

ROMmon Recovery for the Cisco 4000 Series Router

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Introduction

This document explains how to recover a Cisco 4000 Series Router stuck in ROMmon (> prompt).

Before You Begin

Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

Prerequisites

There are no specific prerequisites for this document.

Components Used

The information in this document is based on the hardware version below.

- Cisco 4000 Series Router

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

Check Configuration Register Settings

If the router is stuck in ROMmon mode, the first setting that should be checked is the value of the configuration register. The first four bits of the configuration register comprise the boot field. The value of the boot field defines the source of a default Cisco IOS® software image that will be used to run the router. If the value of the boot field is 0 on startup (a configuration register value of XXX0), the system enters and remains in the ROM monitor mode, awaiting a user command to boot the system manually. If your router keeps entering the ROMmon mode each time the system is restarted, it is probably due to the the boot field in the configuration register set to 0.

To check the configuration register settings, use the **confreg** command as shown below.

```
>confreg
```

```
Configuration Summary
```

```
enabled are:
```

```
load rom after netboot fails
```

```
break/abort has effect
```

```
console baud: 9600
```

```
boot: the ROM Monitor
```

```
!--- The boot field in the configuration register is set to return the router to  
!--- ROM Monitor each time the router is reloaded or power cycled. This is equivalent to  
!--- setting the boot field to 0.
```

To boot the router automatically from a default Cisco IOS software image, change the boot field of the configuration register to a value in the range 2 through F. This setting also enables **boot system** commands that override the default filename.

To change the configuration register value, use the following command:

```
>confreg 0x2102
```

```
!--- Setting the configuration register value so that it boots from system boot mode.
```

You must reset or power cycle the router before the new configuration takes effect.

```
>confreg
```

```
Configuration Summary
```

```
enabled are:
```

```
load rom after netboot fails
```

```
break/abort has effect
```

```
console baud: 9600
```

```
boot: image specified by the boot system commands or default to: cisco2-C4500
```

```
>reset
```

If the configuration register value is set to make the system boot automatically from a default Cisco IOS software image, and if no break signal is sent during start up, the router should boot normally. However, if the router still enters rommon mode, it is probably because the router is unable to locate a valid Cisco IOS image, or the system image is corrupted.

There is only one way to install an image on the Cisco 4000 Series Router if the main Cisco IOS software has been deleted or corrupted: use the router's boot image.

Download Using the Boot Image and a TFTP Server

For detailed instructions on how to do this, see [How to Upgrade from ROMmon Using TFTP with Boot Image](#).

If both the main image and the boot image are corrupted or deleted, there is no easy way to recover the router. Aside from a return materials authorization (RMA), the only other possibility is to swap Flash single in-line memory modules (SIMMs) from another Cisco 4000 Series Router that has a valid boot image and a main

Related Information

- **Software Installation and Upgrade Procedures**
 - **Technical Support for 4000 Series Routers**
 - **Technical Support – Cisco Systems**
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