Key Concepts

Use this information to understand the key terms, concepts, types of releases relevant to setting up and upgrading Cisco IOS XR Optical Site Manager System Setup and Software Installation Guide.

This section contains the following topics:

Types of Releases

Cisco IOS XR software model has three types of software releases. The software images are available for download at the Cisco Software Download page.

Feature Release

A Feature Release (FR) contains new features and support for new hardware. Feature releases have the X.X.1 (dot one) designation. For example, releases 24.1.1 and 24.2.1 are feature releases. The list of features added to a feature release is provided in the Release notes along with the installation instructions and dependencies.

Maintenance Release

A maintenance release is the primary mechanism to deliver groups of critical bug fixes to the software feature releases.

SMUs Release

A Software Maintenance Unit (SMU) is a fix that is provided until the End of Maintenance (EoM) of the release. The fix is also committed into the next shipping release. SMUs are posted under `Cisco IOS XR Software Maintenance Upgrade` on the Cisco Software Download page. Each SMU is customized for a specific software release.

For more information on release numbering, types of releases, and their timelines, see Software Lifecycle Support Statement - IOS XR.

Files in Cisco Software Download Page

The following table describes the files available for download from the Cisco Software Download page for Cisco NCS1010.

Table 1: IOS XR Software Installation Files in Cisco Software Download Page

Package File	Example	Description
ncs1010-x64-*<rel. no.>*.iso	ncs1010-x64-24.3.1.iso	Contains required core packages, including operating system, Admin, Base, Forwarding, SNMP Agent, FPD, and Alarm Correlation and Netconf-yang, Telemetry, Extensible Markup Language (XML) Parser, HTTP server packages.
Individually Installable Packages		
xrtelnet-*<rel. no.>*x86_64.rpm xr-telnet-ncs1010-*<rel. no.>*.x86_64.rpm	xr-telnet-24.3.1.v1.0.0-1.x86_64.rpm xr-telnet-ncs1010-24.3.1.v1.0.0-1.x86_64.rpm	Install these packages to support Telnet.
xrcdp-rpms. *<rel. no.>*.rpm xr-cdp-ncs1010- *<rel. no.>*.x86_64.rpm	xr-cdp-24.3.1.v1.0.0-1.x86_64.rpm xr-cdp-ncs1010-24.3.1.v1.0.0-1.x86_64	Install these packages to support CDP.

Command Modes

The NCS 1010 runs on virtualized Cisco IOS XR software. Therefore, the CLI commands must be executed on virtual machines, namely the IOS XR.

The command modes are applicable for the Cisco Series NCS 1010. This table lists the command modes for the IOS XR.

Command Mode	Description
IOS XR EXEC mode (IOS XR execution mode)	Run commands on the XR to display the operational state of the NCS1010 Example: `RP/0/RP0/CPU0:ios#`

Command Mode	Description
IOS XR Config mode (IOS XR configuration mode)	Perform security, routing, and other XR feature configurations on the IOS XR. Example: `RP/0/RP0/CPU0:ios#`**`configure`** `RP/0/RP0/CPU0:ios(config)`