

Identity Source: Remote Access VPN

The following topics discuss how to perform user awareness and user control with Remote Access VPN:

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Remote access VPN identity sources

A remote access VPN identity source authenticates a user before establishing secure remote connection to the network. It requires the user to provide credentials through a client to verify the identity.

Identity source configuration

Secure Client is the only client supported on endpoint devices for remote VPN connectivity to Firewall Threat Defense devices.

When you set up a secure VPN gateway as discussed in Create a New Remote Access VPN Policy, you can set up an identity policy for those users and associate the identity policy with an access control policy, provided your users are in an Active Directory repository.

Note If you use remote access VPN with User Identity and RADIUS as the identity source, you must configure the realm (**Objects** > **Object Management** > **AAA Server** > **RADIUS Server Group**).

The login information provided by a remote user is validated by an LDAP or AD realm or a RADIUS server group. These entities are integrated with the Secure Firewall Threat Defense secure gateway.

Note If users authenticate with remote access VPN using Active Directory as the authentication source, users must log in using their username; the format domain\username or username@domain fails. (Active Directory refers to this username as the logon name or sometimes as sAMAccountName.) For more information, see User Naming Attributes on MSDN.

If you use RADIUS to authenticate, users can log in with any of the preceding formats.

Once authenticated through a VPN connection, the remote user takes on a VPN identity. This VPN identity is used by identity policies on the Secure Firewall Threat Defense secure gateway to recognize and filter network traffic belonging to that remote user.

Identity policies are associated with access control policies, which determine who has access to network resources. It is in this way that a remote user blocked or allowed to access your network resources.

Related Topics

Secure Connections Overview
Remote Access VPN Overview
VPN basics
Remote Access VPN Features
Guidelines and Limitations for Remote Access VPNs
Create a New Remote Access VPN Policy

Configure Remote Access VPN for AD-authenticated users

Configure remote access VPN for Active Directory-authenticated users. Manage VPN connections and apply identity-based policies to control user access and traffic filtering.

Remote access VPN user control allows you to implement identity-based policies that manage and monitor VPN user connections, providing enhanced security and access control for your network environment.

Before you begin

- Create a realm as discussed in Create an LDAP realm or an Active Directory realm and realm directory.
- To use authentication, authorization, and auditing (AAA), set up a RADIUS server group as discussed in Add a RADIUS server group.

Follow these steps to configure RA VPN for user control:

Procedure

Step 1 Log in to the Firewall Management Center.

Step 2 Click **Devices** > **VPN** > **Remote Access**.

Step 3 See Create a New Remote Access VPN Policy.

Step 4 Specify users to control and other options using an identity policy as described in Create an identity policy.

Step 5 Associate the identity rule with an access control policy, which filters and optionally inspects traffic, as discussed in Associate prefilter, decryption, and identity policies with an access control.

Step 6 Deploy your identity and access control policies to managed devices as discussed in Deploy configuration changes.

What to do next

Monitor VPN user traffic as discussed in VPN Session and User Information.

Hybrid Entra ID and on-premises AD deployments

The hybrid Entra ID and on-premises AD deployment model enables secure, flexible authentication and authorization for remote access users, provided the correct policy order and rule configuration are maintained.

In a hybrid deployment, remote access VPN users can authenticate with Microsoft Entra ID (formerly Azure AD). Cisco ISE authorizes the session and Firewall Management Center uses an on-premises Microsoft Active Directory realm for user identity and user-based access control. In this deployment model:

- Remote access VPN (RA VPN) is configured on Firewall Threat Defense
- Microsoft Entra ID or Azure is used as the SAML identity provider for VPN authentication
- Cisco ISE is used for session authorization
- Cisco ISE authorization policies may include both Microsoft Entra ID/Azure and on-premises AD rules or conditions
- Firewall Management Center uses the on-premises AD domain as the realm for user identity and user enforcement

Best practice: ISE authorization policy order for hybrid deployments

Beginning with Cisco ISE Release 3.4 Patch 4, when ISE evaluates an Entra ID identity source during authorization, it associates Entra ID attributes with the session. If Firewall Management Center uses an on-premises AD realm, the presence of Entra ID attributes may prevent correct user-to-IP mapping for RA VPN sessions. Identity-based access control rules that depend on user or group identity might not match as expected.

To prevent this issue:

Place ISE authorization rules that use the on-premises AD external identity source before rules that evaluate Entra ID or Azure conditions for the same users. This ensures that the session attributes published to FMC through pxGrid align with the configured on-premises AD realm.

After configuring the authorization policy order, verify that new RA VPN sessions create user mappings in Firewall Management Center and that user-based or group-based access control rules match as expected.

Note This behavior applies to Cisco ISE Release 3.4 Patch 4 and later. If user mappings stopped appearing after an ISE upgrade, review the ISE authorization policy order as described in this section.

Troubleshooting guidelines for remote access VPN identity source

For other related troubleshooting information, see Troubleshoot realms and user downloads and Troubleshoot user control.

If you experience issues with Remote Access VPN, check the connection between your Firewall Management Center and a managed device. If the connection fails, all Remote Access VPN logins reported by the device cannot be identified during the downtime, unless the users were previously seen and downloaded to the Firewall Management Center.

The unidentified users are logged as Unknown users on the Firewall Management Center. After the downtime, the Unknown users are reidentified and processed according to the rules in your identity policy.

The host name of the managed device must be less than 15 characters for Kerberos authentication to succeed.

Active FTP sessions are displayed as the **Unknown** user in events. This is normal because, in active FTP, the server (not the client) initiates the connection and the FTP server should not have an associated user name. For more information about active FTP, see RFC 95

Not Observing Correct Settings for VPN Statistics

This task ensures that managed devices receive the correct health policy settings after modifying VPN statistics configurations.

This task discusses steps you must take after either enabling or disabling the **VPN Statistics** setting in a health policy. Failure to perform this task means managed devices have a health policy with incorrect settings.

Procedure

Step 1 Log in to the Secure Firewall Management Center if you haven't already done so.

Step 2 Click **System** (⚙) > **Health** > **Policy**.

Step 3 Click **Edit** (✎) next to the health policy to edit.

Step 4 Scroll to locate **VPN Statistics**.

Step 5 Verify the VPN statistics setting is correct or change it if necessary.

Step 6 If you changed the setting, click **Save**, then click **Cancel** to return to the health policy.

Step 7 Click **Deploy health policy** (🚀) to apply the policy.

Step 8 In the **Policy Assignments & Deploy** dialog box, move the devices to which to deploy the health policy to the **Selected Devices** field.

Step 9 Click **Apply**.
A message is displayed when the health policy is deployed.

Step 10 After the health policy has finished deploying, click **Policies** > **Access Control heading** > **Access Control** to edit an access control policy.

Step 11 Click **Edit** (✎) next to a policy to edit.

Step 12 Make a minor change to the policy, such as changing its name.

Step 13 Save the access control policy.

Step 14 Deploy configuration changes; see Deploy configuration changes..

History for RA VPN

This reference provides the version history and introduction details for Remote Access VPN (RA VPN) feature support across Firewall Management Center and Firewall Threat Defense versions.

Feature	Minimum Firewall Management Center	Minimum Firewall Threat Defense	Details
Remote Access VPN	6.2.1	Any	Feature introduced. RA VPN allows individual users to connect to a private business network from a remote location using a laptop or desktop computer connected to the internet, or an Android or Apple iOS mobile device. Remote users transfer data securely and confidentially using encryption techniques crucial for data being transferred over shared mediums and the Internet.