

# Recover Password for the 1900 Integrated Services Router

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## Introduction

This document describes how to recover the **enable password** and the **enable secret** passwords from your router.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on this hardware version:

- Cisco 1900 Series Integrated Services Router

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.

### Conventions

Refer to [Cisco Technical Tips Conventions](#) for information on document conventions.

## Background Information

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.

## Step-by-Step Procedure

Perform 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. Refer to these documents for information on how to cable and connect a terminal to the console port or the AUX port: [Configure Cable Requirements for Console and AUX Ports](#) and [Understand the Terminal Connection to a Console Port on Catalyst Switches](#)
2. If you can access the router, type **show version** at the prompt, and record the configuration register value. See the [Example of Password Recovery Procedure](#) section to view the output of a **show version** command. **Note:** The configuration register is typically set to 0x2102 or 0x102. If you can no longer access the router (because of a lost login or TACACS password), you can safely assume that your configuration register is set to 0x2102
3. Use the power switch in order to turn off the router, and then turn the router back on.
4. Press **Break** on the terminal keyboard a couple of times after you see the message `program load complete, entry point: 0x80008000, size: 0x6fdb4c` to put the router into ROMMON. **Note:** The values of entry point and size are subjected to the routers. If the break sequence does not work, refer to [Use Standard Break Key Sequence Combinations for Password Recovery](#) for other key combinations. If unable to break into ROMMON mode, perform these steps: Remove flash. Reload the router. Router ends up in ROMMON mode. Insert flash. Perform standard procedure for password recovery.
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** 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. Type **show running-config**. 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, 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>** to change the **enable secret** password. For example:  
`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 must display `up up`.
14. Type **config-register <configuration\_register\_value>**. Where **configuration\_register\_value** is either the value you recorded in step 2 or **0x2102**. For example:

```
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 experience on your product.

```
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/wvl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to [export@cisco.com](mailto: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>

```
!--- The router was just powercycled, and during bootup a  
!--- break sequence was sent to the router after seeing the following message  
!--- program load complete, entry point: 0x80008000, size: 0x6fdb4c. 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

Cisco IOS Software, C2900 Software (C2900-UNIVERSALK9-M), Version 15.0(1)M1,  
RELEASE SOFTWARE (fc1)  
Technical Support: <http://www.cisco.com/techsupport>

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Compiled Wed 02-Dec-09 15:23 by prod\_rel\_team

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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 IOS Software, C2900 Software (C2900-UNIVERSALK9-M), Version 15.0(1)M1,  
RELEASE SOFTWARE (fcl)  
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  
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 <new-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   | <b>administratively down</b> | down     |
| Serial0/0   | unassigned      | YES | TFTP   | <b>administratively down</b> | down     |
| BRI0/0      | 192.168.121.157 | 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   | 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**

Cisco IOS Software, C2900 Software (C2900-UNIVERSALK9-M), Version 15.0(1)M1, RELEASE SOFTWARE (fc1)

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System image file is "flash:c2900-universalk9-mz.SPA.150-1.M1.bin"

Last reload reason: Reload Command

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)
```

```
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
```

```
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
```

```
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```

```
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```

```
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)
```

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

```
Router#
```

## Related Information

- [Example of Password Recovery Procedure](#)
- [Configure Cable Requirements for Console and AUX Ports](#)
- [Understand the Terminal Connection to a Console Port on Catalyst Switches](#)
- [Routers Product Support](#)
- [Cisco Technical Support & Downloads](#)