Identity Sources

Identity sources are servers and databases that define user accounts. You can use this information in a variety of ways, such as providing the user identity associated with an IP address, or authenticating remote access VPN connections or access to the FDM.

The following topics explain how to define the identity sources. You would then use these objects when you configure the services that require an identity source.

- About Identity Sources （1 ページ）
- Active Directory (AD) Identity Realms （2 ページ）
- RADIUS Servers and Groups （8 ページ）
- Identity Services Engine (ISE) （12 ページ）
- Local Users （15 ページ）

About Identity Sources

Identity sources are the AAA servers and databases that define user accounts for the people in your organization. You can use this information in a variety of ways, such as providing the user identity associated with an IP address, or authenticating remote access VPN connections or access to the FDM.

Use the **Objects** > **Identity Sources** page to create and manage your sources. You would then use these objects when you configure the services that require an identity source

Following are the supported identity sources and their uses:

Active Directory (AD) Identity Realm

Active Directory provides user account and authentication information. See Active Directory (AD) Identity Realms （2 ページ）.

You can use this source for the following purposes:

- Remote Access VPN, as a primary identity source. You can use AD in conjunction with a RADIUS server.

- Identity policy, for active authentication and as the user identity source used with passive authentication.

Cisco Identity Services Engine (ISE) or Cisco Identity Services Engine Passive Identity Connector (ISE PIC)

If you are using ISE, you can integrate the FTD device with your ISE deployment. See Identity Services Engine (ISE) （12 ページ） .

You can use this source for the following purposes:

• Identity policy, as a passive identity source to collect user identity from ISE.

RADIUS Server, RADIUS Server Group

If you are using RADIUS servers, you can also use them with the FDM. You must define each server as a separate object, then put them in server groups (where the servers in a given group are copies of each other). You assign the server group to features, you do not assign individual servers. See RADIUS Servers and Groups （8 ページ） .

You can use this source for the following purposes:

• Remote Access VPN, as an identity source for authentication, and for authorization and accounting. You can use AD in conjunction with a RADIUS server.

• Identity policy, as a passive identity source to collect user identity from remote access VPN logins.

• External authentication for the FDM or the FTD CLI management users. You can support multiple management users with different authorization levels. These users can log into the system for device configuration and monitoring purposes.

LocalIdentitySource

This is the local user database, which includes users that you have defined in the FDM. Select **Objects** > **Users** to manage the user accounts in this database. See Local Users （15 ページ） .

（注）　The local identity source database does not include users you configure in the CLI for CLI access (using the **configure user add** command). CLI users are completely separate from those you create in the FDM.

You can use this source for the following purposes:

• Remote Access VPN, as a primary or fallback identity source.

• Identity policy, as a passive identity source to collect user identity from remote access VPN logins.

Active Directory (AD) Identity Realms

Microsoft Active Directory (AD) defines user accounts. You can create an AD identity realm for an Active Directory domain. The following topics explain how to define an AD identity realm.

Supported Directory Servers

You can use Microsoft Active Directory (AD) on Windows Server 2012, 2016, and 2019.

Note the following about your server configuration:

- If you want to perform user control on user groups or on users within groups, you must configure user groups on the directory server. The system cannot perform user group control if the server organizes the users in basic object hierarchy.

- The directory server must use the field names listed in the following table in order for the system to retrieve user metadata from the servers for that field.

Metadata	Active Directory Field
LDAP user name	samaccountname
first name	givenname
last name	sn
email address	mail userprincipalname (if mail has no value)
department	department distinguishedname (if department has no value)
telephone number	telephonenumber

Limitations on Number of Users

FDM can download information on up to 50,000 users from the directory server.

If your directory server includes more than 50,000 user accounts, you will not see all possible names when selecting users in an access rule or when viewing user-based dashboard information. You can write rules on only those names that were downloaded.

The limit also applies to the names associated with groups. If a group has more than 50,000 members, only the 50,000 names that were downloaded can be matched against the group membership.

Determining the Directory Base DN

When you configure directory properties, you need to specify the common base distinguished name (DN) for users and groups. The base is defined in your directory server, and differs from network to network. You must enter the correct bases for identity policies to work. If the base is wrong, the system cannot determine user or group names, and thus identity-based policies will be inoperable.

ヒント   To get the correct bases, consult the administrator who is responsible for the directory servers.

For active directory, you can determine the correct bases by logging into the Active Directory server as domain administrator, and using the **dsquery** command at a command prompt as follows to determine the bases:

User search base

Enter the **dsquery user** command with a known username (partial or complete) to determine the base distinguished name. For example, the following command uses the partial name "John*" to return information for all users that start with "John."

```
C:\Users\Administrator>dsquery user -name "John*"
"CN=John Doe,CN=Users,DC=csc-lab,DC=example,DC=com"
```

The base DN would be "DC=csc-lab,DC=example,DC=com."

Group search base

Enter the **dsquery group** command with a known group name to determine the base distinguished name. For example, the following command uses the group name Employees to return the distinguished name:

```
C:\>dsquery group -name "Employees"
"CN=Employees,CN=Users,DC=csc-lab,DC=example,DC=com"
```

The group base DN would be "DC=csc-lab,DC=example,DC=com."

You can also use the ADSI Edit program to browse the Active Directory structure (**Start** > **Run** > **adsiedit.msc**). In ADSI Edit, right click any object, such as an organizational unit (OU), group, or user, and choose **Properties** to view the distinguished name. You can then copy the string of DC values as the base.

To verify that you have the correct base:

1. Click the Test Connection button in the directory properties to verify connectivity. Resolve any problems, and save the directory properties.

2. Commit changes to the device.

3. Create an access rule, select the **Users** tab, and try to add known user and group names from the directory. You should see auto-complete suggestions as you type for matching users and groups in the realm that contains the directory. If these suggestions appear in a drop-down list, then the system was able to query the directory successfully. If you see no suggestions, and you are certain the string you typed should appear in a user or group name, you need to correct the corresponding search base.

Configuring AD Identity Realms

An identity realm is a directory server plus other attributes required to provide authentication services. The directory server contains information about the users and user groups who are allowed access to your network.

For Active Directory, a realm is equivalent to an Active Directory domain. Create separate realms for each AD domain you need to support.

Realms are used in the following policies:

- Identity—The realm provides user identity and group membership information, which you can then use in access control rules. The system downloads updated information about all users and groups every day in the last hour of the day (UTC). The directory server must be reachable from the management interface.

- Remote access VPN—The realm provides authentication services, which determine whether a connection is allowed. The directory server must be reachable from the RA VPN outside interface.

- Access Control, SSL Decryption—You can select the realm in the user criteria for the rule to apply the rule to all users within the realm.

Work with your directory administrator to get the values required to configure the directory server properties.

（注） If the directory server is not on an attached network or available through the default route, create a static route for the server. Select **Device** > **Routing** > **View Configuration** to create static routes.

The following procedure explains how you can create and edit objects directly through the Objects page. You can also create identity realm objects while editing a realm property by clicking the **Create New Identity Realm** link shown in the object list.

始める前に

Ensure that time settings are consistent among the directory servers, the FTD device, and clients. A time shift among these devices can prevent successful user authentication. "Consistent" means that you can use different time zones, but the time should be the same relative to those zones; for example, 10 AM PST = 1 PM EST.

手順

ステップ 1 Select **Objects**, then select **Identity Sources** from the table of contents.

ステップ 2 Do one of the following:

- To create an AD realm, click + > **AD**.

- To edit a realm, click the edit icon (🖊) for the realm.

To delete an unreferenced object, click the trash can icon (🗑) for the object.

ステップ 3 Configure the basic realm properties.

- **Name**—A name for the directory realm.

- **Type**—The type of directory server. Active Directory is the only supported type, and you cannot change this field.

- **Directory Username**, **Directory Password**—The distinguished username and password for a user with appropriate rights to the user information you want to retrieve. For Active Directory, the user does not need elevated privileges. You can specify any user in the domain. The username must be fully qualified; for example, Administrator@example.com (not simply Administrator).

（注） The system generates ldap-login-dn and ldap-login-password from this information. For example, Administrator@example.com is translated as cn=administrator,cn=users,dc=example,dc=com. Note that cn=users is always part of this translation, so you must configure the user you specify here under the common name "users" folder.

- **Base DN**—The directory tree for searching or querying user and group information, that is, the common parent for users and groups. For example, cn=users,dc=example,dc=com. For information on finding the base DN, see Determining the Directory Base DN （3 ページ） .

- **AD Primary Domain**— The fully qualified Active Directory domain name that the device should join. For example, example.com.

ステップ **4** Configure the directory server properties.

- **Hostname/IP Address**—The hostname or IP address of the directory server. If you use an encrypted connection to the server, you must enter the fully-qualified domain name, not the IP address.

- **Port**—The port number used for communications with the server. The default is 389. Use port 636 if you select LDAPS as the encryption method.

- **Encryption**—To use an encrypted connection for downloading user and group information, select the desired method, **STARTTLS** or **LDAPS**. The default is **None**, which means that user and group information is downloaded in clear text.

  - **STARTTLS** negotiates the encryption method, and uses the strongest method supported by the directory server. Use port 389. This option is not supported if you use the realm for remote access VPN.

  - **LDAPS** requires LDAP over SSL. Use port 636.

- **Trusted CA Certificate**—If you select an encryption method, upload a Certificate Authority (CA) certificate to enable a trusted connection between the system and the directory server. If you are using a certificate to authenticate, the name of the server in the certificate must match the server Hostname / IP Address. For example, if you use 10.10.10.250 as the IP address but ad.example.com in the certificate, the connection fails.

ステップ **5** If there are multiple servers for the realm, click **Add Another Configuration** and enter the properties for each additional server.

You can add up to 10 AD servers to the realm. These servers need to be duplicates of each other and support the same AD domain.

You can collapse and expand each server entry for your convenience. The sections are labeled with the hostname/IP address and port.

ステップ **6** Click the **Test** button to verify the system can contact the server.

The system uses separate processes and interfaces to access the server, so you might get errors indicating that the connection works for one type of use but not another, for example, available for Identity policies but not for remote access VPN. If the server cannot be reached, verify that you have the right IP address and host name, that the DNS server has an entry for the hostname, and so forth. You might need to configure a static route for the server. For more information, see Troubleshooting Directory Server Connections （7 ページ） .

ステップ **7**　Click **OK**.

Troubleshooting Directory Server Connections

The system uses different processes to communicate with your directory server depending on the feature. Thus, a connection for identity policies might work, whereas one for remote access VPN fails.

These processes use different interfaces to communicate with the directory server. You must ensure connectivity from these interfaces.

- Management interface, for: identity policies.

- Data interface, for: remote access VPN (outside interface).

When you configure the identity realm, use the **Test** button to verify that the connection can work. Failure messages should indicate the feature that is having connection problems. The following are the general issues you might encounter, based on authentication attributes and routing/interface configuration.

Directory user authentication issues.

If the problem is that the system could not log into the directory server because of the username or password, ensure that the name and password are correct and valid on the directory server. For Active Directory, the user does not need elevated privileges. You can specify any user in the domain. The username must be fully qualified; for example, Administrator@example.com (not simply Administrator).

Also, the system generates ldap-login-dn and ldap-login-password from the username and password information. For example, Administrator@example.com is translated as cn=administrator,cn=users,dc=example,dc=com. Note that cn=users is always part of this translation, so you must configure the user you specify here under the common name "users" folder.

The directory server is accessible through a data interface.

If the directory server is on a network that is either directly connected to a data interface (such as a GigabitEthernet interface), or routeable from a directly-connected network, you must ensure that there is a route between the virtual management interface and the directory server.

- Using **data-interfaces** as the management gateway should make routing successful.

- If you have an explicit gateway on the management interface, that gateway router needs to have a route to the directory server.

- You do not need to configure an IP address on the **diagnostic** interface, which is the physical interface used by the virtual management interface. However, if you do configure an address, do not also configure a static route (such as a default route) that would redirect traffic to the directory server to the diagnostic interface.

- If there is a router between the directly-connected network and the network that hosts the directory server, configure a static route for the directory server (**Device** > **Routing**).

- Verify that the data interface has the correct IP address and subnet mask.

The directory server is accessible through the Management physical interface.

If the directory server is on the network that is either directly connected to the Management physical interface (such as Management0/0) or routeable from that network, you must do the following:

- Configure an IPv4 address for the Management interface (with the logical name **diagnostic**) on **Device** > **Interfaces**. The IP address must be on the same subnet as the virtual management address (**Device** > **System Settings** > **Management Interface**).

- If there is a router between the directory server and the Management interface, configure a route for the directory server on **Device** > **Routing** for the **diagnostic** interface.

- Verify that the diagnostic and management interfaces have the correct IP address and subnet mask.

The directory server is on an external network.

If the directory server is on a network on the other side of the outside (uplink) interface, you might need to configure a site-to-site VPN connection. For the detailed procedure, see How to Use a Directory Server on an Outside Network with Remote Access VPN.

RADIUS Servers and Groups

You can use RADIUS servers to authenticate and authorize remote access VPN connections, and the FDM and the FTD CLI administration users. For example, if you also use Cisco Identity Services Engine (ISE) and its RADIUS server, you can use that server with the FDM.

When you configure a feature to use RADIUS servers, you select a RADIUS group instead of individual servers. A RADIUS group is a collection of RADIUS servers that are copies of each other. If a group has more than one server, they form a chain of backup servers to provide redundancy in case one server becomes unavailable. But even if you have only one server, you must create a one-member group to configure RADIUS support for a feature.

The following topics explain how to configure RADIUS servers and groups, so that they are available for use in the supported features.

Configure RADIUS Servers

RADIUS servers provide AAA (authentication, authorization, and accounting) services. If you use RADIUS servers to authenticate and authorize users, you can use those servers with the FDM.

After creating objects for each of your RADIUS servers, create RADIUS server groups to contain each group of duplicate servers.

始める前に

If you want to configure a redirect ACL for RA VPN, you must use Smart CLI to create the extended ACL before creating or editing the server object. You cannot create the ACL while editing the object.

手順

ステップ 1 Select **Objects**, then select **Identity Sources** from the table of contents.

ステップ **2**   Do one of the following:

- To create an object, click + > **RADIUS Server**.
- To edit an object, click the edit icon (⬤) for the object.

To delete an unreferenced object, click the trash can icon (⬤) for the object.

ステップ **3**   Configure the following properties:

- **Name**—The name of the object. This does not have to match anything configured on the server.

- **Server Name or IP Address**—The fully-qualified host name (FQDN) or IP address of the server. For example, radius.example.com or 10.100.10.10.

- **Authentication Port**—The port on which RADIUS authentication and authorization are performed. The default is 1812.

- **Timeout**—The length of time, 1-300 seconds, that the system waits for a response from the server before sending the request to the next server. The default is 10 seconds. If you are using this server as a secondary authentication source for remote access VPN, for example, to prompt for an authentication token, increase this timeout to 60 seconds at least. This provides time for the user to obtain and enter the token.

- **Server Secret Key**—(Optional.) The shared secret that is used to encrypt data between the FTD device and the RADIUS server. The key is a case-sensitive, alphanumeric string of up to 64 characters, with no spaces. The key must start with an alphanumeric character or an underscore, and it can contain the special characters: $ & - _ . + @. The string must match the one configured on the RADIUS server. If you do not configure a secret key, the connection is not encrypted.

ステップ **4**   (Optional.) If you are using the server for remote access VPN Change of Authorization configuration, you can click the **RA VPN Only** link and configure the following options.

- **Redirect ACL**—Select the extended ACL to use for the RA VPN redirect ACL. Create extended ACLs using the Smart CLI **Extended Access List** object on the **Device** > **Advanced Configuration** > **Smart CLI** > **Objects** page.

  The purpose of the redirect ACL is to send initial traffic to Cisco Identity Services Engine (ISE) so that ISE can assess the client posture. The ACL should send HTTPS traffic to ISE, but not traffic that is already destined for ISE, or traffic that is directed to a DNS server for name resolution. For an example, see Configure Change of Authorization on the FTD Device.

- **Interface Used to Connect to RADIUS Server**—Which interface to use when communicating with the server. If you select **Resolve via Route Lookup**, the system always uses the routing table to determine the interface to use. If you select **Manually Choose Interface**, the system will always use the interface you select.

  If you are configuring Change of Authorization, you must select a specific interface so that the system can correctly enable the CoA listener on the interface.

  If the server is on the same network as the management address, which means you will select the Diagnostic interface, you must also configure an IP address on the Diagnostic interface. Having a management IP address is not sufficient. Go to **Device** > **Interfaces**, and configure an IP address on the diagnostic interface that is on the same subnet as the management IP address.

  If you also use this server for the FDM administrative access, this interface is ignored. Administrative access attempts are always authenticated through the management IP address.

ステップ **5** (Optional, when editing the object only.) Click **Test** to check whether the system can connect to the server.

> You are prompted for a username and password. The test confirms whether the server can be contacted, and if it can, that the username can be authenticated.

ステップ **6** Click **OK**.

Configure RADIUS Server Groups

A RADIUS server group contains one or more RADIUS server objects. The servers within a group must be copies of each other. These servers form a chain of backup servers, so that if the first server is unavailable, the system can try the next server in the list.

When you configure RADIUS support in a feature, you must select a server group. Thus, even if you have just one RADIUS server, you must create a server group to contain it.

手順

ステップ **1** Select **Objects**, then select **Identity Sources** from the table of contents.

ステップ **2** Do one of the following:

- To create an object, click + > **RADIUS Server Group**.

- To edit an object, click the edit icon () for the object.

To delete an unreferenced object, click the trash can icon () for the object.

ステップ **3** Configure the following properties:

- **Name**—The name of the object. This does not have to match anything configured on the servers.

- **Dead Time**—Failed servers are reactivated only after all servers have failed. The dead time is how long to wait, from 0 - 1440 minutes, after the last server fails before reactivating all servers. The default is 10 minutes.

- **Maximum Failed Attempts**—The number of failed AAA transactions (that is, requests that do not get a response) sent to a RADIUS server in the group before trying the next server. You can specify 1-5, and the default is 3. When the maximum number of failed attempts is exceeded, the system marks the server as Failed.

  For a given feature, if you configured a fallback method using the local database, and all the servers in the group fail to respond, then the group is considered to be unresponsive, and the fallback method is tried. The server group remains marked as unresponsive for the duration of the dead time, so that additional AAA requests within that period do not attempt to contact the server group, and the fallback method is used immediately.

- **Dynamic Authorization (for RA VPN only)**, **Port**—If you enable RADIUS dynamic authorization or change of authorization (CoA) services for this RADIUS server group, the group will be registered for CoA notification and listen on the specified port for CoA policy updates from Cisco Identity Services Engine (ISE). The default listening port is 1700, or you can specify a different port in the

range 1024 to 65535. Enable dynamic authorization only if you are using this server group in a remote access VPN in conjunction with ISE

- **Realm that Supports the RADIUS Server**—If the RADIUS server is configured to use an AD server for authenticating users, select the AD realm that specifies the AD server used in conjunction with this RADIUS server. If the realm does not already exist, click **Create New Identity Realm** at the bottom of the list and configure it now.

- **RADIUS Server list**—Select up to 16 RADIUS server objects that define the servers for the group. Add these objects in priority order. The first server in the list is used until it becomes unresponsive. After adding the objects, you can drag and drop to rearrange them. If the object you need does not yet exist, click **Create New RADIUS Server** and add it now.

   You can also click the **Test** link to verify the system can connect to the server. You are prompted for a username and password. The test confirms whether the server can be contacted, and if it can, that the username can be authenticated.

ステップ **4**   (Optional.) Click the **Test All Servers** button to check connectivity to each server in the group.

   You are prompted for a username and password. The system checks whether each server can be contacted, and whether the username can be authenticated on each server.

ステップ **5**   Click **OK**.

Troubleshoot RADIUS Servers and Groups

Following are some things you can check if external authorization does not work.

- Use the **Test** buttons in the RADIUS server and server group objects to verify that the servers can be contacted from the device. Ensure that you save the objects before testing. If the test fails:

   - Please understand that the test ignores the interface configured for the server, and always uses the management interface. The test is expected to fail if the RADIUS authentication proxy is not configured to respond to requests from the management IP address.

   - Verify that you are entering a correct username/password combination during the test. You should get a Bad Credentials message if they are incorrect.

   - Verify the secret key, port, and IP address for the server. If you are using a hostname, verify that DNS is configured for the management interface. Consider the possibility that the secret key was changed on the RADIUS server but not in the device configuration.

   - If the test continues to fail, you might need to configure a static route to the RADIUS servers. Try pinging the server from the CLI Console or an SSH session to see if it can be reached.

- If external authentication has been working, but has stopped working, consider the possibility that all servers are in the dead time. When all the RADIUS servers within a group have failed, the dead time is the number of minutes the system waits before trying the first server again. The default is 10 minutes, but you can configure as long as 1440 minutes.

- If HTTPS external authentication works for some users but not others, evaluate the cisco-av-pair attribute defined in the RADIUS server for each user account. This attribute might be configured incorrectly. A missing or incorrect attribute will block all HTTS access for that user account.

- If SSH external authentication works for some users but not for others, evaluate the Service-Type attribute defined in the RADIUS server for each user account. This attribute might be configured incorrectly. A missing or incorrect attribute will block all SSH access for that user account.

Identity Services Engine (ISE)

You can integrate your Cisco Identity Services Engine (ISE) or ISE Passive Identity Connector (ISE-PIC) deployment with the FTD device to use ISE/ISE-PIC for passive authentication.

ISE/ISE-PIC is an authoritative identity source, and provides user awareness data for users who authenticate using Active Directory (AD), LDAP, RADIUS, or RSA. However, for FTD, you can use ISE for user identity awareness in conjunction with AD only. You can use the user identity in access control and SSL decryption policies as matching criteria, in addition to seeing user information in the various monitoring dashboards and events.

For more information on Cisco ISE/ISE-PIC, see the *Cisco Identity Services Engine Administrator Guide* (https://www.cisco.com/c/en/us/support/security/identity-services-engine/ tsd-products-support-series-home.html) and the *Identity Services Engine Passive Identity Connector (ISE-PIC) Installation and Administrator Guide* (https://www.cisco.com/c/en/us/support/security/ ise-passive-identity-connector/tsd-products-support-series-home.html).

Guidelines and Limitations for ISE

- The firewall system does not support 802.1x device authentication alongside Active Directory authentication because the system does not associate device authentication with users. If you use 802.1x active logins, configure ISE to report only 802.1x active logins (both device and user). That way, a device login is reported only once to the system.

- ISE/ISE-PIC does not report the activity of ISE Guest Services users.

- Synchronize the time on the ISE/ISE-PIC server and the device. Otherwise, the system might perform user timeouts at unexpected intervals.

- If you configure ISE/ISE-PIC to monitor a large number of user groups, the system might drop user mappings based on groups due to memory limitations. As a result, rules with realm or user conditions might not perform as expected.

- For the specific versions of ISE/ISE-PIC that are compatible with this version of the system, see the *Cisco Secure Firewall Compatibility Guide*, https://www.cisco.com/c/en/us/support/security/ firepower-ngfw/products-device-support-tables-list.html.

- Use the IPv4 address of the ISE server, unless you confirm that your version of ISE supports IPv6.

Configure Identity Services Engine

To use the Cisco Identity Services Engine (ISE) or Cisco Identity Services Engine Passive Identity Connector (ISE PIC) as a passive identity source, you must configure the connection to the ISE Platform Exchange Grid (pxGrid) server.

始める前に

- Export the pxGrid and MNT server certificates from ISE. For example, in ISE PIC 2.2, you find these on the **Certificates** > **Certificate Management** > **System Certificates** page. The MNT (Monitoring and Troubleshooting node) is shown as Admin in the Used By column in the certificates list. You can either upload them as trusted CA certificates on the **Objects** > **Certificates** page, or upload them during the following procedure. These nodes might be using the same certificate.

- You must also configure an AD identity realm. The system obtains the list of users from AD, and from ISE it gets information on the user-to-IP address mappings.

手順

ステップ 1 Select **Objects**, then select **Identity Sources** from the table of contents.

ステップ 2 Do one of the following:

- To create an object, click + > **Identity Services Engine**. You can create at most one ISE object.
- To edit an object, click the edit icon () for the object.

To delete an unreferenced object, click the trash can icon () for the object.

ステップ 3 Configure the following properties:

- **Name**—The name of the object.

- **Status**—Click the toggle to enable or disable the object. When disabled, you cannot use ISE as an identity source in your identity rules.

- **Description**—An optional description of the object.

- **Primary Node Hostname/IP Address**—The hostname or IP address for the primary pxGrid ISE server. Do not specify an IPv6 address unless you verify that your version of ISE supports IPv6.

- **Secondary Node Hostname/IP Address**—If you set up a secondary ISE server for high availability, click **Add Secondary Node Hostname/IP Address** and enter the hostname or IP address of the secondary pxGrid ISE server.

- **pxGrid Server CA Certificate**—The trusted Certificate Authority certificate for the pxGrid framework. If your deployment includes a primary and a secondary pxGrid node, the certificates for both nodes must be signed by the same certificate authority.

- **MNT Server CA Certificate**—The trusted Certificate Authority certificate for the ISE certificate when performing bulk downloads. This can be the same as the pxGrid server certificate if your MNT (Monitoring and Troubleshooting) server is not separate. If your deployment includes a primary and a secondary MNT node, the certificates for both nodes must be signed by the same certificate authority.

- **Server Certificate**—The internal identity certificate that the FTD device must provide to ISE when connecting to ISE or performing bulk downloads.

- **ISE Network Filters**—An optional filter you can set to restrict the data that ISE reports to the system. If you provide a network filter, ISE reports data from the networks within the filter only. Click +, select the network objects that identify the networks, and click **OK**. Click **Create New Network** if you need to create the objects. Configure IPv4 network objects only.

ステップ **4**   Click the **Test** button to verify that the system can connect to your ISE server.

If the test fails, click the **See Logs** link to read the detailed error messages. For example, the following message indicates that the system could not connect to the server at the required port. The problem might be no route to the host, that the ISE server is not using the expected port, or that you have access control rules that prevent the connection.

```
Captured Jabberwerx log:2018-05-11T16:10:30 [   ERROR]: connection timed out while
trying to test connection to host=10.88.127.142:ip=10.88.127.142:port=5222
```

ステップ **5**   Click **OK** to save the object.

次のタスク

After you configure ISE, enable the identity policy, configure passive authentication rules, and deploy the configuration. Then, you must go into ISE/ISE PIC and accept the device as a subscriber. If you configure ISE/ISE PIC to automatically accept subscribers, you do not need to manually accept the subscription.

Troubleshoot the ISE/ISE-PIC Identity Source

ISE/ISE-PIC Connections

If you experience issues with the ISE or ISE-PIC connection, check the following:

- The pxGrid Identity Mapping feature in ISE must be enabled before you can successfully integrate ISE with the FTD device.

- Before a connection between the ISE server and the FTD device succeeds, you must manually approve the clients in ISE.

    Alternatively, you can enable **Automatically approve new accounts** in ISE as discussed in the chapter on Managing users and external identity sources in the *Cisco Identity Services Engine Administrator Guide*.

- The FTD device (server) certificate must include the **clientAuth** extended key usage value, or it must not include any extended key usage values. If the clientAuth extended key usage is set, then there must also either be no key usage set, or the Digital Signature key usage value must be set. The self-signed identity certificates you can create using the FDM meet these requirements.

- The time on your ISE server must be synchronized with the time on the FTD device. If the appliances are not synchronized, the system might perform user timeouts at unexpected intervals.

ISE/ISE-PIC User Data

If you experience issues with user data reported by ISE or ISE-PIC, note the following:

- After the system detects activity from an ISE user whose data is not yet in the database, the system retrieves information about them from the server. Activity seen by the ISE user is not handled by access control rules, and is not displayed in the dashboards until the system successfully retrieves information about them in a user download.

• You cannot perform user control on ISE users who were authenticated by an LDAP, RADIUS, or RSA domain controller.

• The system does not receive user data for ISE Guest Services users.

Local Users

The local user database (LocalIdentitySource) includes users that you have defined in the FDM.

You can use locally-defined users for the following purposes:

• Remote Access VPN, as a primary or fallback identity source.

• Management access, as a primary or secondary source for the FDM users.

The **admin** user is a system-defined local user. However, the admin user cannot log into a remote access VPN. You cannot create additional local administrative users.

If you define external authentication for management access, external users who log into the device appear on the local users list.

• Identity policy, indirectly, as a passive identity source to collect user identity from remote access VPN logins.

The following topic explains how to configure local users.

Configure Local Users

You can create user accounts directly on the device for use with remote access VPN. You can use the local user accounts instead of, or in addition to, an external authentication source.

If you use the local user database as a fallback authentication method for remote access VPN, ensure that you configure the same usernames/passwords in the local database as the names in the external database. Otherwise, the fallback mechanism will be ineffective.

The users defined here cannot log into the device CLI.

手順

ステップ **1** Select **Objects** > **Users**.

The list shows the usernames and service types, which can be:

• MGMT—For administrative users who can log into the FDM. The admin user is always defined, and you cannot delete it. You also cannot configure additional MGMT users. However, if you define external authentication for management access, external users who log into the device appear on the local users list as MGMT users.

• RA VPN—For users who can log into a remote access VPN configured on the device. You must also select the local database for the primary or secondary (fallback) source.

ステップ **2** Do one of the following:

- To add a user, click +.

- To edit a user, click the edit icon ( ) for the user.

If you no longer need a particular user account, click the delete icon ( ) for the user.

ステップ 3 Configure the user properties:

The name and password can contain any printable ASCII alphanumeric or special character except spaces and question marks. Printable characters are ASCII codes 33-126.

- **Name**—The username for logging into the remote access VPN. The name can be 4-64 characters, and it cannot contain spaces. For example, johndoe.

- **Password**, **Confirm Password**—Enter the password for the account. The password must be 8-16 characters long. It cannot contain consecutive letters that are the same. It must also contain at least one of each of the following: number, upper and lower case characters, and a special character.

（注）   Users cannot change their passwords. Notify them of their passwords, and when they need to change them, you must edit the user account. Also, do not update the password for external MGMT users: the passwords are controlled by the external AAA server.

ステップ 4 Click **OK**.