SecureW2 Third-Party CA SCEP Integration with Microsoft Intune

Chapter 1: Introduction

This guide describes the steps to integrate a SecureW2 third-party CA with Microsoft Intune to create and auto-enroll certificates for Microsoft Intune Managed Devices using the Simple Certificate Enrollment Protocol (SCEP).

Admins can then view and manage the end-entity certificates on the JoinNow Management Portal.

Note: When a device, which has been enrolled through the Intune third-party CA integration, is removed from Intune, the corresponding certificates are automatically revoked in the JoinNow Management Portal.

Prerequisites

To set up Microsoft Intune to allow devices to enroll for digital certificates using the SCEP, you need:

- A Microsoft Online Services account with a Microsoft Intune (Microsoft Endpoint Manager) subscription.
- Permissions to register an application in Azure Active Directory (AD).
- An account in the JoinNow Management Portal set up for TLS-based authentication.
- Getting Started Wizard to generate Certificate Authorities (CAs) and the RADIUS Server.

Device Profiles in Microsoft Intune

Device profiles allow you to add and configure settings, and then push those settings to devices in your organization.The following profiles are created for end-user devices to connect to the secured network using user certificates:

- Trusted Certificate Profile for the SecureW2 RADIUS Server Root CA.
- Trusted Certificate Profile for the SecureW2 Root CA.
- Trusted Certificate Profile for the SecureW2 Issuing CA.
- SCEP Profile for the SecureW2 SCEP certificate requests.
- Wi-Fi profile for secure SSID configuration.

Note: You must create a separate profile for each platform.

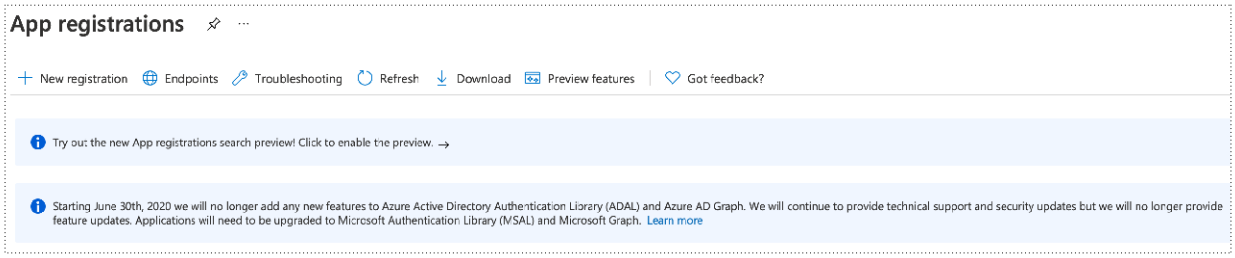
Chapter 2: Configure Azure

This section describes the steps to configure Azure and Intune to work with the SecureW2 PKI.

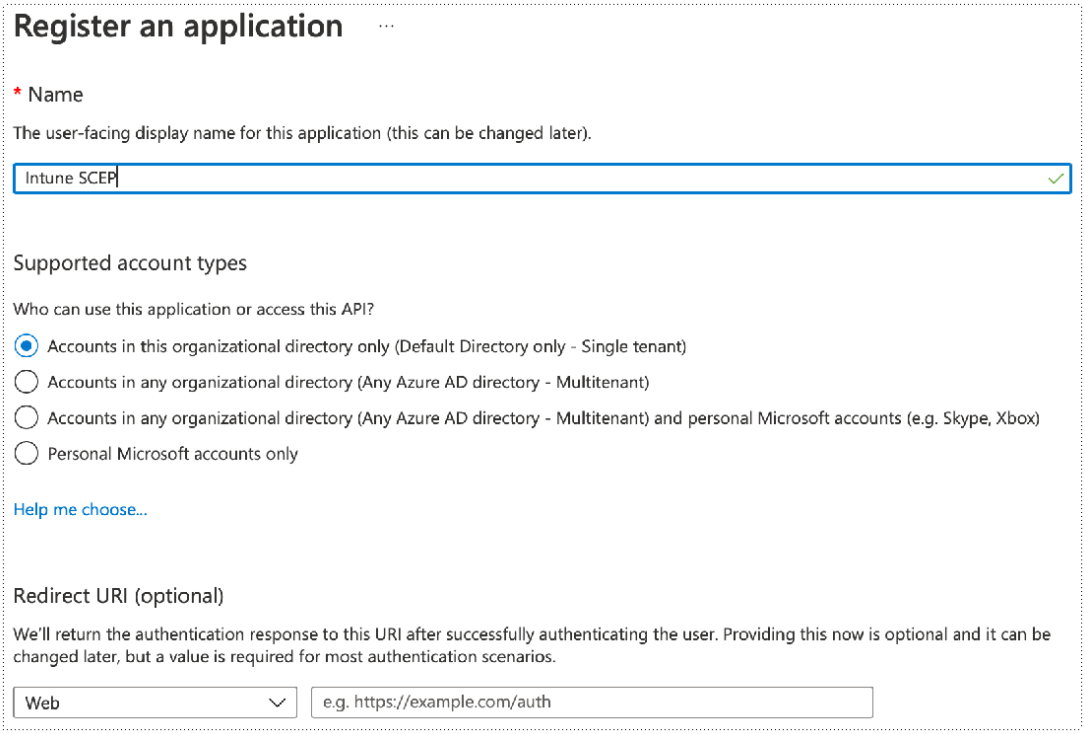
Creating a New Application

To create an app in Azure to communicate with the Intune CA IdP, follow the given steps.

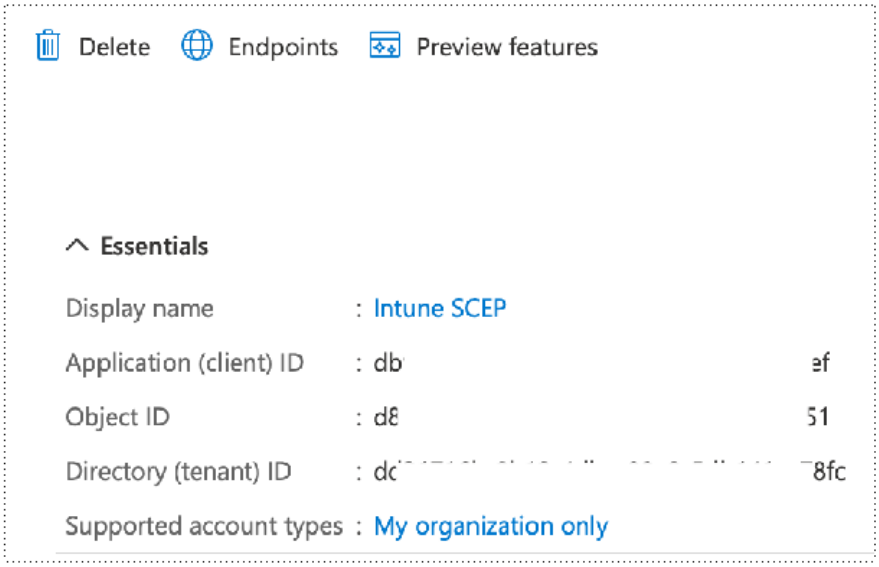
1. Log in to the Azure portal.
2. Go to **App registrations**.



3. Click **New registration**.
4. On the displayed screen, configure the following settings.



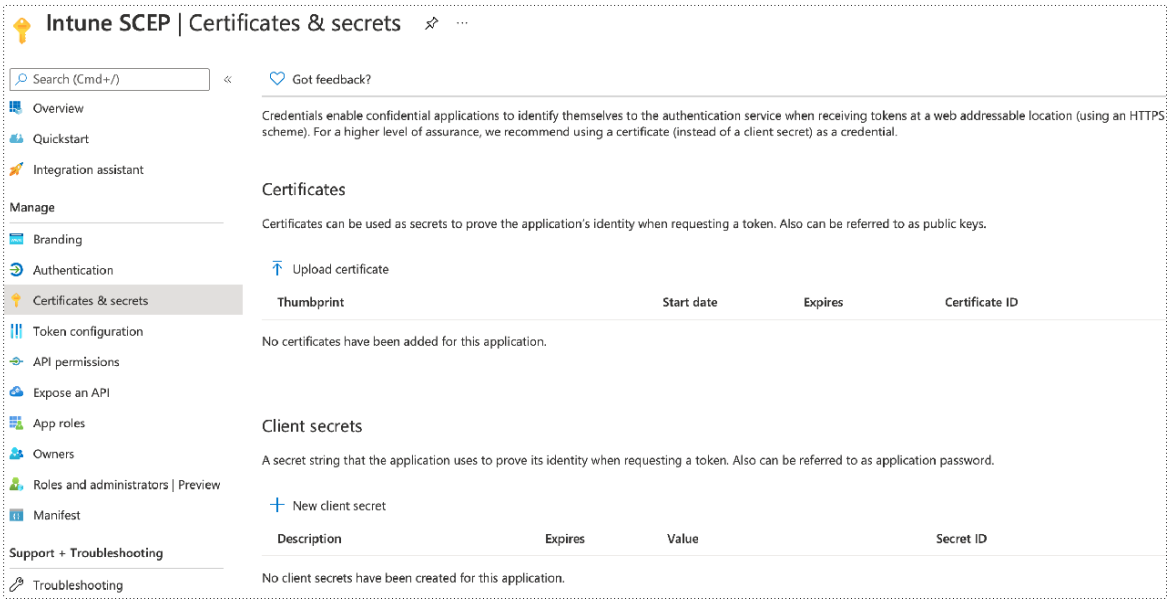
5. Click **Register**. The following screen is displayed.



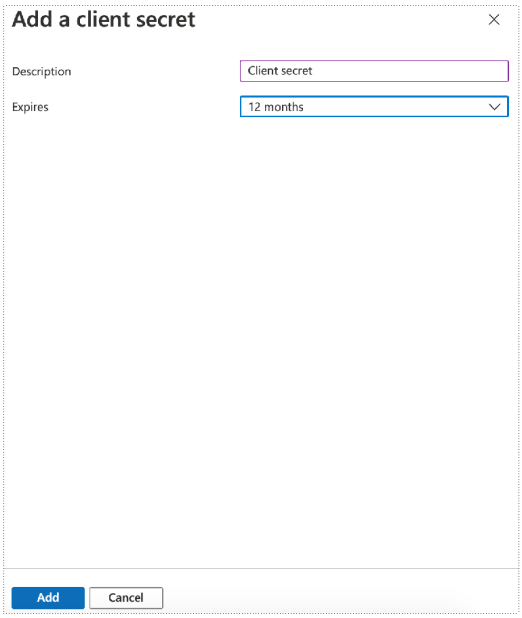
6. Copy the **Application (client) ID**, **Object ID**, and **Directory (tenant) ID** values to your console. These values are required to create an Intune IdP in the JoinNow Portal. (See the Creating an Intune CA IdP section.)

Creating a Client Secret

1. On the left pane, go to **Manage** and click **Certificates & secrets**.



2. Click **New client secret**.
3. In the **Description** field, enter a description for the client secret.
4. From the **Expires** drop-down list, select an expiration date.
5. Click **Add**.



6. The client secret is displayed under the **Value** column.

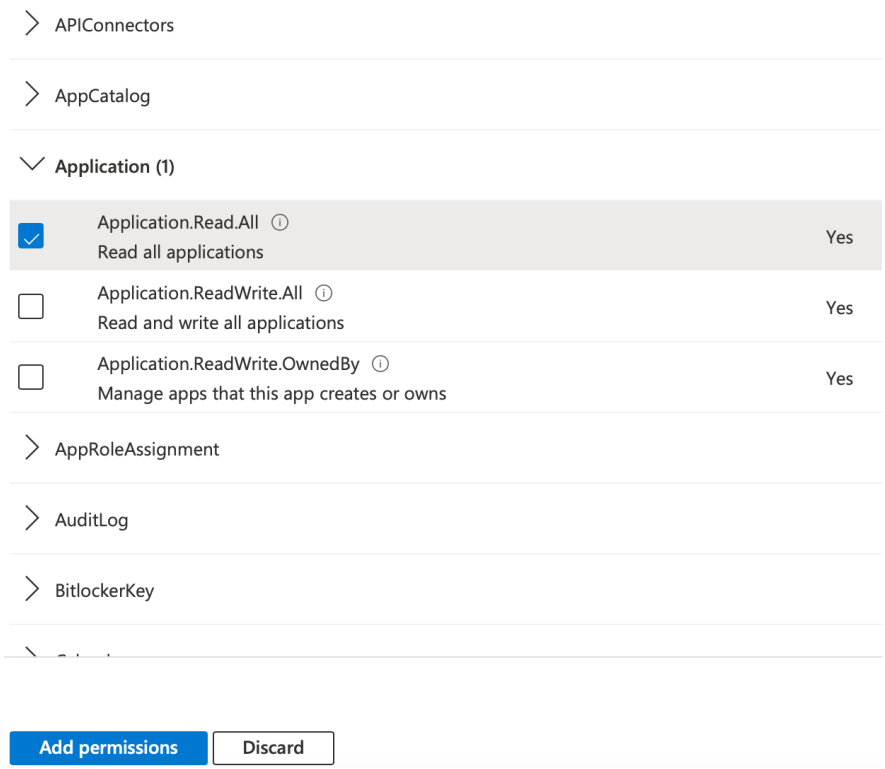
   Note: Ensure that you save the client secret on your console properly, as this secret is non-recoverable.

Adding API Permissions

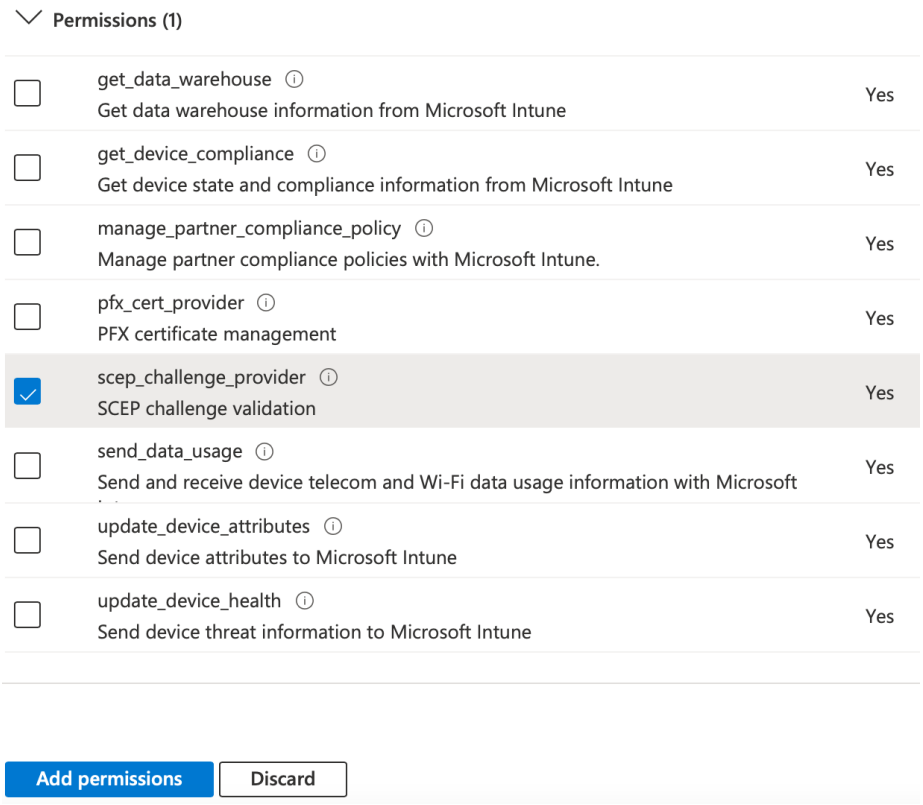
To provide the API permission for SecureW2 to access the Azure directory, follow the given steps.

1. On the left pane, go to **Manage** and click **API Permissions**.
2. On the displayed screen, click **Add a permission**.

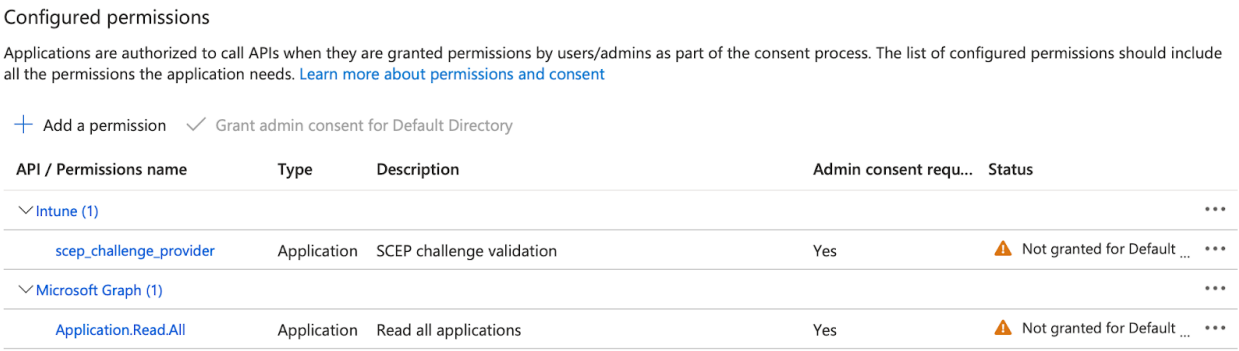
3. Select **Microsoft Graph**.
3. Select **Application permissions**.
4. From the **Application** drop-down menu, select **Application.Read.All**.



5. Click **Add permissions**.
6. Select **Intune**.
7. Select **Application permissions**.
8. From the **Permissions** drop-down menu, select **scep_challenge_provider**.



8. After adding the permissions, click **Add permissions**.
9. The **Configured permissions** screen is displayed.



Chapter 3: Configure SecureW2

This section describes the following procedures carried out in the JoinNow Management Portal:

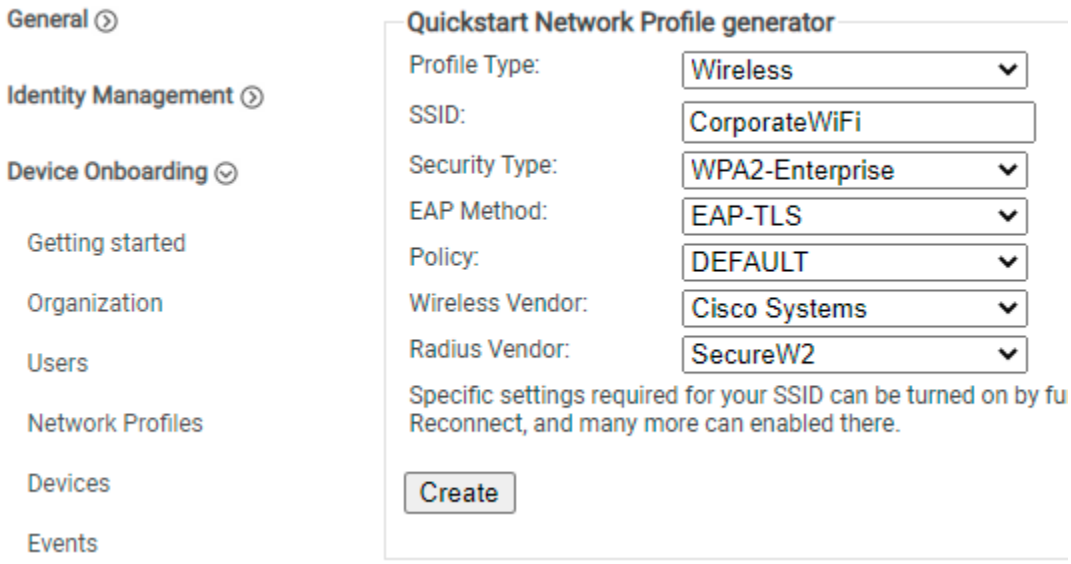
- Generating the required network profiles
- Creating a SecureW2 Intermediate CA
- Creating a certificate template
- Creating an Identity Provider (IdP) for Intune CA,
- Creating the Role and Enrollment policies

Getting Started

The Getting Started Wizard creates everything you need for 802.1x. It will generate a RADIUS server, CAs, profiles, a Landing page to onboard BYOD devices if desired, and all the default network settings you need for 802.1x.

Note: This is not mandatory if you already tested SecureW2 PKI flow.

1. Log in to the JoinNow Management Portal.
2. Go to **Device Onboarding** > **Getting Started**.
3. On the following screen, retain the default settings as shown.



4. For the **SSID** field, enter the name of the SSID with which you want to authenticate users.
5. For the **Wireless Vendor** field, from the drop-down list, select a wireless infrastructure vendor.
6. For the **Radius Vendor** field, from the drop-down list, select **SecureW2**.
7. Click **Create**.

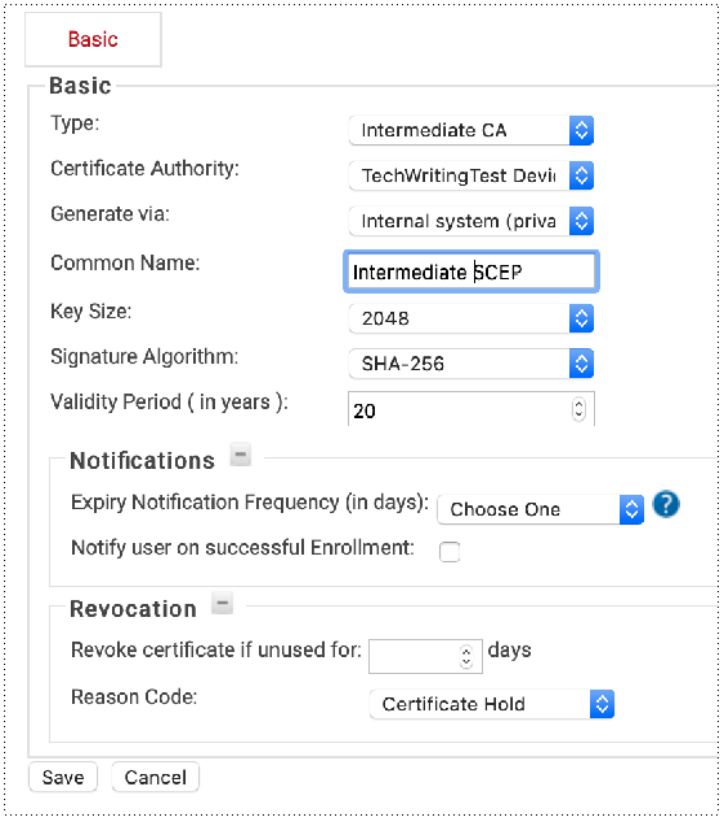
The Getting Started wizard typically takes 60-90 seconds to create the profile.

Creating an Intermediate CA for Intune SCEP Gateway Integration

As a best practice, SecureW2 recommends using a dedicated intermediate CA for Intune enrollments. The CA that issues certificates to BYOD devices should be separate from the CA that issues certificates to managed devices, because managed devices do not require email notifications. You can disable email notifications for a dedicated CA that issues certificates to Intune managed devices.

To create a new intermediate CA:

1. Go to **PKI Management** > **Certificate Authority** and click **Add Certificate Authority**.
2. In the **Basic** section, from the **Type** drop-down list, select **Intermediate CA**.
3. From the **Certificate Authority** drop-down list, select the default Root CA that comes with your organization.
4. In the **Common Name** field, type a name. SecureW2 recommends a name that includes "SCEP".
5. Click **Save**. The new intermediate CA is generated.



Creating an Intune Certificate Template

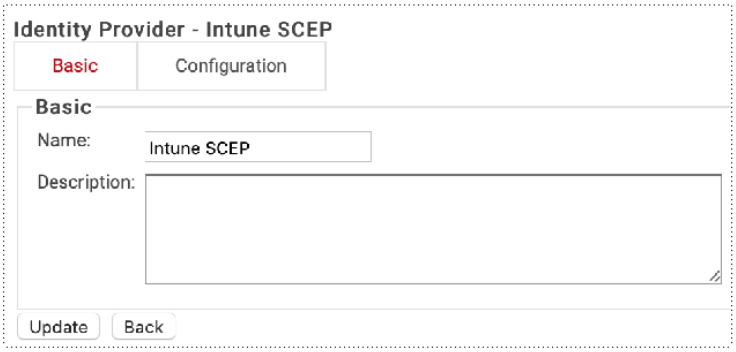
To create an Intune certificate template:

1. Go to **PKI Management** > **Certificate Authorities**. In the **Certificate Templates** section, click **Add Certificate Template**.
2. In the **Name** field, enter **Intune Certificate Template** as the name of the template.
3. In the **Subject** field, enter **CN=${/device/identity:/device/clientId}** as the common name.
4. In the **Validity Period** field, enter the validity period of the certificate (based on requirement).
5. In the **SAN** section, for the:
    - **DNS** field, enter: **${/device/clientId:/device/identity}**
    - **RFC822** field, enter: **${/device/clientId}**
    - **Other Name** field, enter: **${/device/clientId}**
6. In the **Extended Key Usage** section, from the **Use Certificate For** list, select **Client Authentication**.
7. Click **Update**.

Creating an Intune CA IdP

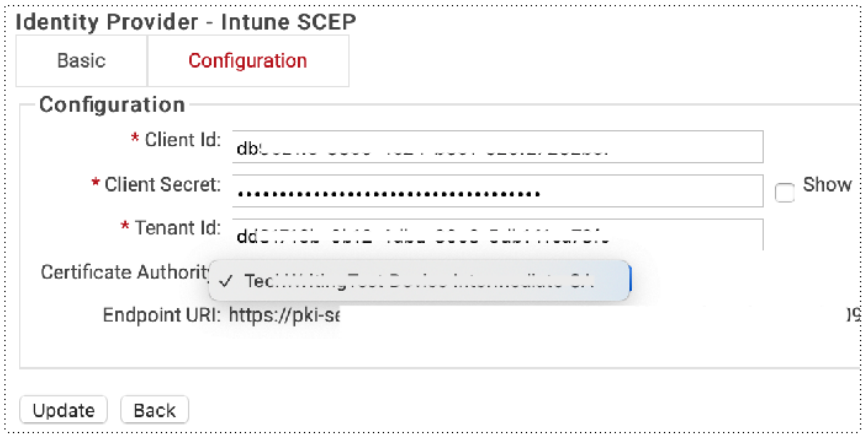
In the JoinNow Management Portal, create an IdP for the Intune CA to accept requests from the Intune portal. The IdP provides the Endpoint URI for the SCEP profiles in Intune.

1. Go to **Identity Management** > **Identity Providers**.
2. Click **Add Identity Provider**.
3. Enter a suitable name and description for the IdP, in the respective fields.
4. In the **Type** field, from the drop-down list, select **INTUNE CA PARTNER**.
5. Click **Save**. The following screen is displayed.



6. Click the **Configuration** tab.

7. Enter the **Client ID**, **Client Secret**, and **Tenant ID** which you obtained after creating a new app in the Azure portal. (See the Creating a New Application and Creating a Client Secret sections.)



8. From the **Certificate Authority** drop-down list, select the Intermediate CA you created.(See the Creating an Intermediate CA for Intune SCEP Gateway Integration section.)
9. Copy the Endpoint URI to your console.
10. Click **Update**.

Configuring Policy Management

Setting up Microsoft Intune requires two separate policies in the JoinNow Management Portal:

- A Roles policy and
- An Enrollment policy.

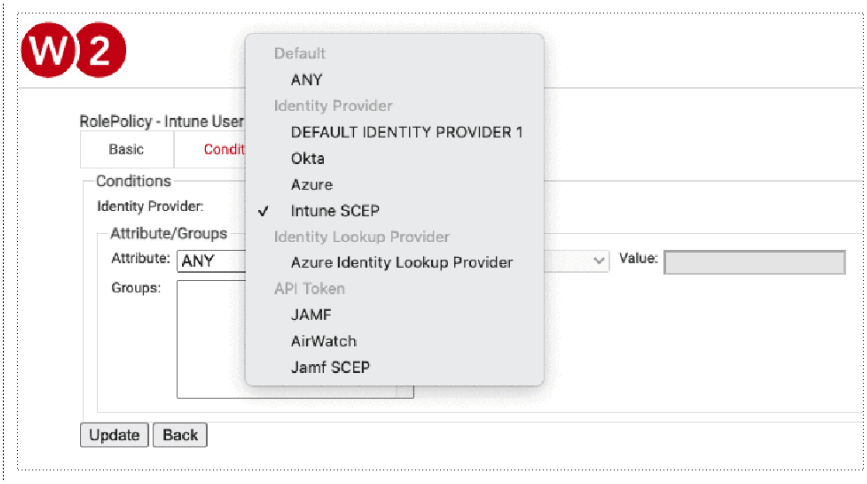
Note: Microsoft Intune does not need a dedicated Device Role policy. You can use the Default Device Role policy in the configuration.

Configuring a Roles Policy

To configure a Roles policy:

1. Go to **Policy Management** > **Roles**.
2. Click **Add Role**.

3. Type a name and display description, in the respective fields, and click **Save**.
4. The page refreshes and the **Conditions** tab is displayed. Click the **Conditions** tab.
5. In the **Conditions** section, from the **Identity Provider** drop-down list, select the Intune CA IdP you created. (See the Creating an Intune CA IdP section.)

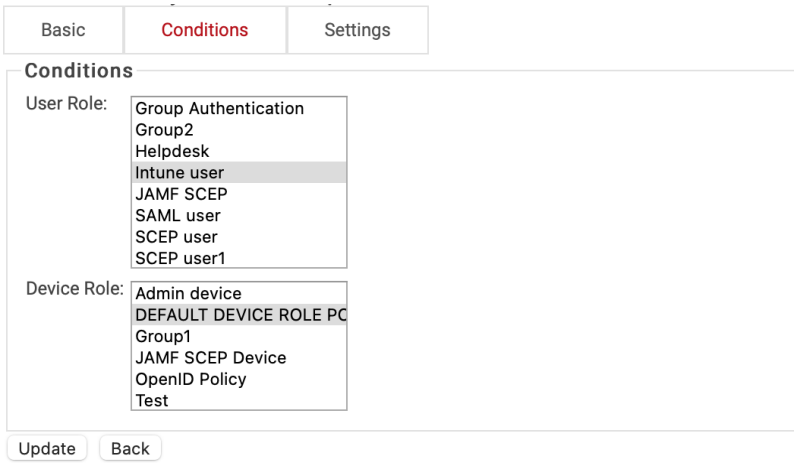


6. In the **Attributes/Groups** section, for the **Attribute** field, retain **ANY**.
7. Click **Update**.

Configuring an Enrollment Policy

To configure an enrollment policy:

1. Go to **Policy Management** > **Enrollment** and click **Add Enrollment Policy**.
2. Type a name and display description, in the respective fields, and click **Save**.
3. The page refreshes and the **Conditions** and **Settings** tabs are displayed.
4. Click the **Conditions** tab.
5. In the **Conditions** section, from the **User Role** list, select the user role policy you created earlier.
6. From the **Device Role** list, select **DEFAULT DEVICE ROLE POLICY**.



Note: You must select a User Role and Device Role for enrollment. You can use a Fallback Device policy to allow enrollment based on the Role policy.

6. Click the **Settings** tab.
7. In the **Settings** section, from the **Use Certificate Authority** drop-down list, select the Intermediate CA you created earlier. (See the Creating an Intermediate CA for Intune SCEP Gateway Integration section.)
8. From the **Use Certificate Template** drop-down list, select the template you created earlier (see the Creating an Intune Certificate Template section).
9. For the other settings, retain the default values.
10. Click **Update**.

Configuring a Network Policy

To set up a network policy:

1. Go to **Policy Management > Network**.
2. Click **Add Network Policy**.
3. Add a **Name** and optional **Description** to the Basic tab
4. Click **Save**. The **Conditions** and **Settings** tabs appear.

Network Policy Conditions

The Conditions tab under Network policy is where you map Roles policies and other user attributes. You can configure the Roles policy you just created.

We've configured the conditions for the Azure tenant network policy, which is the Roles policy created earlier, the email attribute from the lookup policy, and the issuing CA. The 'Match All' option is selected, meaning that if every rule is checked, the RADIUS will respond to the user with an 'Access_Accept' and the RADIUS attributes that we'll configure under Settings.

Network Policy Settings

Our policy sends a RADIUS_ACCEPT if users are verified as active. You can take it a step further by segmenting the users into separate VLANs. So, we need to configure a RADIUS attribute to send them to a VLAN.

1. Choose the **Settings** tab.
2. Click **Add Attribute**.
    a. From the **Dictionary** drop-down list, select **Radius:IETF**.
    b. From the **Attribute** drop-down list, select **Filter-Id**.
    c. In the **Value** text box, enter a value for the VLAN.
    d. Click **Save**.

Network Policy - Azure tenant network policy

Basic | Conditions | Settings

Settings

Access: Allow

AAA Attributes

Attribute	Value	Functions	
Filter-Id	101	Edit	Delete

Add Attribute

Update Back

Chapter 4: Trusted Certificate Profiles

Trusted Certificate Profile for the RADIUS Server Root CA Certificate

You should configure the Trusted Certificate Profile with the certificate of your RADIUS server certificate's issuing authority. This is to make the devices trust your RADIUS server by validating the RADIUS server certificate. We achieve this server validation in the profile configuration by adding the Root and/or Intermediate Certificate Authority (CA) certificates that issued the RADIUS server certificate. When you assign this profile, the Microsoft Intune managed devices receive the trusted certificates.

Note: For other RADIUS vendors, other than SecureW2 RADIUS server, ensure that you have the Root or Intermediate CA that issues the RADIUS server certificates.

Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

Trusted Certificate Profile for SecureW2 Root CA

This trusted certificate profile is required for the certificate chain of trust.

Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

Exporting the SecureW2 Root CA

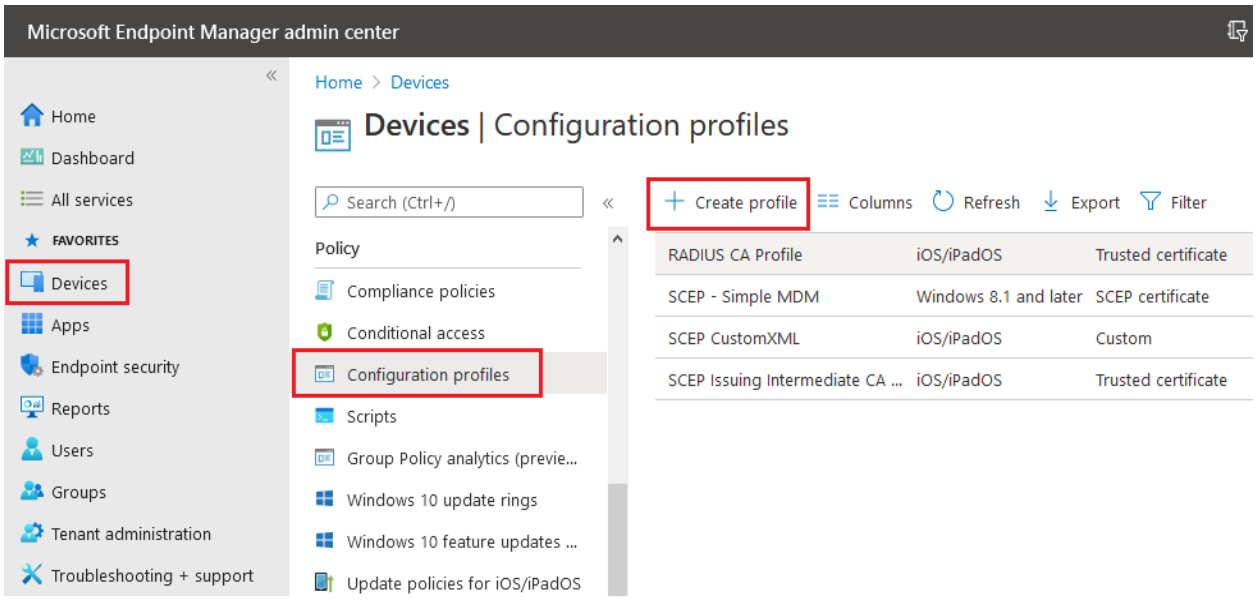
To export the SecureW2 Root CA from the JoinNow Management Portal, follow the given steps.

1. Log in to the JoinNow Management Portal.
2. Go to **PKI Management** > **Certificate Authorities**.
3. In the **Certificate Authorities** section, click the **Download** link for the Root CA issued to your organization.

This certificate is imported when you set up the trusted certificate profile described in the following section.

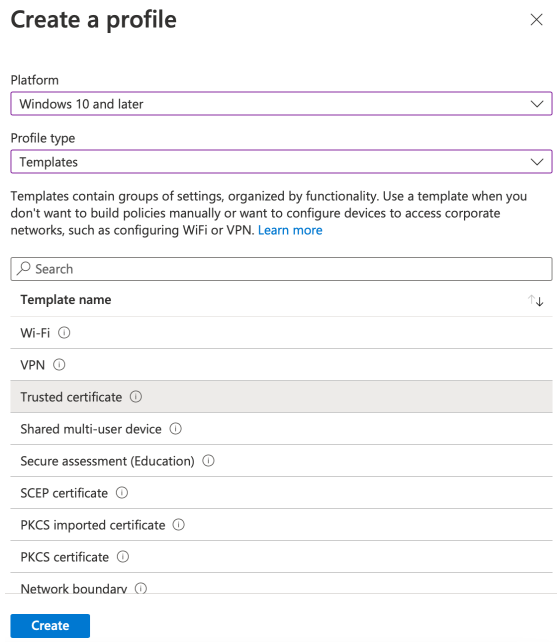
Creating a Trusted Certificate Profile - SecureW2 Root CA

1. Sign in to the Microsoft Endpoint Manager portal.
2. Select **Devices** > **Configuration profiles** > **Create profile**.



3. From the **Platform** drop-down list, select the device platform for this trusted certificate. The options are:
    - **Android**
    - **iOS**
    - **macOS**
    - **Windows 10 and later**

4. From the **Profile type** drop-down list, select **Templates**, and then select **Trusted certificate**. Click **Create**.



Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

5. On the **Trusted certificate** page, type a name and description for the trusted certificate profile and then click **Next**.
6. Add the Root certificate you saved earlier by clicking the **Browse** button (see the Exporting the SecureW2 Root CA section).
7. Click **Next**.

Note: For Windows 8.1 and later devices only, configure the **Destination Store** field as **Computer certificate store - Intermediate** as shown in the following screen.

Trusted Certificate Profile for SecureW2 Intermediate CA

This Trusted Certificate Profile is required to map the SecureW2 Intermediate CA certificate to the SCEP certificate profile. This CA certificate must be the certificate that issues the end-user certificates.

Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

Exporting the SecureW2 Intermediate CA

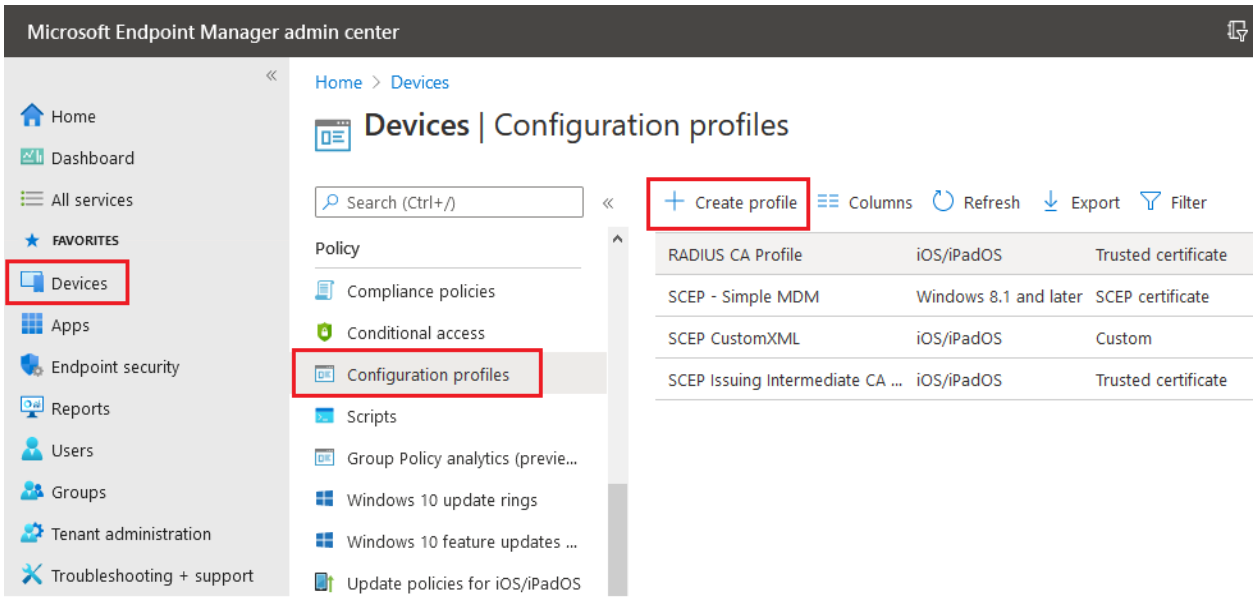
To export the SecureW2 Intermediate CA from the JoinNow Management Portal, follow the given steps.

1. Log in to the JoinNow Management Portal.
2. Go to **PKI Management** > **Certificate Authorities**.
3. In the **Certificate Authorities** section, click the **Download** link for the Intermediate CA created earlier. (See the Create an Intermediate CA for Intune SCEP Gateway Integration section.)

This certificate is imported when you set up the trusted certificate profile described in the following section.

Creating a Trusted Certificate Profile - SecureW2 Intermediate CA

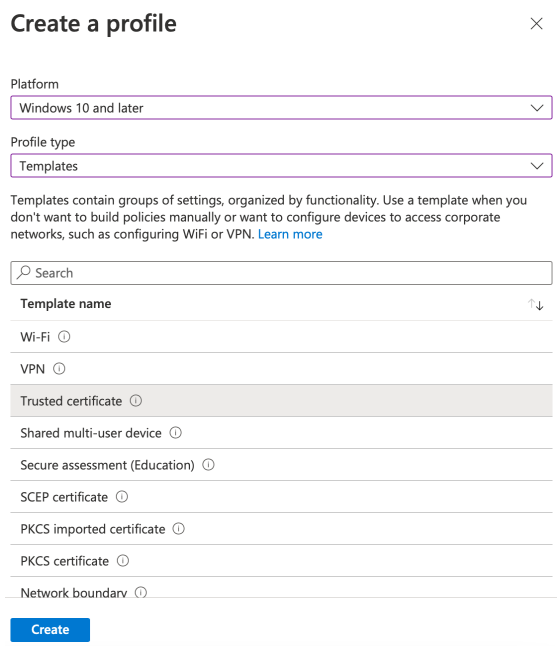
1. Sign in to the Intune (Microsoft Endpoint Manager) portal.
2. Select **Devices** > **Configuration profiles** > **Create profile**.



3. From the **Platform** drop-down list, select the device platform for this trusted certificate. The options are:

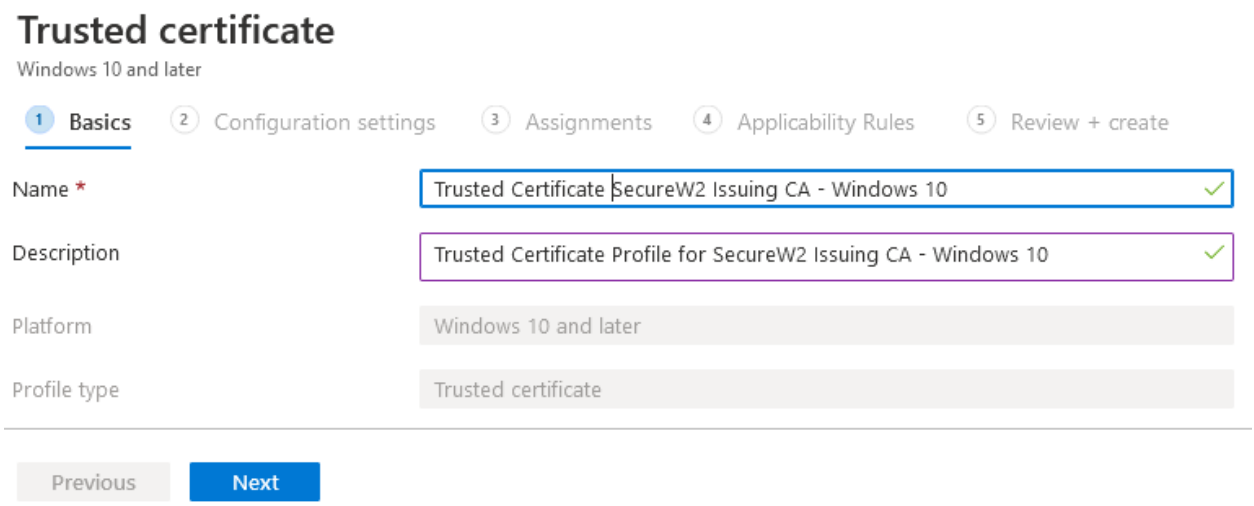
- **Android**
- **iOS**
- **macOS**
- **Windows 10 and later**

4. From the **Profile type** drop-down list, select **Templates**, and then select **Trusted certificate**. Click **Create**.



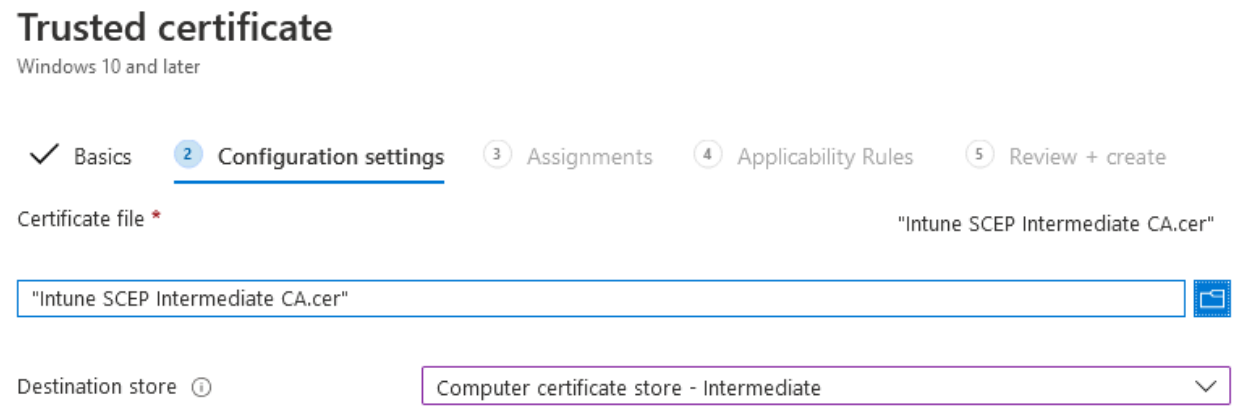
Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

5. On the **Trusted certificate** page, type a name and description for the trusted certificate profile and then click **Next**.

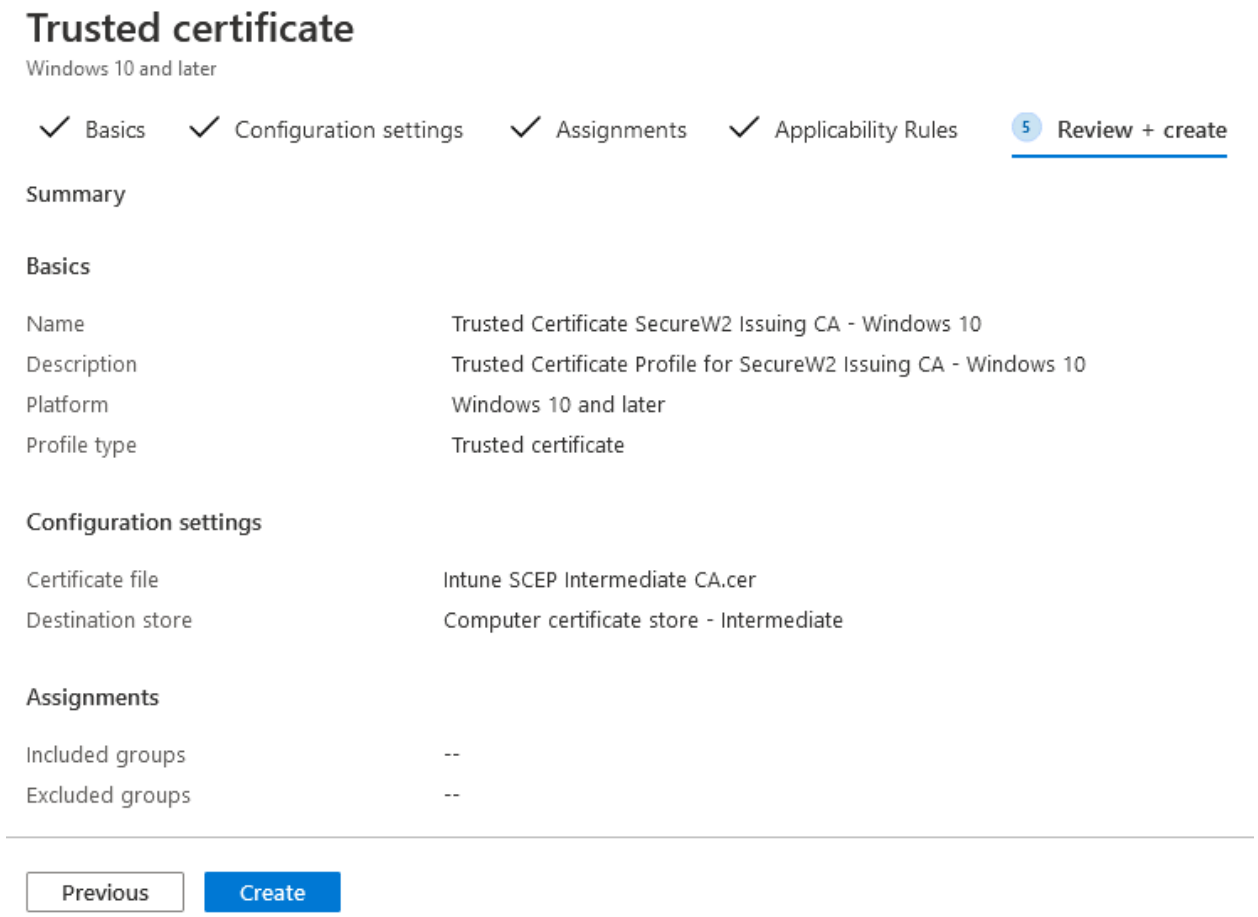


6. Add the certificate you saved earlier by clicking the **Browse** button (see the Exporting the SecureW2 Intermediate CA section).
8. Click **Next**.

Note: For Windows 8.1 and later devices only, configure the **Destination Store** field as **Computer certificate store - Intermediate** as shown in the following screen.



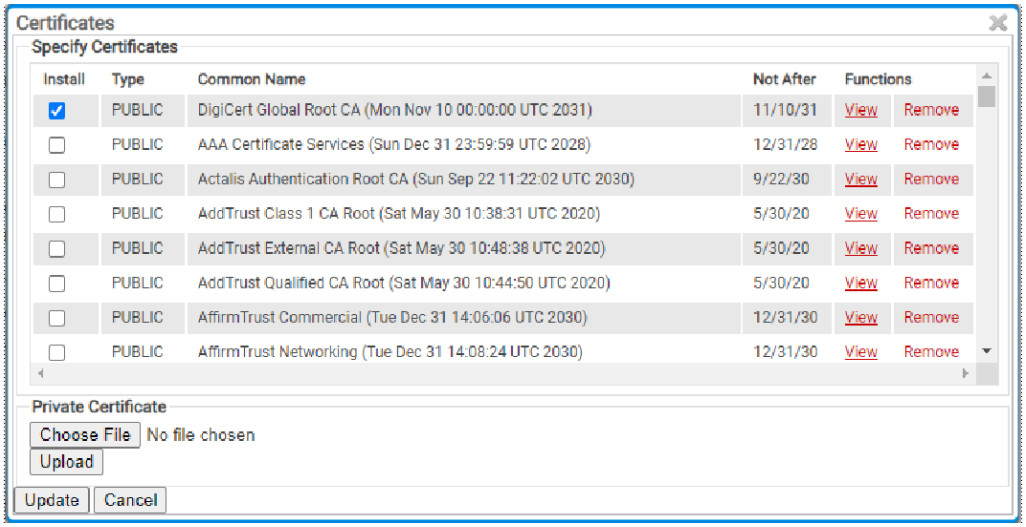
8. Assign the profile to appropriate **Groups** and **Rules**, review it, and click **Create**.



Exporting the Trusted RADIUS Server Root CA Certificate

This section lists the steps to export the RADIUS Server Root CA Certificate from the JoinNow Management Portal.

1. Click **Network Profiles**.
2. Click the **Edit** link of the network profile you configured earlier.
3. In the **Certificates** section, click **Add/Remove Certificate**.
4. Check the checkbox next to **DigiCert Global Root CA (Mon Nov 10 00:00:00 UTC 2031)** as shown in the following screen.

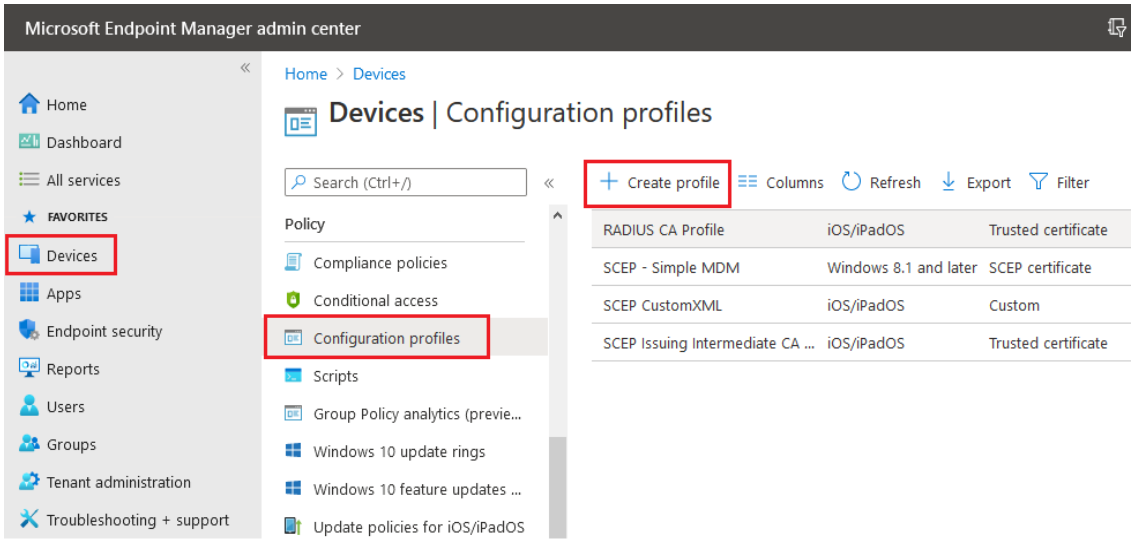


5. Click **Update**.
6. The CA appears in the **Certificates** section.
7. Click **Download**.

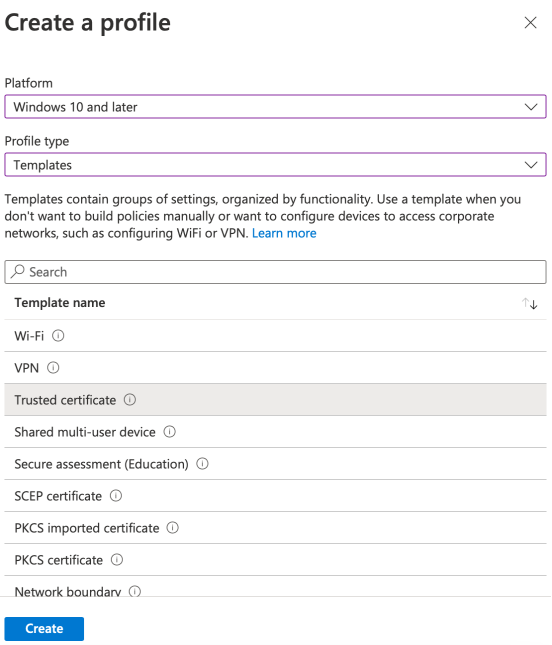
Creating a Trusted Certificate Profile - RADIUS Server Root CA Certificate

After downloading the RADIUS Server certificate, create a Trusted Certificate Profile in Intune to push this certificate to the organization's devices. The process is as follows:

1. Sign in to the Microsoft Endpoint Manager portal.
2. Select **Devices** > **Configuration profiles** > **Create profile**.

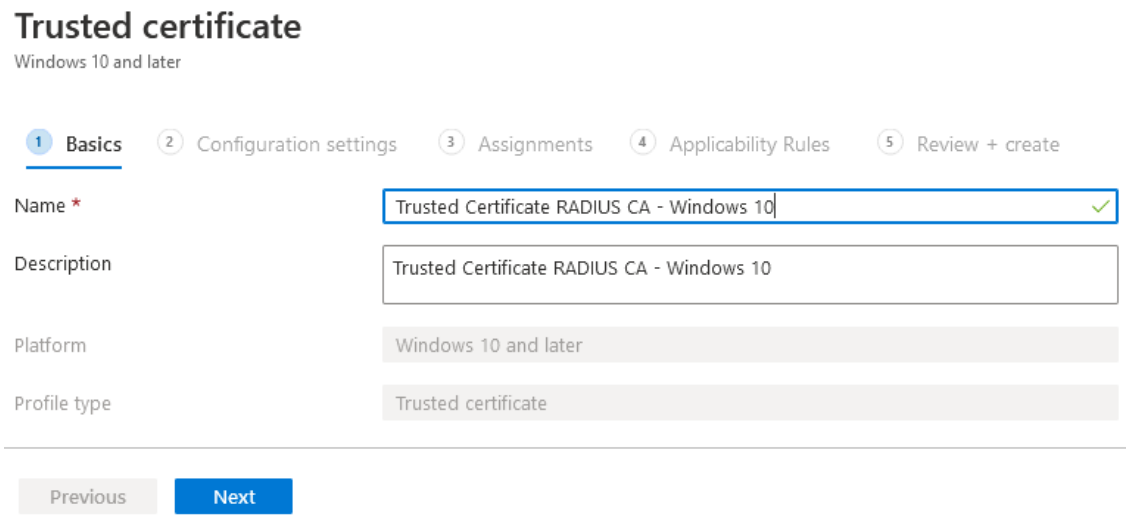


3. From the **Platform** drop-down list, select the device platform for this trusted certificate.
    - **Android**
    - **iOS**
    - **macOS**
    - **Windows 10 and later**
4. From the **Profile type** drop-down list, select **Templates**, and then select **Trusted certificate** and click **Create**.



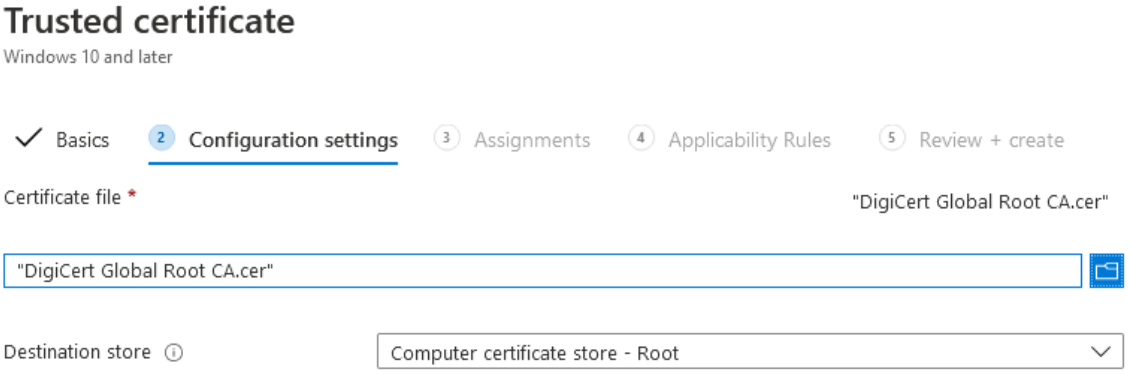
Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

5. Enter a name and description for the trusted certificate profile, in the respective fields.
6. Click **Next**.

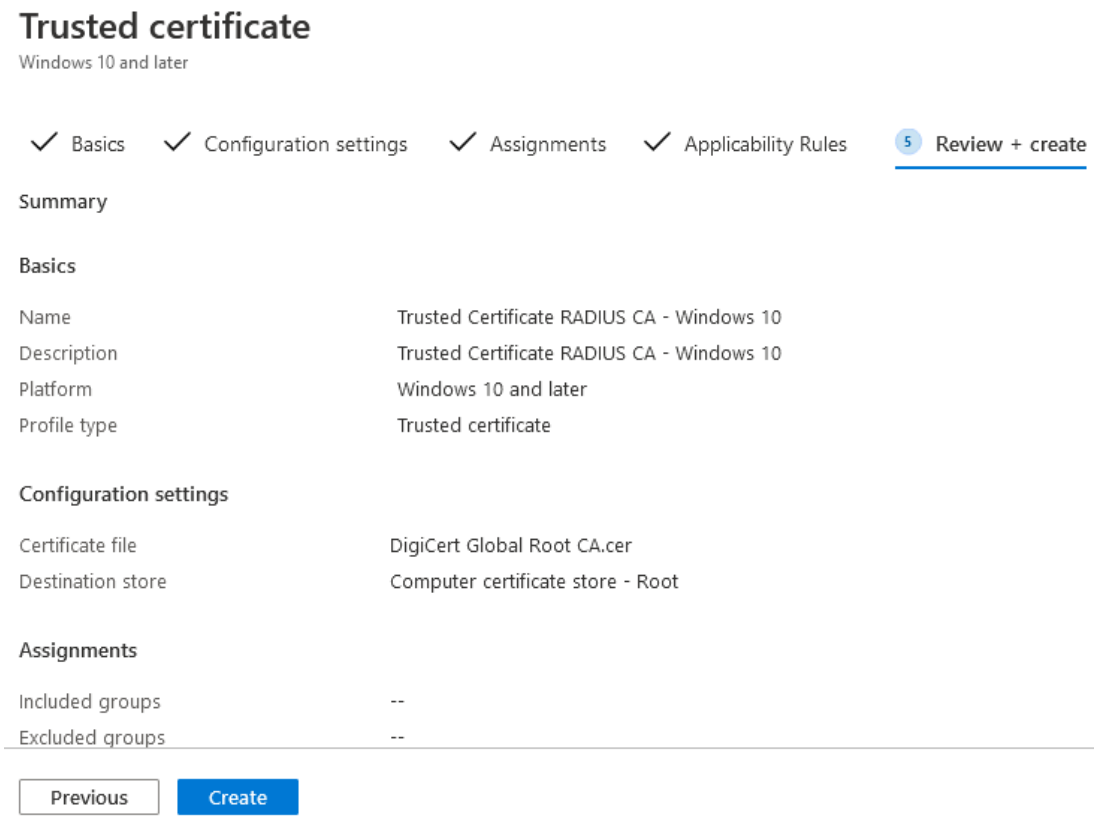


7. Click the **Browse** button to add the certificate you saved earlier (see the Exporting the Trusted RADIUS Server Root CA Certificate section) and then click **Next**.

   Note: For Windows 8.1 and later devices only, from the **Destination Store** drop-down list, select **Computer certificate store - Root**.



8. Assign the profile to appropriate **Groups** and **Rules**, review it and click **Create**.



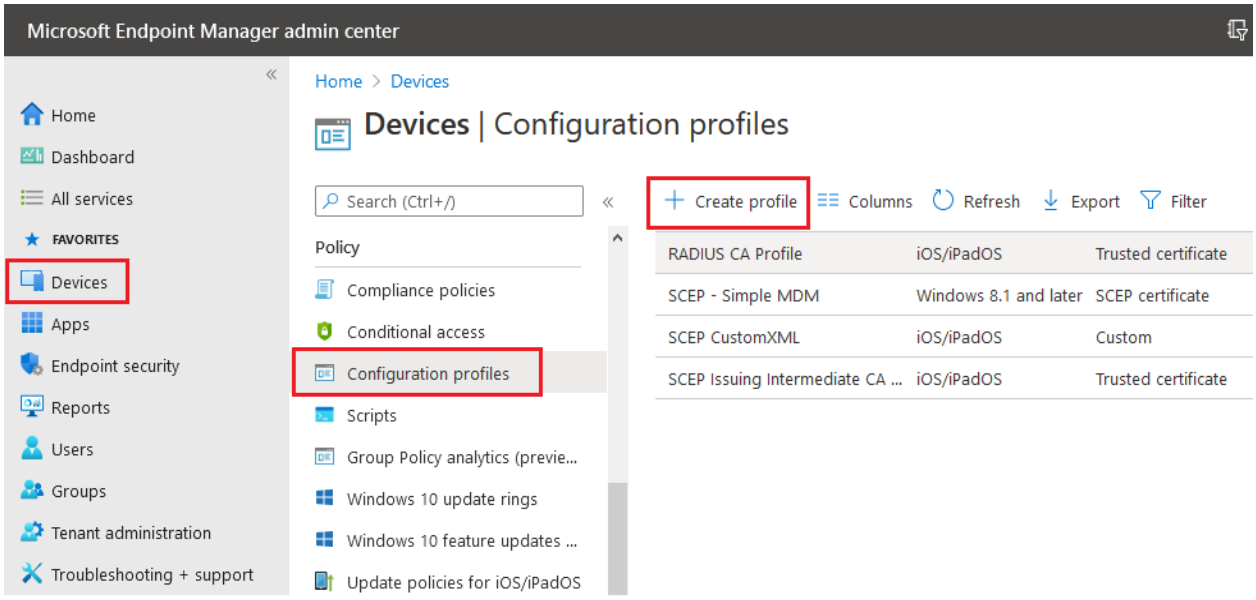
Chapter 5: SCEP Profile for SecureW2 Certificate Requests

The SCEP Profile is required for end-user devices to communicate with the SecureW2 Issuing CA certificate for the enrollment of end-user certificates. Once the end-user certificate is enrolled successfully, the certificate is used to connect to the Wi-Fi network.

Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

Creating a SCEP Certificate Profile

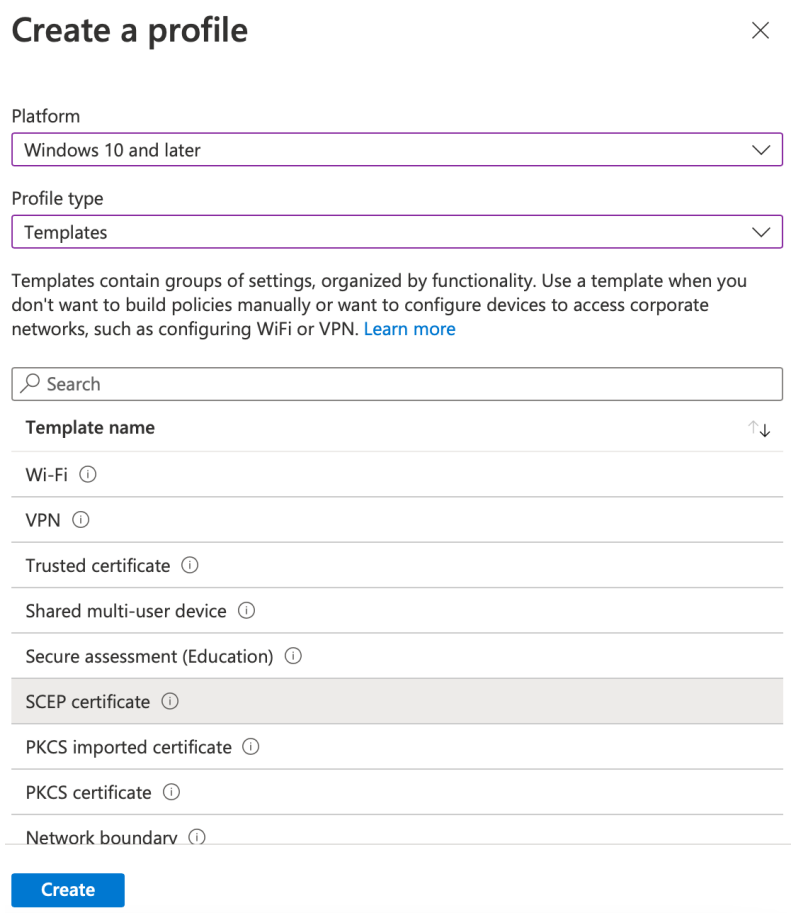
1. Sign in to the Microsoft Endpoint Manager portal.
2. Select **Devices** > **Configuration profiles** > **Create profile**.



3. From the **Platform** drop-down list, select the device platform for this SCEP certificate. You can select one of the following platforms for device restriction settings:
   - **Android**
   - **iOS**
   - **macOS**
   - **Windows 10 and later**

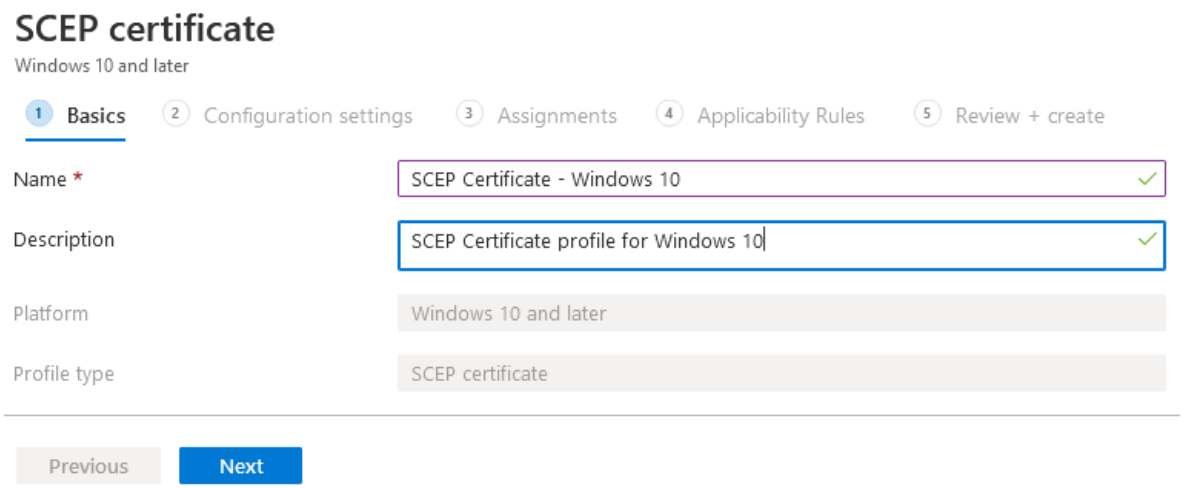
4. From the **Profile type** drop-down list, select **Templates** and then select **SCEP certificate**.

   Click **Create**.



Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.

5. On the **SCEP certificate** page, type a name and description for the SCEP Certificate profile and click **Next**.



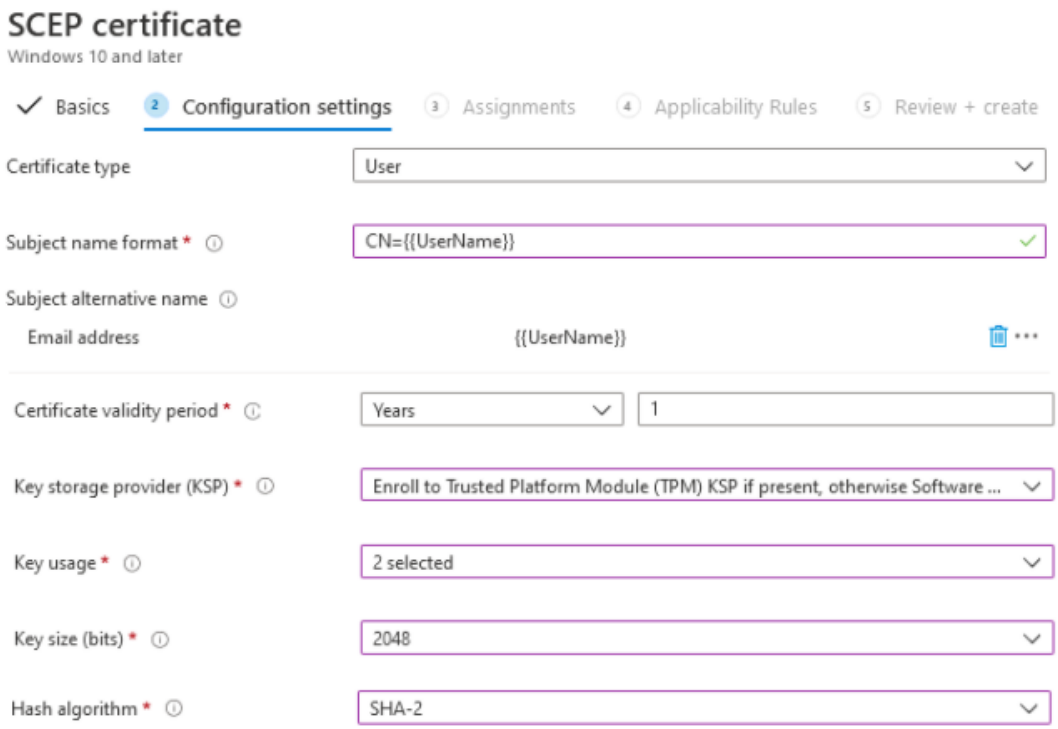
6. For **Certificate Type - User**, use the following settings:
    a. **Certificate type**: Select **User** for user certificates.
    b. **Subject name format**: Choose how Microsoft Intune creates the subject name in the certificate request. Select one of the following options:
        - **CN={{UserName}}**
        - **CN={{EmailAddress}}**
        - **CN={{UserPrincipalName}}**
    c. **Subject alternative name**: Choose how Microsoft Intune creates the subject alternative name (SAN) in the certificate request. We advice customers to use one of the following attributes in the given format:
        - **Email address : {{User Name}}**
        - **Email address : {{UserPrincipalName}}**
        - **Email address : {{AAD_Device_ID}}**

        Note: To test if attributes are configured correctly, check the **General Events** section in the SecureW2 Management Portal for any event messages, such as **Device Creation Failed**, which indicates that the attributes are not correctly mapped.

    d. **Key storage provider (KSP)** (Windows Phone 8.1, Windows 8.1, and later): Select where the certificate's key is to be stored. Choose the following value:
        - **Enroll to Trusted Platform Module (TPM) KSP if present, otherwise Software KSP**
    e. **Key usage**: Enter the key usage options for the certificate. Select both options:
        - **Key encipherment**: Allow key exchange only when the key is encrypted.
        - **Digital signature**: Allow key exchange only when a digital signature helps protect
          the key.

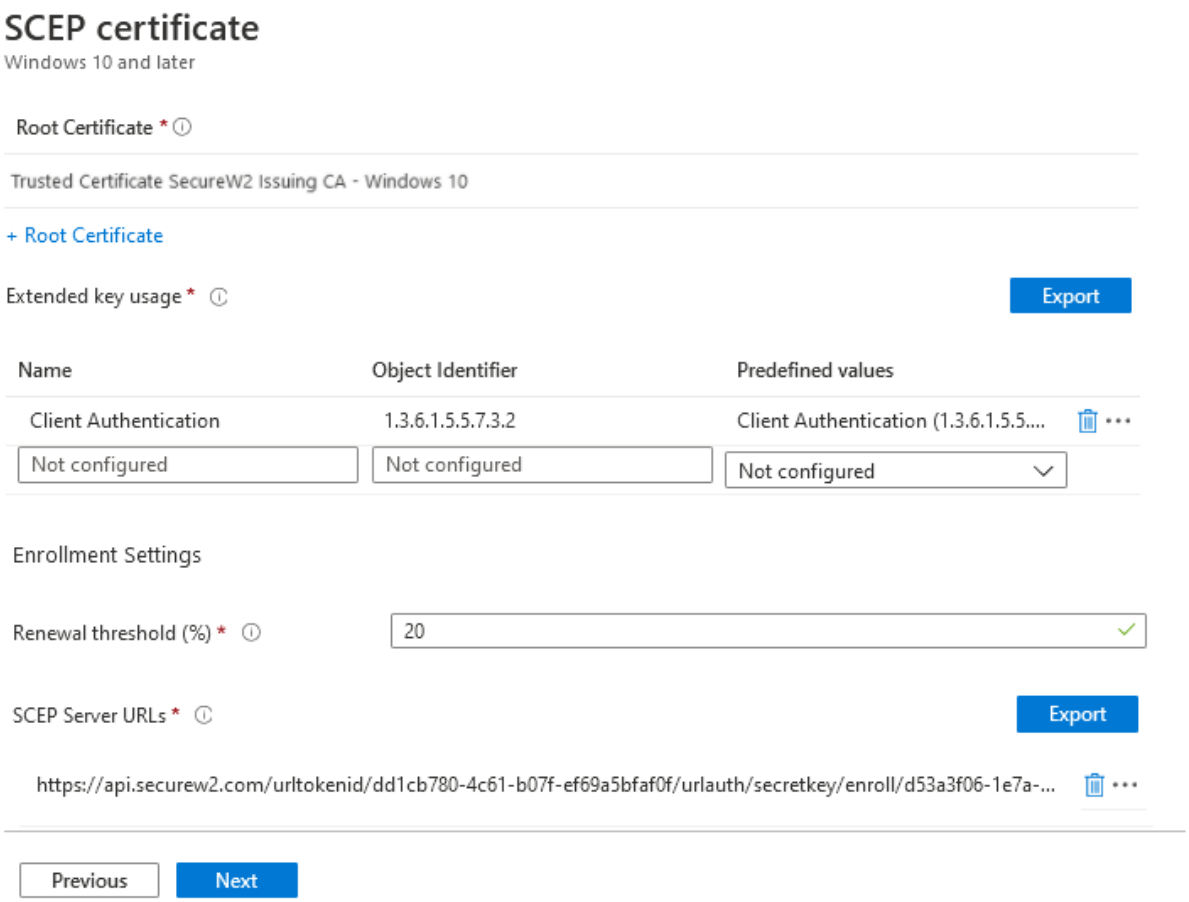
f. **Key size (bits)**: Select the number of bits contained in the key. Select the largest bit size.

g. **Hash algorithm** (Android, Windows Phone 8.1, Windows 8.1 and later): Select **SHA-2**, the strongest level of security that the connecting devices support.



Note: **Certificate type** is not a setting on Android SCEP Profiles.

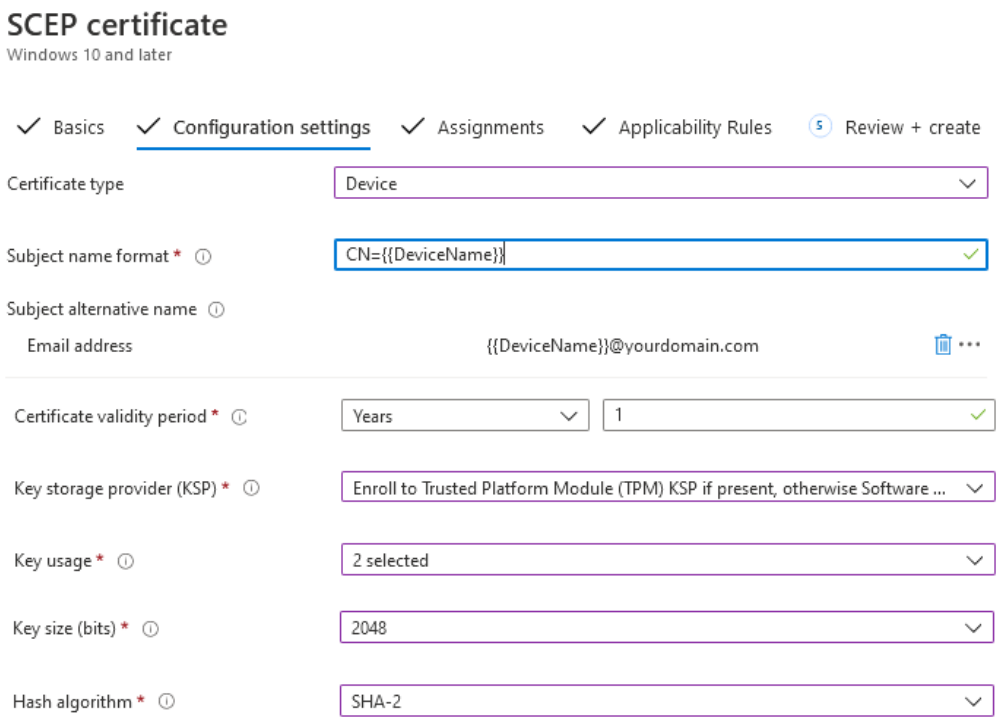
7. **Root Certificate**: Click the **+** sign and choose the profile created earlier (Trusted Certificate Profile for SecureW2 Issuing CA).
8. **Extended key usage**: Add values for the certificate's intended purpose. In most cases, the certificate requires **Client Authentication** so that the user or device can authenticate to a server. From the **Predefined values** drop-down list, select **Client Authentication**.
9. **Enrollment Settings**
    - **Renewal threshold (%)**: Enter the percentage of the certificate lifetime that remains
      before the device requests renewal of the certificate. The default value is 20%.
    - **SCEP Server URLs**: Enter the Endpoint URI available in the Intune CA IdP. (See the Creating an Intune CA IdP section.)
10. Select **Next** and assign the profile to appropriate **Groups** and **Rules**, review it, and click **Create**.



11. For **Certificate Type - Device**, use the following settings:
    a. **Certificate type**: Select **Device certificate** for scenarios such as user-less devices, example kiosks, or for Windows devices, placing the certificate in the Local Computer certificate store.
    b. **Subject name format**: Choose how Microsoft Intune creates the subject name in the certificate request. Select one of the following options:
        - **CN={{DeviceName}}**
        - **CN={{AAD_Device_ID}}**
    c. **Subject alternative name**: Choose how Microsoft Intune creates the subject alternative name (SAN) in the certificate request. We advice customers to use one of the following attributes in the given format:
        - Email address: **{{DeviceName}}**
        - Email address: **{{AAD_Device_ID}}**

Note: To test if the attributes are configured correctly, check the **General Events** section in the JoinNow Management Portal for any event messages, such as **Device Creation Failed**, which indicates that the attributes are not correctly mapped.

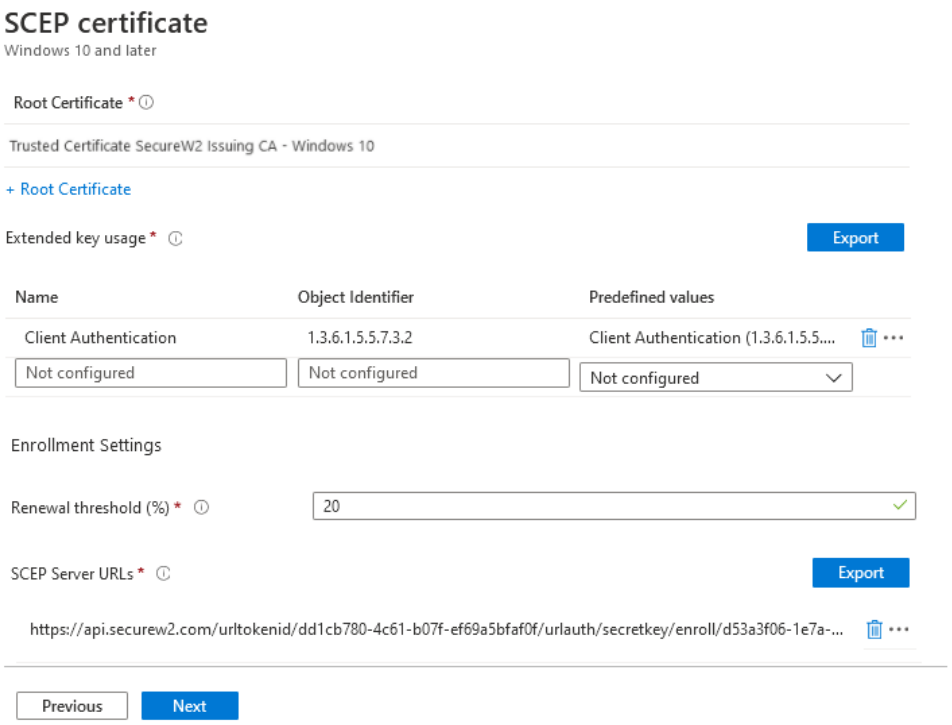
d. **Key storage provider (KSP)** (Windows Phone 8.1, Windows 8.1 and later): Select where the key to the certificate is stored. Choose the following value:
    - **Enroll to Trusted Platform Module (TPM) KSP if present, otherwise Software KSP**
e. **Key usage**: Select the key usage options for the certificate. Select both the options:
    - Key encipherment: Allows key exchange only when the key is encrypted.
    - Digital signature: Allows key exchange only when a digital signature helps protect
      the key.
f. **Key size (bits)**: Select the number of bits contained in the key. Select the largest bit size.
g. **Hash algorithm** (Android, Windows Phone 8.1, Windows 8.1, and later): Select **SHA-2**, the strongest level of security that the connecting devices support.
h. **Root Certificate**: Click the **+** sign and choose the profile created earlier. (See the Trusted Certificate Profile for SecureW2 Intermediate CA section.)
i. **Extended key usage**: Add values for the certificate's intended purpose. In most cases, the certificate requires **Client Authentication** so the user can authenticate to a server. From the **Predefined values** drop-down list, select **Client Authentication**.



j. **Enrollment Settings**
    - **Renewal threshold (%)**: Enter the percentage of the certificate lifetime that remains before the device requests renewal of the certificate.

- **SCEP Server URLs**: Enter the Endpoint URI available in the Intune CA IdP.

12. Select **Next** and assign the profile to appropriate **Groups** and **Rules**, review it, and click **Create**.



Chapter 6: Wi-Fi Profile for Secure SSID Configuration

Microsoft Intune includes built-in Wi-Fi settings that you can deploy to users and devices in your organization. This group of settings is called a profile, which can be assigned to different users and groups. Once you assign users a profile, they can obtain access to the network without configuring it themselves.

Creating a Wi-Fi Profile

1. In the Microsoft Endpoint Manager portal, select **Device configuration** > **Profiles** > **Create profile**.
2. Enter a name and description for the Wi-Fi profile.
3. From the **Platform** drop-down list, select one of the OS devices to apply the Wi-Fi settings:
    - **Android**
    - **iOS**
    - **macOS**
    - **Windows 10 and later**

    Note: You must create a separate profile for each OS platform. The steps to create trusted certificates are similar for each device platform.
4. In the **Profile Type** drop-down list, select **Templates** and then scroll down and select **Wi-Fi**.
5. After adding your Wi-Fi settings, select **Create** to add the configuration profile. The profile is created and is displayed in the profiles list (**Devices** > **Configuration profiles**).

Assigning a Device Profile

After creating a profile, you must specify the devices to which the profiles are to be pushed. You can accomplish this by assigning them.

1. In the Microsoft Endpoint Manager portal, select **Devices** > **Configuration profiles**. All the profiles are listed.
2. Select the profile you want to assign > **Assignments**.
3. Select to **Include** groups or **Exclude** groups, and then select your groups. When you select your groups, you are choosing an Azure AD group. To select multiple groups, hold down the **Ctrl** key, and select your groups.

4. Click **Save**..

Adding Wi-Fi Settings for Devices Running Android

You can create a profile with specific Wi-Fi settings, then deploy this profile to your Android devices.

Table 1: Configuration steps for devices running Android

Setting Name	**Configuration Step**
Wi-Fi type	Select **Enterprise**.
Network name	Enter a name for your reference.
SSID	Enter the name of the wireless network that devices connect to.
EAP type	Select the Extensible Authentication Protocol (EAP) type used to authenticate secured wireless connections. Select **EAP-TLS**. ○ **Server Trust - Root certificate for server validation**: Select an existing trusted Root certificate profile, created in Creating a Trusted Certificate Profile - RADIUS Server Root CA. This certificate is presented to the server when the client connects to the network, and is used to authenticate the connection. Select **OK** to save your changes. ○ **Client Authentication - Client certificate for client authentication (Identity certificate)**: Select the SCEP profile created previously in Creating a SCEP Certificate Profile. This certificate is the identity presented by the device to the server to authenticate the connection. Select **OK** to save your changes.

Note: Retain the default values for the **Connect automatically** and **Hidden network** attributes.

After you have configured the Wi-Fi settings, select **OK** and then click **Create**. The profile is created and displayed in the profiles list.

Adding Wi-Fi Settings for iOS Devices

You can create a profile with specific Wi-Fi settings, then deploy this profile to your iOS devices.

Table 2: Configuration steps for iOS devices

Setting Name	Configuration Step
Wi-Fi type	Select **Enterprise**.
Network name	Enter a name for the Wi-Fi connection.
SSID	Enter the name of the wireless network that devices connect to.
EAP type	Select the Extensible Authentication Protocol (EAP) type used to authenticate secured wireless connections. Select **EAP-TLS**. ○ **Server Trust - Certificate server names**: Add one or more common names used on your RADIUS server certificates issued by your trusted CA. For the SecureW2 RADIUS, it is: **radius01.securew2.com** ○ **Root certificate for server validation**: Select an existing trusted Root certificate profile, created in Creating a Trusted Certificate Profile - RADIUS Server Root CA. This certificate is presented to the server when the client connects to the network, and is used to authenticate the connection. Select **OK** to save your changes. ○ **Client Authentication - Client certificate for client authentication (Identity certificate)**: Select the SCEP profile created previously in Creating a SCEP Certificate Profile. This certificate is the identity presented by the device to the server to authenticate the connection. Select **OK** to save your changes.

Note: Retain the default values for the **Connect automatically**, **Hidden network**, and **Proxy settings** attributes.

After you have configured the Wi-Fi settings, select **OK** and then click **Create**. The profile is created and displayed in the profiles list.

Adding Wi-Fi Settings for macOS Devices

You can create a profile with specific Wi-Fi settings, then deploy this profile to your macOS devices.

Table 3: Configuration steps for macOS devices

Setting Name	Configuration Step

Wi-Fi type	Select **Enterprise**.
Network name	Enter a name for the Wi-Fi connection.
SSID	Enter the name of the wireless network that devices connect to.
EAP type	Select the Extensible Authentication Protocol (EAP) type used to authenticate secured wireless connections. Select **EAP-TLS**. ○ **Server Trust - Certificate server names**: Add one or more common names used on your RADIUS server certificates issued by your trusted CA. For the SecureW2 RADIUS, it is: **radius01.securew2.com** ○ **Root certificate for server validation**: Select an existing trusted Root certificate profile, created in Creating a Trusted Certificate Profile - RADIUS Server Root CA. This certificate is presented to the server when the client connects to the network, and is used to authenticate the connection. Select **OK** to save your changes. ○ **Client Authentication - Client certificate for client authentication (Identity certificate)**: Select the SCEP profile created previously in Creating a SCEP Certificate Profile. This certificate is the identity presented by the device to the server to authenticate the connection. Select **OK** to save your changes.

Note: Retain the default values for the **Connect automatically**, **Hidden network**, and **Proxy settings** attributes.

After you have configured the Wi-Fi settings, select **OK** and then click **Create**. The profile is created and displayed in the profiles list.

Adding Wi-Fi Settings for Windows 10 and Later Devices

You can create a profile with specific Wi-Fi settings, then deploy this profile to your Windows 10 and later devices.

Table 4: Configuration steps for Windows 10 and later devices

Setting Name	**Configuration Step**
Wi-Fi type	Select **Enterprise**.

Wi-Fi name (SSID)	Enter the name of the wireless network that devices connect to.
Connection name	Enter a name name for the Wi-Fi connection.
EAP type	Select the Extensible Authentication Protocol (EAP) type used to authenticate secured wireless connections. Select **EAP-TLS**. ○ **Server Trust - Certificate server names**: Add one or more common names used on your RADIUS server certificates issued by your trusted CA. For the SecureW2 RADIUS it is: **radius01.securew2.com** ○ **Root certificate for server validation**: Select an existing trusted Root certificate profile, created in Creating a Trusted Certificate Profile - RADIUS Server Root CA. This certificate is presented to the server when the client connects to the network, and is used to authenticate the connection. Select **OK** to save your changes. ○ **Client Authentication - Client certificate for client authentication (Identity certificate)**: Select the SCEP profile created previously in Creating a SCEP Certificate Profile. This certificate is the identity presented by the device to the server to authenticate the connection. Select **OK** to save your changes.

Note: Retain the default values for the **Connect automatically when in range**, **Metered Connection Limit**, **Single sign-on (SSO)**, **Enable Pairwise Master Key (PMK) caching**, **Enable pre-authentication**, and **Company Proxy settings** attributes.

After you have configured the Wi-Fi settings, select **OK** and then click **Create**. The profile is created and displayed in the profiles list.

Chapter 6: Troubleshooting

This section lists the common issues and the steps to resolve them.

Common issues that you may encounter after the configuration is done:

- Certificate fails to enroll.
- Connection to the secure SSID fails.
- Error messages are displayed:
    - **Device Creation Failed** in the SecureW2 Management Portal > **Device Onboarding** > **Events** or
    - **SCEP enrollment failed** in the Intune portal.

To resolve them:

- Check if the attributes have values and are mapped correctly. For more information, see: Creating an Intermediate CA for Intune SCEP Gateway Integration.
- Make sure that the SCEP profile (in the Intune Portal) is configured to send values in the SAN attribute using **Email address (RFC822)**. The common attributes configured are DeviceName and AAD_Device_ID. For more information, see: Creating an Intermediate CA for Intune SCEP Gateway Integration.
- Confirm if the User Role Policy is mapped to the Intune API Token as identity Provider and similarly ensure that Enrollment Policy is mapped to the Role and default Device Role. For more information, see: Configuring a Role Policy.
- Ensure that the SCEP profile is configured accurately.For more information, see: Creating an Intermediate CA for Intune SCEP Gateway Integration.
- Check if the Trusted Root CA of the RADIUS server certificate is mapped in the Wi-Fi profile. For more information, see: Creating a Wi-Fi Profile.
- Remove the SCEP profile and push any other profile, like the Trusted Root CA profile, to confirm if the user is successful with the configuration. For more information, see: Exporting Trusted RADIUS Server Root CA Certificate.

Possible issues in Microsoft Intune:

- SCEP enrollment failed. For more information, see: https://docs.microsoft.com/en-gb/troubleshoot/mem/intune/troubleshoot-device-enrollment-in-intune
- Users not assigned to the application in Azure. For more information, see: https://docs.microsoft.com/en-us/mem/intune/fundamentals/users-add