Perform Password Recovery on Integrated Services Router 2900 Router

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Introduction

This document describes how to recover the enable password and the enable secret password for the 2900 Cisco Router.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these hardware versions:

- Cisco 2900 Series Integrated Services Router (ISR)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Related Products

Refer to Password Recovery Procedures for information on how to recover passwords for related products.

Background Information

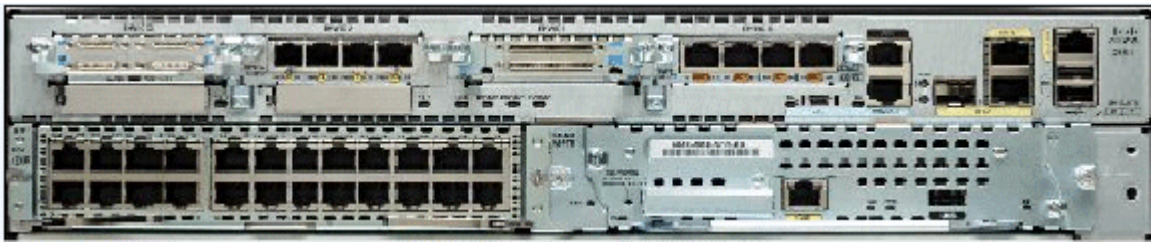
This document describes how to recover the enable password and the enable secret password. These passwords protect access to privileged EXEC and configuration modes. The enable password can be recovered, but the enable secret password is encrypted and must be replaced with a new password. Use the procedure described in this document in order to replace the enable secret password.

Note: The Cisco 2900 Series Integrated Services Router has reached its End of Support (EOS) status. This means that Cisco no longer provides software updates, bug fixes, or technical support for this device. Customers are advised to plan for migration or upgrade to newer supported platforms to ensure continued security and feature enhancements. For more information, please refer to Cisco's End-of-Life Announcement.

Step-by-Step Procedure

To recover your password:

1. Either **switch off** or **shut down** the router.
2. Remove the **compact flash** that is on the rear of the router. This image shows the rear of the 2951 router:



Back of the 2951 Router

For more information, refer to Overview of the Routers.

3. Switch **on** the router.
4. Once the router is on Rommon mode, reinsert the **compact flash**.
5. Type **confreg 0x2142** at the `rommon 1>` prompt in order to boot from Flash.

   This step bypasses the startup configuration where the passwords are stored.
6. Type **reset** at the `rommon 2>` prompt.

   The router reboots, but ignores the saved configuration.
7. Type **no** after each setup question, or press **Ctrl-C** in order to skip the initial setup procedure.
8. Type **enable** at the `Router >` prompt.

   You are in enable mode and you see the `Router#` prompt.
9. Type **configure memory** or **copy startup-config running-config** in order to copy the nonvolatile RAM (NVRAM) into memory.

Warning: Do not enter **copy running-config startup-config** or **write**. These commands 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, the **shutdown** command appears under all interfaces, which indicates all interfaces are currently shut down. In addition, the passwords (enable password, enable secret, vty, and console passwords) are in either an encrypted or unencrypted format. You can reuse unencrypted passwords. You must change encrypted passwords to a new password.

11. Type **configure terminal**.

    The `hostname(config)#` prompt appears.

12. Type **enable secret <password>** in order to change the enable secret password. For example:

    ```
    <#root>

    hostname(config)#

    enable secret cisco
    ```

13. Issue the **no shutdown** command on every interface that you use.

    If you issue a **show ip interface brief** command, every interface that you want to use displaysup.

14. Type **config-register <configuration_register_setting>**, where <configuration_register_setting> is either the value you recorded in step 2 or 0x2102. For example:

    ```
    <#root>

    hostname(config)#

    config-register 0x2102
    ```

15. Press **Ctrl-z** or **end** in order to leave the configuration mode.

    The `hostname#` prompt appears.

16. Type write memory or copy running-config startup-config in order to commit the changes.

Example of Password Recovery Procedure

This section provides an example of the password recovery procedure. This example was created with a Cisco 2900 Series ISR. Even if you do not use a Cisco 2900 Series ISR, this output provides an example of what you must experience on your product.

```
<#root>

Router>
enable

Password:
```

```
Password:
Password:
% Bad secrets

Router>
show version


Cisco IOS Software, C2900 Software (C2900-UNIVERSALK9-M), Version 15.0(1)M1,
     RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Wed 02-Dec-09 15:23 by prod_rel_team

ROM: System Bootstrap, Version 15.0(1r)M1, RELEASE SOFTWARE (fc1)

c2921-CCP-1-xfr uptime is 2 weeks, 22 hours, 15 minutes
System returned to ROM by reload at 06:06:52 PCTime Mon Apr 2 1900
System restarted at 06:08:03 PCTime Mon Apr 2 1900
System image file is "flash:c2900-universalk9-mz.SPA.150-1.M1.bin"
Last reload reason: Reload Command


This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

Cisco CISCO2921/K9 (revision 1.0) with 475136K/49152K bytes of memory.
Processor board ID FHH1230P04Y
1 DSL controller
3 Gigabit Ethernet interfaces
9 terminal lines
1 Virtual Private Network (VPN) Module
1 Cable Modem interface
1 cisco Integrated Service Engine-2(s)
   Cisco Foundation 2.2.1 in slot 1
DRAM configuration is 64 bits wide with parity enabled.
255K bytes of non-volatile configuration memory.
248472K bytes of ATA System CompactFlash 0 (Read/Write)
62720K bytes of ATA CompactFlash 1 (Read/Write)

Technology Package License Information for Module:'c2900'

-----------------------------------------------------------------
Technology    Technology-package          Technology-package
              Current       Type          Next reboot
-----------------------------------------------------------------
ipbase        ipbasek9      Permanent     ipbasek9
security      securityk9    Permanent     securityk9
uc            uck9          Permanent     uck9
data          datak9        Permanent     datak9
```

Configuration register is 0x2102

Router>

!--- Execute Steps 1 through 4 from Step-by-Step Procedure.

!

rommon 1 >

confreg 0x2142

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

rommon 2 >

reset

System Bootstrap, Version 15.0(1r)M1, RELEASE SOFTWARE (fc1)
Copyright (c) 2009 by cisco Systems, Inc.
TAC:Home:SW:IOS:Specials for info
C2900 platform with 524288 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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Processor board ID FHH1230P04Y

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1 DSL controller
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   Cisco Foundation 2.2.1 in slot 1
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62720K bytes of ATA CompactFlash 1 (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 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 --
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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 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 >
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      192.168.121.157   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   192.168.121.157   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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Configuration register is 0x2102

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 (is
```

0x2102

```
 at next reload)

Router#
```

Related Information

- Troubleshoot Password Recovery in IOS and IOS XE Routers
- Perform Password Recovery on Catalyst 9000 Series Switches
- Cisco Technical Support & Downloads