FortiNAC - Microsoft Entra ID Authentication Cookbook

Version F 7.6.5

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July 10th, 2025
FortiNAC F 7.6.5 Microsoft Entra ID Authentication Cookbook
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Overview

This document provides steps to configure the following features using Microsoft Entra ID. Note these features are independent of each other.

Microsoft Entra ID Authentication using 802.1x with TTLS-PAP - Enables FortiNAC to automatically register clients with a Microsoft Entra ID account based upon the RADIUS supplicant information.

Microsoft Entra ID Authentication using Captive Portal - Use Entra ID as the Authentication source for end users registering through the FortiNAC captive portal.

Microsoft Entra ID Authentication using TLS Certificate - Enables FortiNAC to automatically register clients with a Microsoft Entra ID account based upon the TLS certificate information.

Remote Group- Allows FortiNAC to sync groups of users from Microsoft Entra ID. These groups of users can constantly be polled and updated automatically or manually through FortiNAC service connector. Allows FortiNAC users to see the list of users authenticated by FortiNAC through Microsoft Entra ID authentication as a group in System > Groups > Remote Groups.

Requirements

The requirement for conducting this use case is as the following:

Device	Version
FortiNAC	7.6.5 or later
FortiGate	
FortiSwitch	
FortiAP	
Windows Client	
Wireless adapter	

Microsoft Entra ID Authentication using 802.1x with TTLS-PAP

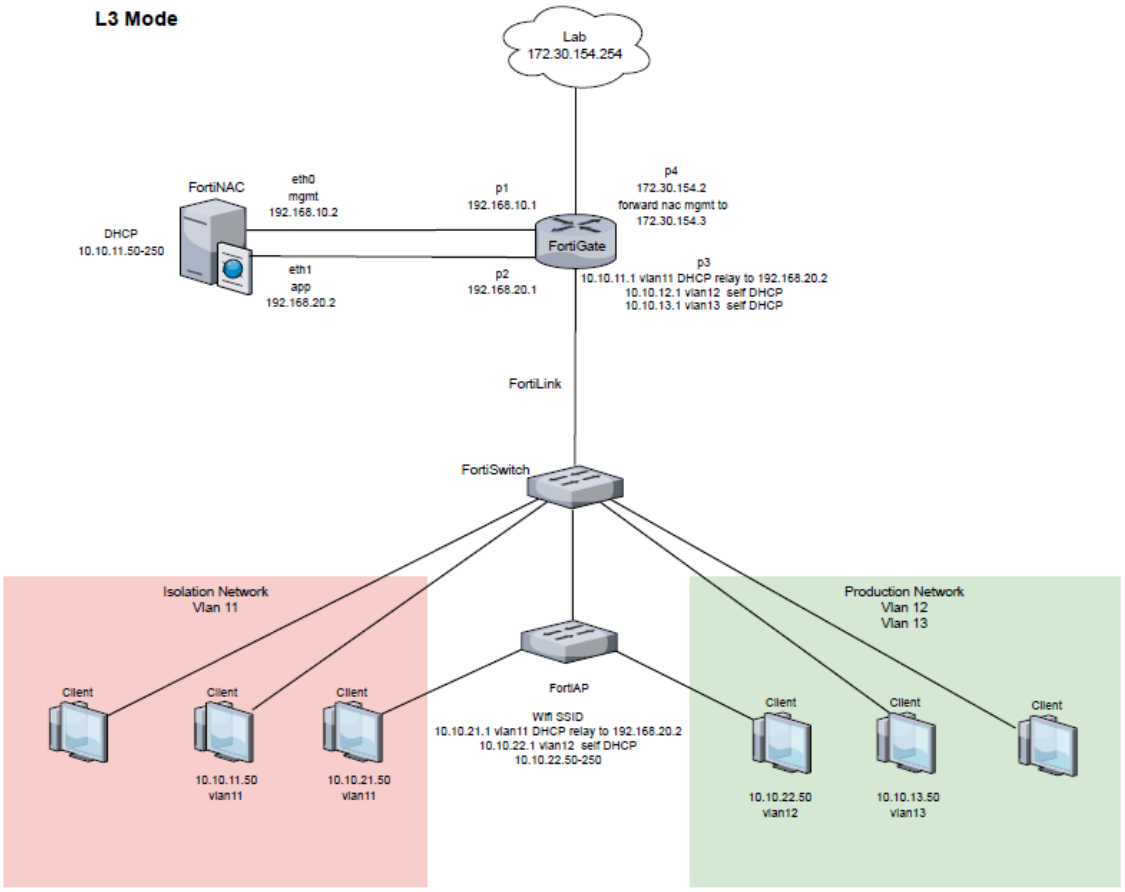
Caution: EAP-TTLS PAP with Entra ID does NOT support MFA (Multi-Factor Authentication). See https://learn.microsoft.com/en-us/entra/identity-platform/v2-oauth-ropc

802.1X is a network authentication protocol that gives device access to the protected network after authentication. The verification is done through identifying the opened port through RADIUS server. Microsoft Entra ID Authentication intended to authenticate the 802.1X network protocol through the use of Microsoft Entra ID account.

Prerequisite

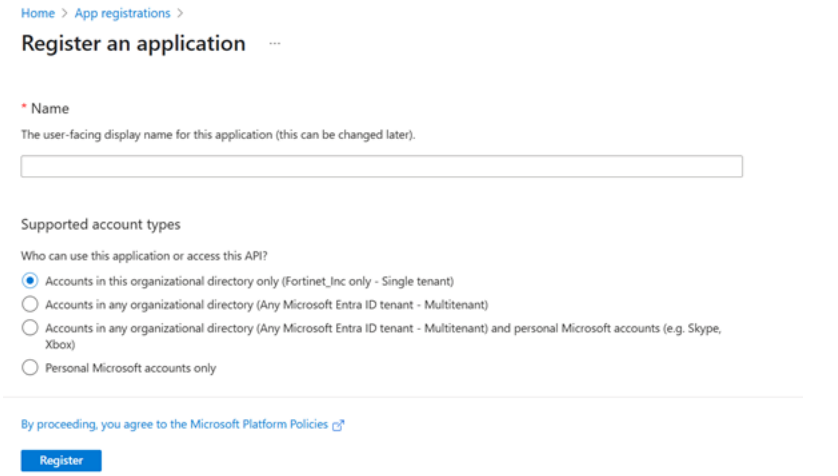
Before proceeding with Microsoft Entra ID Authentication, please configure TLS Service configuration in 2. FortiNAC Local RADIUS TLS Service Configuration on page 42.

Here is the use case diagram of the this authentication using 802.1x with TTLS-PAP:

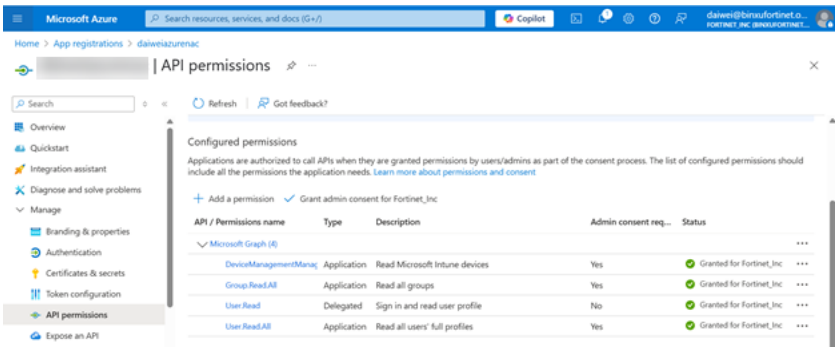


1. Create and Register FortiNAC Application in Microsoft Entra ID

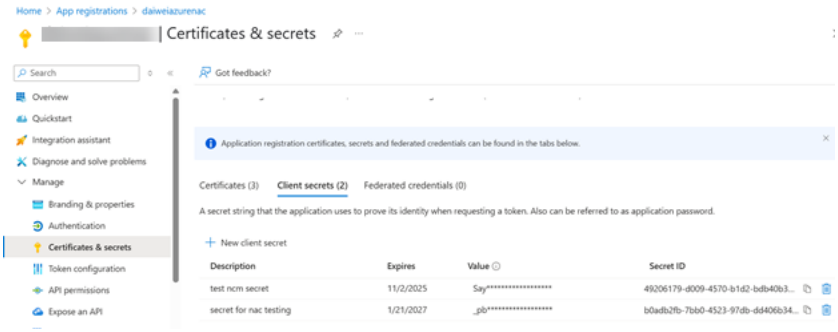
1. Log into Microsoft Entra ID, go to **App Registration**.
2. Fill in a name and choose a supported account types and click **Register**.



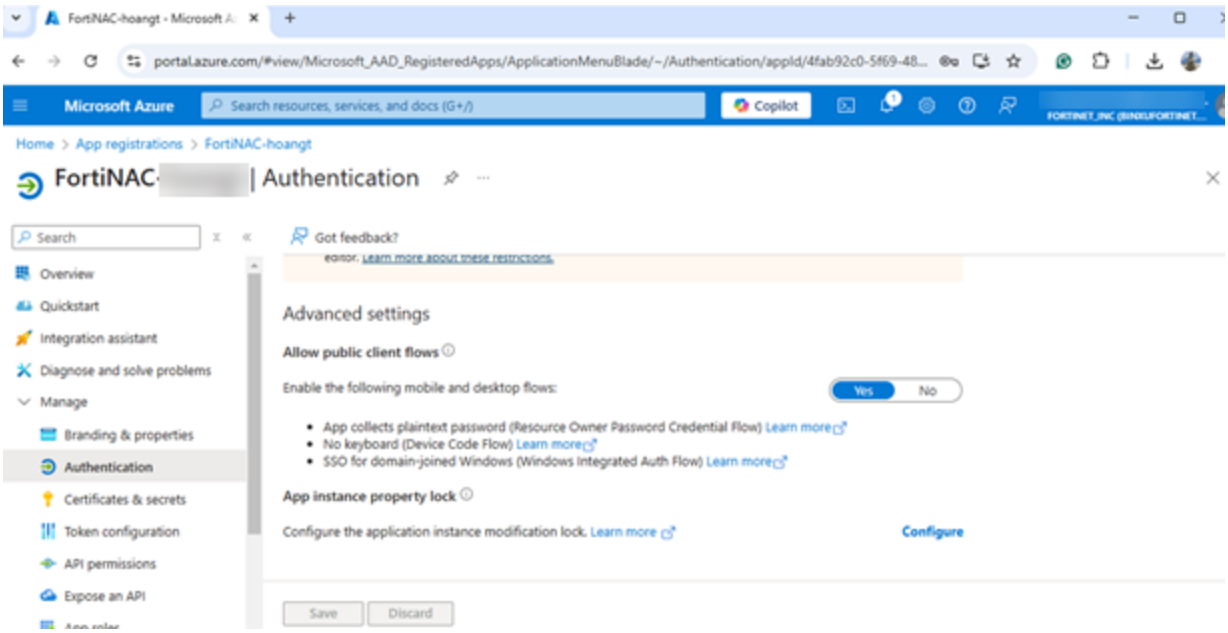
3. After the app is created, go to the app > Manage > API Permission.
4. Click +Add a Permission to grant permission of the following: (all types should be **Application**)
   a. DeviceManagementManagedDevices.Read.All
   b. Group.Read.All
   c. User.Read.All
   d. GroupMember.Read.All
   e. Directory.Read.All
   f. User.Read
   g. User.Read.Al



5. Go to **Certificate $ Secrets**, and generate Client Secrets or Certificate.



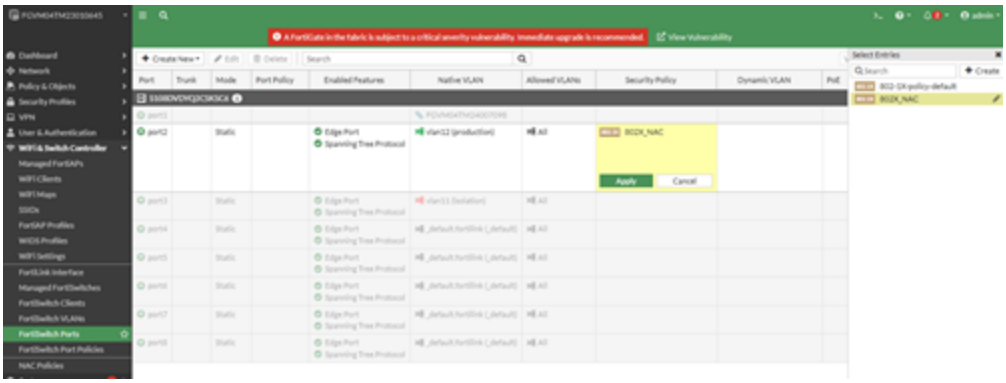
6. After the FortiNAC app is created. In the FortiNAC app, go to Manage > Authentication.
7. In the **Advanced Settings > Allow public client flows section**, click **Yes** to enable the following mobile and desktop flows.
8. Go to **Manage > Authentication**, click **Yes** to enable mobile and desktop flows in.



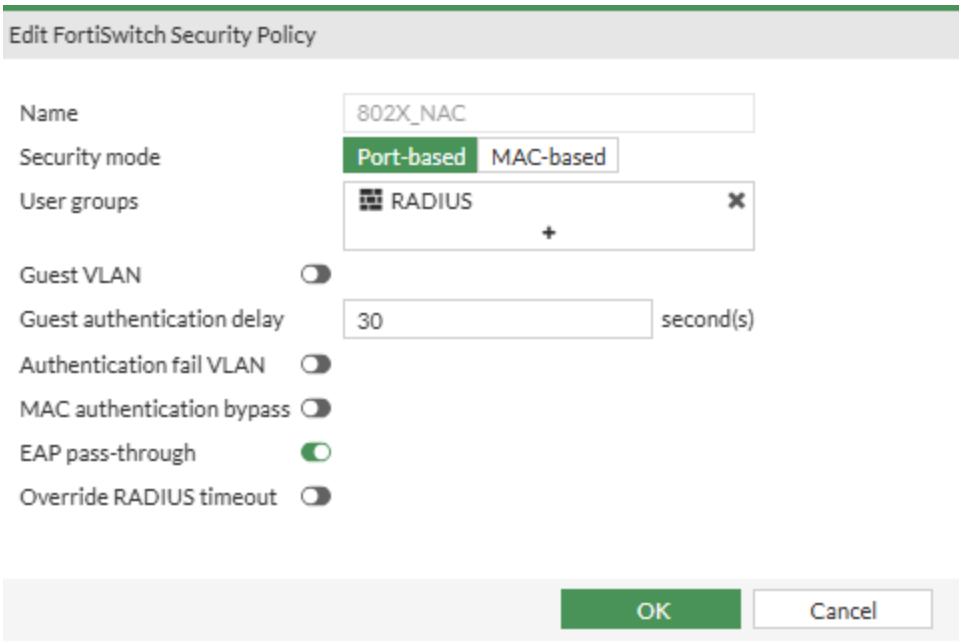
2. FortiGate Configuration

In order to prepare FortiGate for dot1x authentication, security policy needs to be configured on the FortiSwitch port (port 2) which 802.1x windows client is connected.

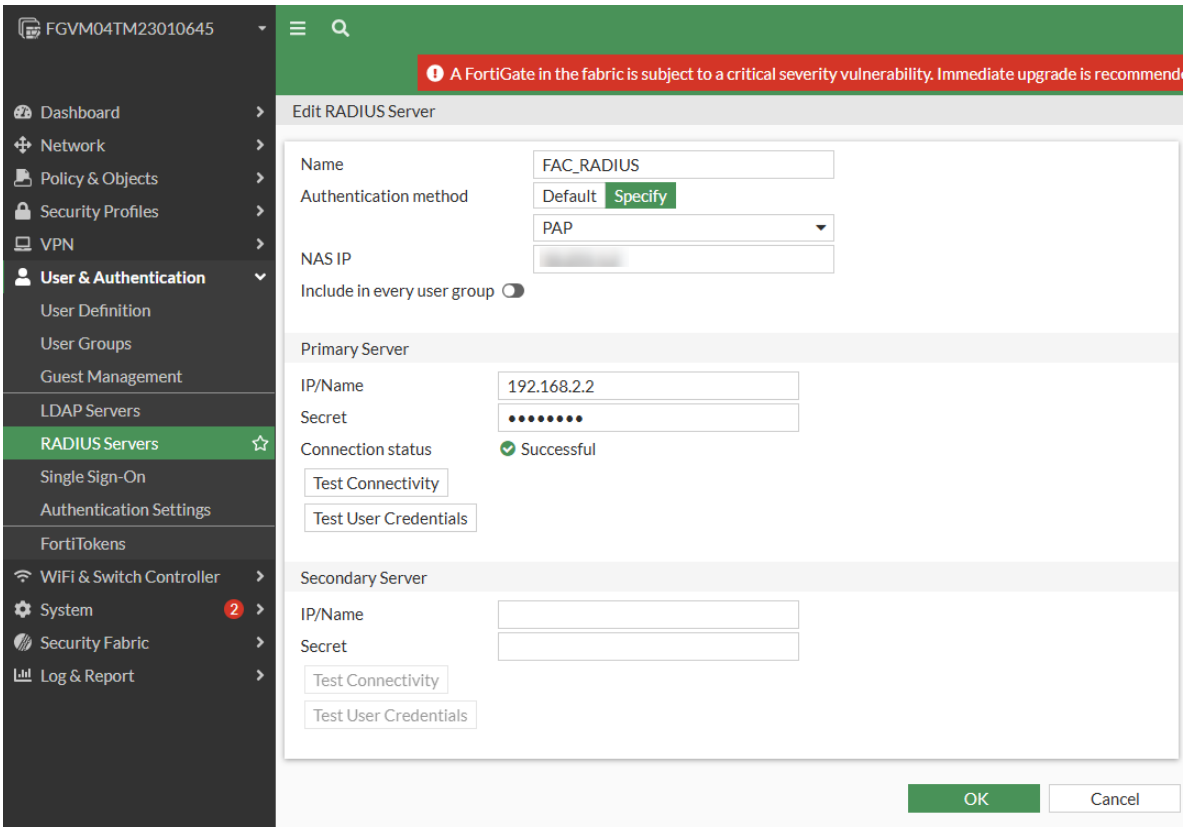
1. Go to **Wifi &Switch Controller > FortiSwitch Ports**, then apply 802.1.x security policy on port 2.



2. Here is an example of a 802.1x security policy:

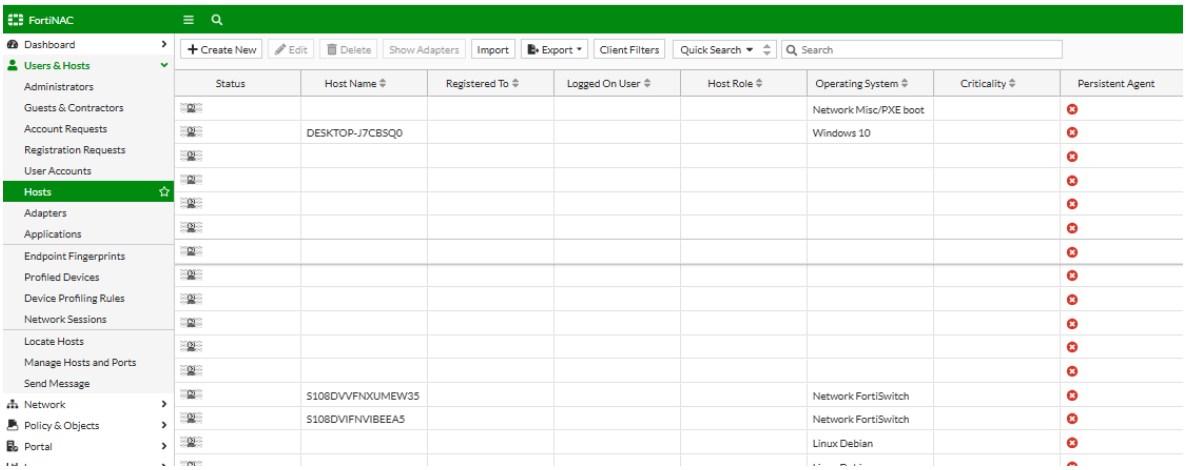


3. After the FortiSwitch configuration, Radius that connects to FortiNAC also needs to be configured. Go to **User & Authentication > RADIUS server**, select **PAP** method. Then click **Test Connectivity** to test the connectivity to the Radius Server. Make sure the Connection status is "Successful".



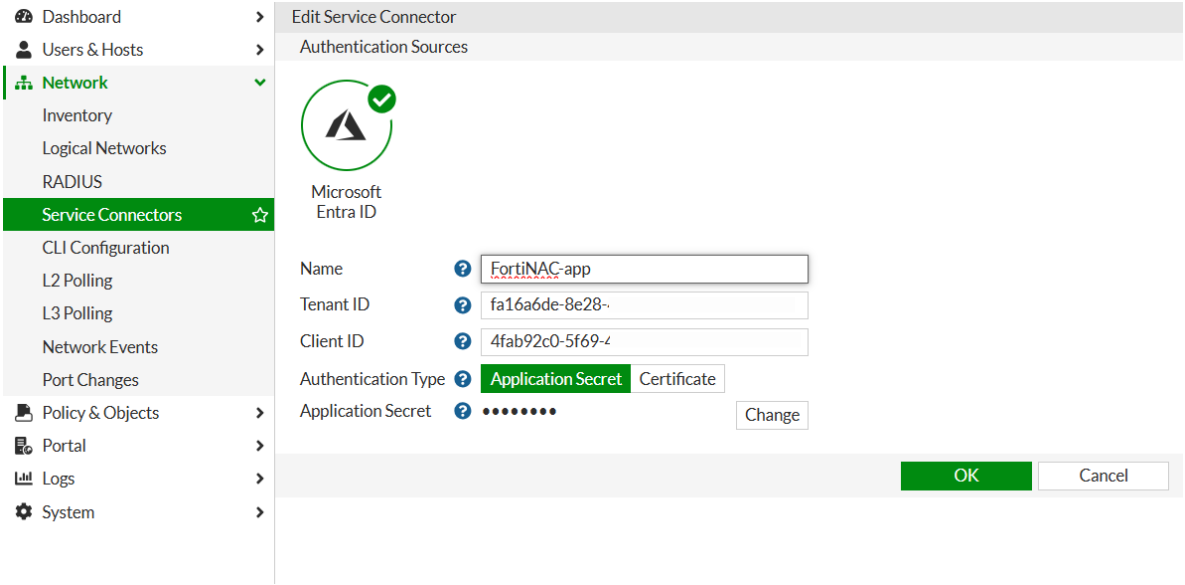
3. FortiNAC Configuration

Before proceeding the steps below, first go to **Users & Hosts > Hosts** and make sure the host that is going to be authenticated by Microsoft Entra ID is not in the Hosts table.



Service Connectors Configuration

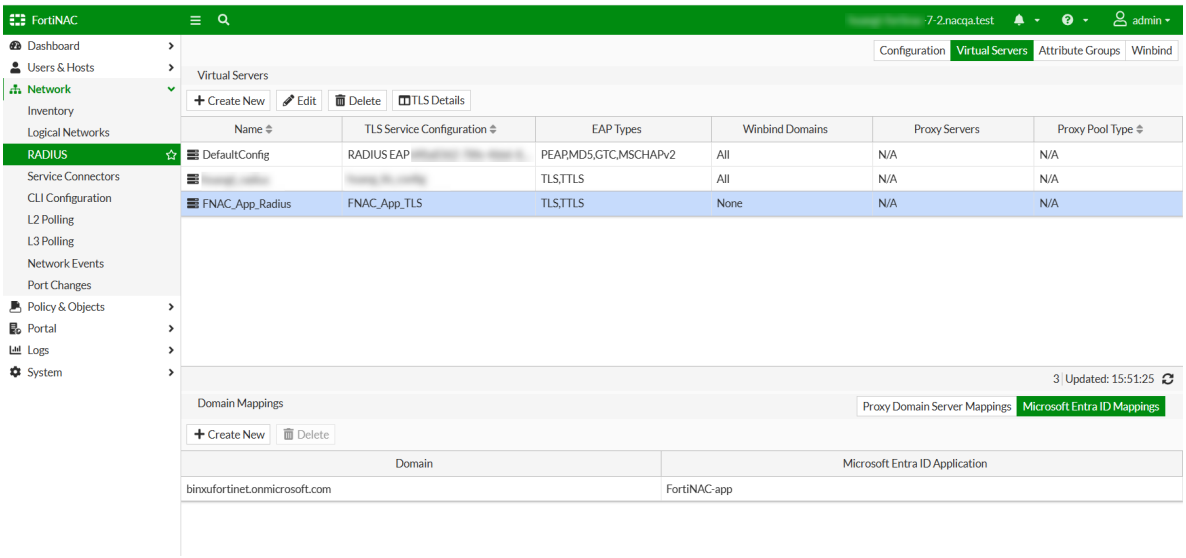
1. Go to **Network > Service Connectors** and create a new Microsoft Entra ID Authentication Source.
2. In this example, "FortiNAC-app" is used as the name of the service connector.
3. Fill in all the Microsoft Entra ID information. For Authentication Type, there are two options, either fill in the application secret created in the Microsoft Entra ID environment.



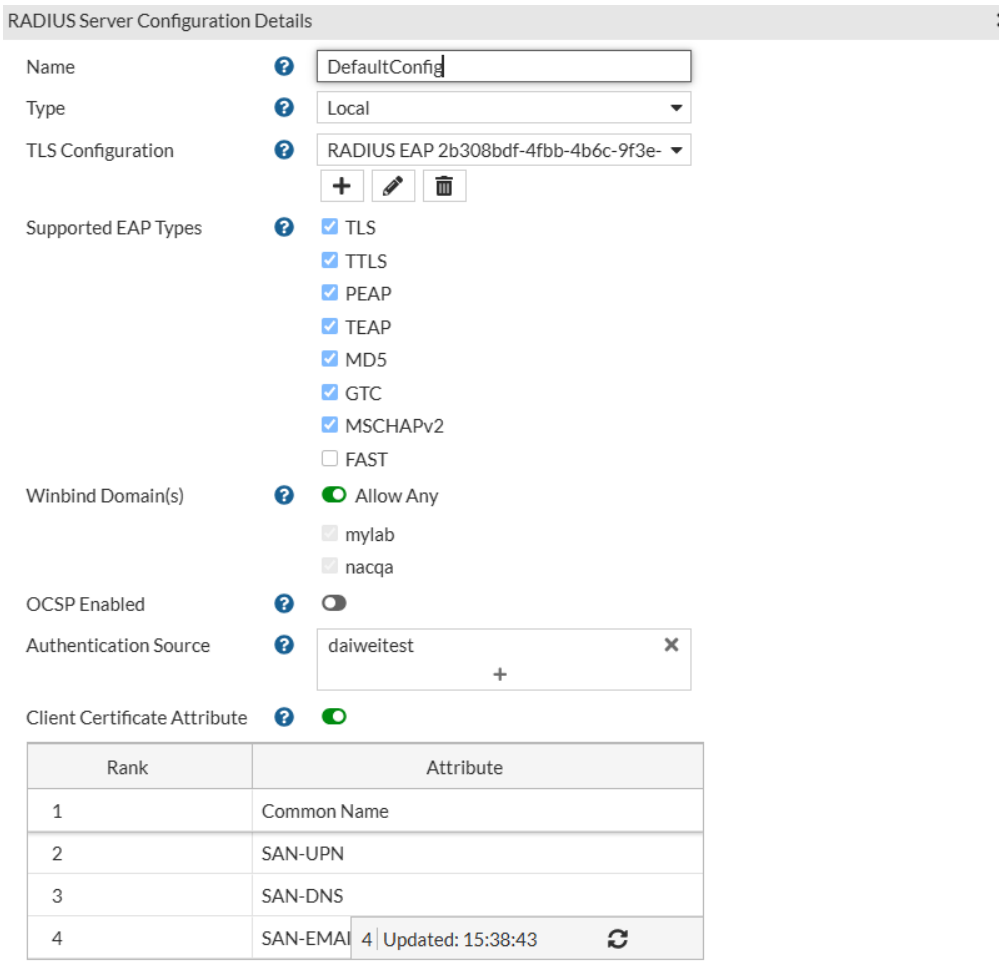
Alternatively to fill in variables for Certificate type authentication, follow the steps in Generate Certificate for Microsoft Entra ID in FortiNAC Service Connector (Optional) on page 16. Only one authentication type is required.

Microsoft Entra ID Mappings Configuration

1. Go to **Network > RADIUS > Virtual Servers**, then create a new Microsoft Entra ID Mapping which uses the Authentication Source named "FortiNAC-app" created above.



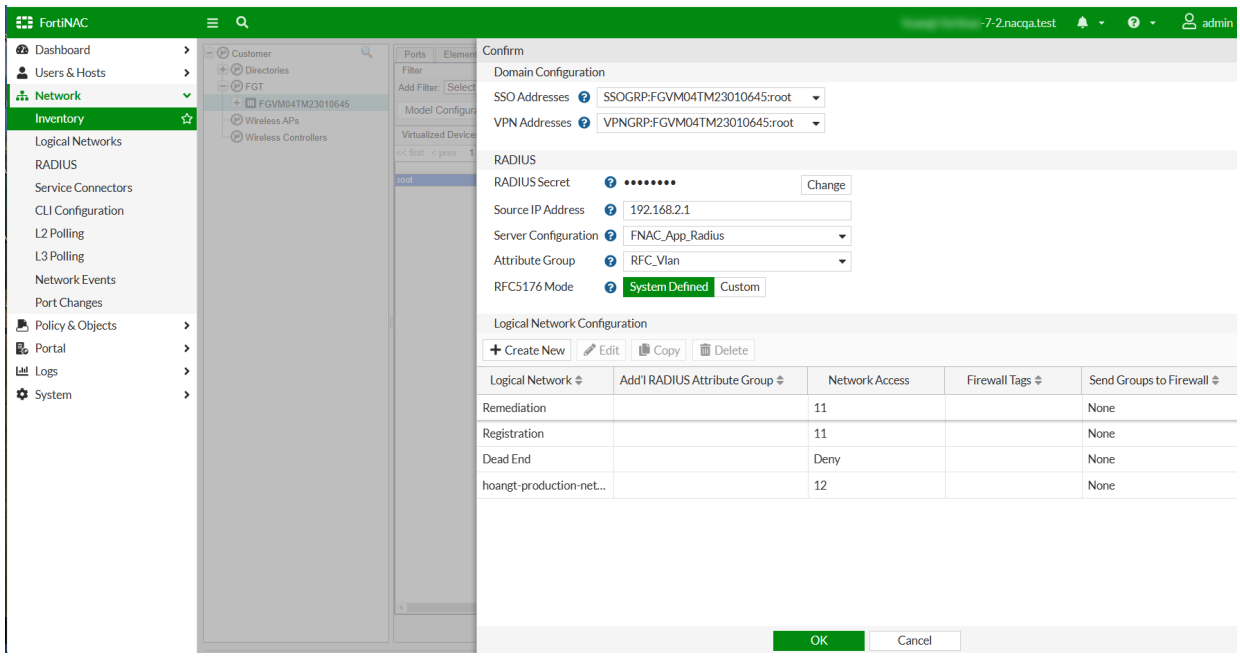
2. Edit the RADIUS Servers Configuration Details and Authentication source of the virtual servers and enable TLS and TTLS in **Supported EAP Types**.



3. Enable **Winbind Domains** by turning the toggle switch button "Allow Any".

FortiGate VDOM configuration

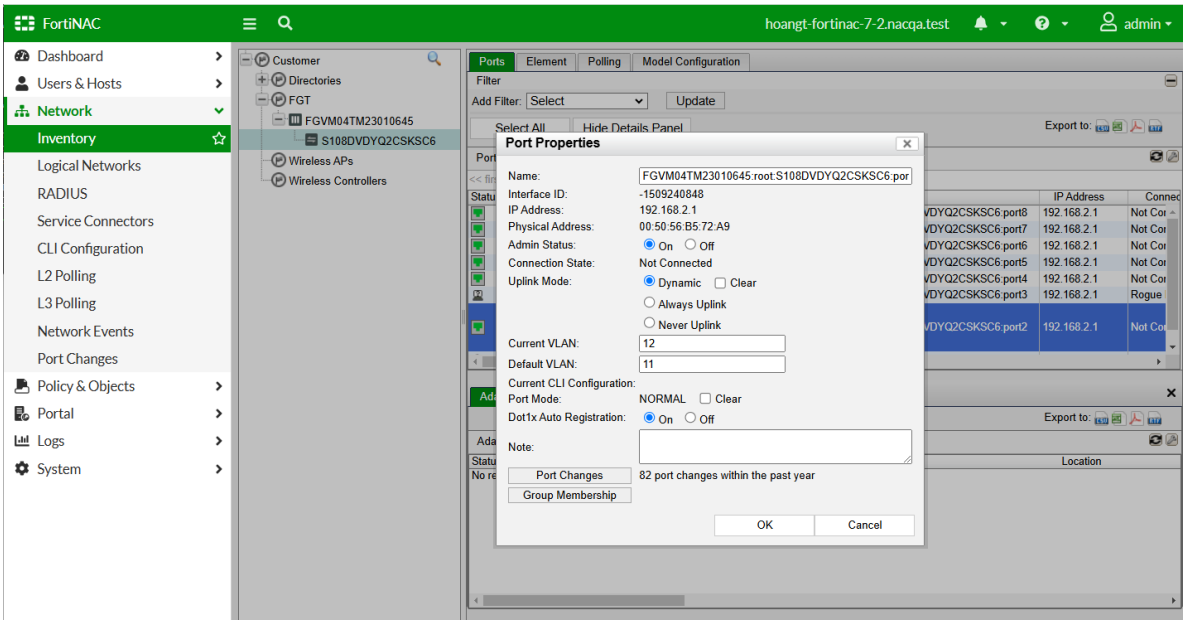
1. Go to **Network > Inventory > FGT > Virtualized Devices > root > Model Configuration** to configure the logical network configuration for Production networks.
2. Fill in IP address for the source IP address of the FortiGate interface for which FortiNAC is connected to. Make sure to test connectivity and credentials on the FortiGate and the result is successful.
3. Please make sure the correct RADIUS is used in the VDOM.
4. Configure Production VLAN is set to production vlan.



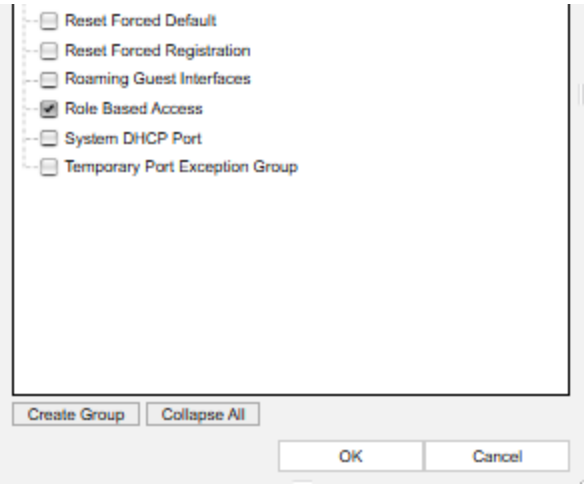
FortiSwitch Port Configuration

Follow these steps to enable dot1x on port 2:

1. Go to **Network > Inventory > FortiSwitch port 2**
2. In the **Port Properties** window, click on **On** radio button to enable Dot1x Auto Registration.

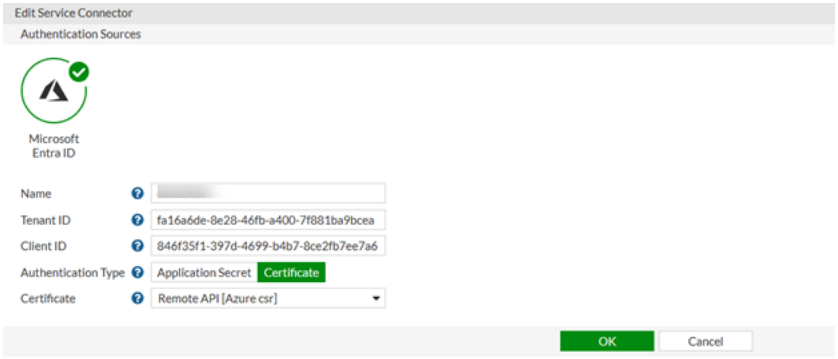


3. Click **Group Membership** button, and check **Role Based Access** button.



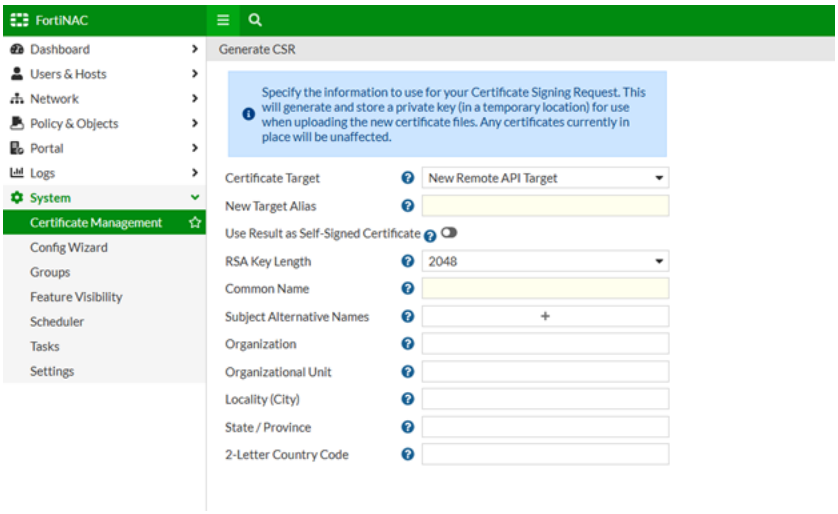
Generate Certificate for Microsoft Entra ID in FortiNAC Service Connector (Optional)

This section will generate the certificate for Microsoft Entra ID in FortiNAC service Connector



Step 1 - Generate new CSR on FortiNAC

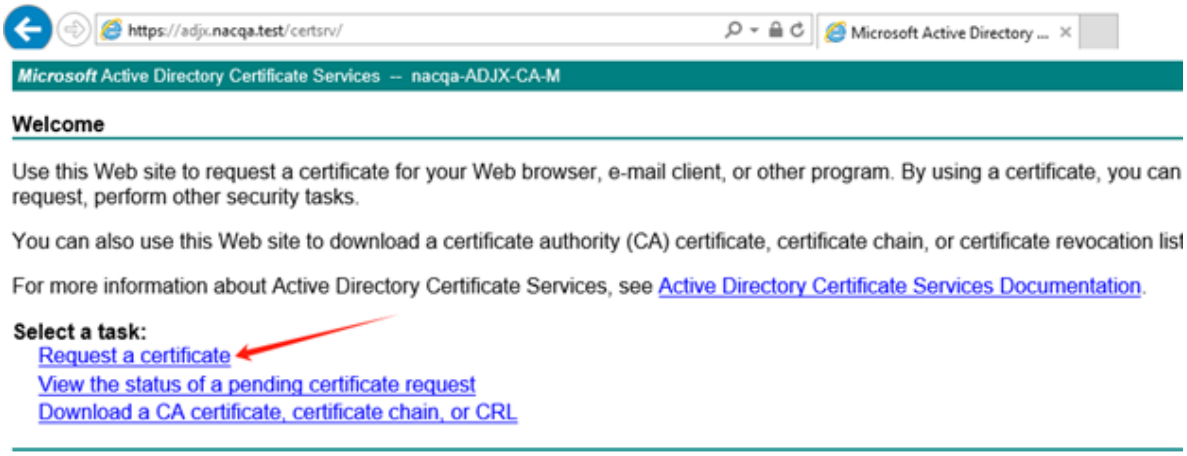
1. Go to **System > Certificate Management**, and generate a new CSR.
2. For **Certificate Target**, choose **New Remote Target**, and for **RSA key length**, fill in 2048.



Step 2 - Submit Certificate Request on Microsoft Active Directory

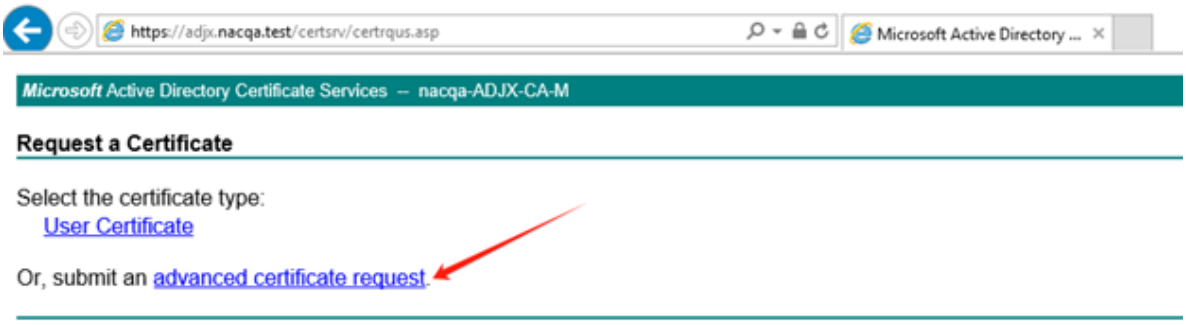
Use the CSR generated in Step 1 to submit a request for certificate in Microsoft Active Directory

1. Open a browser to connect to Microsoft Active Directory Certificate Services, then click **Request a certificate**

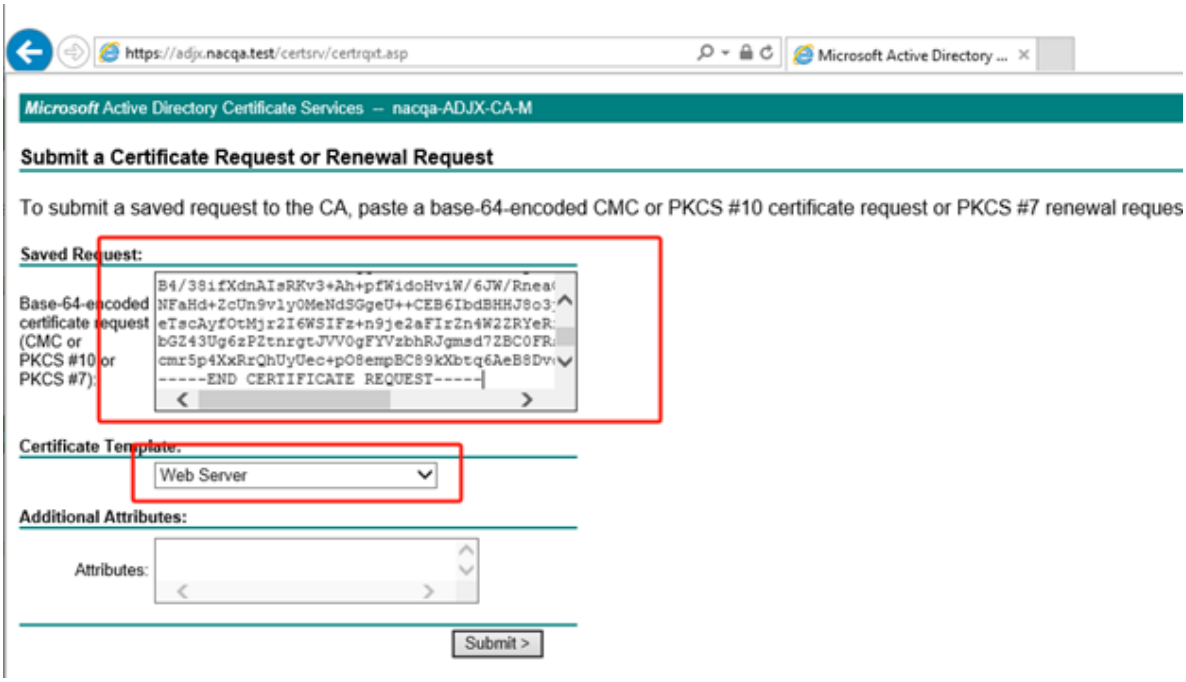


.

2. In **Request a Certificate** page, click **advanced certificate request**.



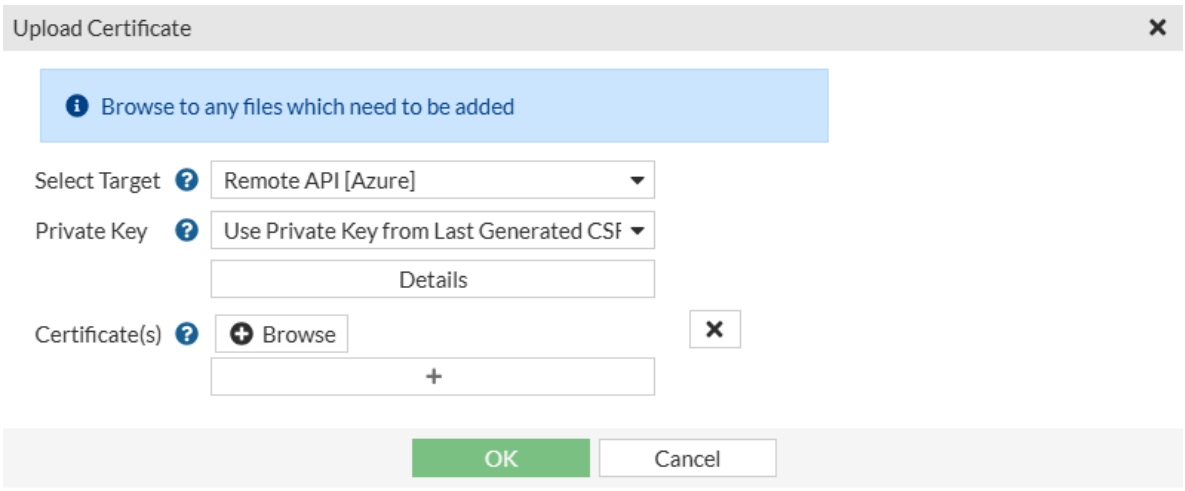
3. In **Advanced Certificate Request** page, click **Submit a certificate request by using a base 64 encoded CM.**
4. Paste the CSR generated from FortiNAC in **Base-64-encoded certificate**. In **Certificate Template**, select Web Server, and click **Submit**.



5. When the certificate is issued, download the certificate to the local machine.

Step 3 - Upload the certificate onto FortiNAC

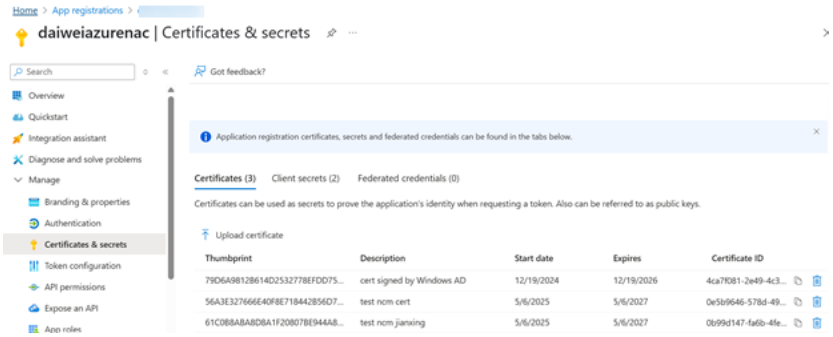
1. Log back onto FortiNAC, go to **System > Certificate Mangement**.
2. Click **Upload Certificate** and select "Remote API Target".
3. Browse and upload the certificate downloaded from Step 2, and click OK.



4. Restart the service for the certificate to take into effect.

Step 4 - Upload the Certificate back to Microsoft Entra ID App Registration

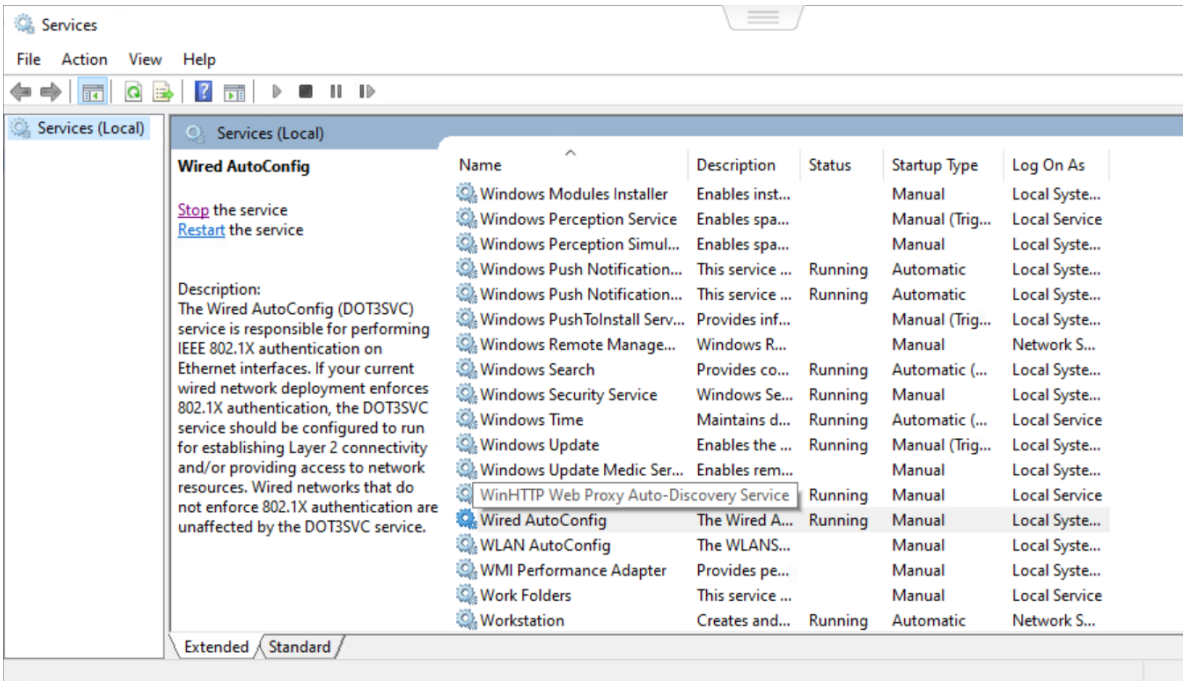
1. Log into Microsoft Entra ID, and go to App Registration.



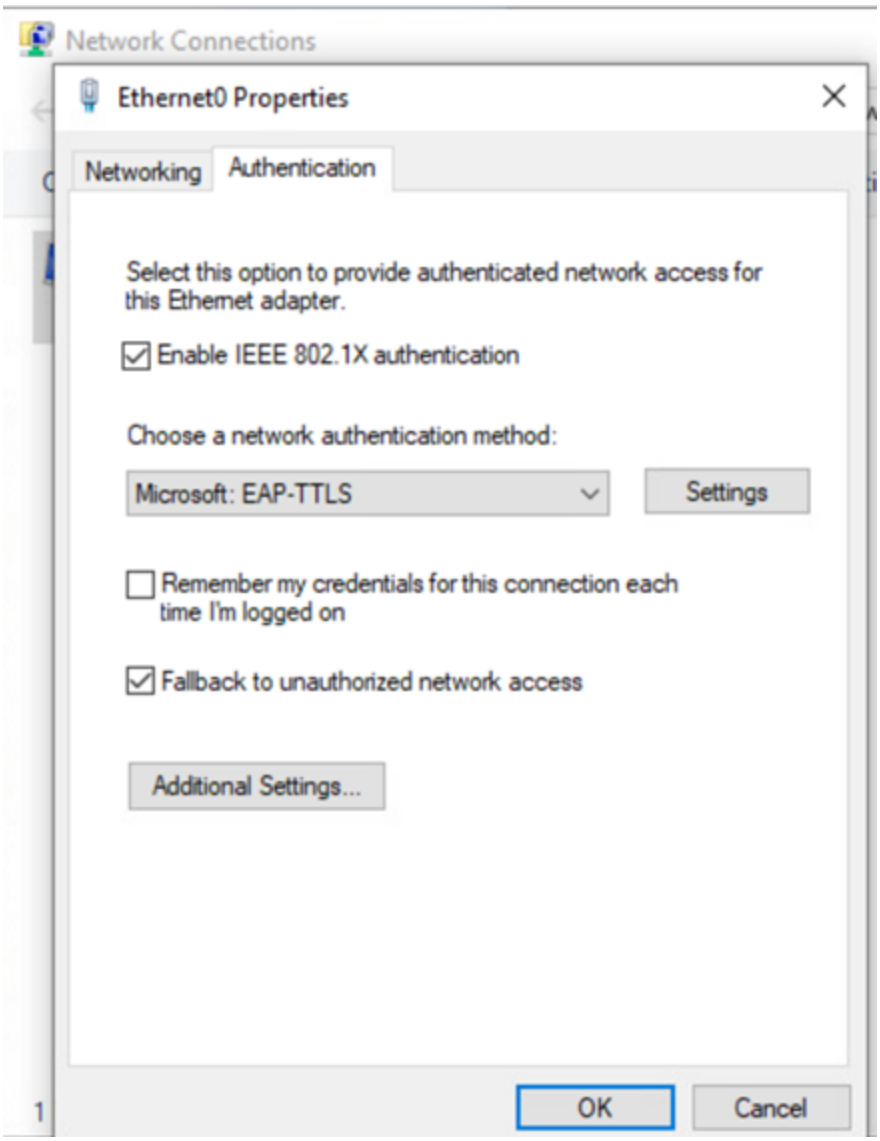
2. Upload the Certificate to complete.

4. Windows Client

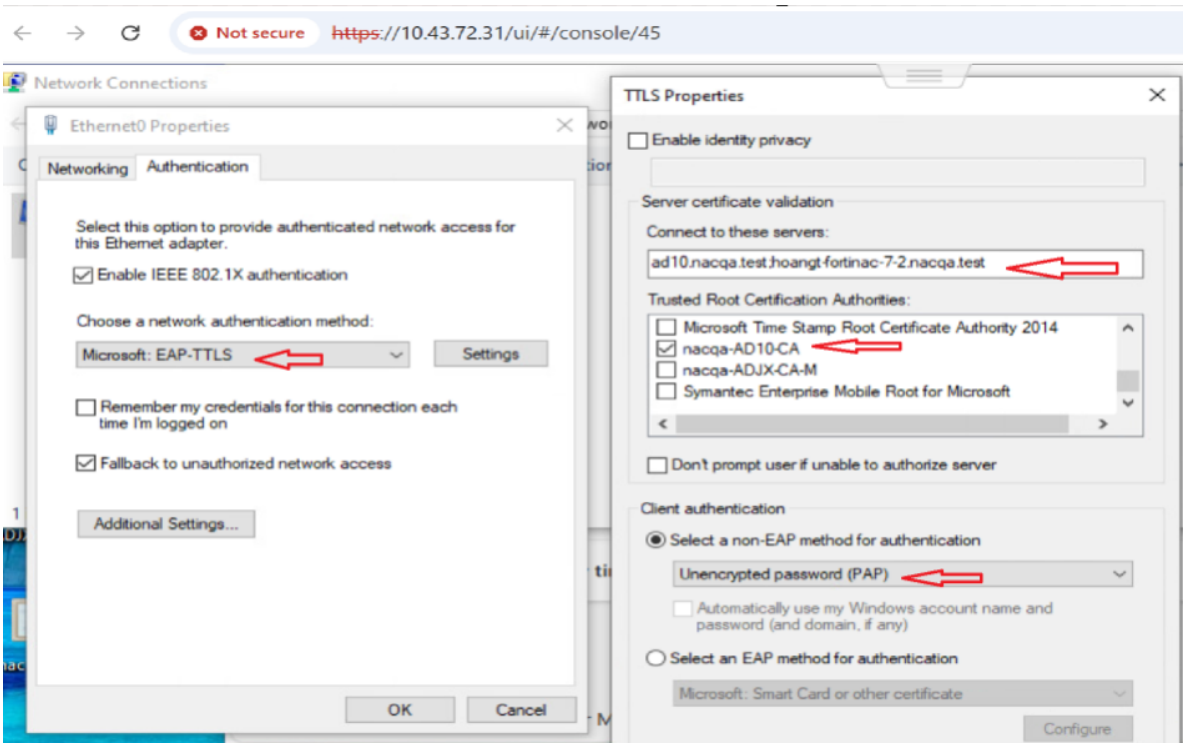
1. Log into the Windows client host.
2. Search for "Services", and go to Services client, and start the **Wired AutoConfig** service.



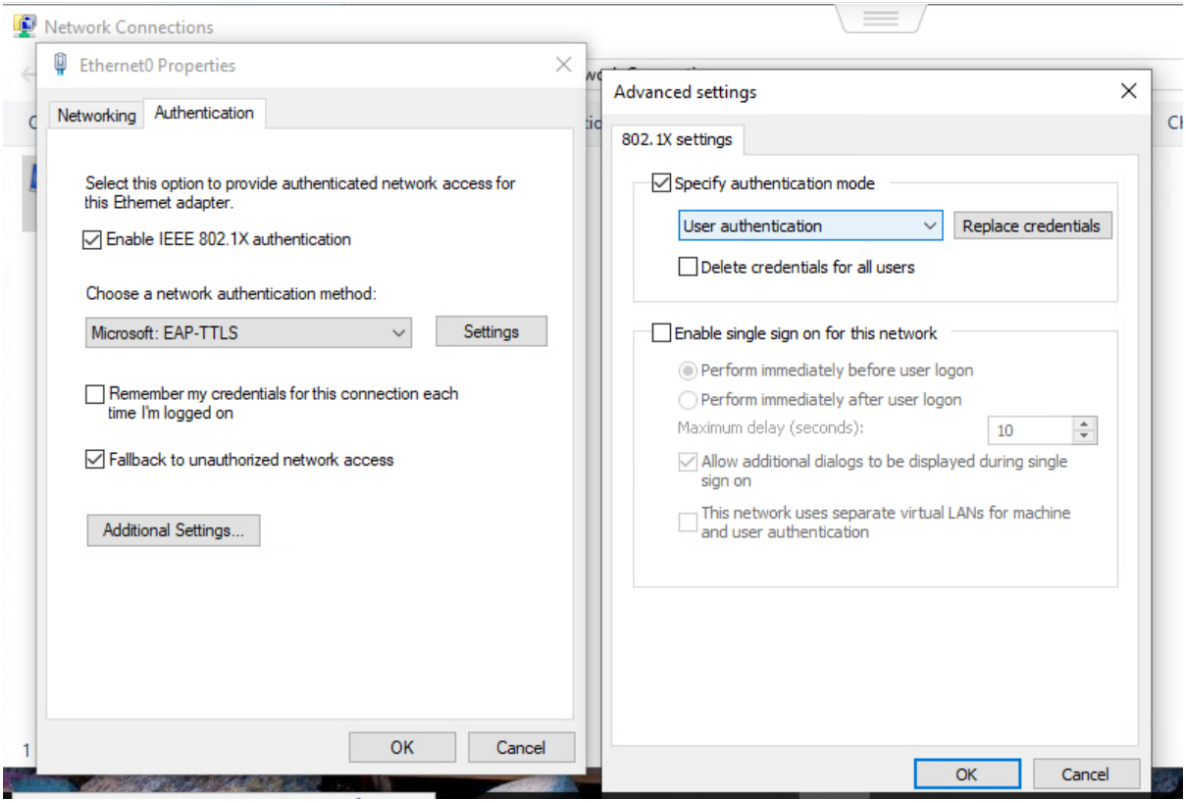
3. Open Network Connections and open the **Ethernet Properties > Authentication**.



4. Enable IEEE 802.1X authentication.
5. Click network authentication method drop down menu and choose Microsoft: EAP-TTLS, and click on Settings.
6. In the **TTLS Properties**, configure the AD and **Trusted Root Certification Authorities** for your environment. The image below is served as an example.



7. Go back to Authentication tab, click Additional Settings, click Specify authentication mode, and select User authentication.

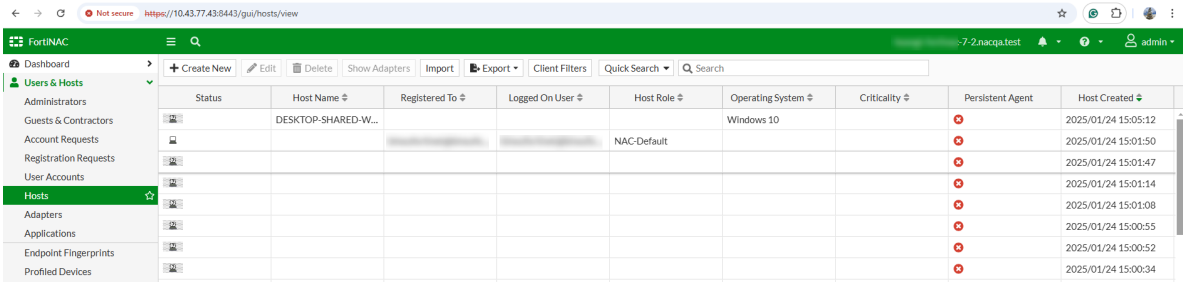


8. On Windows Client, disable the Ethernet card and then enable it. The windows client adapter should now be authenticated and authorized.

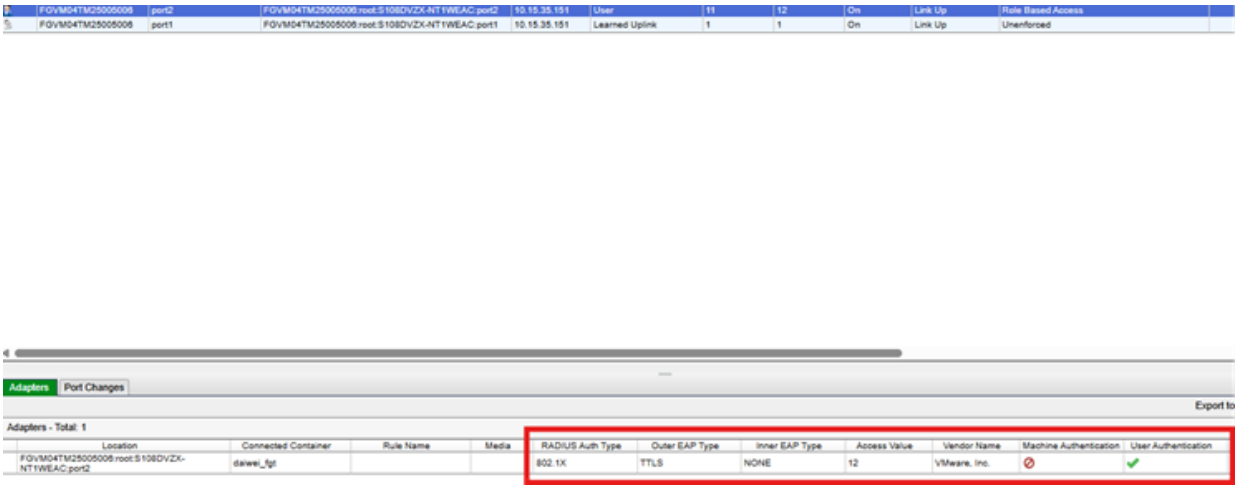
9. Open up Windows Command Line Prompt, and verify settings type: ipconfig/all

```
C:\Users\win10>ipconfig /all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-[redacted]-B5491D
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet0:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) 82574L Gigabit Network Connection
   Physical Address. . . . . . . . . : 00-50-56-B5-49-1D
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::aecb:cbc0:f087:4a1f%13(Preferred)
   IPv4 Address. . . . . . . . . . . : [redacted](Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : Friday, January 24, 2025 3:07:02 PM
   Lease Expires . . . . . . . . . . : Friday, January 31, 2025 3:07:03 PM
   Default Gateway . . . . . . . . . : 10.10.12.1
   DHCP Server . . . . . . . . . . . : 10.10.12.1
   DHCPv6 IAID . . . . . . . . . . . : 100683862
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-2D-15-73-47-00-50-56-B5-49-1D
   DNS Servers . . . . . . . . . . . : 8.8.8.8
   NetBIOS over Tcpip. . . . . . . . : Enabled

C:\Users\win10>
```

10. After the window client host is successfully authenticated, validate the client IP address is moved to production network. Open up Windows Command Line Prompt, and verify settings by typing: `ipconfig/all`
11. In FortiNAC, the Windows machine should now appeared as one of the hosts in Hosts viewn with user registered to and logged on user attached.



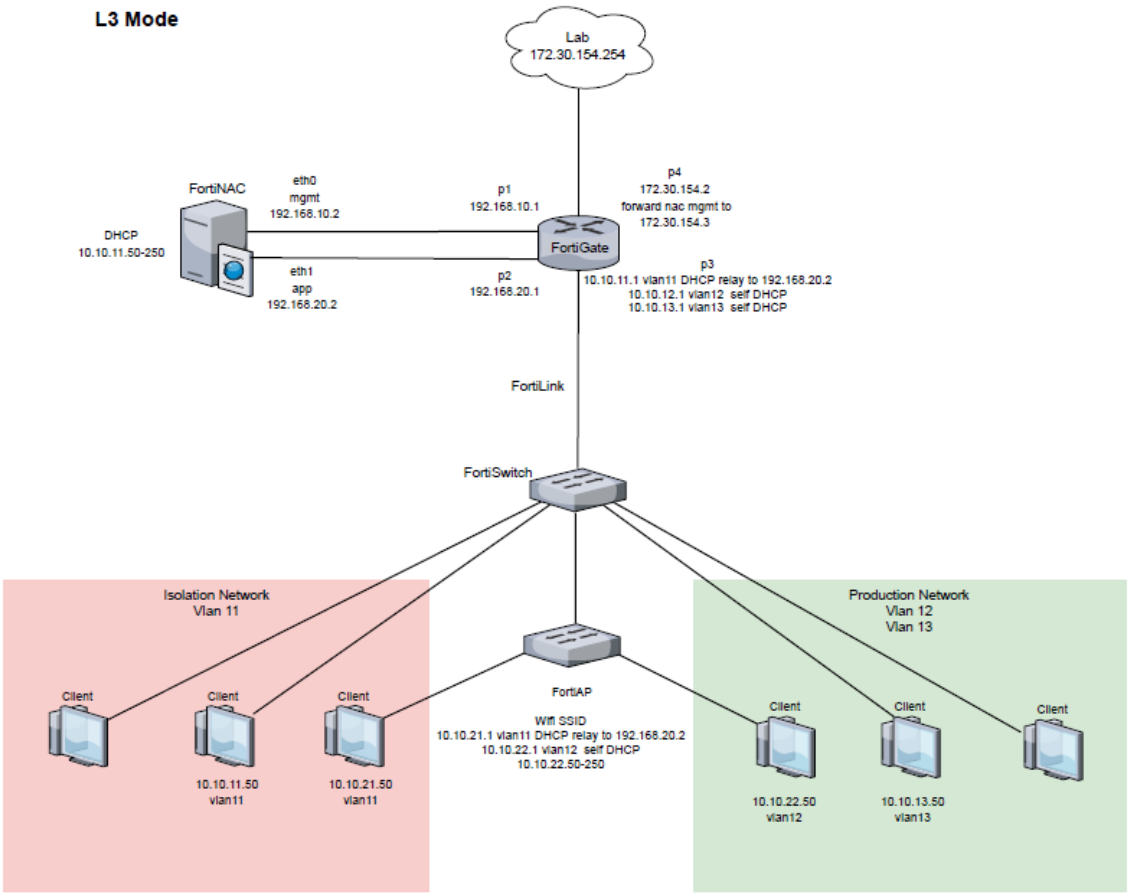
12. From the inventory page. You can view the protocol detail. Inner EAP type is **None** is expected behavior since PAP is not an EAP type protocol.


Adapters
Port Changes
Export to
Adapters - Total: 1
Location
Connected Container
Rule Name
Media
RADIUS Auth Type
Outer EAP Type
Inner EAP Type
Access Value
Vendor Name
Machine Authentication
User Authentication
FGVM04TM25005006:root:S108DVZX-NT1WEAC:port2
daiwei_fgt
802.1X
TTLS
NONE
12
VMware, Inc.

Microsoft Entra ID Authentication using Captive Portal

Captive Portal is FortiNAC's authentication protocol to grant device access to protected network. Microsoft Entra ID Authentication integrates the Captive Portal to streamline the authentication process. The Microsoft Entra ID users will be able to gain access promptly through the Microsoft Entra ID admin users when using Microsoft Entra ID Authentication with Captive Portal. This method is the quick and secure method to grant access to other device users within the protected network.

This is the use case diagram for the Microsoft Entra ID Authentication using Captive Portal:



1. Microsoft Entra ID, FortiGate, FortiNAC, and FortiSwitch Configuration

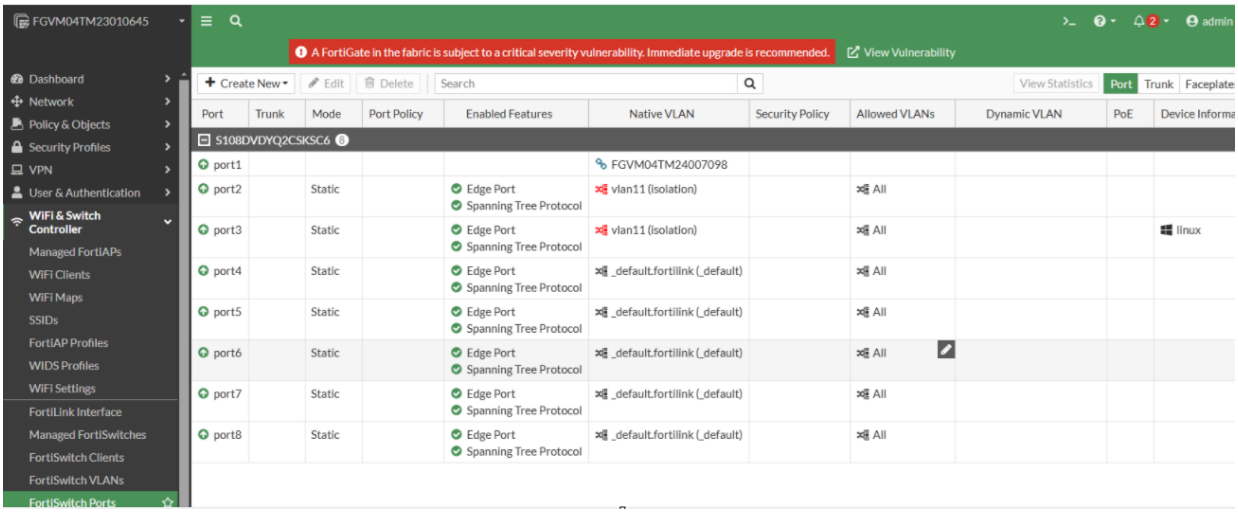
Step 1 - Microsoft Entra ID Configuration

Follow the link to register FortiNAC application in Microsoft Entra ID Configuration.

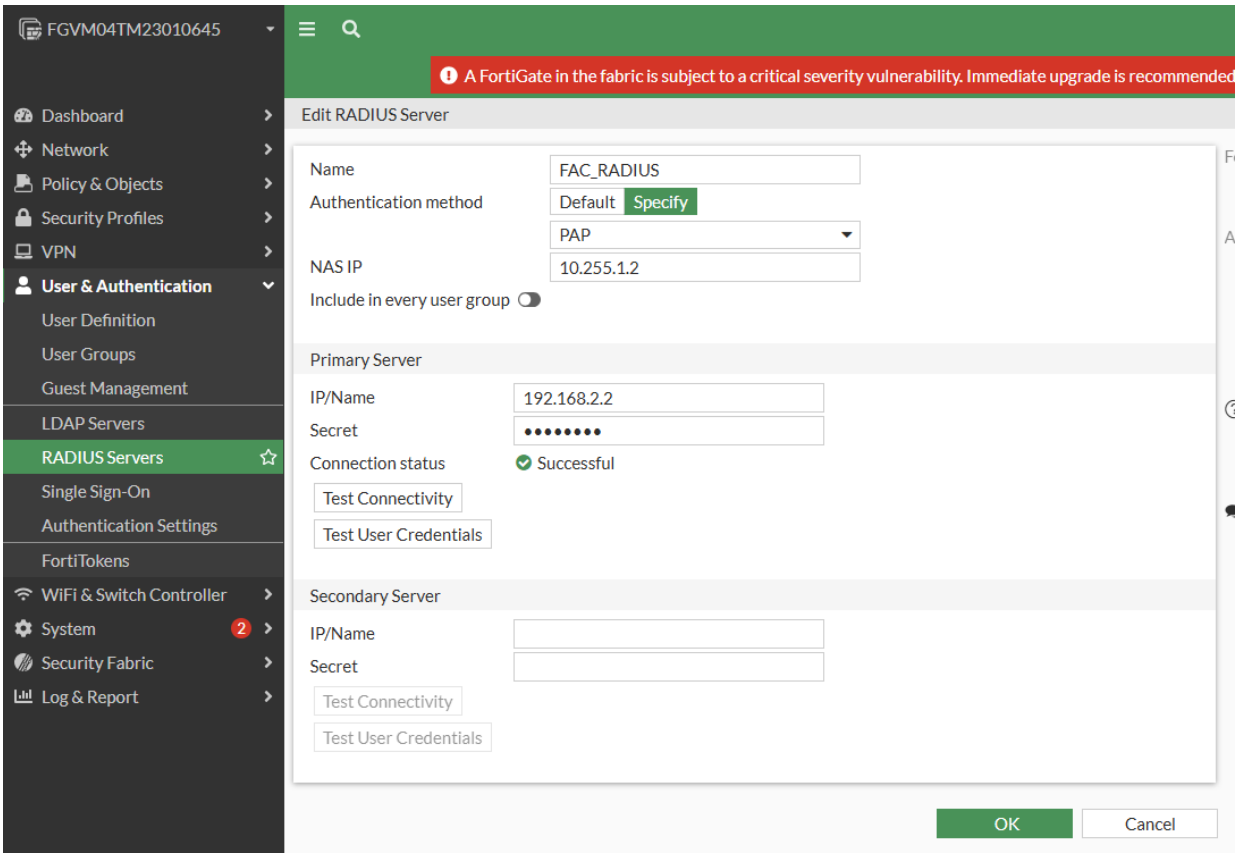
Step 2 - FortiGate Configuration

Follow the link to configure FortiGate: Firewall Configuration

The FortiSwitch Port connecting to FortiNAC should not have security policy applied like 802.1.x.



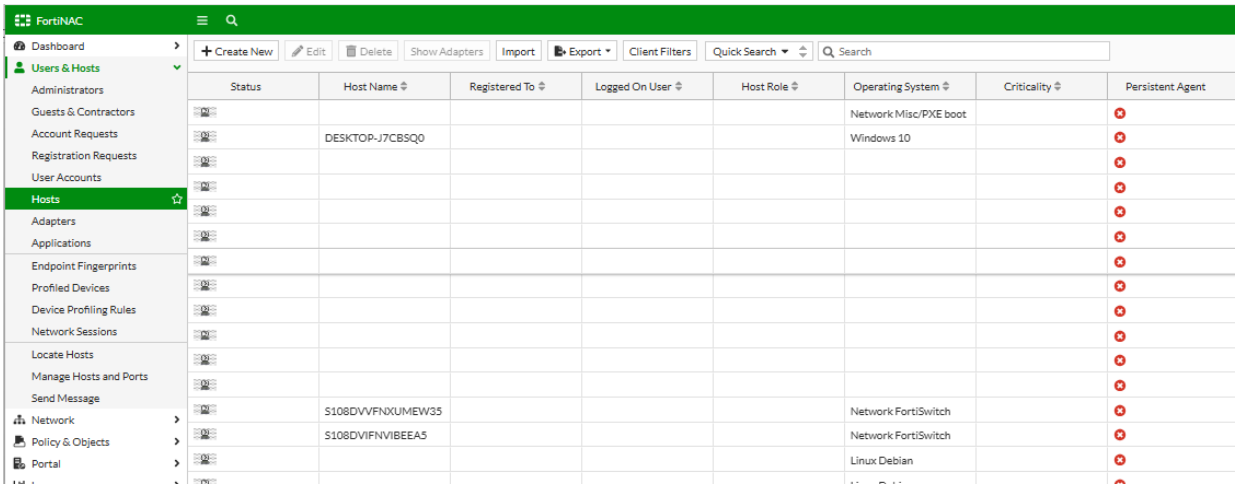
For Radius, make sure the test connectivity is successful. In the example below, 192.168.2.2 is the IP address of the interface on FortiNAC.



Step 3 - FortiNAC configuration

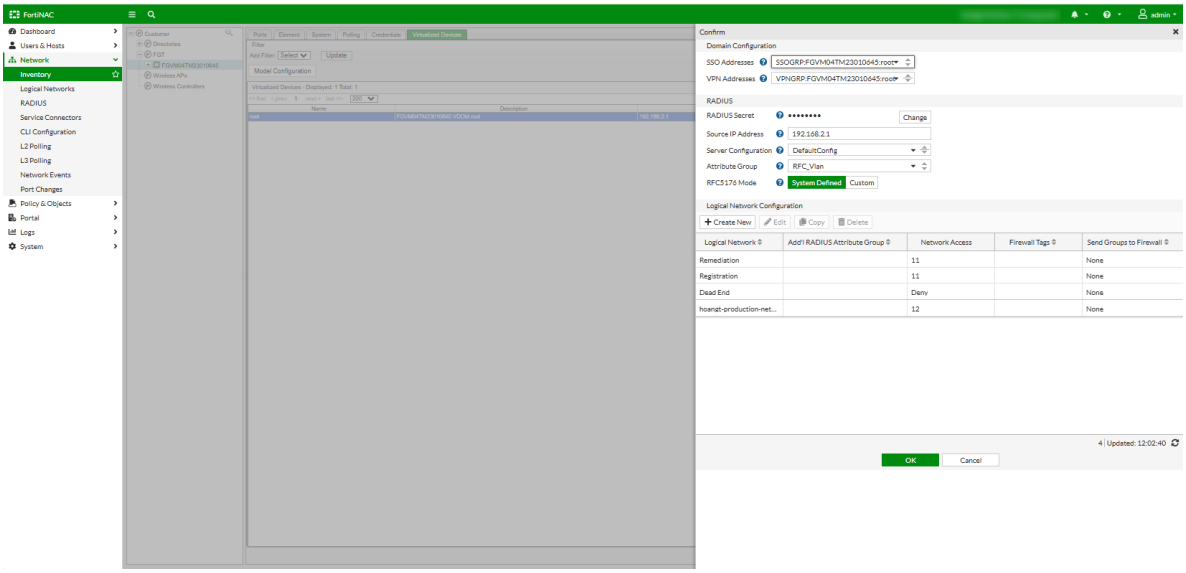
Follow the link below to configure FortiNAC overall configuration: FortiNAC Configuration

Note: Delete the client host under test in **Users & Hostst > Hosts** to have successful test run.



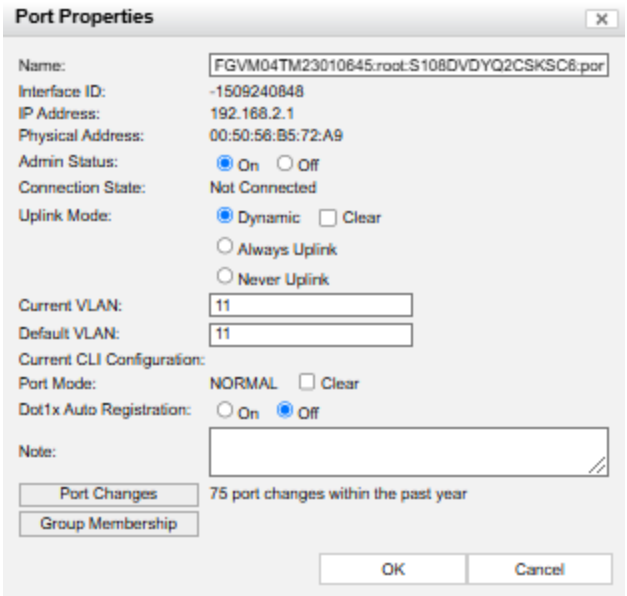
1. Go to **Policy & Objects > Authentications**, enable **Enable Authentication** but don't enable Authentication Method.

2. For RADIUS configuration: go to Network > Inventory, in our example, make sure the connection to FortiGate is successful, and remediation/registration is set to enforce and vlan 11. Lastly, Production vlan is set to 12.

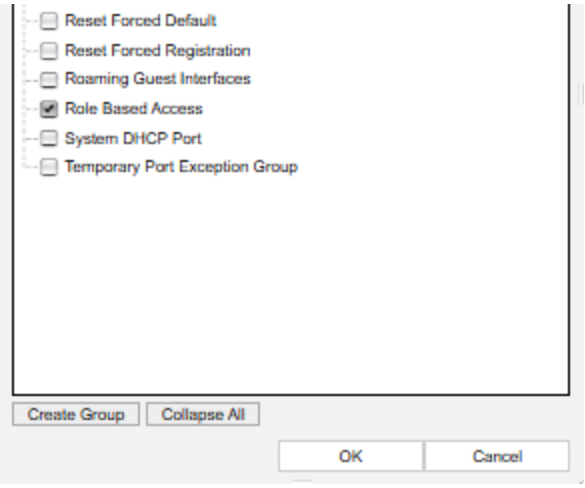


Step 4 - FortiSwitch Port Configuration

1. Go to **Network > Inventory > FortiSwitch port 2**.
2. Click **Off** radio button to disable Dot1x Auto Registration.

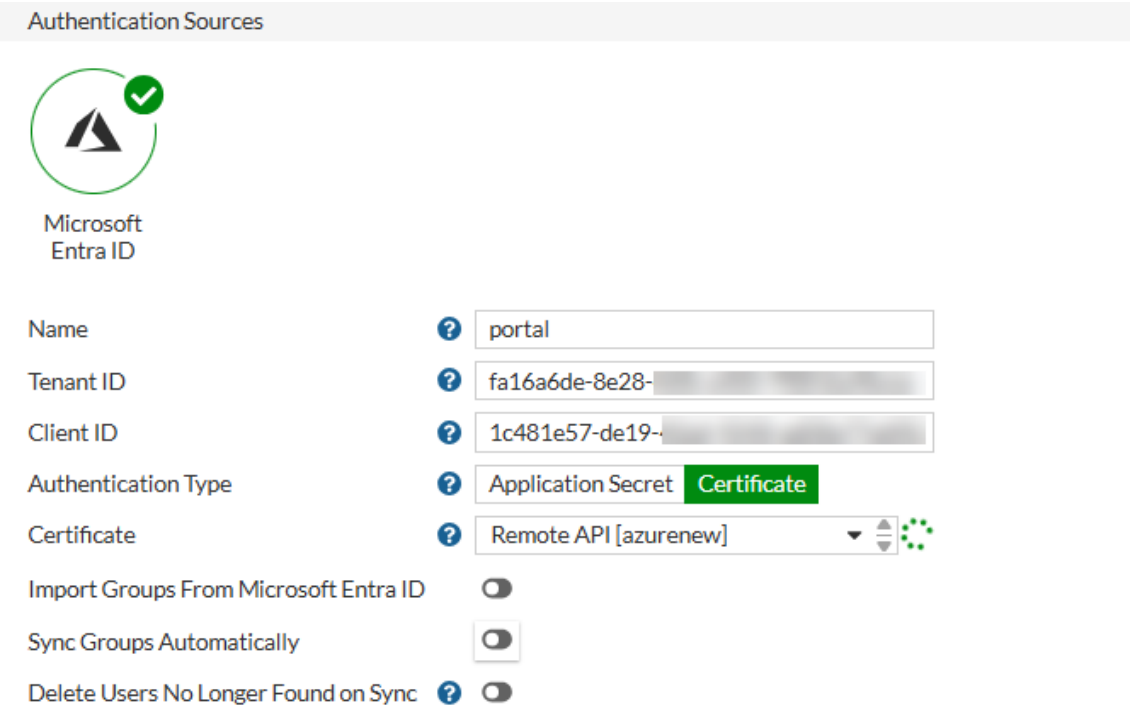


3. Click **Group Membership**, and check the following in Group Membership.



Step 5 - Service Connectors Configuration

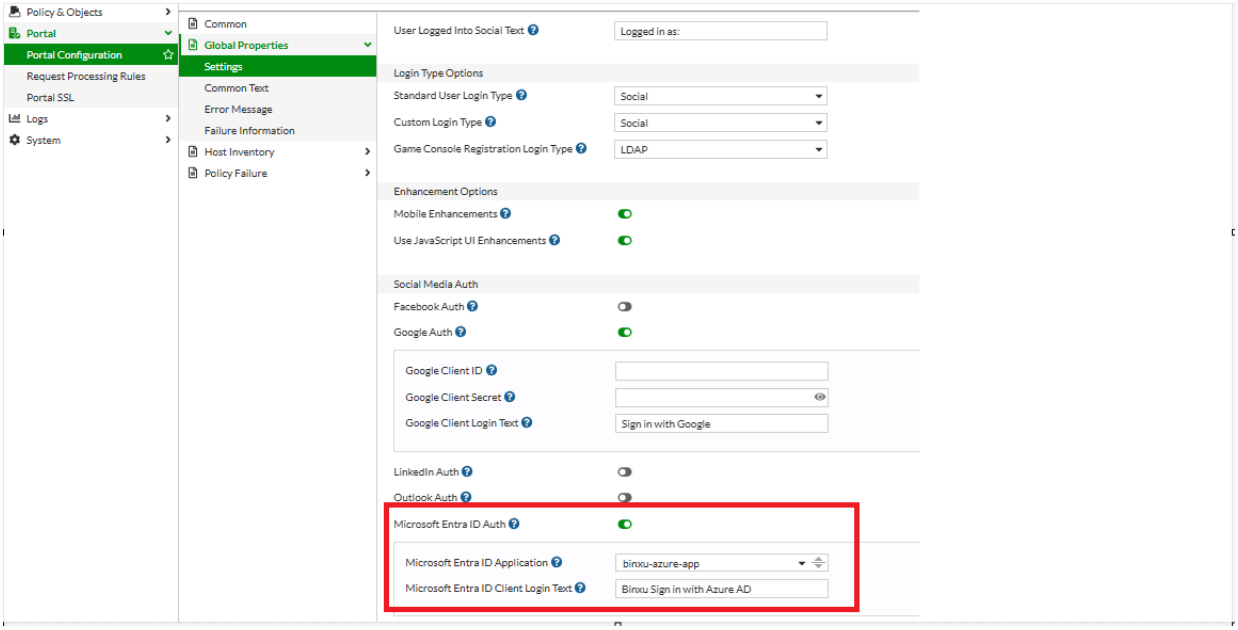
1. Go to **Network > Service Connectors** and create a new Authentication Source. In this example, it will be called "portal"



2. Fill in all the information of the Microsoft Entra ID environment: Microsoft Entra ID information and Application Secret.

Step 7 - Portal Configuration

Go to **Portal > Portal Configuration > Configuration > Global > Global Properties > Settings**, and enable Microsoft Entra ID Auth and select the Microsoft Entra ID service connector created earlier, in this example, it will be "portal", and create a client Login text.



Continue to 2. Windows Client Configuration on page 31 to finish up with the rest of the configurations.

2. Windows Client Configuration

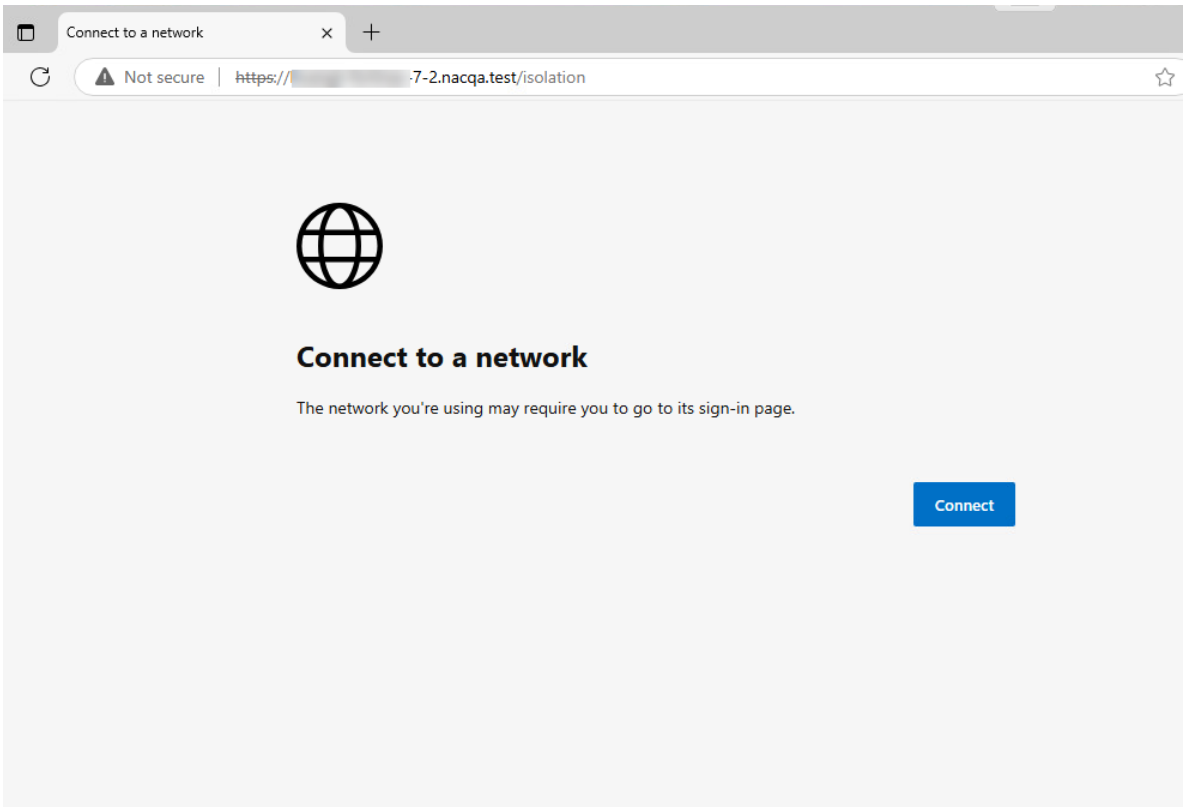
Step 1 - Disable dot1x on Host

1. Log into the Windows client machine.
2. Go to **Network Connections** and open **Ethernet Properties > Authentication**.
3. Deselect **Enable IEEE 802.1X authentication** to disable dot1x on the host
4. Search for "Services", and go to **Services** client.
5. Stop the **Wired AutoConfig** service if it is running.

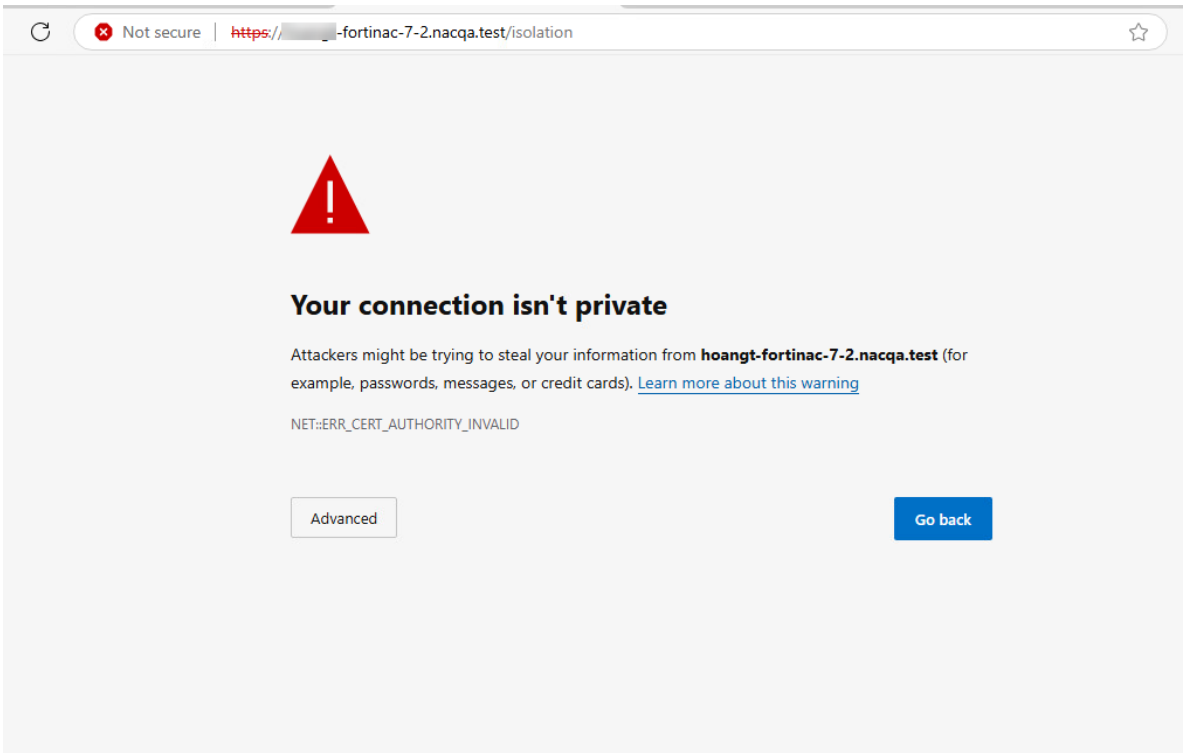
Step 2 - Connect to the Network

Before configure windows on the client machine, delete all the cache and history to have a smooth test run.

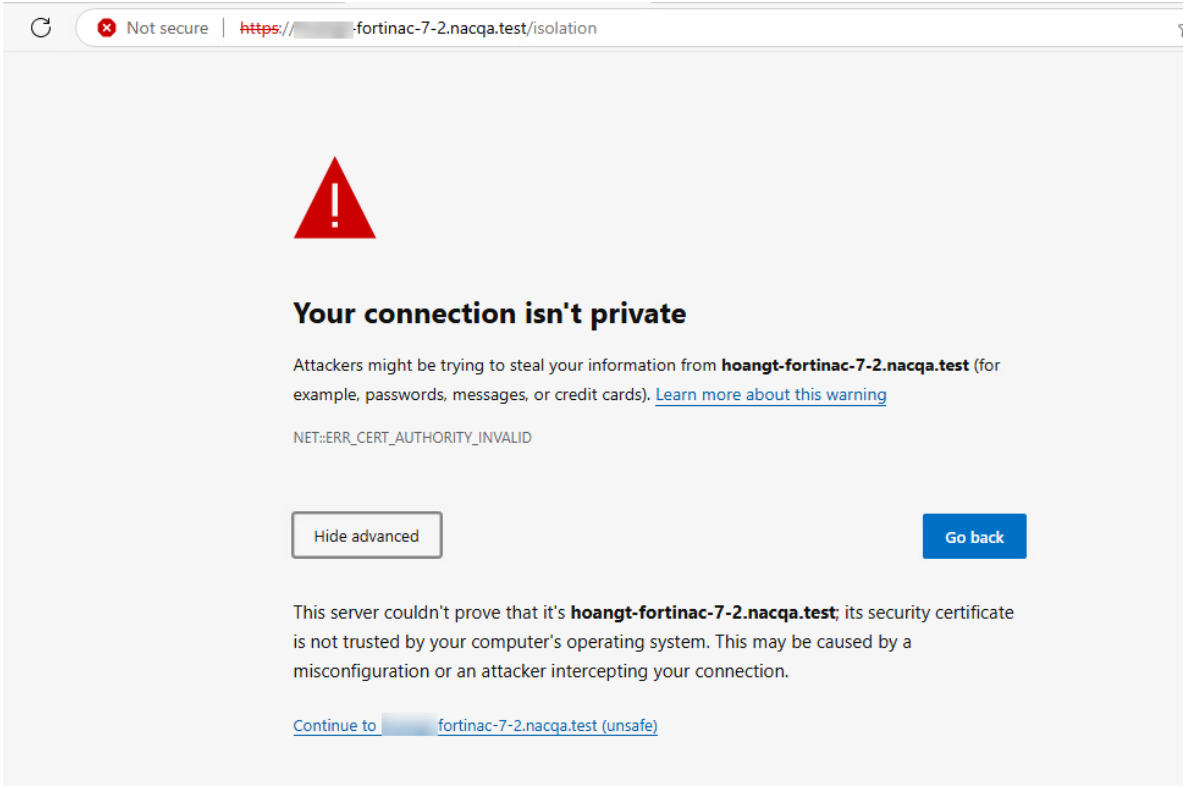
1. Go to **Network and Internet > Network and Sharing Center > View Network** and click on **Change adapter settings**.
2. Disable and enable the Ethernet card to trigger the authentication using Captive Portal.
3. Open a browser, and click **Connect**.



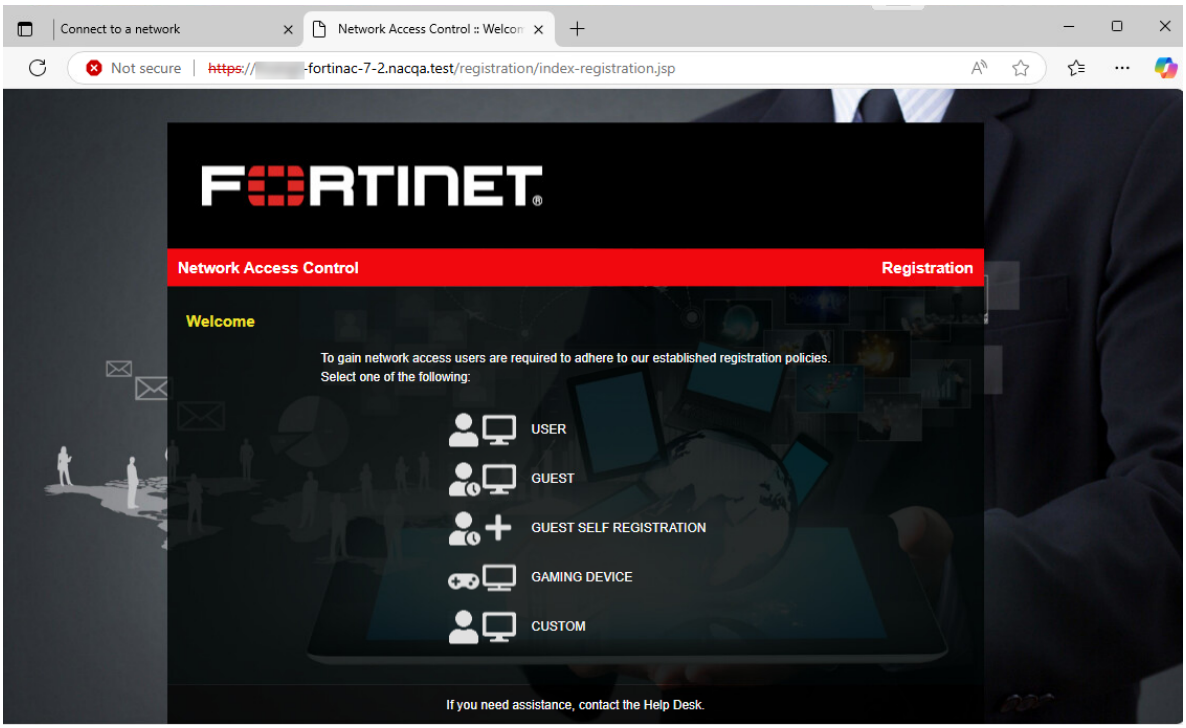
4. The browser would state the connection is not private, then click **Advanced**.



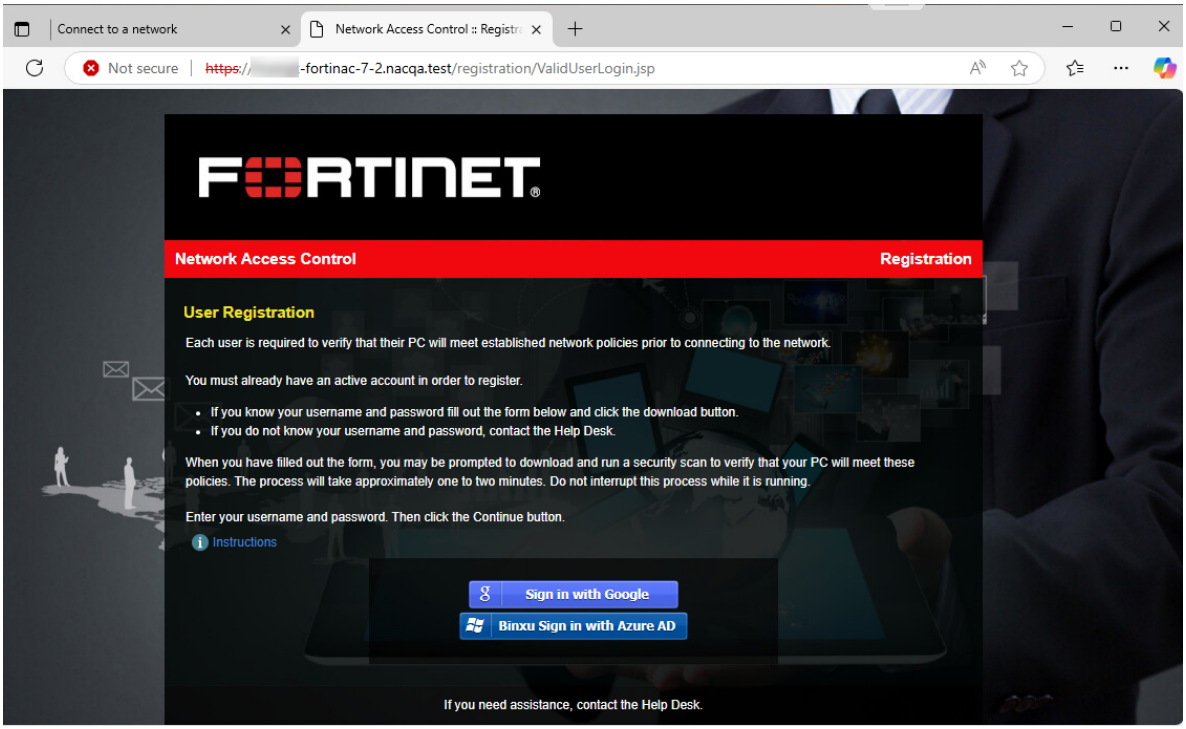
5. Then click the Continue link to trigger the Captive Portal.



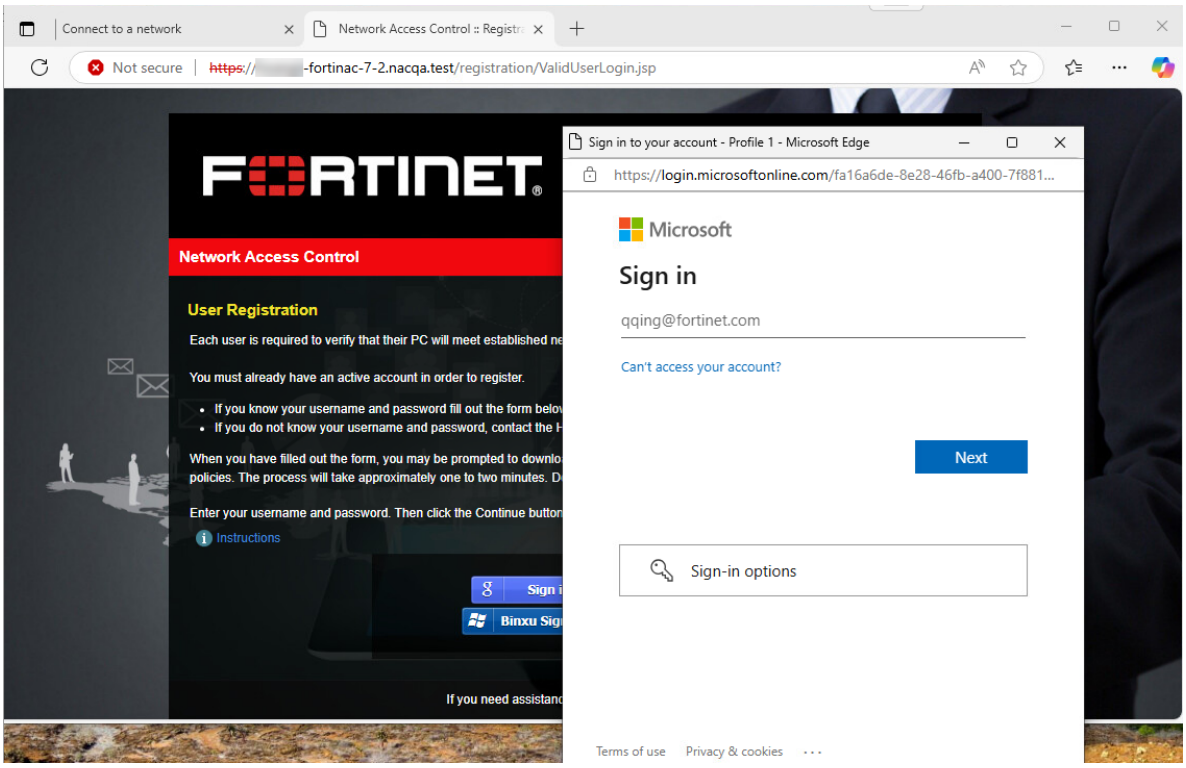
6. Wait until the Captive Portal show up, then click **User**.



7. Then click the Microsoft Entra ID signin button, in this example, customer can sing in with the Azure AD account.



8. A Login windows would popup, login with the Microsoft Entra ID account.


Connect to a network
Network Access Control :: Registr
Not secure
https://-fortinac-7-2.nacqa.test/registration/ValidUserLogin.jsp
FORTINET
Network Access Control
User Registration
Each user is required to verify that their PC will meet established ne
You must already have an active account in order to register.
If you know your username and password fill out the form belo
If you do not know your username and password, contact the H
When you have filled out the form, you may be prompted to downlo
policies. The process will take approximately one to two minutes. D
Enter your username and password. Then click the Continue buttor
Instructions
Sign i
Binxu Sig
If you need assistanc
Sign in to your account - Profile 1 - Microsoft Edge
https://login.microsoftonline.com/fa16a6de-8e28-46fb-a400-7f881...
Microsoft
Sign in
qqing@fortinet.com
Can't access your account?
Next
Sign-in options
Terms of use
Privacy & cookies

Microsoft Entra ID Authentication using TLS Certificate

Overview

Digital Certificate authentication ensure that only trusted devices and users can connect to their network as well as confirm the authenticity of a website to a web browser, also known as SSL certificate. Digital certificate requires a copy of a public key from the certificate holder, which needs to be matched the a corresponding private key to verify its identity. A public key certificate should be issued by the certificate authority(CA) to verify the identity.

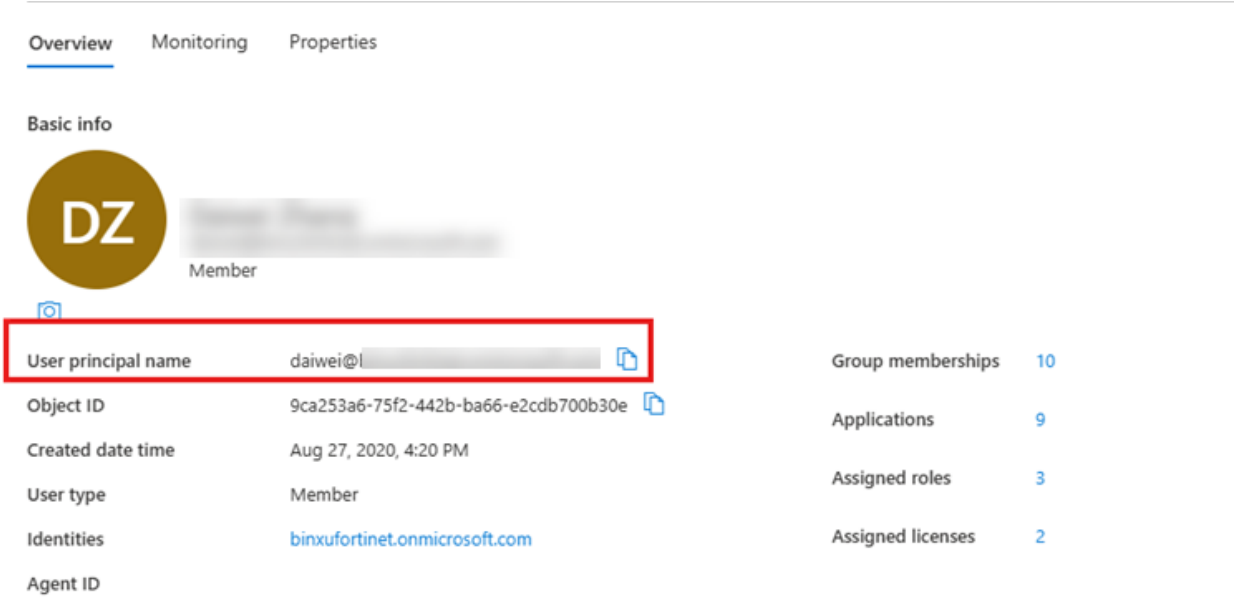
1. Generate TLS certificate for Microsoft Entra ID to do authentication

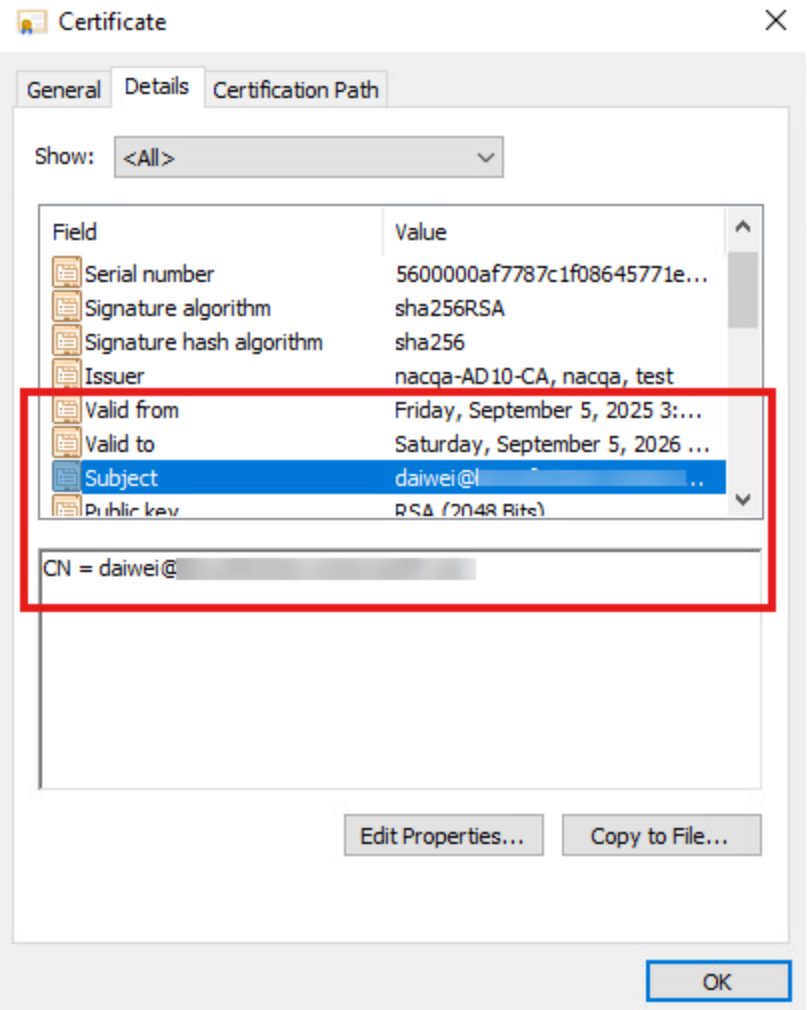
There are multiple ways to generate TLS certificate for Microsoft Entra ID to do the authentication.

Method 1:

Users can generate the CSR by themselves and configure the value of CN/SAN-DNS/SAN-UPN/SAN-Email as the UPN(User Principal Name) of the Microsoft Entra ID user account.

Here is the UPN of the Microsoft Entra ID user account.





Method 2:

The second method is using Microsoft Intune to generate TLS certificate. Here are some reference links from Microsoft Official site:

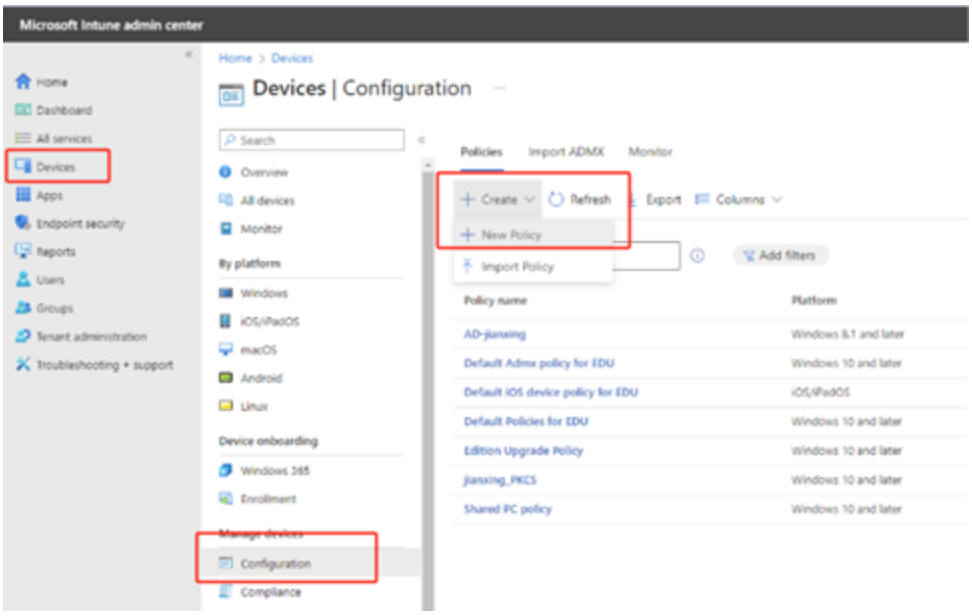
Use a PKCS certificate profile to provision devices with certificates in Microsoft Intune

Install the Certificate Connector for Microsoft Intune

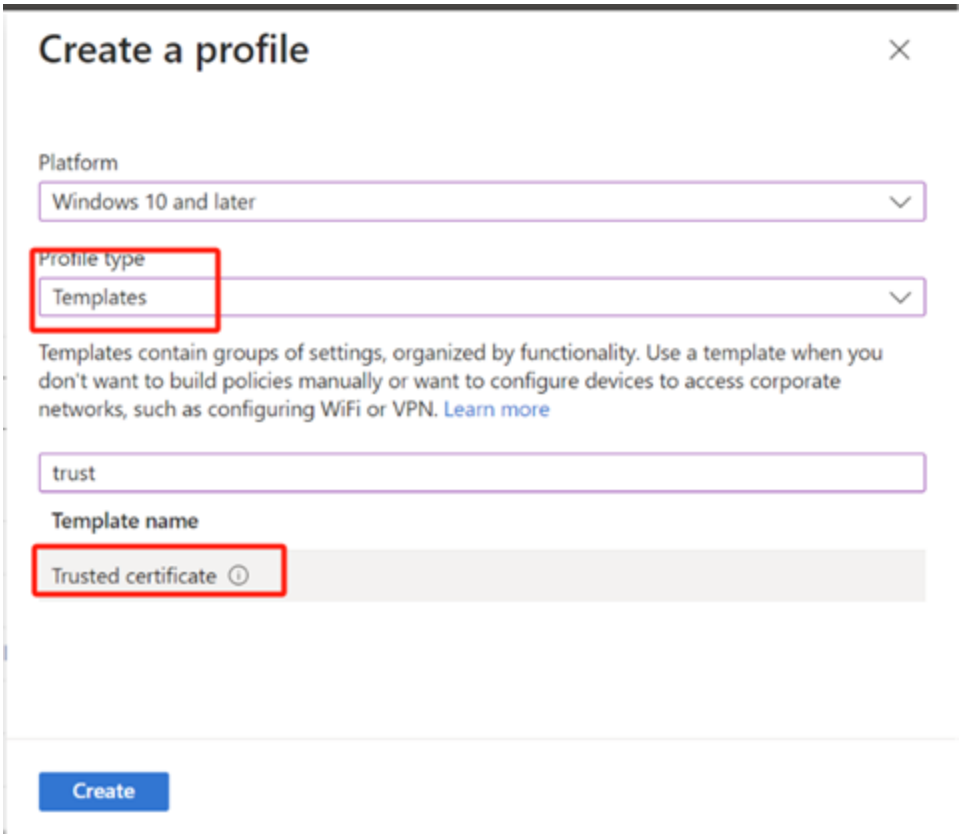
Troubleshoot use of PKCS certificate profiles to provision certificates with Microsoft Intune

Step 1 - Configure Trust Certificate Profile

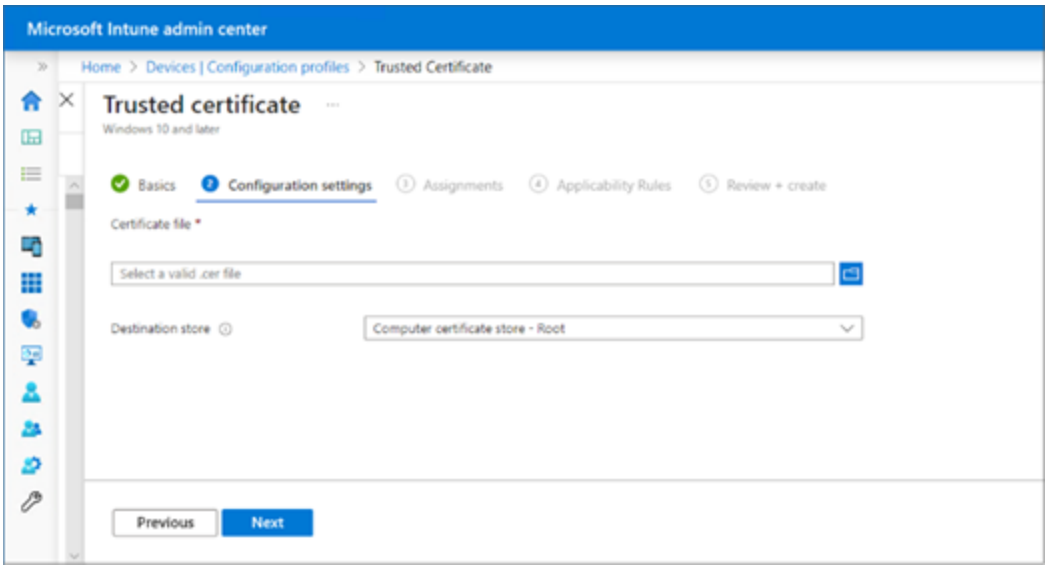
1. Go to Microsoft Intune Admin Center
2. Go to **Device > Configurartion**
3. Under **Profile** tab, click **Create** and select **New Policy**.



4. Set **Platform** as “Windows 10 and later”, profile type as “Template”, and Template name as ” Trusted certificate”.

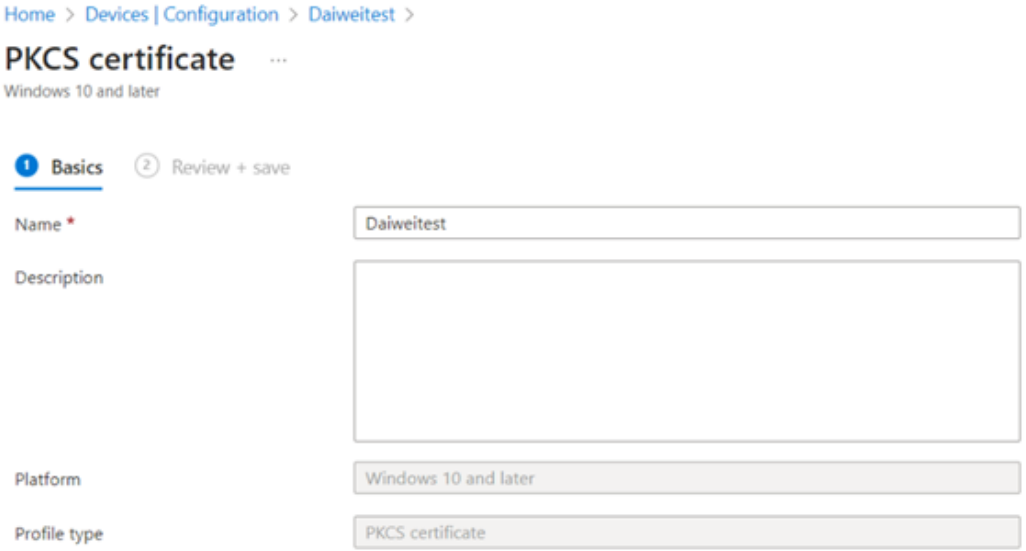


5. Select the root certificate you exported from CA.

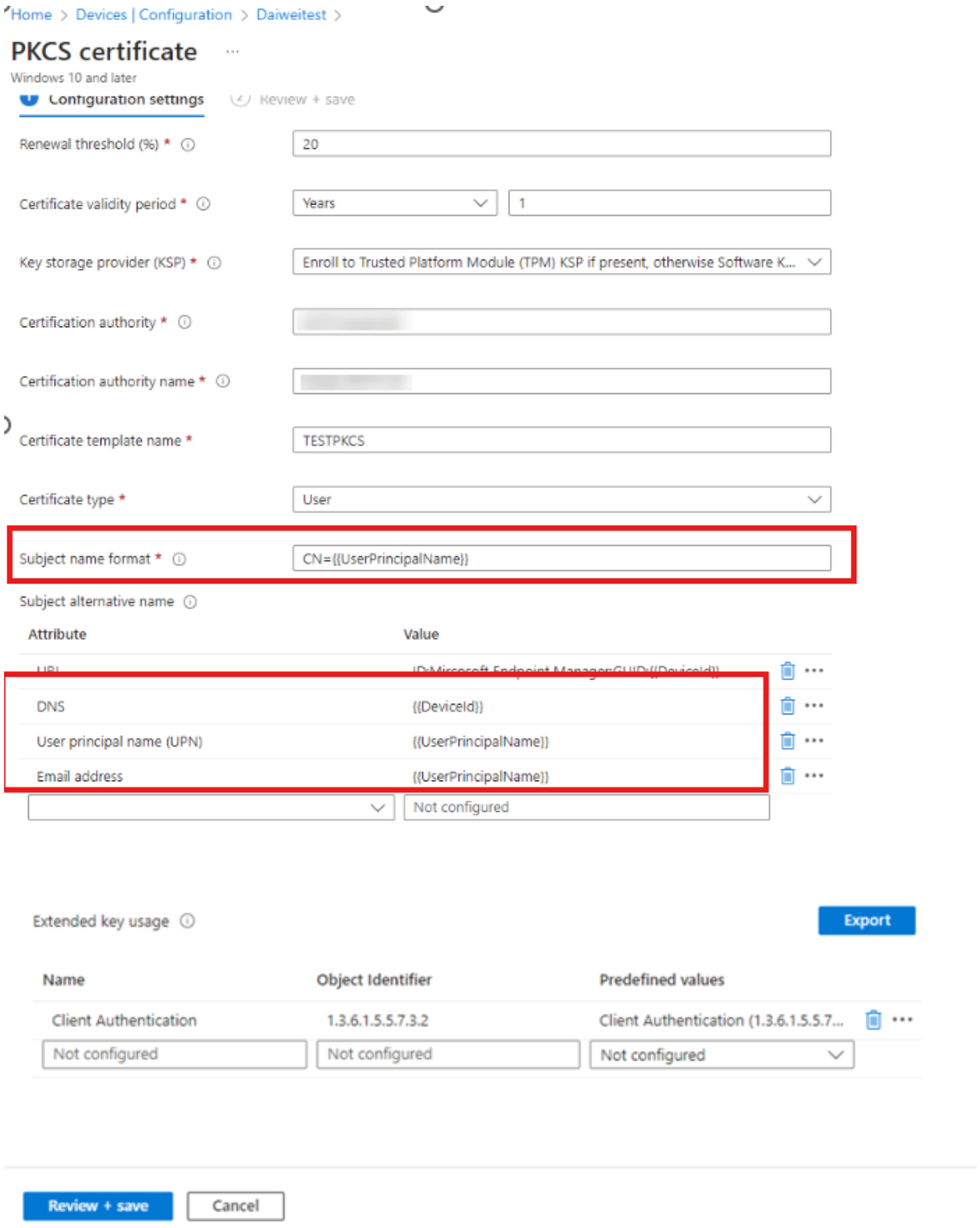


Step 2 - Configure PKCS certificate profile

1. In the **PKCS Certificate** profile, go to the **Basics** tab.



2. In **Configuration settings**, set CN/SAN-DNS/SAN-Email/SAN-UPN format as `{{UserPrincipleName}}`

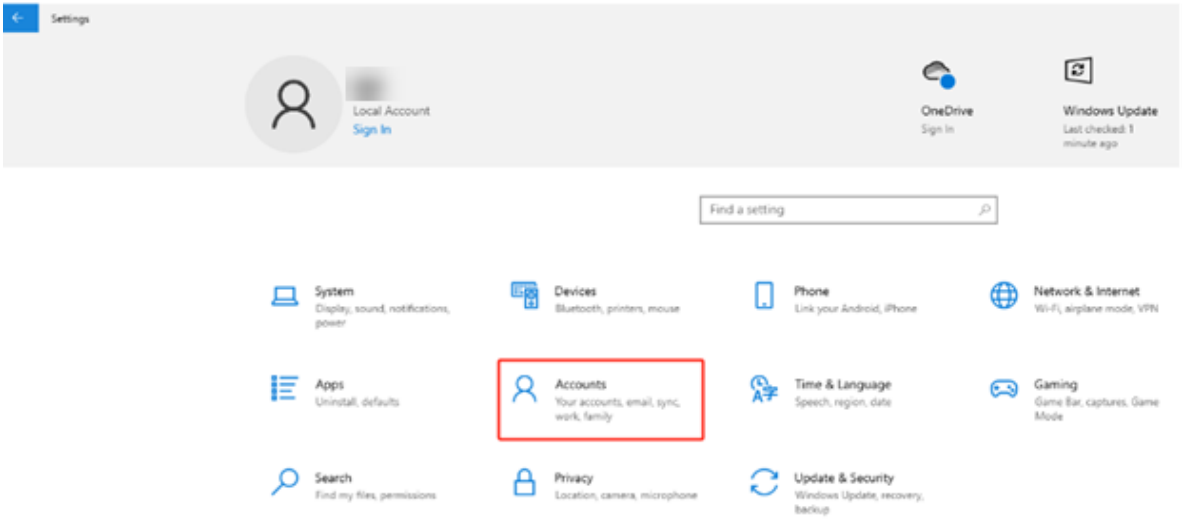


Step 3 - Install the Certificate Connector for Microsoft Intune

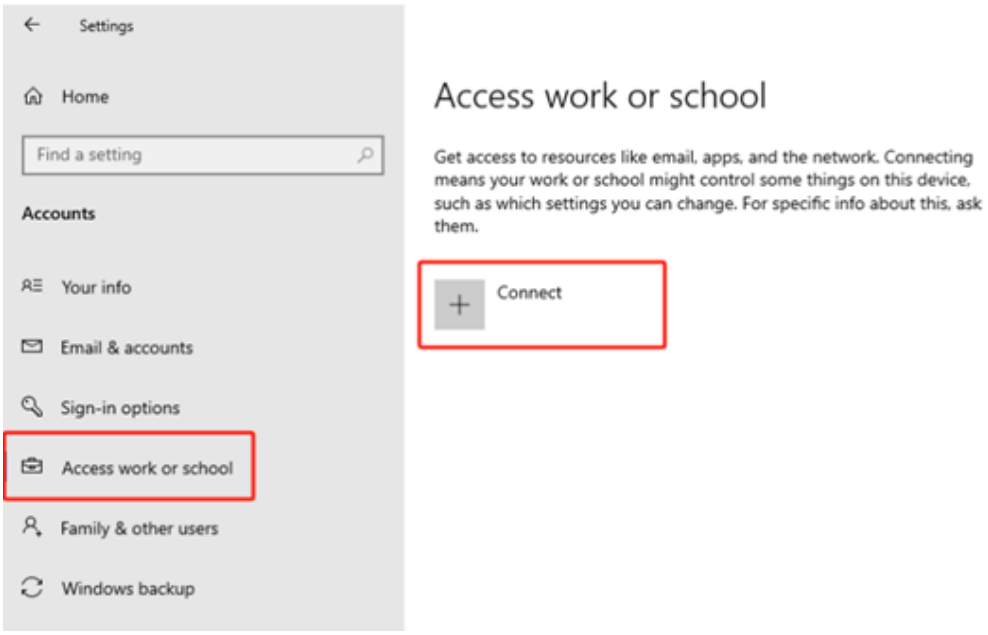
Please refer to tutorial from Install the Certificate Connector for Microsoft Intune.

Configuration on Windows Client Side

1. Login your Windows Client.
2. Open **Setting**, select **Accounts** and choose **Access Work or School**.

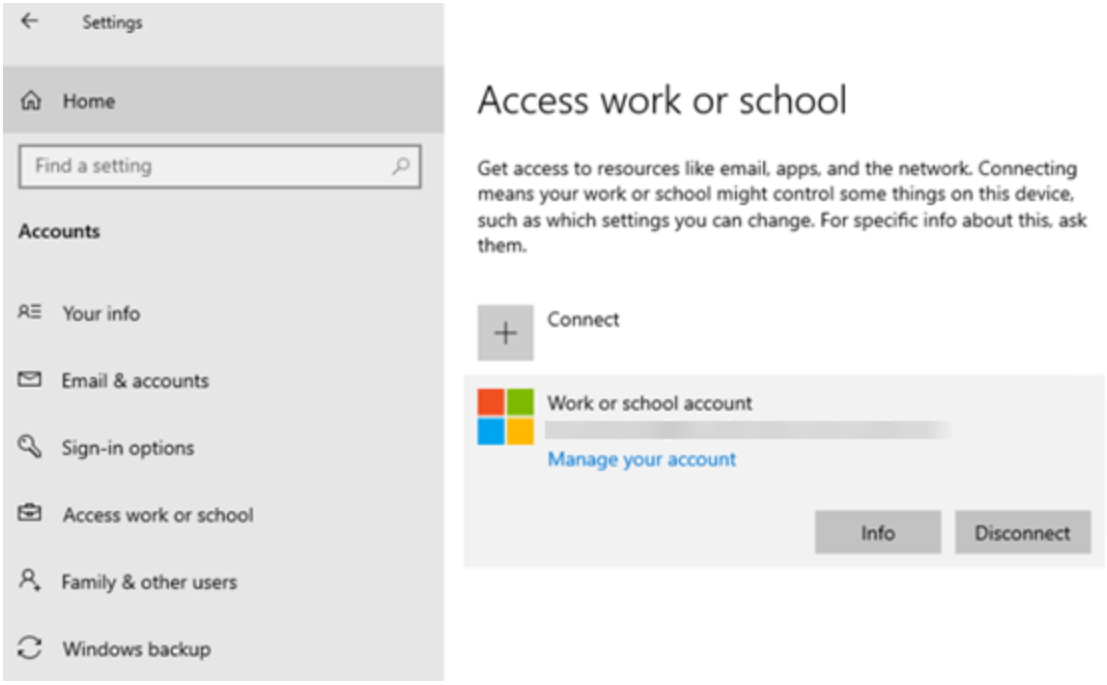


3. Click **Connect** to enter the account you used to login, make sure it has permissions in to allow users to enroll device.



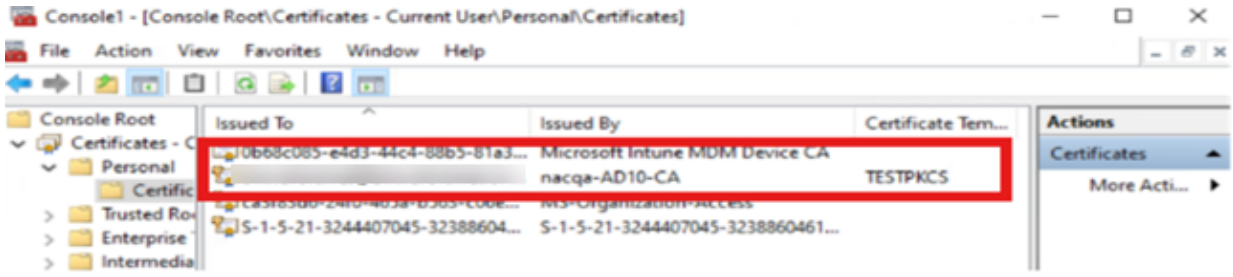
4. Enter the work or school account, and then click **Next**, sign in with your account password, then it will register the device with your organization.

5. Once it is completed, the account should appear as one of the access to work or school.



Result - TLS Certificate added in Client

In Windows Client, go to **Current User > Personal > Certificates**, a user TLS certificate should now be added as a result.

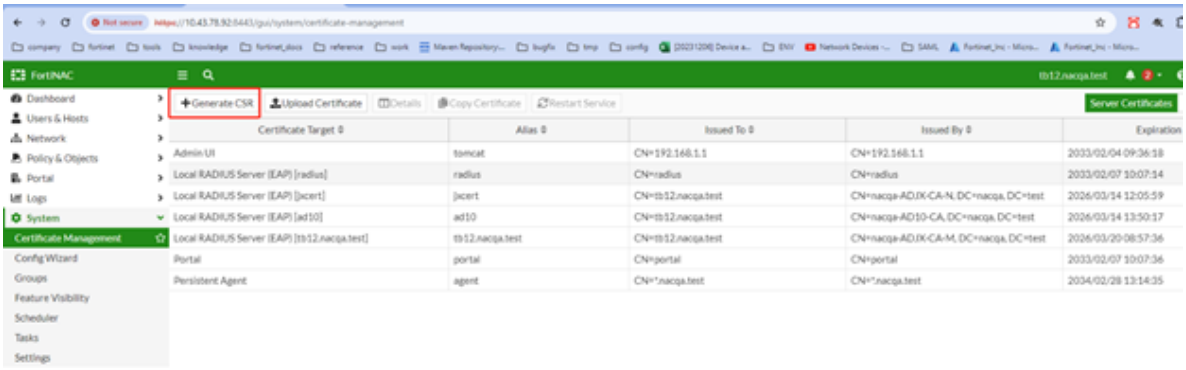


2. FortiNAC Local RADIUS TLS Service Configuration

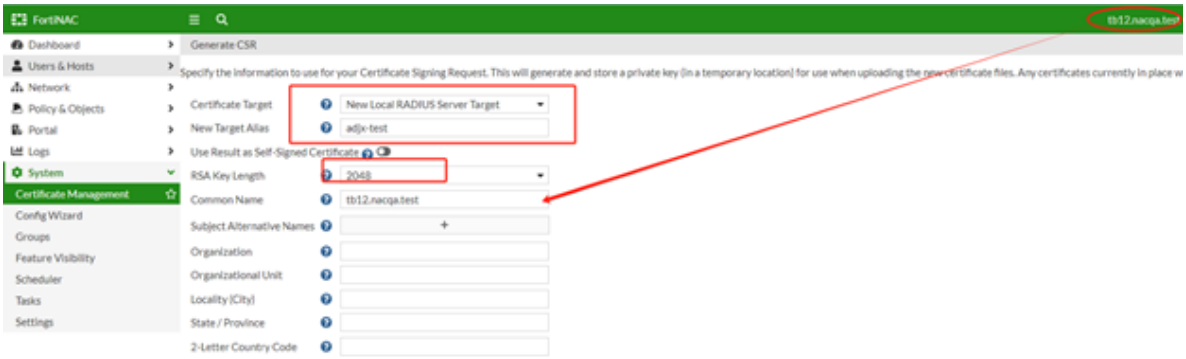
Step 1 - Generate Certificate Signing Request (CSR)

Certificate Signing Request (CSR) is an encoded file that contains the public key for requesting certificate from Certificate Authority(CA).

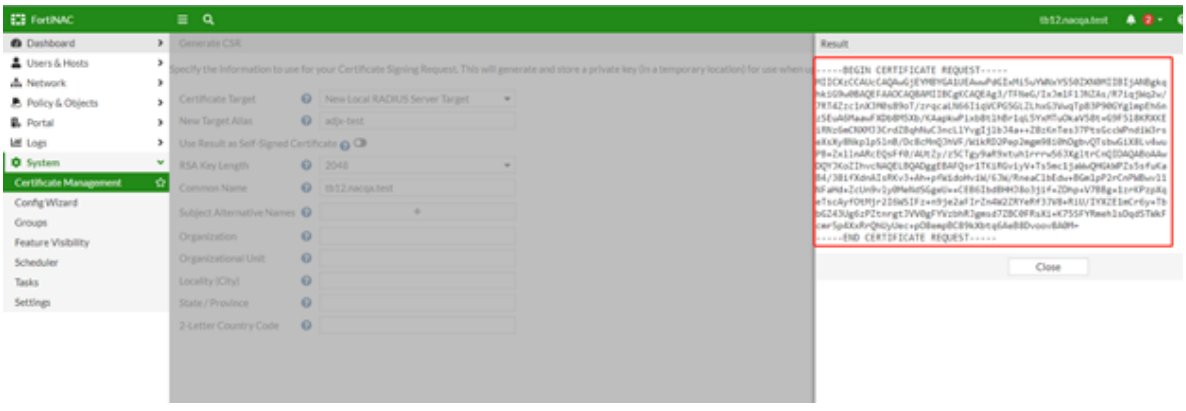
1. Go to Certificate Management, click **+ Generate CSR**.



2. Fill in the Certificate Target or the new local radius server target (EAP), new Target Alias, RSA Key Length, and Common name information.



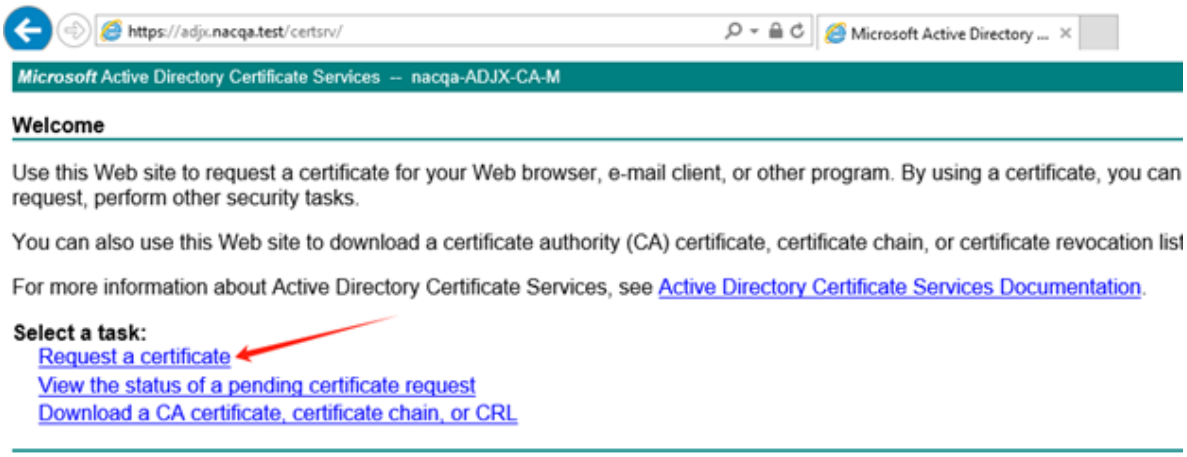
3. Once the CSR is generated, copy in entire key.



Step 2 - Submit Certificate Request on Microsoft Active Directory

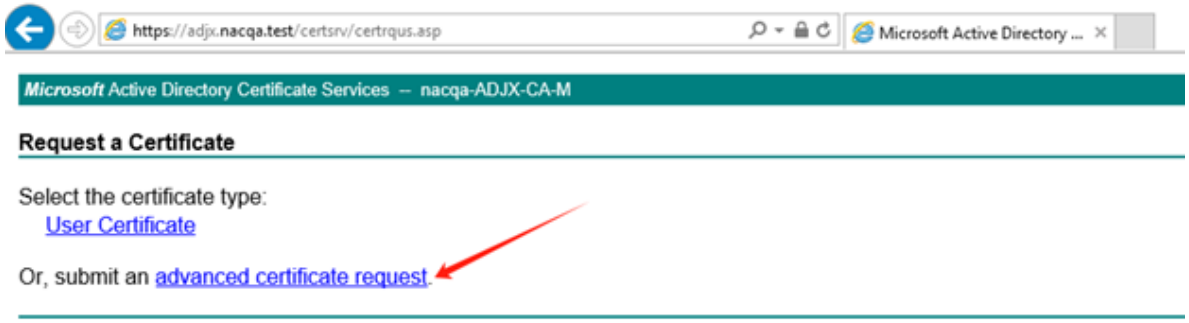
Use the CSR generated in Step 1 to submit a request for certificate in Microsoft Active Directory

1. Open a browser to connect to Microsoft Active Directory Certificate Services, then click **Request a certificate**

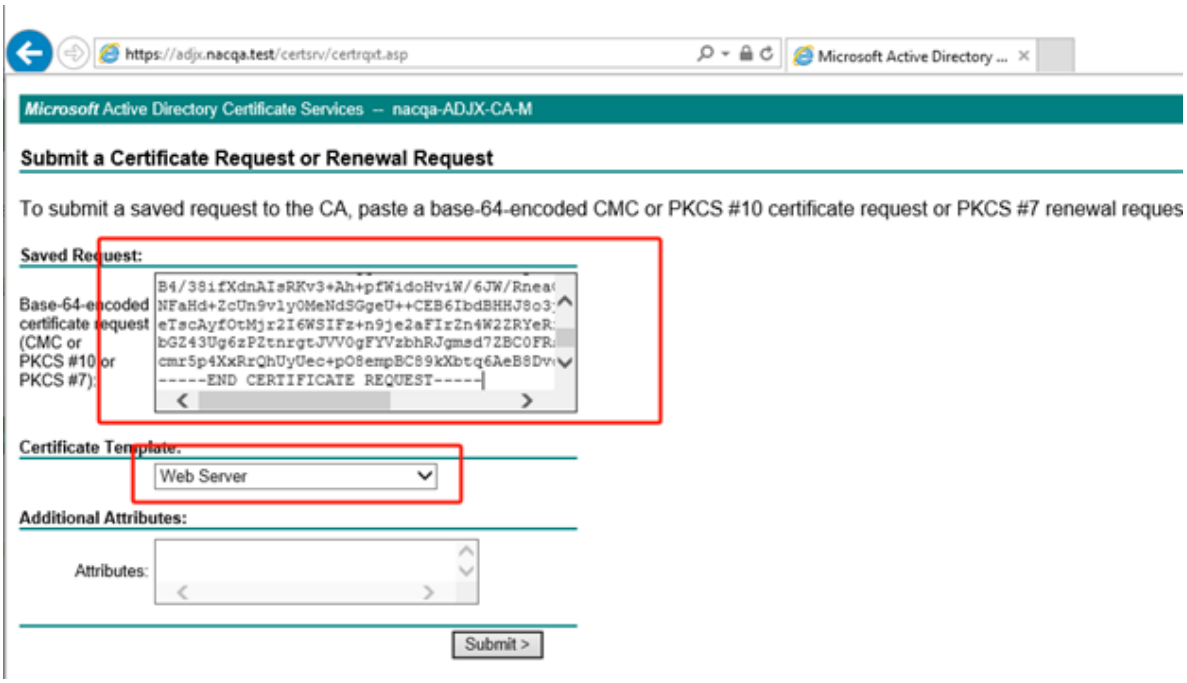


.

2. In **Request a Certificate** page, click **advanced certificate request**.



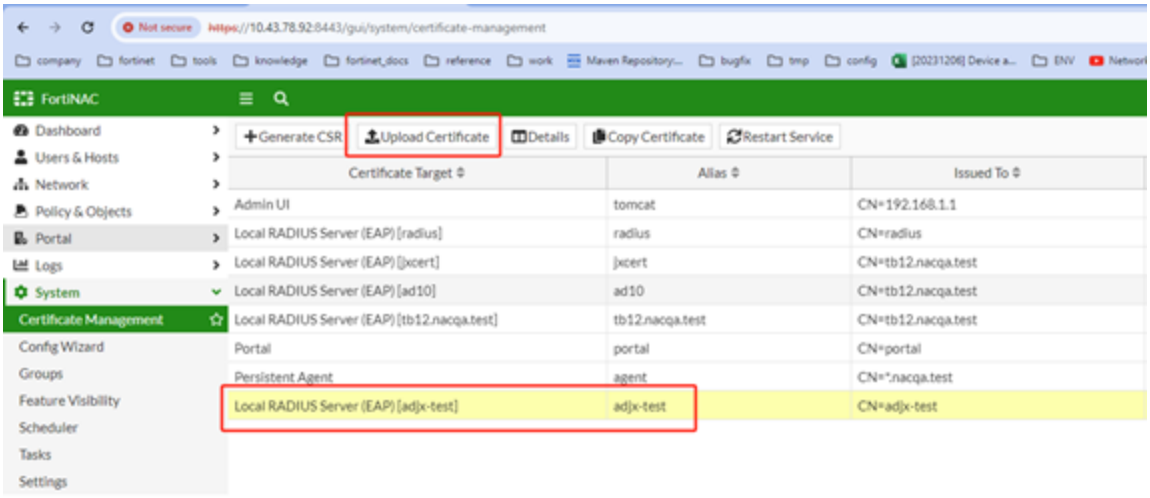
3. In **Advanced Certificate Request** page, click **Submit a certificate request by using a base 64 encoded CM..**
4. Paste the CSR generated from FortiNAC in **Base-64-encoded certificate**. In **Certificate Template**, select Web Server, and click **Submit**.



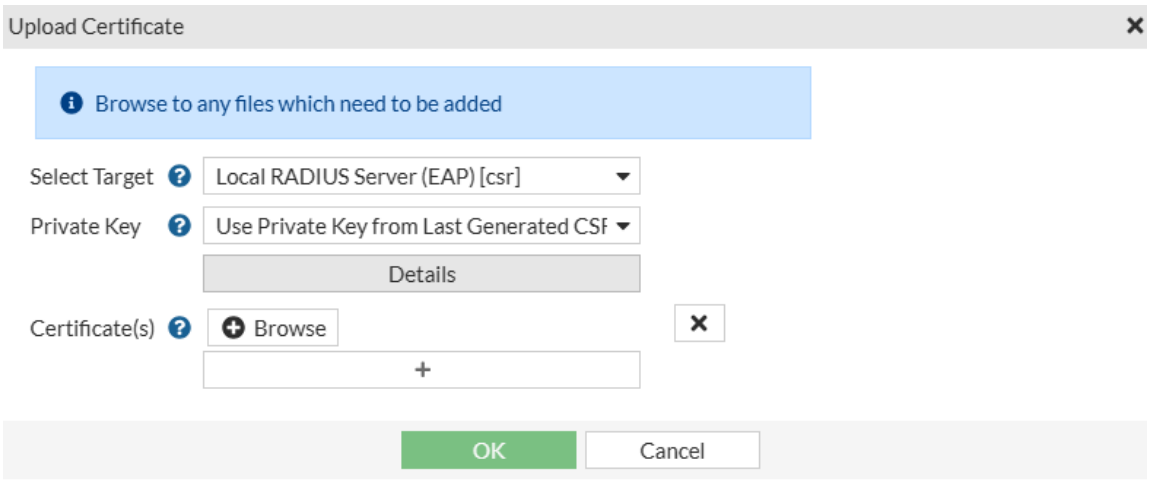
5. When the certificate is issued, download the certificate to the local machine.

Step 3 - Upload the certificate onto FortiNAC

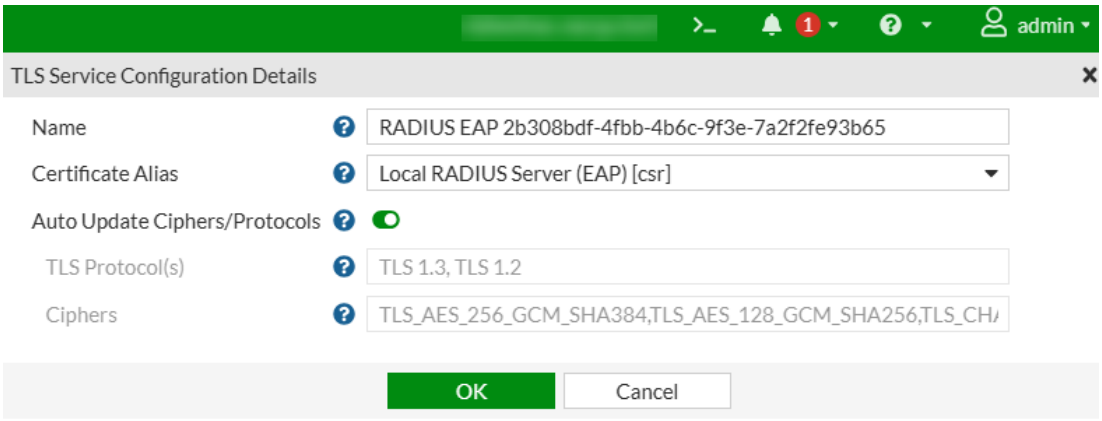
1. Log back onto FortiNAC, go to **System > Certificate Mangement**.
2. Click **Upload Certificate**.



3. Click **Select Target**, and select "Local RADIUS Server (EAP)", then browse and upload the new RADIUS server EAP certificate downloaded from Step 2, and click **OK**.

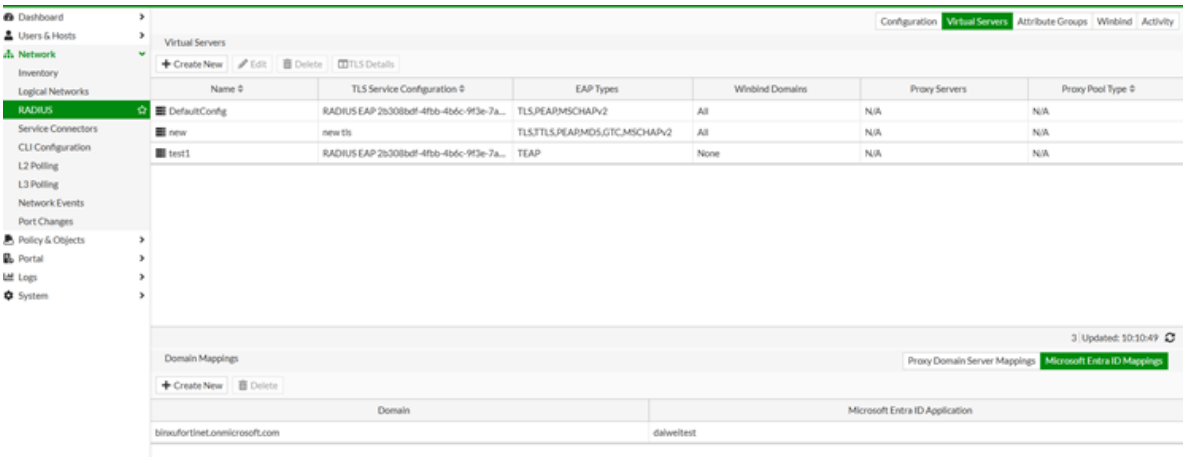


4. Restart the service for the certificate to take into effect.
5. Go to **Network > RADIUS**, click **DefaultConfig** and select **Edit**, configure the **TLS configuration Details** by selecting "LOCAL RADIUS Server (EAP) [csr]" as the **Certificate Alias**, and click **OK**.



Step 4 - Define Microsoft Entra ID Mappings and Authentication source in virtual server configuration

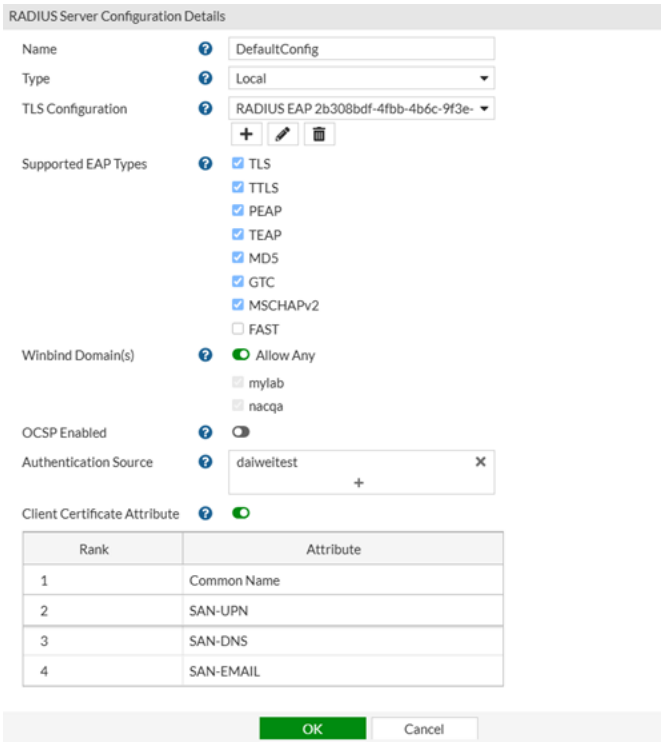
1. Under Domain Mappings, go to Microsoft Entra ID Mapping tab, add domain and Microsoft Entra ID Application.



2. Inside Virtual servers, for Authentication source, select the Microsoft Entra ID from the dropdown list.

Step 5 - Define certificate attribute selection ranking in virtual server configuration

1. In FortiNAC, go to **Network > Radius > Virtual Server**, select one of the servers and double click that, a window will pop up.



1. In **Support EAP Types**, select **TLS** and **Client Certificate Attribute** will appear.
2. Enable the toggle switch button, and configure the ranking in which the attribute can be used to retrieve the username. Currently, 4 values are supported: **SAN-UPN,SAN-DNS,SAN-EMAIL, CN**.
3. FortiNAC will retrieve the username from these attributes according to the ranking configured.

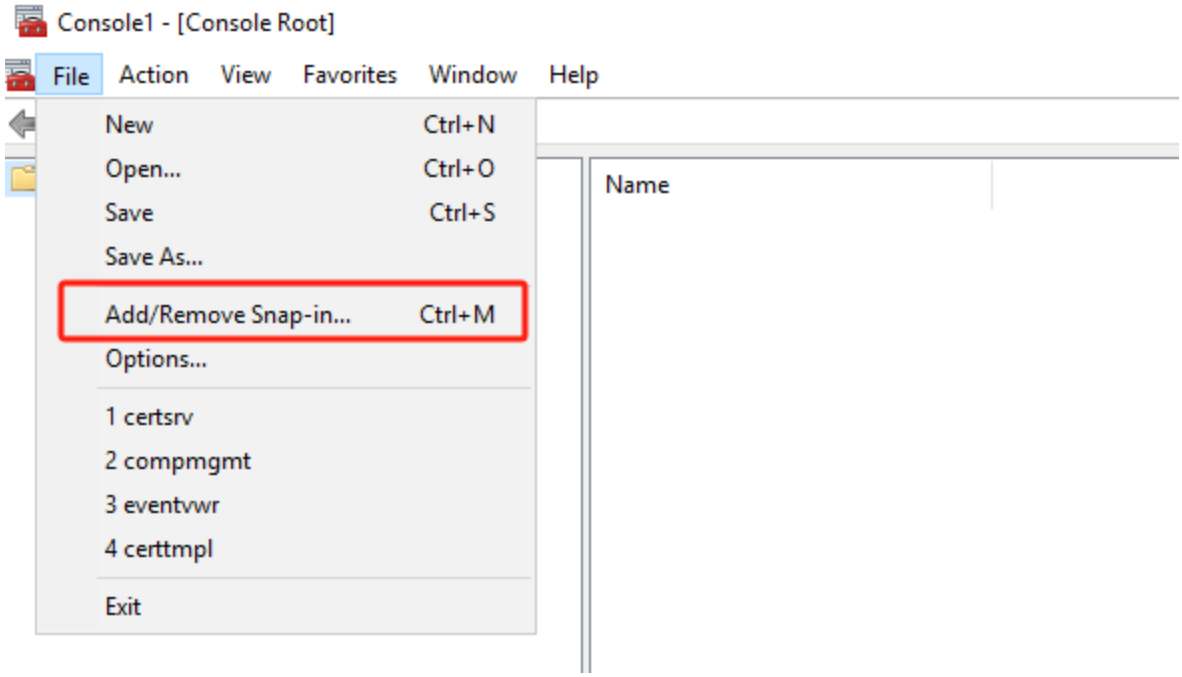
For example, in the screenshot above, FortiNAC will check if there is any common name existing in the certificate and the format is UPN, then the common name can be used to retrieve username and authentication is successful, then it will skip the rest of attributes. Otherwise, it will check **SAN-UPN** etc. If none of these attributes is existing in the certificate or username that retrieved from these attributes cannot finish authentication process, as a result authentication will failed.

3. Configuration on Client Side

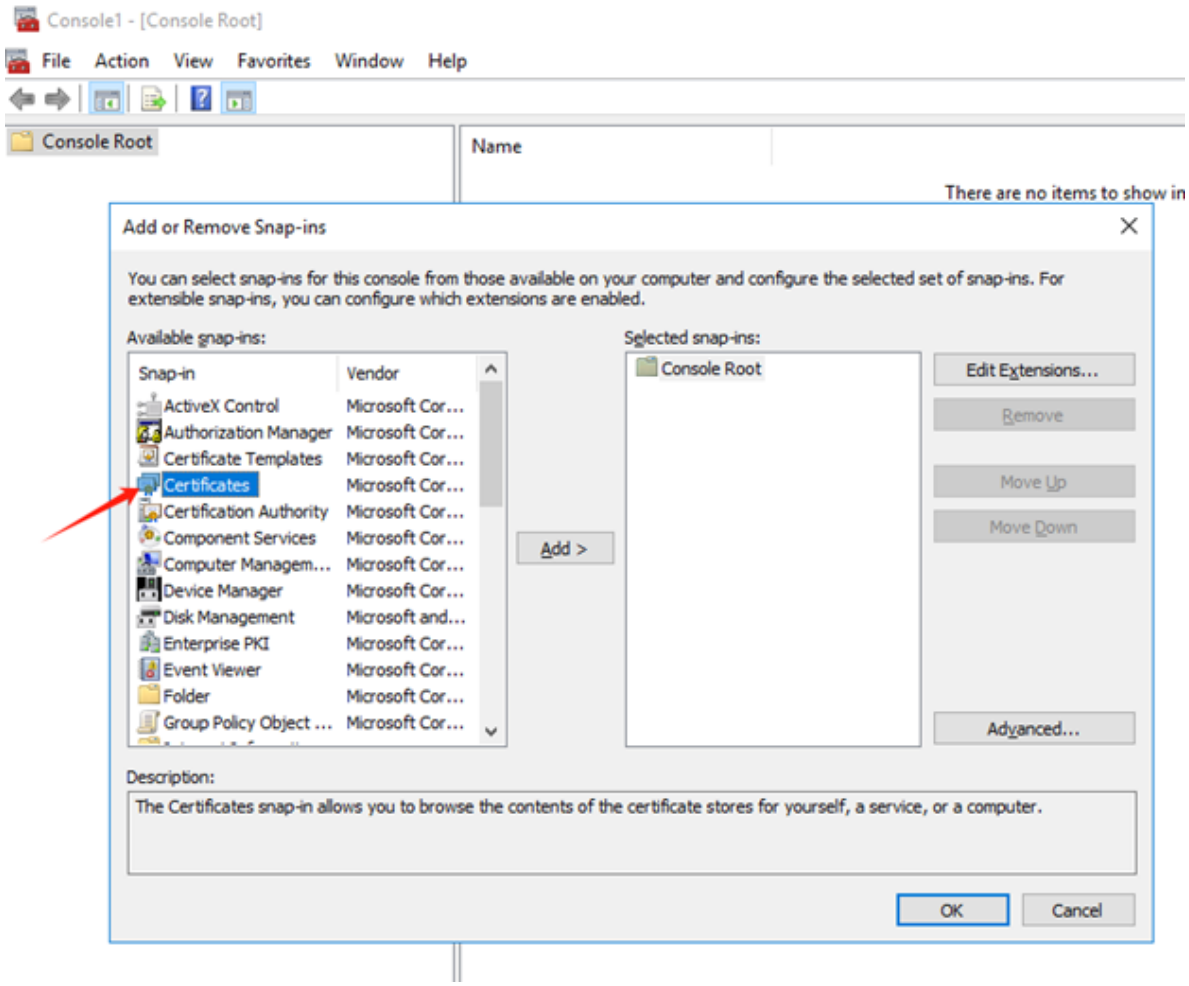
Follow these steps to configure Client Certificate:

Step 1 - Export root CA from Active Directory Certificate Services

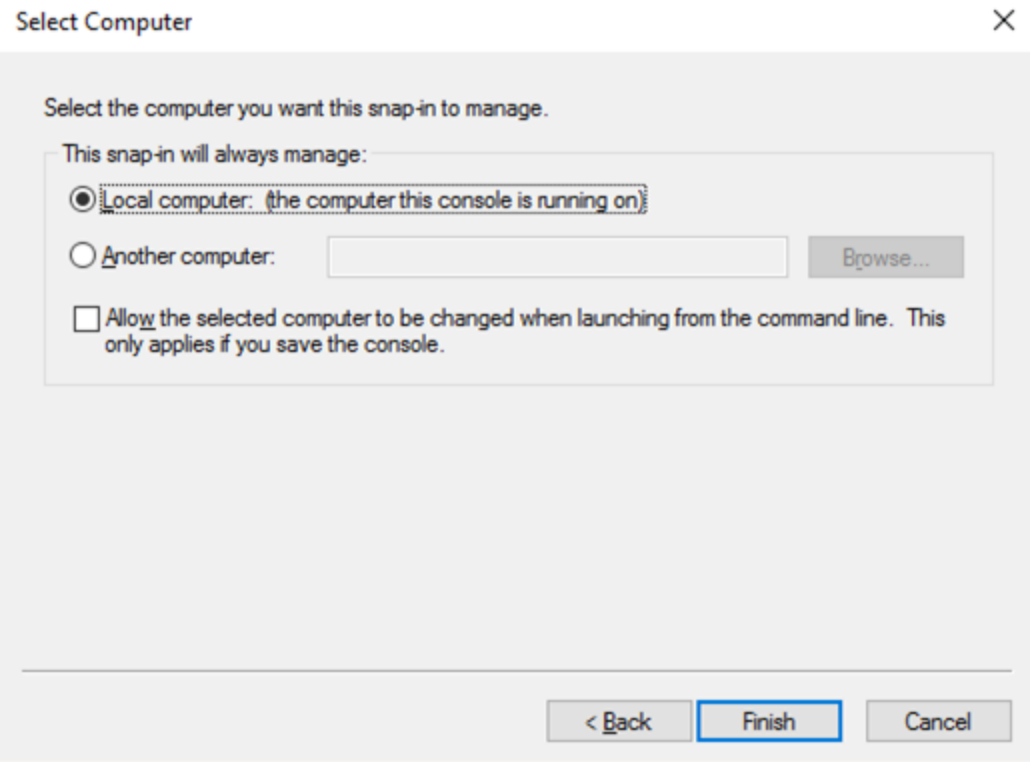
1. In root CA, click search and run on the command "mmc".
2. When the Console window opened, go to **File > Add/Remove Snap-in** from menu.



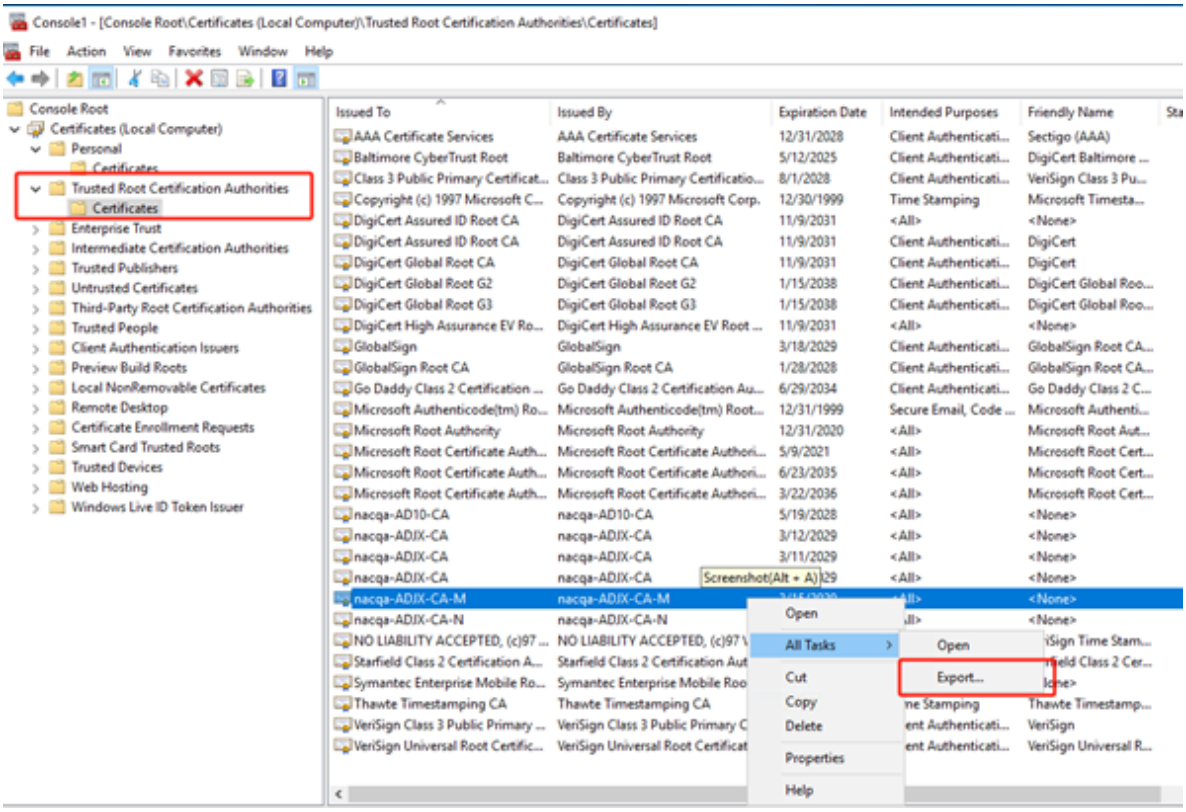
3. In available snap-ins, select Certificates to add, and click **Ok**.



4. In Certificate snap-in window, choose **Computer account**, and click **Next**.
5. Select **Local Computer** as where the snap-in will be managed, and click **Finish**.

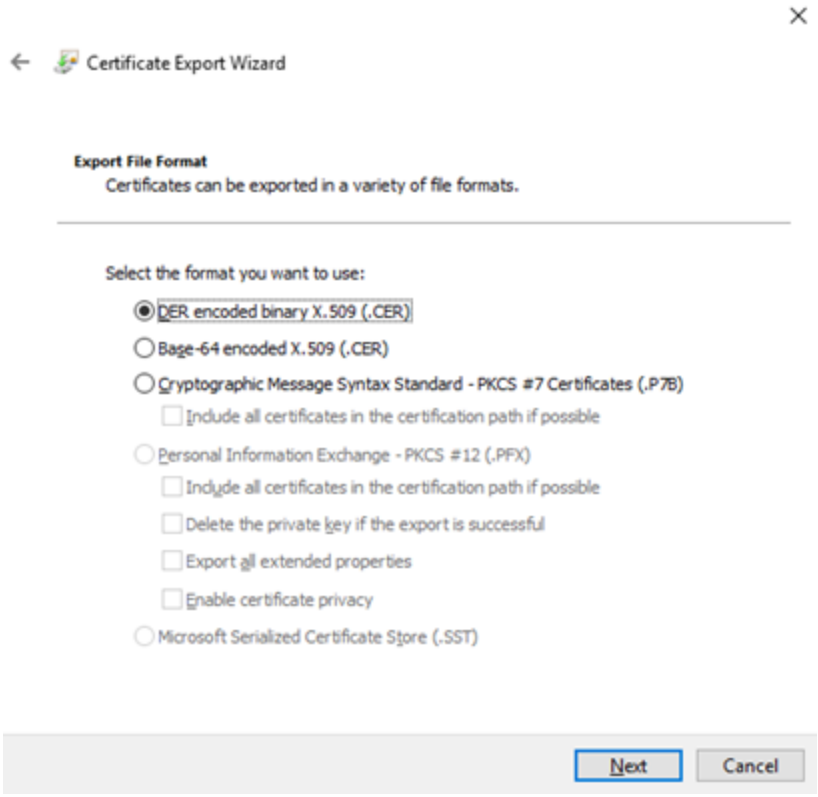


6. Go back to Console, Go to **Trusted Root Certification Authorities > Certificates, select nacqa-ADJX-CA-M**, right click, click All **Tasks > Export**.



7. In Certificate Export Wizard, click **Next** to continue.

8. Click **DER encoded binary X.509 (.CER)** and click **Next**.

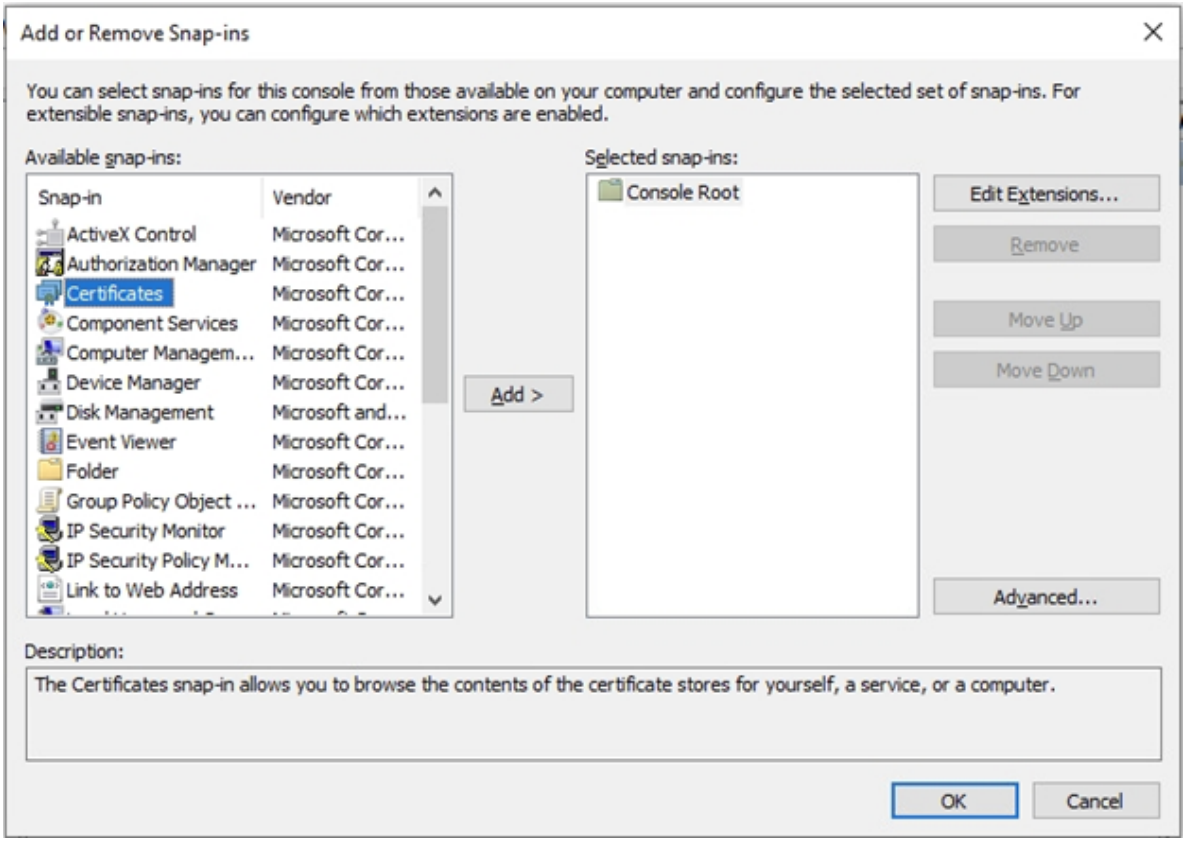


9. Browse to the file you want to export, and click Finish to finish exporting the file.

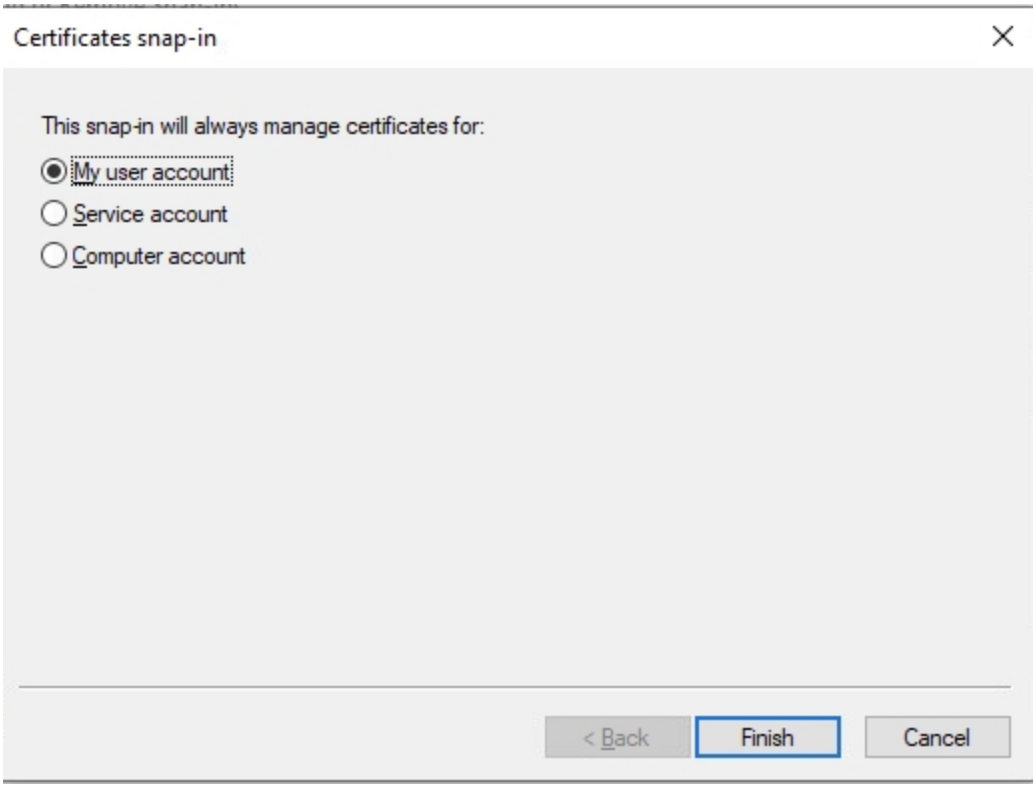
Before proceeding, generate a client certificate and place it in a personal folder under the Certificate's current user.

Step 2 - Import Root CA into Client Trust Root Certificates

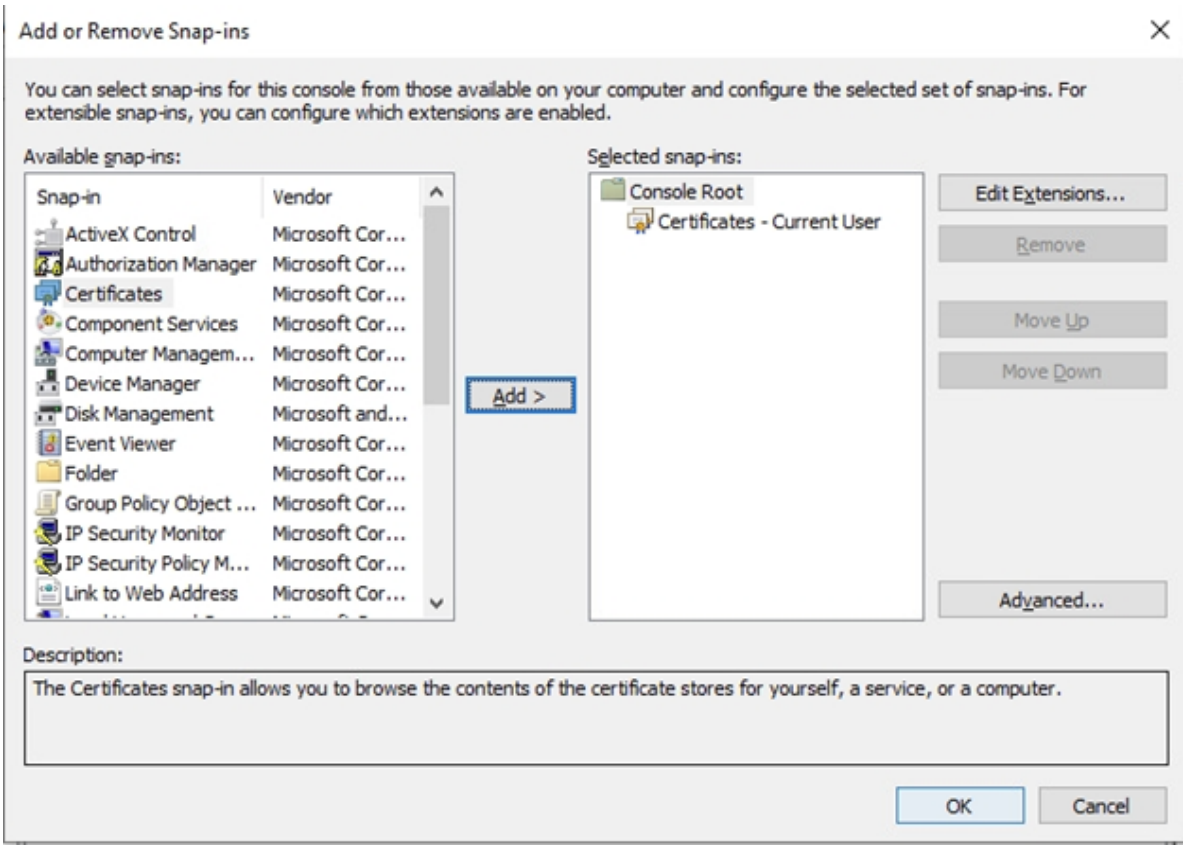
1. In client machine, click search and run on the command "mmc".
2. In **Add or Remove Snap-ins**, select **Certificates**.



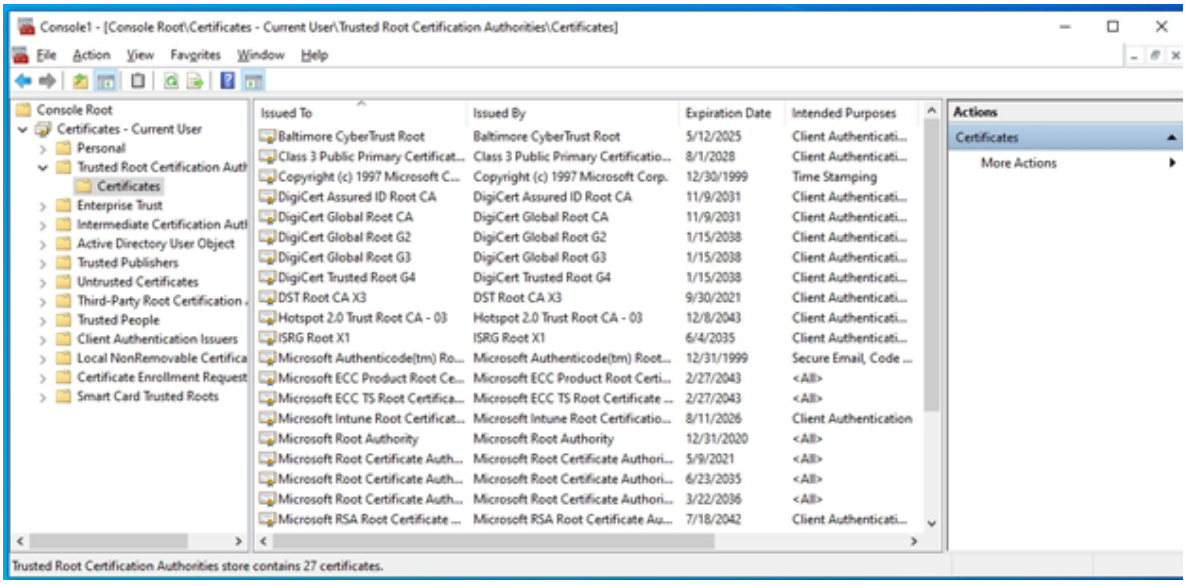
3. In **Certificates snap-in**, select **My user account**, and click **Finish**



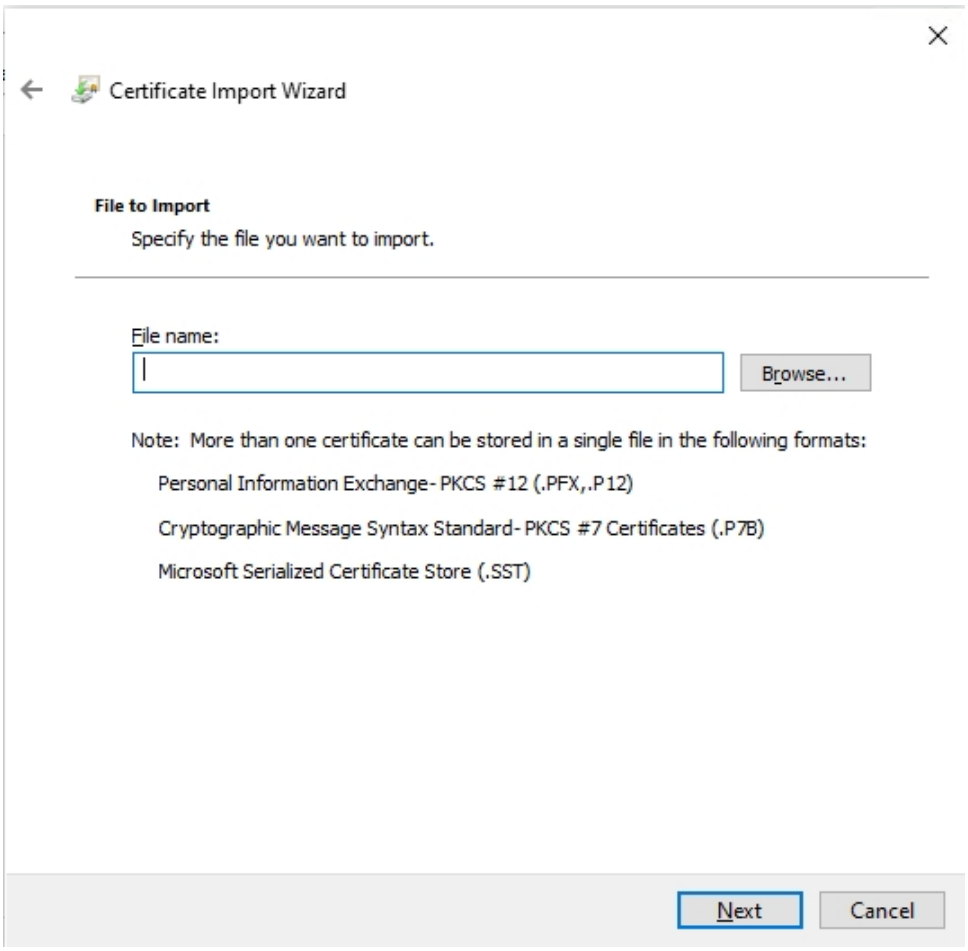
4. .Right click on Trusted Root Certification Authorities, and select Certificates.



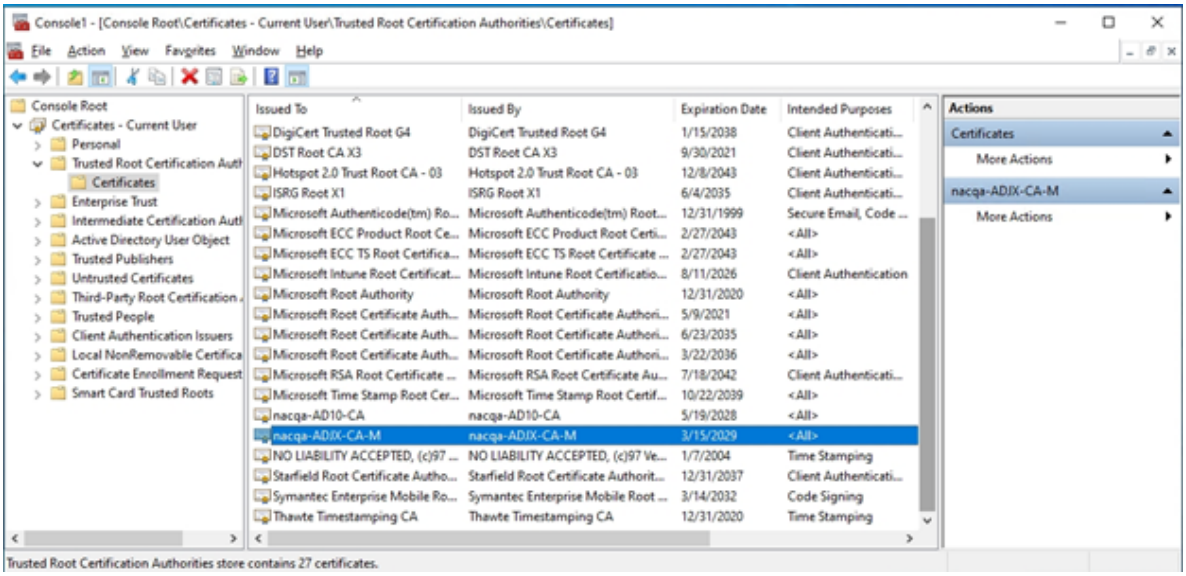
5. Select All Tasks > Import



6. Select Root CA file.

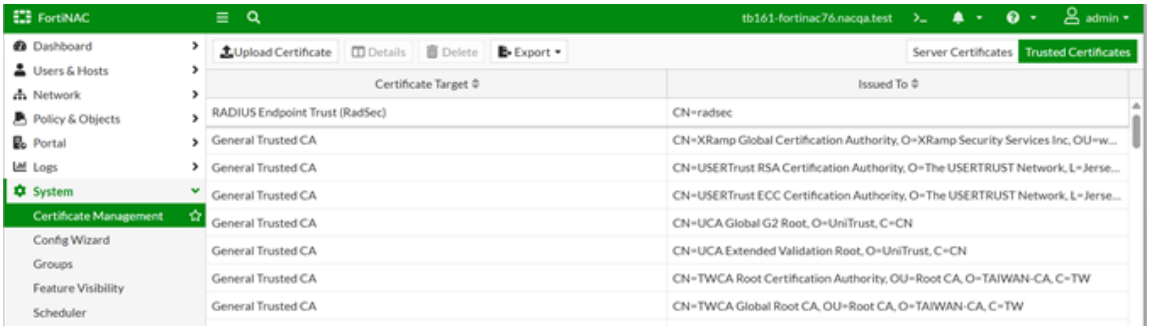


7. After the file is imported, the Root CA can be located in the list.

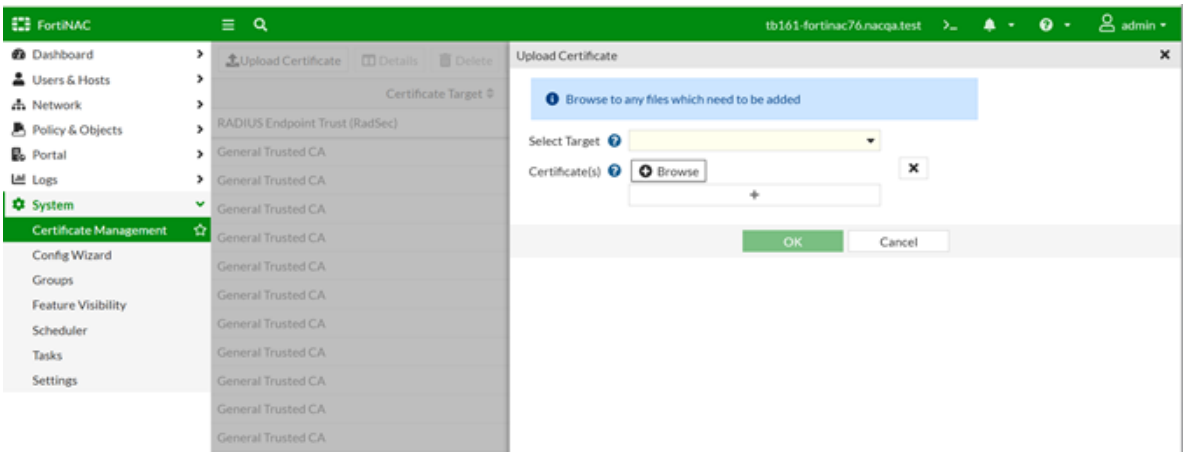


Step 3 - Upload AD Root Certificate to FortiNAC

1. Log into FortiNAC, and go to **System > Certificate management**.
2. Select **Trusted Certificates** tab and click on **Upload Certificate**.

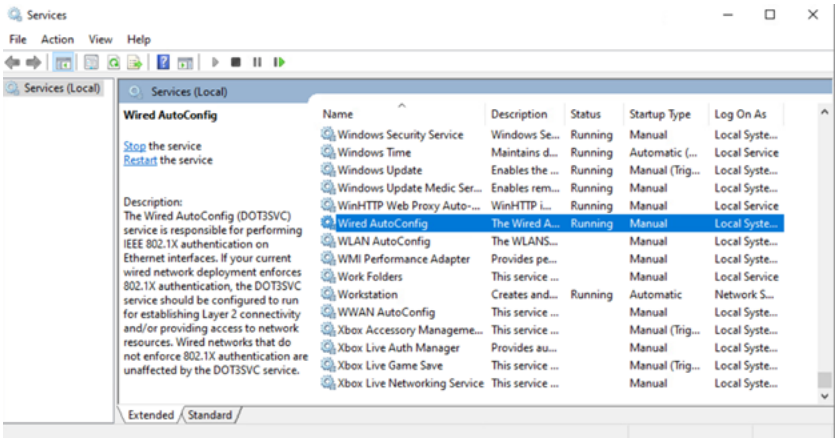


3. Click on **Browse** to add the AD root certificate to the FNAC

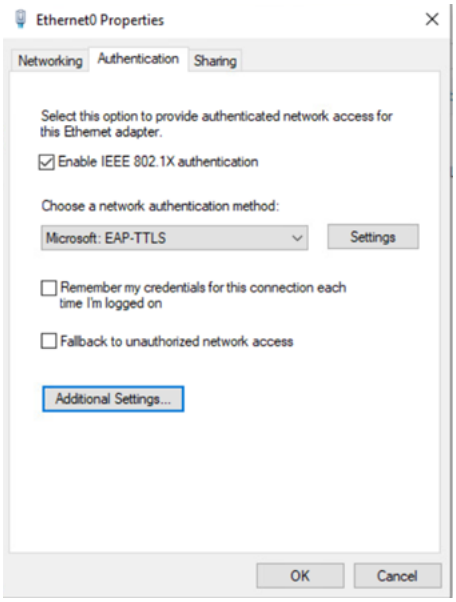


4. Use the TLS certificate to initiate authentication

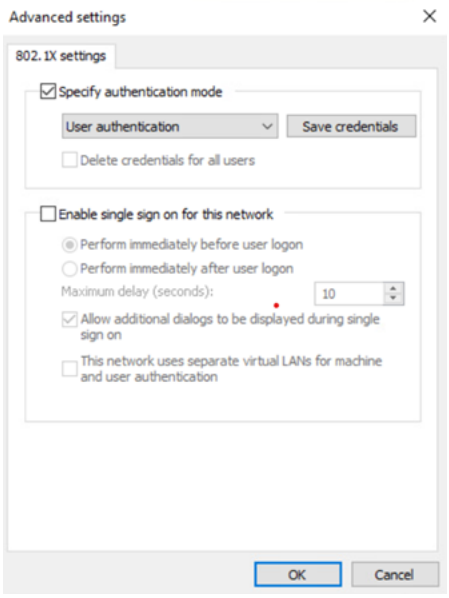
1. Log into the Windows host. Go to Services, and start **Wired Autoconfig** Service.



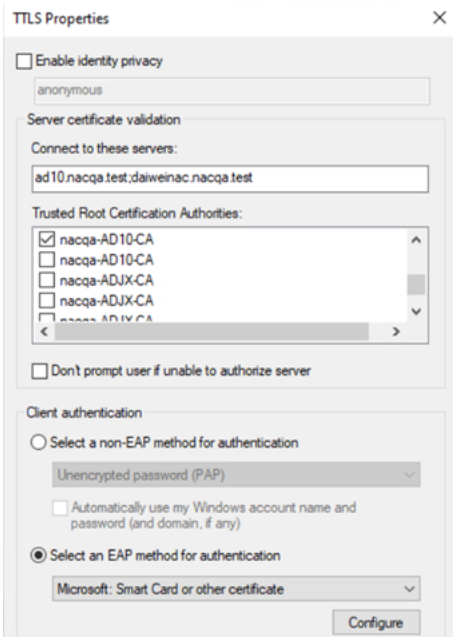
2. Go to **Control Panel > Network Connections**, right click on the network adapter, and click **Properties**.
3. Click on **Authentication** tab, and enable **IEEE 802.1X authentication**. For network authentication method, select **EAP-TTLS**.



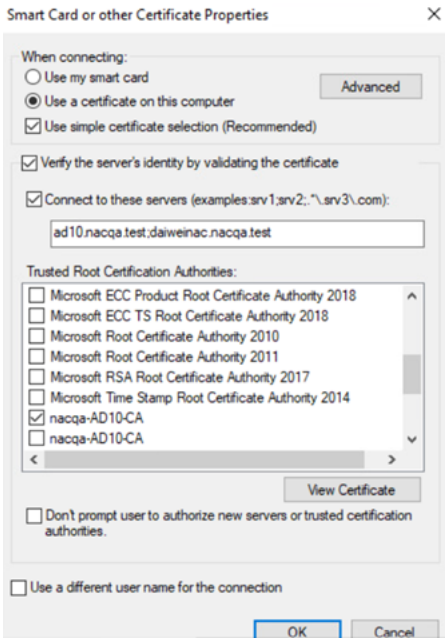
4. Click **Additional Settings > Specify authentication mode**, and choose **User authentication**.



5. Click on **Settings** next to **EAP-TLLS**
6. Uncheck **Enable Identity Privacy**.
7. For **Connect to these server**, input your CA address and FortiNAC address. Choose the **Trusted Root Certification Authorities**.
8. For **Client Authentication**, select an **EAP method for Authentication**. Choose **Smart Card** or other certificates.



9. Click **Configure** under Smart and certificates.

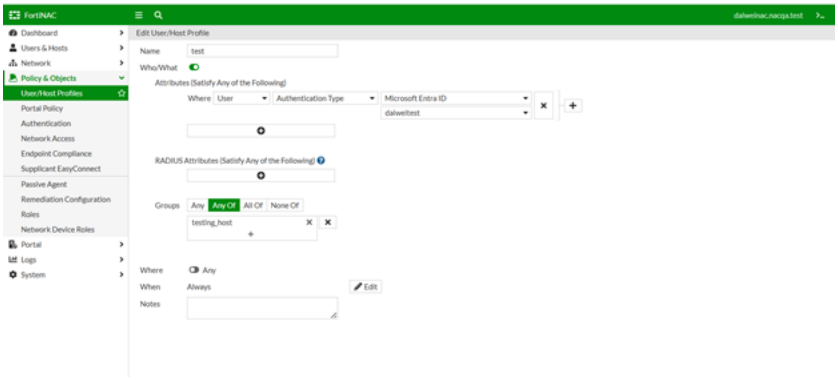


10. Enable **simple certificate selection**, **Verify the server's identity by validating the certificate**, **Connect to these severs** and input your CA and FortiNAC address.
11. Select the trusted root certification Authorities.

5. Synchronize New attributes added in User/Host Profiles for Microsoft Entra ID

The new Microsoft Entra ID service connector can be sourced and synchronize in User/Host profile .

1. Go to **Policy & Objects > User/Host Profiles > Who/What Attributes**.
2. In Where condition, set **User** > **Authentication Type** as Microsoft Entra ID, you can choose your service connector for Microsoft Entra ID.
3. If the user source is Microsoft Entra ID and authentication source matches the service connector configured for Microsoft Entra ID. The vlan will switch based on the matched policy.



Remote Group

Overview

Remote Group allows FortiNAC to sync groups of users from Microsoft Entra ID. These groups of users can constantly be polled and updated automatically or manually through FortiNAC service connector. Essentially, it allows FortiNAC users to see the list of users authenticated by FortiNAC through Microsoft Entra ID authentication as a group in **System > Groups > Remote Groups**.

These remote group can be also be used in User Host Profile (UHP).

FortiNAC checks the user group membership and then responds to RADIUS with a Production vlan in the scenario where access request are accepted according to network access policies.

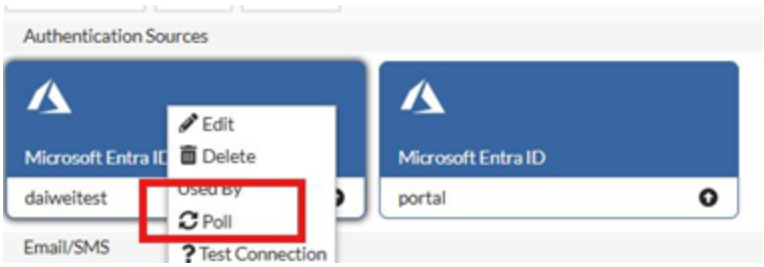
Configuration on FortiNAC through Service Connector

To import groups from Microsoft Entra ID, go to **Network > Service Connectors > Authentication Sources -> Microsoft Entra ID**.

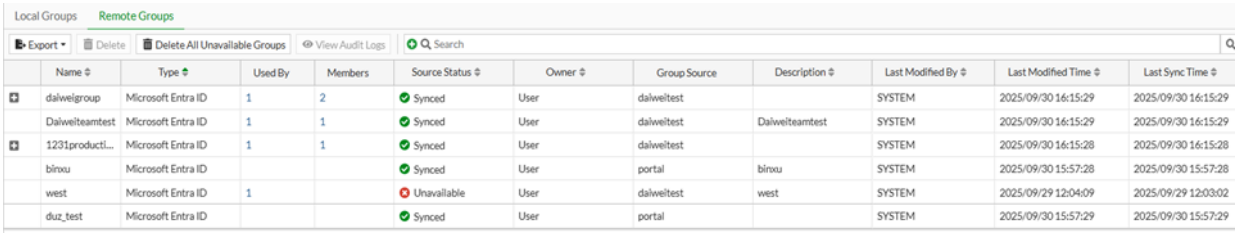
1. Enable **Import Groups From Microsoft Entra ID**.

2.
3. Select the groups to be imported from Microsoft Entra ID.
4. In **Sync Groups Automatically**, configure how often the groups to be synced in FortiNAC.
5. Enable **Delete Users No Longer Found on Sync** to automatically delete users no longer found from the group.

Alternatively, remote groups can also be pulled manually through right click on the service connector and select Poll.



The remote groups that are imported can now be viewed on FortiNAC at **System > Groups >Remote Groups**



The **Source Status** is a reflection of the group status on Microsoft Entra ID:

1. Synced - connected and updated through Microsoft Entra ID.
2. Unavailable - the group is deleted from Microsoft Entra ID.
3. Disconnected - Service connector cannot reach the specific group.

Remote Groups CLI Configuration

The following CLI commands can be used to display Microsoft Entra ID group details in FortiNAC CLI:

```
Diagnose system remote-group display all/id/name
```

CLI Command	Description
all	Display all remote groups.
id	Display remote group information and/or members using ID.
name	Display remote group information and/or members by name

CLI Command example

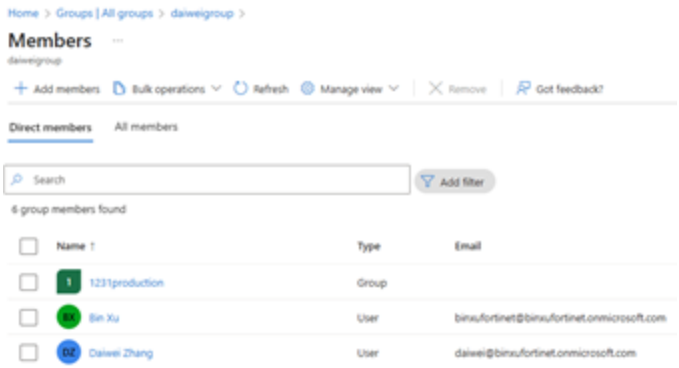
```
Commands:
  all   Display all remote groups
  id    Display remote group information and/or members using ID
  name  Display remote group information and/or members by name
daiweinac2 (Interim) # diagnose system remote-group display all
  ID  |                 Name                 |      Type
______|______________________________________|______________
1373345314447362|daiweigroup                              |Microsoft Entra ID
1373345315557380|Daiweiteamtest                           |Microsoft Entra ID
1373346624471056|binxu                                    |Microsoft Entra ID
1373382050545695|duz_test                                 |Microsoft Entra ID
1375483748839431|1231production                           |Microsoft Entra ID
1377195803824152|west                                     |Microsoft Entra ID
______|______________________________________|______________
daiweinac2 (Interim) #
```

Example - Remote Group Use with User Host/Profile

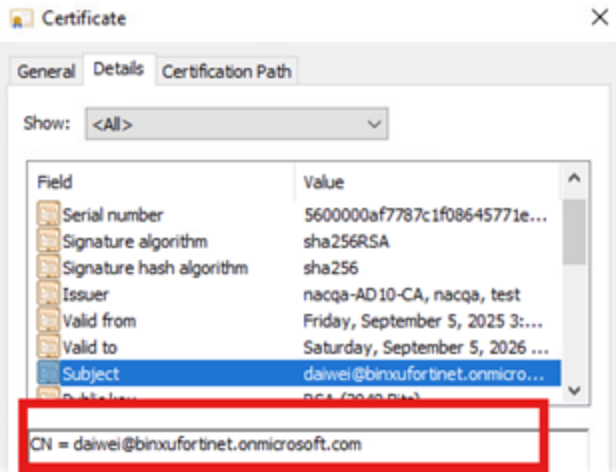
In this example, 802.1X TLS will be used in conjunction with Remote Group.

Prerequisite

The user used to do the authentication is a member of remote group in Microsoft Entra ID.



The user has generated a TLS certificate that CN has the UPN format of username.

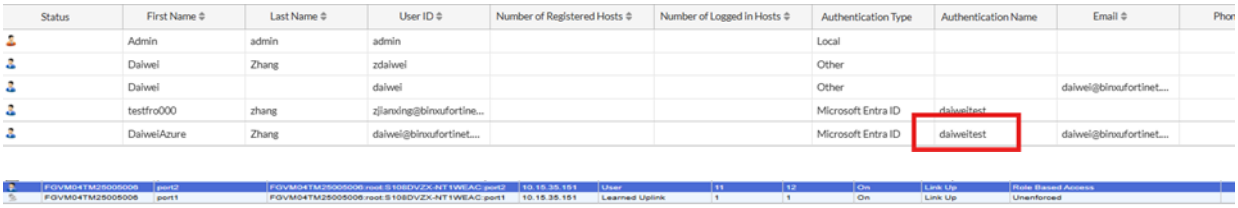


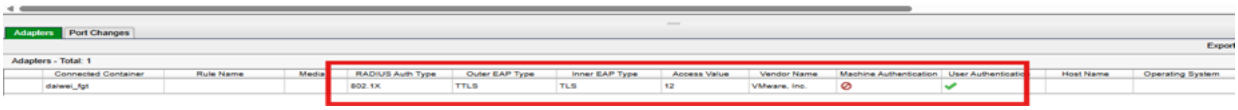
Steps on using 802.1X TLS Security Profile

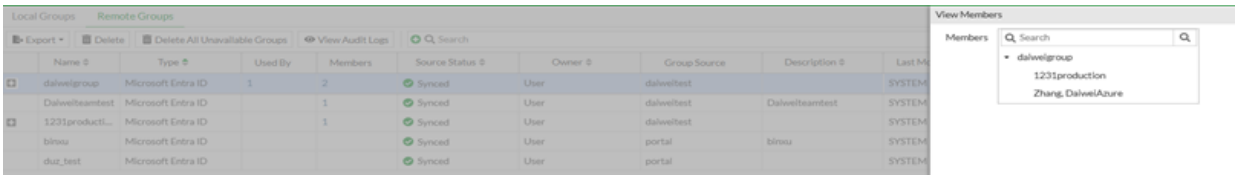
1. Add Microsoft Entra ID into FortiNAC network Service Connector.
2. Import remote group called "daiweigroup" and pull group.
3. Apply remote group "daiweigroup" in Network Access UHP.
4. Enable auto registration on switch port
5. Add 802.1X security profile from FortiGate switchport.
6. Add Authentication source and Microsoft Entra ID Mappings in radius configuration
7. Using TLS certificate which CN is "daiwei@binxufortinet.onmicrosoft.com" to do 802.1X authentication. Outer EAP method is TTLS, inner method is TLS.
8. After authentication is done, "daiwei@binxufortinet.onmicrosoft.com" is added into "daiweigroup" remote group automatically and host will move to production vlan

Note: Import UHP policy including remote group attribute from CA to NCM is not supported.

Result of the authentication






Local Groups
Remote Groups
Export
Delete
Delete All Unavailable Groups
View Audit Logs
Search
Name
Type
Used By
Members
Source Status
Owner
Group Source
Description
dalweigroup
Microsoft Entra ID
1
2
Synced
User
dalweitest
Dalweiteamtest
Microsoft Entra ID
1
Synced
User
dalweitest
Dalweiteamtest
1231producti...
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1
Synced
User
dalweitest
binxu
Microsoft Entra ID
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Microsoft Entra ID
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User
portal
View Members
Members
Search
dalweigroup
1231production
Zhang, DalweiAzure