



## Preparing for Installation

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This chapter covers information about the prerequisites before installing the Cisco IOS XRv Router.

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## Obtaining Cisco IOS XRv Router Software

To obtain the Cisco IOS XRv Router software:

### Before You Begin

Before starting your installation of the Cisco IOS XRv Router, you must first set up your virtual environment, including the necessary host and client software. For example, if you are installing the Cisco IOS XRv Router in a VMware ESXi environment, you must first install the vSphere Client.

For more information, see the vendor documentation for the supported hypervisors.

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- Step 1** Go to the product page for Cisco Routers at:  
<http://www.cisco.com/en/US/products/hw/routers/index.html>
- Step 2** Navigate to the Cisco IOS XRv Router product page.
- Step 3** Click the **Download Software** link.
- Step 4** Select the Cisco IOS XR release package and click **Download Now** or **Add to Cart**.  
Follow the instructions for downloading the software.
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# Cisco IOS XRv Router Installation Package

The following file type is supported in the Cisco IOS XRv Router software image package:

- **vmdk**—Virtual machine disk image (VMDK) containing Cisco IOS XRv Router software installed to disk. The VMDK image is recommended for deploying Cisco IOS XRv Router on the QEMU hypervisor.
- **ova**—Open Virtualization Appliance (OVA) containing a compressed .vmdk and virtual machine hardware definition (CPUs, RAM, NICs, etc). The OVA image is recommended for deploying Cisco IOS XRv Router on the VMware hypervisor.

## ROMMON and the Cisco IOS XRv Router

The Cisco IOS XRv Router does NOT include a ROMMON image similar to the one included in many Cisco hardware-based routers.

**Note**

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The Cisco IOS XRv Router does not include ROMMON; instead, the platform uses a GRUB-based bootloader. However, some Cisco IOS XRv Router commands, such as **show version** may indicate the presence of ROMMON.

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## CVAC - Bootstrap Configuration Support

Cisco Virtual Appliance Configuration (CVAC) is an out-of-band configuration mechanism supported by Cisco IOS XRv Router. CVAC receives configuration injected into the Cisco IOS XRv Router environment on a CD-ROM or other disk image provided by the hypervisor. The configuration is detected and applied at startup time.

**Note**

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Real-time configuration is not supported by CVAC.

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## Building the Bootstrap Configuration File

The Cisco IOS XRv Router supports these plain-text configuration file(s) on a single CD-ROM drive:

- **iosxr\_config.txt**—provides standard configuration
- **iosxr\_config\_admin.txt**—provides admin configuration

These text files provide a simple list of configuration CLIs for CVAC to apply automatically. This operation is functionally equivalent to manually issuing a **copy iosxr\_config.txt running-config** command.

Given a configuration file(s), you can create an ISO image suitable for insertion into Cisco IOS XRv Router with any of the following commands:

**Note**

The mkisofs commands should be executed from a Linux shell.

```
mkisofs -o xrconfig.iso -l --iso-level 2 iosxr_config.txt
mkisofs -o xrconfig.iso -l --iso-level 2 iosxr_config_admin.txt
mkisofs -o xrconfig.iso -l --iso-level 2 iosxr_config.txt iosxr_config_admin.txt
```

If the correct configuration files are provided and CVAC runs successfully, these syslog messages are displayed:

```
RP/0/0/CPU0:Dec 14 09:10:14.560 : config[65699]: %MGBL-CONFIG-6-DB_COMMIT_ADMIN :
Configuration committed by user 'CVAC'. Use 'show configuration commit changes 2000000001'
to view the changes.
RP/0/0/CPU0:Dec 14 09:10:15.330 : cvac[163]: %MGBL-CVAC-5-CONFIG_DONE : Configuration was
applied from file /cd0/iosxr_config_admin.txt.
RP/0/0/CPU0:Dec 14 09:10:22.719 : config[65699]: %MGBL-CONFIG-6-DB_COMMIT : Configuration
committed by user 'CVAC'. Use 'show configuration commit changes 1000000001' to view the
changes.
RP/0/0/CPU0:Dec 14 09:10:23.619 : cvac[163]: %MGBL-CVAC-5-CONFIG_DONE : Configuration was
applied from file /cd0/iosxr_config.txt.
```

If any configuration from the config file(s) is rejected, this additional syslog message is displayed:

```
RP/0/0/CPU0:Dec 14 09:10:23.619 : cvac[163]: %MGBL-CVAC-3-CONFIG_ERROR : Errors were
encountered while applying configs from file /cd0/iosxr_config.txt. Please inspect 'show
configuration failed' for details
```

