Administrative Tasks

This chapter contains the following sections:

About AAA Servers

AAA enables the security appliance to determine who the user is (authentication), what the user can do (authorization), and what the user did (accounting). Cisco Nexus Data Broker uses Remote Authentication Dial-In User Service (RADIUS) or Terminal Access Controller Access-Control System Plus (TACACS+) to communicate with an AAA server.

Remote authentication and authorization is supported using the AAA server. To authenticate each user, Cisco Nexus Data Broker uses both the login credentials and an attribute-value (AV) pair that assigns the authorized role for the user as part of the user administration. After successful authentication, the Cisco AV pair is returned to Cisco Nexus Data Broker for resource access authorization.

Adding an AAA Server

Note When the configured AAA server(s) are not reachable, the user request is authenticated locally. If the AAA server is reachable and the user authentication fails, the user request is not authenticated locally.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From management **Admin** drop-down list, choose **AAA**.

Step 3 From the **Admin** drop-down list, choose **AAA**.

Step 4 In the **AAA Configuration** dialog box, click **Add Server**.

Step 5 In the **Add AAA Server** dialog box, complete the following fields:

Name	Description
Server Address field	The IP address of the AAA server.
Server Secret field	The shared secret configured on the AAA server.
Protocol drop-down list	Choose the protocol for the AAA server. This can be one of the following: • **Radius+** • **TACACS+**

Step 6 Click **Save**.

What to Do Next

If you chose RADIUS as the protocol for the AAA server, you need to configure user authentication for RADIUS.

Configuring User Authentication for RADIUS Server

User authorization on a RADIUS server must conform to the Cisco Attribute-Value (av-pair) format.

Procedure

In the RADIUS server, configure the Cisco av-pair attribute for a user as follows:

```
shell:roles="Network-Admin Slice-Admin"
```

Viewing an AAA Server

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.
Step 2 From management **Admin** drop-down list, choose **AAA**.
Step 3 From the **Admin** drop-down list, choose **AAA**.
Step 4 In the **AAA Configuration** dialog box, click a server address.
Step 5 After viewing the server information in the **Remove AAA Configuration** dialog box, click **Close.**
Step 6 In the **AAA Configuration** dialog box, click **Close.**

Users and Roles

Cisco Nexus Data Broker uses users and roles to manage user access. You can assign more than one role to a user. This can be one of the following:

- **Network Administrator—**Provides full administrative privileges to all applications.
- **Network Operator—**Provides read-only privileges to all applications.
- **Application User—**Provides privileges that are defined in the specified application.
- **Slice User—**Provides access to a specified slice.

Each user is assigned a role, which determines the permissions that they have. Slice users are assigned to both a role and a slice. The Admin user with the Network Administrator role is created by default when you install Cisco Nexus Data Broker.

Viewing User Information

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.
Step 2 From management **Admin** drop-down list, choose **Users**.
Step 3 From the **Admin** drop-down list, choose **Users**.
Step 4 In the **User Management** dialog box, you can do the following:

- View a list of usernames and the roles assigned to each user.
- Click an existing user to delete the user or change the password for the user.
- Click **Add User** to create a new user.

Step 5 When you are finished, click **Close**.

Adding a User

After creating a user, you can change the password, but you cannot change the roles assigned to the user.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From management **Admin** drop-down list, choose **Users**.

Step 3 From the **Admin** drop-down list, choose **Users**.

Step 4 In the **User Management** dialog box, click **Add User**.

Step 5 In the **Add User** dialog box, complete the following fields:

Name	Description
Username field	The name that you want to assign to the user. A username can be between 1 and 32 alphanumeric characters and contain any special character except a period ("."), forward slash ("/"), pound sign ("#"), percent sign ("%"), semicolon (";"), question mark ("?"), or backslash ("\").
Password field	The password for the user. Passwords must be between 8 and 256 characters long, contain uppercase and lowercase characters, have at least one numeric character, and have at least one nonalphanumeric character.
Choose Role(s) drop-down list	Choose the role that you want to assign to the user. You can assign more than one role. This can be one of the following: • **Network Administrator—**Provides full administrative privileges to all applications. • **Network Operator—**Provides read-only privileges to all applications. • **Application User—**Provides privileges that are defined in the specified application. • **Slice User—**Provides access to a specified slice.
Role Name field	If you chose **Application User**, enter the name that you want to assign to the role.
Slices drop-down list	If you chose **Slice User**, choose the slice that you want to assign to the user.

Name	Description
Slice Role drop-down list	If you chose **Slice User**, choose the role that you want to assign to the user. This can be one of the following: • **Administrator—**Provides full administrative privileges to the specified slice. • **Operator—**Provides read-only privileges to the specified slice.
Assign button	Assigns a role to the user.

Step 6 Click **Add User**.

Step 7 In the **User Management** dialog box, click **Close.**

Changing the Password for an Existing User

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From management **Admin** drop-down list, choose **AAA**.

Step 3 From the **Admin** drop-down list, choose **Users**.

Step 4 In the **User Management** dialog box, click the user that you want to modify.

Step 5 In the **Manage User** dialog box, click **Change Password**.

Step 6 In the **Change Password** dialog box, enter the new password in the **New Password** and in the **Verify New Password** fields.

Step 7 Click **Submit**.

Step 8 Click **Close** in the **Manage User** dialog box.

Step 9 Click **Close** in the **User Management** dialog box.

Deleting a User

If you are signed in as a particular user, you cannot delete that user.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.
Step 2 From management **Admin** drop-down list, choose **Users**.
Step 3 From the **Admin** drop-down list, choose **Users**.
Step 4 In the **User Management** dialog box, click the user that you want to modify.
Step 5 In the **Edit User** dialog box, click **Remove User**.
Step 6 In the **User Management** dialog box, click **Close**.

Viewing Cluster Management Information

Note The cluster management dialog boxes are read-only.

Note To save configurations that are related to the users, choose Management and click Save.

Before You Begin

You must have configured high availability clustering in order to view the cluster management information. See Configuring High Availability Clusters.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.
Step 2 From management **Admin** drop-down list, choose **AAA**.
Step 3 From the **Admin** drop-down list, choose **Clusters**.
The **Cluster Management** dialog box lists the IP addresses of all of the Cisco Nexus Data Broker instances in the cluster. Clusters can be denoted by one of the following icons:

- The ***** icon indicates the cluster node that is currently being viewed.
- The **C** icon indicates that the cluster node is the coordinator.

Step 4 In the **Cluster Management** dialog box, choose a cluster.
The **Connected Nodes** dialog box lists all of the nodes in the selected cluster.
Step 5 In the **Connected Nodes** dialog box, click **Close.**
Step 6 In the **Cluster Management** dialog box, click **Close.**

Viewing the OSGi Console

You can view all of Cisco Nexus Data Broker bundles that comprise the application by viewing the OSGi Web Console.

Note This procedure does not provide a step-by-step guide to everything you can do in the OSGi Web Console for **Cisco XNC Bundles** list. It guides you in opening the OSGi Web Console and viewing bundle information.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From management **Admin** drop-down list, choose **OSGi**.

Step 3 From the **Admin** drop-down list, choose **OSGi**.
A new browser tab opens.

Step 4 Enter your username and password, and then press **Enter**.
The **Cisco – XNC Bundles** list is displayed. In this page you can view all of the active packages, filter on the package name to specify bundle names, and complete other tasks.

Step 5 When you are finished viewing the list, close the **Cisco – XNC Bundles** browser tab.

Viewing the Northbound API Content

You can view all of Cisco Nexus Data Broker northbound API content for the application by opening a browser tab using the **Northbound API** tool (book icon) in the menu bar.

Procedure

Step 1 From the menu bar, click the **Northbound API** button.
A new browser tab (Swagger UI) is opened and the complete list of northbound API content used in Cisco Nexus Data Broker is displayed.

From this tab, you can do the following:

- Show or hide the operations for an API.
- List the operations for an API.
- Expand the operations for an API.

Step 2 When you are finished viewing northbound API content, close the browser tab.

System Management

The system management features in Cisco Nexus Data Broker enable you to download and save the configuration files for your system, or upload and restore the configuration files for your system. You can also download log files.

Downloading the System Log Files

You can download log files for Cisco Nexus Data Broker to use for analysis. Log files are saved as a .zip archive.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From the management **Admin** drop-down list, choose **System**.
The **System Administration** dialog box is displayed.

Step 3 Click **Download Logs**.
A dialog box opens in the browser prompting you to either open or save the .zip file.

Step 4 Do one of the following:

- Save the archive to a location of your choosing, for example, `home/ndbconfig`.
- Open the archive to view the contents, and then save it.

Downloading the System Configuration Files

You can download the system configuration files for Cisco Nexus Data Broker to save them in case you need to restore the system after an upgrade or other change. System configuration files are saved in a zipped archive.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From the management **Admin** drop-down list, choose **System**.
The **System Administration** dialog box is displayed.

Step 3

Step 4 Click **Download Configuration**.
A dialog box opens in the browser prompting you to either open or save the file.

Step 5 Do one of the following:

- Save the archive to a location of your choosing, for example, `home/ndbconfig`.

- Open the archive to view the contents, and then save it.

Uploading the System Configuration Files

You can upload the saved system configuration files for Cisco Nexus Data Broker to restore the Cisco Nexus Data Broker application in the case of a failure or other event. After restoring you configuration, you will need to restart Cisco Nexus Data Broker.

Before You Begin

You must download the system configuration files and save them in a zipped archive.

Procedure

Step 1 From the **Admin** drop-down list, choose **Management**.

Step 2 From the management **Admin** drop-down list, choose **System**.
The **System Administration** dialog box is displayed.

Step 3 Click **Upload Configuration**.

Step 4 Navigate to the location of the file `configuration_startup.zip`.

Step 5 Click on the archive file.
The system configuration is uploaded and the browser displays a message informing you that you need to restart the server.

Step 6 Restart the server, and then log back in to the Cisco Nexus Data Broker GUI.

Backing Up or Restoring the Configuration

The backup and restore commands allow you to back up your Cisco Nexus Data Broker configurations and restore them.

Note In XNC, you can save the configuration related to ODL, for example, password change or new users etc, from the Device Management page.

Procedure

Step 1 Open a command window where you installed Cisco Nexus Data Broker.

Step 2 Navigate to the `xnc/bin` directory that was created when you installed the software.

Step 3 Back up the configuration by entering the **./xnc config --backup** command.

The **--backup** option creates a backup archive (in .zip format) of the startup configuration in the current `xnc` distribution. The backup archive is stored in `{xncHome}/backup/`. A new archive is created each time that the backup command is entered using a filename with the current timestamp.

Step 4 Restore the configuration by entering the **./xnc config --restore --backupfile** {*zip_filename*} command. The **--restore** option restores the startup configuration of the current `xnc` distribution from an existing backup archive. The restore action requires the absolute path of the backup archive.

Step 5 If you are restoring a configuration, stop and restart Cisco Nexus Data Broker for the restored configuration to take effect.

Recovering the Administrative Password

The Cisco Nexus Data Broker network administrator user can return the administrative password to the factory default.

Note The software may or may not be running when this command is used. If the it is not running, the password reset takes effect the next time that it is run.

Procedure

Step 1 Open a command window where you installed Cisco Nexus Data Broker.

Step 2 Navigate to the `xnc/bin` directory that was created when you installed the software.

Step 3 Reset the administrative password by entering the **./xnc reset-admin-password** [**--wait-seconds** {*wait_time*} **--password** {*password*}] command.
Resets the admin password to the default or specified password by restarting the user manager.

- The **wait-seconds** is the length of time, in seconds, to wait for the user manager to restart. The minimum is 5 seconds and the maximum is 60 seconds.
- The **password** is the administrative password.

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.

Uninstalling the Application Software

Before You Begin

Ensure that your Cisco Nexus Data Broker application is stopped before proceeding.

Procedure

Step 1 Navigate to the directory where you created the Cisco Nexus Data Broker installation.
For example, if you installed the software in `Home/CiscoNDB`, navigate to the `Home` directory.

Step 2 Delete the `CiscoNDB` directory.