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Password Recovery Procedure for the Cisco 3600 Series Routers

Document ID: 22189

Introduction

Prerequisites

- Requirements

- Related Products

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Step-by-Step Procedure

Example of a Password Recovery Procedure

NetPro Discussion Forums – Featured Conversations

Related Information

Introduction

This document describes the procedure to recover the **enable password** or **enable secret** password. These passwords protect access to privileged EXEC and configuration modes. You can recover the **enable** password, but the **enable secret** password is encrypted. You can only replace the **enable secret** password with a new password through the procedure in this document.

Prerequisites

Requirements

There are no specific requirements for this document.

Related Products

This password recovery procedure can also be used for these products.

<ul style="list-style-type: none">• Cisco 806		
	<ul style="list-style-type: none">• Cisco 4700	<ul style="list-style-type: none">• Catalyst 2948G-L3
<ul style="list-style-type: none">• Cisco 827	<ul style="list-style-type: none">• Cisco AS5x00	<ul style="list-style-type: none">• Catalyst 4840G
<ul style="list-style-type: none">• Cisco uBR900	<ul style="list-style-type: none">• Cisco 6x00	<ul style="list-style-type: none">• Catalyst 4908G-L3
<ul style="list-style-type: none">• Cisco 1003	<ul style="list-style-type: none">• Cisco 7000 (RSP7000)	<ul style="list-style-type: none">• Catalyst 5500 (RSM)
	<ul style="list-style-type: none">• Cisco 7100	

• Cisco 1004		• Catalyst 8510-CSR
• Cisco 1005		
• Cisco 1400	• Cisco 7200	• Catalyst 8510-MSR
• Cisco 1600	• Cisco 7500	• Catalyst 8540-CSR
• Cisco 1700	• Cisco uBR7100	• Catalyst 8540-MSR
• Cisco 2600	• Cisco uBR7200	• Cisco MC3810
• Cisco 3600	• Cisco uBR10000	• Cisco NI-2
• Cisco 4500	• Cisco 12000	• Cisco VG200 Analog Gateway
• Cisco 1800	• Cisco LS1010	• Route Processor Module
	• Cisco 2800	• Cisco 3800

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Step-by-Step Procedure

Complete these steps in order to recover your password:

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

Use these terminal settings:

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

For additional information on cabling and how to connect a terminal to the console port or the AUX port, refer to these documents:

- ◆ Cabling Guide for Console and AUX Ports
 - ◆ The "Connecting a Terminal to Catalyst 2948G–L3, 4908G–L3, and 4840G Series Switches" and "Catalyst 8510CSR, and 8540CSR Switches Console Port Pinouts" sections of the document *Connecting a Terminal to the Console Port on Catalyst Switches*
2. If you still have access to the router, issue the **show version** command, and record the setting of the configuration register, which is usually 0x2102 or 0x102.

For a sample output of the **show version** command, see the Example of Password Recovery Procedure section.

If you do not have access to the router (due to a lost login or TACACS password), you can safely assume that your configuration register is set to 0x2102.

3. Turn off the power switch of the router, and then turn it back on.

Note: In order to simulate step 3 on a Cisco 6400, pull out and then replace the Node Route Processor (NRP) or Node Switch Processor (NSP) card.

Note: In order to simulate step 3 on a Cisco 6x00 with NI–2, pull out and then replace the NI–2 card.

4. Press the key combination for **Break Sequence** on the terminal keyboard within 60 seconds of the power–up to put the router into ROMMON mode.

If the break sequence does not work, refer to Standard Break Key Sequence Combinations During Password Recovery for other key combinations.

5. Issue the **confreg 0x2142** command at the `rommon 1>` prompt to boot from Flash, and bypass the startup–configuration, where the passwords are stored.
6. Issue the **reset** command at the `rommon 2>` prompt.

The router reboots but ignores the saved configuration (startup–configuration).

7. Type **no** at the prompt `Would you like to enter the initial configuration dialog?[yes/no]` or press **Ctrl–C** to skip the initial setup procedure.
8. Issue the **enable** command at the `router>` prompt.

You enter the enable mode, and the `Router#` prompt appears.

9. Issue the **configure memory** command or the **copy startup–config running–config** command to copy the nonvolatile RAM (NVRAM) into memory.

Note: Do *not* issue the **copy running–config startup–config** or **write** commands, which can erase your startup configuration.

10. Issue the **show running–config** command.

The **show running–config** command shows the configuration of the router. In this configuration you see, under all the interfaces, the **shutdown** command, which means all interfaces are currently shut down. Also, you can see the passwords (**enable password**, **enable secret**, **vtty**, **console** passwords, and so on) either in encrypted or unencrypted format. You can reuse the unencrypted passwords but you must change the encrypted ones to a new password.

11. Issue the **configure terminal** command, and make the required changes.

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

12. Issue the **enable secret <password>** command to change the **enable secret** password.

For example, `hostname(config)# enable secret cisco`

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 must be up.
14. Issue the **config-register 0x2102** command, in the global configuration mode, or the value you recorded in step 2.
 15. Press **Ctrl-Z** or **end** to leave the configuration mode.

The prompt is now hostname#.

16. Issue the **write memory** command or the **copy running-config startup-config** command to commit the changes.

Example of a Password Recovery Procedure

This example output presents an actual password recovery procedure. This example was created on a Cisco 2600. Even if you do not use a Cisco 2600, this example is 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-I-M), Version 12.3(3a), RELEASE SOFTWARE (fc2)
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Wed 15-Oct-03 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-i-mz.123-3a.bin"

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 power-cycled. During bootup, the router
!--- receives a break sequence.

!

*** 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

```
Cisco Internetwork Operating System Software
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```
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2 Ethernet/IEEE 802.3 interface(s)
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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)
```

--- System Configuration Dialog ---

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

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
IOS (tm) C2600 Software (C2600-I-M), Version 12.3(3a), RELEASE SOFTWARE (fc2)
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled wed 15-Oct-03 02:21 by phanguye
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 down
00:00:53: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1,
  changed state to down
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    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#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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IOS (tm) C2600 Software (C2600-I-M), Version 12.3(3a), RELEASE SOFTWARE (fc2)
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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
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-I-M), Version 12.3(3a), RELEASE SOFTWARE (fc2)
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ROM: System Bootstrap, Version 11.3(2)XA4, RELEASE SOFTWARE (fc1)

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```



```
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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 (will be 0x2102 at next reload)

Router#
```

NetPro Discussion Forums – Featured Conversations

Networking Professionals Connection is a forum for networking professionals to share questions, suggestions, and information about networking solutions, products, and technologies. The featured links are some of the most recent conversations available in this technology.

NetPro Discussion Forums – Featured Conversations for Router and IOS Architecture
Network Infrastructure: LAN Routing and Switching
Network Infrastructure: WAN Routing and Switching

Related Information

- [Technical Support & Documentation – Cisco Systems](#)
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