco Internetwork Operating System Software
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Copyright (c) 1986-1999 by cisco Systems, Inc.
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00:00:50: %LINK-5-CHANGED: Interface BRI0/0, changed state to administratively dc
00:00:52: %LINK-5-CHANGED: Interface Ethernet0/0, changed state to administrative
00:00:52: %LINK-5-CHANGED: Interface Serial0/0, changed state to administratively
00:00:52: %LINK-5-CHANGED: Interface Ethernet0/1, changed state to administrative
00:00:52: %LINK-5-CHANGED: Interface Serial0/1, changed state to administratively
00:00:53: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed st
00:00:53: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed st
Router>
Router>en
Router#copy start run
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
00:01:24: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0/0:2, changed state
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#enable secret cisco
Router(config)#^Z
00:01:54: %SYS-5-CONFIG_I: Configured from console by console
Router#sh ip int brief

Interface      IP-Address      OK?    Method      Status          Prot
Ethernet0/0    10.200.40.37    YES    TFTP        administratively down  down
Serial0/0      unassigned      YES    TFTP        administratively down  down
BRI0/0         193.251.121.157 YES    unset       administratively down  down
BRI0/0:1       unassigned      YES    unset       administratively down  down
BRI0/0:2       unassigned      YES    unset       administratively down  down
Ethernet0/1    unassigned      YES    TFTP        administratively down  down
Serial0/1      unassigned      YES    TFTP        administratively down  down
Loopback0      193.251.121.157 YES    TFTP        up                up
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int Ethernet0/0
Router(config-if)#no shut
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 st
Router(config-if)#int BRI0/0
Router(config-if)#no shut
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
Router(config-if)#^Z
Router#
00:02:35: %SYS-5-CONFIG_I: Configured from console by console
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#sh ver
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8192K bytes of processor board System flash partition 2 (Read/Write)

Configuration register is 0x2142

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#config-reg 0x2102
Router(config)#^Z
00:03:20: %SYS-5-CONFIG_I: Configured from console by console

Router#sh ver
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```

```
32K bytes of non-volatile configuration memory.  
--More-- 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 (will be 0x2102 at next reload)
```

```
Router#
```

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## Related Information

- [Password Recovery Procedures Index](#)
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