



Deploying Cisco Nexus Data Broker

This chapter contains the following sections:

- [Installing Cisco Nexus Data Broker, page 1](#)

Installing Cisco Nexus Data Broker

Installing or Upgrading the Cisco Nexus Data Broker Software



Important

There is no direct upgrade path from Cisco XNC Monitor Manager Release 1.0 to Cisco Nexus Data Broker Release 2.0. If you have Cisco XNC Monitor Manager Release 1.0 installed and you want to update to Cisco Nexus Data Broker Release 2.0, you must first upgrade to Cisco XNC Monitor Manager Release 1.5. See the *Cisco Extensible Network Controller Deployment Guide, Release 1.5* for the procedure.

- To complete a new installation of Cisco Nexus Data Broker, see [Installing the Cisco Nexus Data Broker Software, on page 2](#).
- To upgrade Cisco XNC Monitor Manager Release 1.5 or Release 1.6 to Cisco Nexus Data Broker Release 2.0, see [Upgrading the Application Software, on page 3](#).

Installing the Cisco Nexus Data Broker Software

- Step 1** In a web browser, navigate to Cisco.com.
- Step 2** Under **Support**, click **All Downloads**.
- Step 3** In the center pane, click **Cloud and Systems Management**.
- Step 4** If prompted, enter your Cisco.com username and password to log in.
- Step 5** In the right pane, click **Network Controllers and Applications**, and then click **Cisco Nexus Data Broker**.
- Step 6** Download the Cisco Nexus Data Broker application bundle.
- Step 7** Create a directory in your Linux machine where you plan to install Cisco Nexus Data Broker. For example, in your Home directory, create `CiscoNDB`.
- Step 8** Copy the Cisco Nexus Data Broker zip file into the directory that you created.
- Step 9** Unzip the Cisco Nexus Data Broker zip file. The Cisco Nexus Data Broker software is installed in a directory called `xnc`. The directory contains the following:
- `runxnc.sh` file—The file that you use to launch Cisco Nexus Data Broker.
 - `version.properties` file—The Cisco Nexus Data Broker build version.
 - `captures` directory—The directory that contains output dump files from analytics run in Cisco Nexus Data Broker.
Note The `captures` directory is created after you execute the Cisco Nexus Data Broker analytics tool.
 - `configuration` directory—The directory that contains the Cisco Nexus Data Broker initialization files. This directory also contains the `startup` subdirectory where configurations are saved.
 - `bin` directory—The directory that contains the following script:
 - `xnc` file—This script contains the Cisco Nexus Data Broker common CLI.
 - `etc` directory—The directory that contains profile information.
 - `lib` directory—The directory that contains the Cisco Nexus Data Broker Java libraries.
 - `logs` directory—The directory that contains the Cisco Nexus Data Broker logs.
Note The `logs` directory is created after the Cisco Nexus Data Broker application is started.
 - `plugins` directory—The directory that contains the OSGi plugins.
 - `work` directory—The webserver working directory.
Note The `work` directory is created after the Cisco Nexus Data Broker application is started.
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Upgrading the Application Software

You can use the **upgrade** command to upgrade a Cisco XNC Monitor Manager Release 1.5 or Release 1.6 installation to Cisco Nexus Data Broker Release 2.0. This upgrade is called an in-place upgrade, which means that the product bits are replaced. A backup archive is created to restore your original installation, if necessary.

When you execute the **upgrade** command, the installation and the configuration are upgraded. However, any changes you made to the shell scripts or configuration files, for example, `runxnc.sh` and `config.ini`, are overwritten. After you complete the upgrade process, you must manually reapply your changes to those files.

Before You Begin

- If you have upgraded from Cisco XNC Monitor Manager Release 1.5 to Cisco XNC Monitor Manager Release 1.6, reset the password, start the controller and save the configuration using the **Save** button at the top of the menu bar in the Cisco XNC Monitor Manager GUI.
- Stop all controller instances that use the Cisco XNC Monitor Manager 1.5 or 1.6 installation. This will avoid conflicts with the file system, which is updated during upgrade.
- If you are using high availability clustering, stop all application instances in the cluster to ensure that there are no inconsistencies.
- Back up your `config.ini` and `runxnc.sh` files.



Important

You should manually backup your `config.ini` and `runxnc.sh` files before upgrading, because the backup process does not back them up for you. If you do not backup your files before upgrading, any changes you made will be lost.

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- Step 1** In a web browser, navigate to [Cisco.com](https://www.cisco.com).
 - Step 2** Under **Support**, click **All Downloads**.
 - Step 3** In the center pane, click **Cloud and Systems Management**.
 - Step 4** In the right pane, click **Network Controllers and Applications**, and then click **Cisco Nexus Data Broker**.
 - Step 5** Download the Cisco Nexus Data Broker Release 2.0 application bundle.
 - Step 6** Create a temporary directory in your Linux machine where you plan to upgrade to Cisco Nexus Data Broker. For example, in your `Home` directory, create `CiscoNDB_Upgrade`.
 - Step 7** Extract the Cisco Nexus Data Broker Release 2.0 zip file into the temporary directory that you created.
 - Step 8** Navigate to the `xnc` directory that was created when you installed the Cisco XNC Monitor Manager Release 1.5 or 1.6 software.
 - Step 9** Stop all running release 1.5 or release 1.6 processes.
 - Step 10** Backup your release 1.5 or release 1.6 installation using your standard backup procedures.
 - Step 11** Navigate to the `xnc/bin` directory in the temporary directory that you created for the Cisco Nexus Data Broker Release 2.0 upgrade software.
 - Step 12** Upgrade the application by entering the `./xnc upgrade --perform --target-home {xnc_directory_to_be_upgraded} [--verbose] [--backupfile {xnc_backup_location_and_zip_filename}]` command.

You can use one of the following options:

Option	Description
--perform --target-home { <i>xnc_directory_to_be_upgraded</i> }	Upgrades the Cisco XNC Monitor Manager installation to Cisco Nexus Data Broker.
--perform --target-home { <i>xnc_directory_to_be_upgraded</i> } --backupfile { <i>xnc_backup_location_and_zip_filename</i> }	Upgrades the Cisco XNC Monitor Manager installation to Cisco Nexus Data Broker and creates a backup .zip file in the directory path that you set. Note You must provide the name of the backup file and the .zip extension.
--rollback --target-home { <i>xnc_directory_to_be_upgraded</i> }	Rolls back to the previous Cisco XNC Monitor Manager installation.
--rollback --target-home { <i>xnc_directory_to_be_upgraded</i> } --backupfile { <i>xnc_backup_location_and_zip_filename</i> }	Rolls back to the previous Cisco XNC Monitor Manager installation using the backup file in the absolute path that you set.
--verbose	Displays detailed information to the console. This option can be used with any other option and is disabled by default.
--validate --target-home { <i>xnc_directory_to_be_upgraded</i> }	Validates the installation.
./xnc help upgrade	Displays the options for the upgrade command.

Step 13 Navigate to the `xnc` directory where you originally installed Cisco XNC Monitor Manager.

Step 14 Start the application processes that you previously stopped.

Note Press Ctrl-F5, or press the Cmd, Shift, and R keys simultaneously when you access Cisco Nexus Data Broker through a web UI following an upgrade.

Step 15 If you have any upgrade-related issues, perform the following tasks:

- a) Stop all application processes.
- b) Navigate to the temporary directory that you created in Step 6.
- c) Enter the `./xnc upgrade --rollback --target-home {xnc_directory_to_be_downgraded} --backupfile {xnc_backup_location_and_zip_filename} [--verbose]` command.
- d) Restart the application processes.

Note Press Ctrl-F5, or press the Cmd, Shift, and R keys simultaneously when you access Cisco XNC Monitor Manager through a web UI following a rollback.

Starting the Application

Step 1 (Optional) Navigate to the `xnc/bin` directory.

Step 2 (Optional) Change the default password supplied with Cisco Nexus Data Broker by entering the `./xnc reset-admin-password [--wait-seconds {wait_time} --password {password}]` command. The `{password}` variable resets the administrator password to the value that you specify by restarting the user manager. The `{wait_time}` is the number of seconds to wait while the user manager restarts. The minimum `{wait_time}` value is 5 seconds and the maximum is 60 seconds.

- Note**
- The password must be from 8 to 256 characters, contain both uppercase and lowercase characters, and have at least one number and one nonalphanumeric character.
 - If you leave the password blank, it is reset to the factory default of "admin".
 - Each time that you reset the administrative password, make sure that the new password meets these requirements or you will not be able to log in to Cisco Nexus Data Broker.

Step 3 Navigate to the `xnc` directory and start Cisco Nexus Data Broker by entering the `./runxnc.sh` command. You can use one of the following options:

Option	Description
no option	Starts Cisco Nexus Data Broker with the <code>-start</code> option.
<code>-jmx</code>	Enables Java Management Extensions (JMX) remote access on the Cisco Nexus Data Broker JVM, which can be used to troubleshoot performance issues.
<code>-jmxport port_number</code>	Enables JMX remote access on the specified JVM port.
<code>-debug</code>	Enables debugging on the Cisco Nexus Data Broker JVM.
<code>-debugsuspend</code>	Suspends the Cisco Nexus Data Broker startup until a debugger is connected.
<code>-debugport port_number</code>	Enables debugging on the specified JVM port.
<code>-start</code>	Starts Cisco Nexus Data Broker and provides Secure Shell (SSH) access on port 2400. Note The SSH server can be accessed by any Cisco Nexus Data Broker user with the network-administrator role.
<code>-start port_number</code>	Starts Cisco Nexus Data Broker and provides SSH access to the controller on the specified port number. Note The SSH server can be accessed by any Cisco Nexus Data Broker user with the network-administrator role. The valid range of values for <code>port_num</code> is 1024 through 65535.
<code>-stop</code>	Stops Cisco Nexus Data Broker.
<code>-status</code>	Displays the status of Cisco Nexus Data Broker.

Option	Description
-console	Starts Cisco Nexus Data Broker with the OSGi console.
-help	Displays the options for the <code>./runxnc.sh</code> command.
-tls	Enables TLS secure connections between Cisco Nexus Data Broker and OpenFlow or onePK switches. To enable TLS, start the controller by entering the <code>./runxnc.sh -tls -tlskeystore keystore_file_location -tlstruststore truststore_file_location</code> command.

Verifying That the Application is Running

- Step 1** Open a command window where you installed Cisco Nexus Data Broker.
- Step 2** Navigate to the `xnc` directory that was created when you installed the software.
- Step 3** Verify that the application is running by entering the `./runxnc.sh -status` command. The controller outputs the following, which indicates that the controller is running the Java process with PID 21680:
- ```
Controller with PID:21680 -- Running!
```

### What to Do Next

Connect the switches to the controller. For more information, see the configuration guide for your switches.