



Configuring Primary Authentication

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Primary Authentication

Cisco VNMC supports two methods to authenticate user logins:

- Local to Cisco VNMC
- Remote through LDAP

The role and locale assignment for a local user can be changed on Cisco VNMC. The role and locale assignment for a remote user can be changed on LDAP. If any of the following information related to a user is modified, the administrator must delete all the existing sessions of that user so that the new privileges take effect:

- the assigned role for a user
- the assigned locale for a user
- the privilege for a role that is assigned to a user
- the organization in a locale that is assigned to a user

Remote Authentication Providers

If a system is configured for the supported remote authentication services, you must create a provider for that service to ensure that Cisco VNMC can communicate with it.

User Accounts in Remote Authentication Services

You can create user accounts in Cisco VNMC or in the remote authentication server.

The temporary sessions for users who log in through remote authentication services can be viewed through the Cisco VNMC GUI.

User Roles and Locales in Remote Authentication Services

If you create user accounts in the remote authentication server, you must ensure that the accounts include the roles and locales those users require for working in Cisco VNMC and that the names of those roles and locales match the names used in Cisco VNMC. If an account does not have the required roles and locales, the user is granted only read-only privileges.

LDAP Attribute for User

In Cisco VNMC, the LDAP attribute that holds the LDAP user roles and locales are preset. This property is always a name-value pair. For example, by default CiscoAvPair specifies the role and locale information for the user and if the filter is specified, the LDAP search is restricted to those values that match the defined filter. By default, the filter is sAMAccountName=\$userid. The user can change these values to match the setting on the LDAP server. When a user logs in, Cisco VNMC checks for the value of the attribute when it queries the remote authentication service and validates the user. The value should be identical to the username.

An example of LDAP property settings is as follows:

- **Timeout**—30
- **Retries**—1
- **Attribute**—CiscoAvPair
- **Filter**—sAMAccountName=\$userid
- **Base DN**—DC=cisco, DC=com (The specific location in the LDAP hierarchy where Cisco VNMC will start the query for the LDAP user.)

Creating an LDAP Provider

Before You Begin

Configure users with the attribute that holds the user role and locale information for Cisco VNMC. You can use an existing LDAP attribute that is mapped to the Cisco VNMC user roles and locales or create a custom attribute, such as the CiscoAVPair attribute, which has an attribute ID of 1.3.6.1.4.1.9.287247.1. When you add the LDAP user to the LDAP server, specify the role and locale in the attribute (for example, shell:roles=network,aaa shell:locale=sanjose,dallas)

Configure the properties for the LDAP provider connections in Cisco VNMC.

Procedure

- Step 1** In the **Navigation** pane, click the **Administration** tab.
- Step 2** In the **Navigation** pane, click the **Access Control** subtab.
- Step 3** In the **Navigation** pane, select the **LDAP** node.
- Step 4** In the **Work** pane, click the **Create LDAP Provider** link.
- Step 5** In the **Create LDAP Provider** dialog box:
- a) Complete the following fields with the information about the LDAP service you want to use:

Name	Description
Hostname/IP Address field	The hostname or IP address on which the LDAP provider resides. If SSL is enabled, this field must exactly match a Common Name (CN) in the security certificate of the LDAP database. Note If you use a hostname rather than an IP address, you must configure a DNS server in the Cisco VNMC.
Order field	The order in which Cisco VNMC uses this provider to authenticate users. Enter an integer between 1 and 16, or enter lowest-available or 0 (zero) if you want Cisco VNMC to assign the next lowest available order based on the other providers defined in this Cisco VNMC instance.
Key field	The password for the LDAP database account specified in the Root DN field.
Root DN field	The distinguished name (DN) for an LDAP database account that has read and search permissions for all objects under the base DN. The maximum supported string length is 128 characters.
Port field	The port through which Cisco VNMC communicates with the LDAP database. The standard port number is 389.
Enable SSL check box	The check box to enable SSL.

- b) Click **OK**.

An example of creating an LDAP provider is as follows:

- **Hostname/IP Address**—Provider-blr-sam-aaa-10.cisco.com
- **Order**—1 (To assign the next lowest available order)
- **Key**—xxxxxx (The password of the LDAP database account specified in the **Root DN** field.)
- **Root DN**—CN=bob,DC=cisco,DC=com (The value of CN is the name of a user with query privileges. DC refers to the location in the LDAP directory where a user is created.)
- **Port**—389
- **Enable SSL**—check box

What to Do Next

Select LDAP as the primary authentication service. For more information, see [Selecting a Primary Authentication Service](#), on page 5.

Editing an LDAP Provider

Procedure

- Step 1** In the **Navigation** pane, click the **Administration** tab.
- Step 2** In the **Navigation** pane, click the **Access Control** subtab.
- Step 3** In the **Navigation** pane, select the **LDAP** node.
- Step 4** In the **Work** pane, click on an *LDAP Provider_name*.
- Step 5** Click on the **Edit** link.
- Step 6** In the **Edit** dialog box:
- a) Modify the appropriate fields with the information about the LDAP service you want to use:

Name	Description
Name field	<p>The hostname or IP address on which the LDAP provider resides. If SSL is enabled, this field must exactly match a Common Name (CN) in the security certificate of the LDAP database.</p> <p>Note If you use a hostname rather than an IP address, you must configure a DNS server in the Cisco VNM.</p>
Order field	<p>The order in which Cisco VNM uses this provider to authenticate users.</p> <p>Enter an integer between 1 and 16, or enter lowest-available or 0 (zero) if you want Cisco VNM to assign the next lowest available order based on the other providers defined in this Cisco VNM instance.</p>

Name	Description
Key field	The password for the LDAP database account specified in the Root DN field.
Root DN field	The distinguished name (DN) for an LDAP database account that has read and search permissions for all objects under the base DN. The maximum supported string length is 128 characters.
Port field	The port through which Cisco VNMC communicates with the LDAP database. The standard port number is 389.
Enable SSL check box	The check box to enable SSL.

b) Click **OK**.

Deleting an LDAP Provider

Procedure

- Step 1** In the **Navigation** pane, click the **Administration** tab.
- Step 2** In the **Navigation** pane, click the **Access Control** subtab.
- Step 3** In the **Navigation** pane, expand **LDAP**.
- Step 4** Right-click the LDAP provider you want to delete and choose **Delete LDAP Provider(s)**.
- Step 5** In the Confirm dialog box, click **Yes**.

Selecting a Primary Authentication Service



Note

If the default authentication is set to LDAP, and the LDAP servers are not operating or unreachable, the local admin user can login any time and make changes to the AAA system.

Procedure

- Step 1** In the **Navigation** pane, click the **Administration** tab.
- Step 2** In the **Navigation** pane, click the **Access Control** subtab.
- Step 3** In the **Navigation** pane click the **Authentication** node.
- Step 4** In the **Work** pane, click the **Properties** tab.
- Step 5** On the **Properties** tab, complete the following fields:

Name	Description
Default Authentication drop-down list	<p>The default method by which a user is authenticated during remote login. This can be:</p> <ul style="list-style-type: none"> • ldap—The user must be defined on the LDAP server specified for this Cisco VNMC instance. • local—The user account must be defined locally in this Cisco VNMC instance. • none—If the user account is local to this Cisco VNMC instance, no password is required when the user logs in remotely.
Role Policy to Remote Users drop-down list	<p>The action to take when a user attempts to log in and the LDAP server does not supply a user role with the authentication information. This can be:</p> <ul style="list-style-type: none"> • assign-default-role—The user is allowed to log in with a read-only user role. • no-login—The user is not allowed to log into the system, even if the user name and password are correct.

- Step 6** Click **Save**.