

# Reset Router to Factory Defaults

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## Introduction

This document describes how to restore a Cisco router to its original factory default settings.

## Prerequisites

### Requirements

In order to perform the procedures described in this document, you must have enable (also known as privileged EXEC ) access on the router.

```
Router# <<< Privileged EXEC mode
```

### Components Used

This document is not restricted to specific software and hardware versions.

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

For more information on document conventions, refer to the [Cisco Technical Tips Conventions](#).

# Instructions to Reset a Cisco Router Back to Factory Defaults

There are two main methods to return a Cisco router to its original factory defaults. These two methods are described next.



Note: To view any information on the commands in this article refer to the Cisco IOS® [Configuration Fundamentals Command Reference](#).

## Method 1

This method uses the `config-register 0x2102` command in global configuration mode.

1. Issue the `show version` command to check the configuration register on the router.

The configuration register setting is displayed in the last line of the `show version` command output and must be set to `0x2102`.

```
<#root>
```

```
Router#
```

```
show version
```

```
Cisco IOS Software, VG3X0 Software (VG3X0-UNIVERSALK9-M), Version 15.4(3)M3, RELEASE SOFTWARE (fc2)  
Technical Support: http://www.cisco.com/techsupport  
Copyright (c) 1986-2015 by Cisco Systems, Inc.  
Compiled Fri 05-Jun-15 17:29 by prod_re1_team
```

```
ROM: System Bootstrap, Version 15.4(3r)M1a, RELEASE SOFTWARE (fc1)
```

```
Router uptime is 1 day, 14 hours, 14 minutes  
System returned to ROM by power-on  
System image file is "flash0:vg3x0-universalk9-mz.SPA.154-3.M3.bin"  
Last reload type: Normal Reload  
Last reload reason: power-on
```

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Cisco VG320 (revision 1.0) with 1003520K/45056K bytes of memory.  
Processor board ID FGL2023103U

2 Gigabit Ethernet interfaces  
1 Virtual Private Network (VPN) Module  
DRAM configuration is 32 bits wide with parity enabled.  
255K bytes of non-volatile configuration memory.  
255488K bytes of ATA System CompactFlash 0 (Read/Write)

License Info:

License UDI:

```
-----  
Device#   PID                SN  
-----  
*0        VG320              FGL2023103U
```

Technology Package License Information for Module:'vg3x0'

```
-----  
Technology   Technology-package   Type           Technology-package  
              Current                               Next reboot  
-----  
ipbase       ipbasek9             None           ipbasek9  
security     securityk9           RightToUse     securityk9  
uc           None                 None           None  
data         datak9               RightToUse     datak9  
NtwkEss     None                 None           None  
CollabPro   None                 None           None
```

Configuration register is 0x2102

If this is not the case, enter the config-register 0x2102 command once in global configuration mode.

```
<#root>
```

```
Router#
```

```
configure terminal
```

```
Router(config)#
```

```
config-register 0x2102
```

```
Router(config)#
```

```
end
```

```
Router#
```

If the show version command is issued again, the same line in the command output can have (0x2102 at next reload) appended to the current register setting.

2. Erase the current start-up configuration on the router with the write erase command.
3. Reload the router with the reload command. When prompted to `save` the configuration, DO NOT save .

```
<#root>
Router#
reload
System configuration has been modified. Save? [yes/no]:
n

Proceed with reload? [confirm]
```

Once the router reloads, the System Configuration Dialog appears.

```
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]:
```

The router is now reset to the original factory defaults.

## Method 2

This method uses the `config-register 0x2142` command in global configuration mode.

1. Enter the `config-register 0x2142` command in global configuration mode.

```
<#root>
Router(config)#
config-register 0x2142
```

This causes the router to ignore the start-up configuration on the next reload. If you run a `show version` again, it has (0x2142 at next reload) appended to the current configuration register setting.

```
<#root>
Router#
show version
```

Cisco IOS Software, VG3X0 Software (VG3X0-UNIVERSALK9-M), Version 15.4(3)M3, RELEASE SOFTWARE (fc2)  
Technical Support: <http://www.cisco.com/techsupport>  
Copyright (c) 1986-2015 by Cisco Systems, Inc.  
Compiled Fri 05-Jun-15 17:29 by prod\_rel\_team

ROM: System Bootstrap, Version 15.4(3r)M1a, RELEASE SOFTWARE (fc1)

Router uptime is 1 day, 14 hours, 19 minutes  
System returned to ROM by power-on  
System image file is "flash0:vg3x0-universalk9-mz.SPA.154-3.M3.bin"  
Last reload type: Normal Reload  
Last reload reason: power-on

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1 Virtual Private Network (VPN) Module  
DRAM configuration is 32 bits wide with parity enabled.  
255K bytes of non-volatile configuration memory.  
255488K bytes of ATA System CompactFlash 0 (Read/Write)

License Info:

License UDI:

```
-----  
Device#   PID                SN  
-----  
*0        VG320              FGL2023103U
```

Technology Package License Information for Module:'vg3x0'

```
-----  
Technology   Technology-package   Type   Technology-package  
              Current                Next reboot  
-----  
ipbase       ipbasek9             None   ipbasek9  
security     securityk9           RightToUse securityk9  
uc           None                 None  
data         datak9               RightToUse datak9  
NtwkEss     None                 None  
CollabPro   None                 None
```

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

2. Reload the router with the reload command in the enable mode. It is not necessary to `save` when prompted to `save` the system configuration.

```
<#root>
```

```
Router#
```

```
reload
```

```
System configuration has been modified. Save? [yes/no]:
```

```
n
```

```
Proceed with reload? [confirm]
```

After the router has reloaded, the System Configuration Dialog appears.

1. Enter `no` to the question: Would you like to enter initial configuration dialog?
2. Change the configuration register `setting` back to 0x2102 with the `config-register 0x2102` command, entered once in global configuration mode.
3. Issue the write memory command in enable mode to overwrite the current start-up configuration with the configuration that currently runs.
4. Reload the router with the reload command in enable mode.
5. Once the router reloads, the System configuration Dialog appears.

```
--- System Configuration Dialog ---  
Would you like to enter the initial configuration dialog? [yes/no]:
```

The router is now reset to the original factory defaults.



Note: The next configurations are stored in ROMMON and the write erase and/orconfig-register 0x2142 commands cannot reset them to the factory default `settings`.

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- warm-reboot
- memory-size iomem <not default>

## Verification

This section provides information you can use to verify that your router has been returned to the factory defaults.



Note: Internal and bug information is only accessible to registered Cisco clients.

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- `show running-config` — Use this command to verify that the previous configuration that the router ran has been erased. The output must result in a skeleton configuration. For example, there must be no IP addresses or descriptions configured under any interface on the router, no hostname or settings particular to your environment.
- `show version` — Use this command to verify that the configuration register is set to the default value of 0x2102.

## Related Information

- [Cisco Technical Support & Downloads](#)

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