Microsoft Windows MDM Setup

Integration of FileWave with Microsoft Windows MDM requires some initial setup. This is likely a one-time configuration for your environment, depending on complexity.

On initial setup, we'll need to make sure we can satisfy the licensing pre-requisites, publish a custom FileWave client, set our acceptable use terms, and finally create and configure the AAD MDM application itself.

Pre-Requisites of Windows MDM Setup

What

FileWave can integrate and use the framework of Microsoft Windows MDM to manage Windows endpoints, but there are licensing requirements that need to be satisfied (outside of FileWave).

When/Why

Windows MDM requires certain licenses based on your organization's relationship with Microsoft. As far as FileWave-specific licensing is concerned, each endpoint need only have a FW client license.

How

All Windows MDM function relies on Microsoft Entra Active Directory, so that must be in place for your organization. Specifically Microsoft Entra Premium P1 or P2. Many of their license bundles include that license. Additionally, you'll need AutoPilot access and access to the Microsoft store for business:

Licensing requirements for AutoPilot:

Windows Autopilot licensing requirements | Microsoft Learn

(AutoPilot is the framework that allows your devices to enroll into FileWave when initially setup)

Information on Microsoft Endpoint Management / InTune for Business:

Endpoint Management at Microsoft | Microsoft Learn

Part 1: Custom FileWave Client

What

Windows MDM with FileWave is implemented in a hybrid-mode. That is, we can issue MDM commands (such as installing a policy), but also wish to leverage our native FileWave client capabilities.

When/Why

Our first step in setting up the integration for Windows MDM is to create and publish a customized FileWave client so that our newly MDM enrolled devices will have a functioning FileWave client installed upon enrollment.

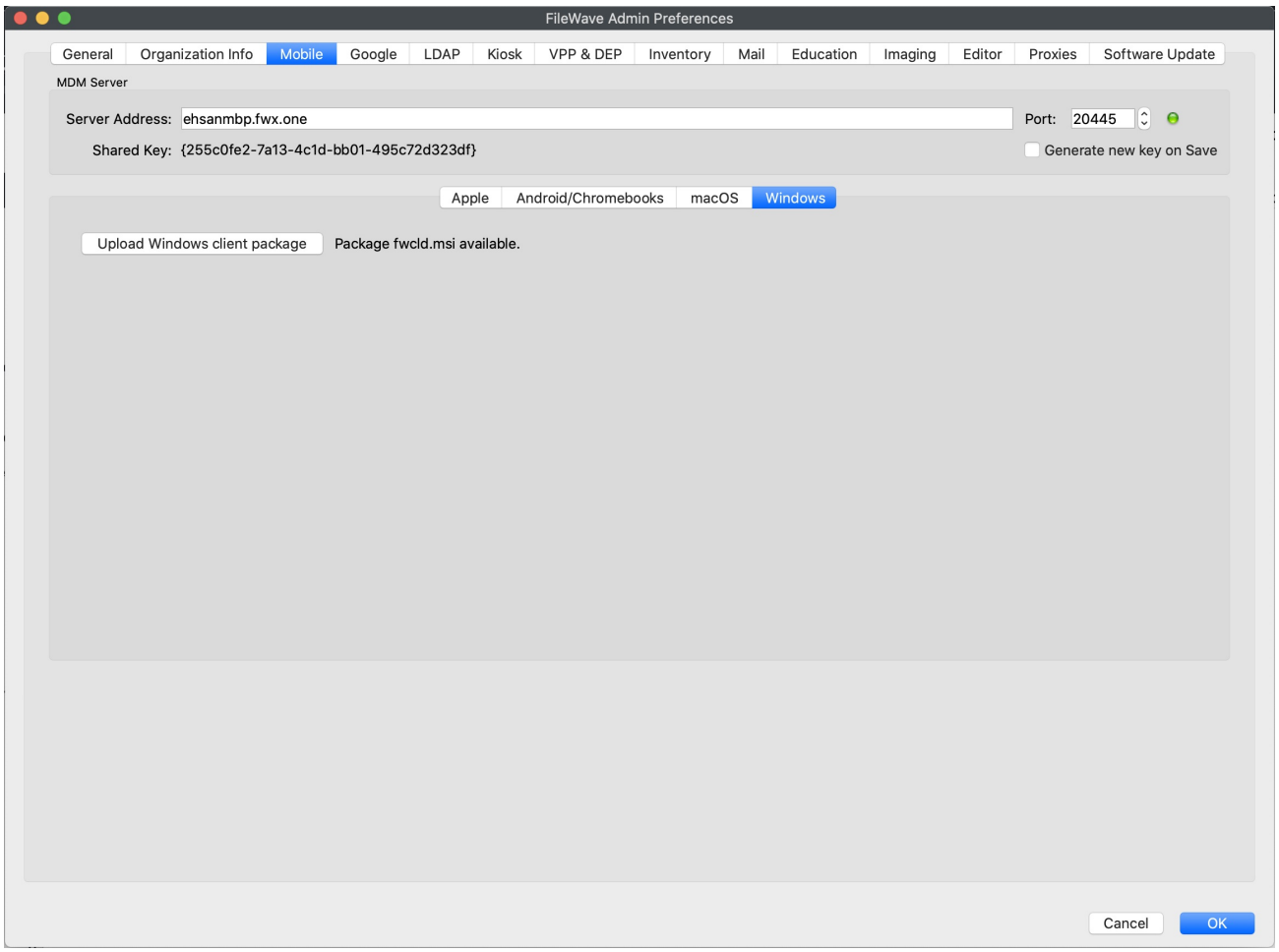
How

> ⚠ Before anything make sure that you have done following steps:
>
> Your FileWave server is running healthy, and backups are being performed.
> You have valid, trusted certificate installed on your FileWave server.
> You have at least saved FileWave preferences once (open preferences in the native admin and save it.)
> This will set important configurations on your FileWave server (shared keys, etc.)
> You have at least updated model once
> This will allow FileWave's internal URIs to be in place.

After you confirmed everything is ok, then you may upload the custom client MSI installer.

Upload fwcld msi package

1. Open the native admin and open preferences.
2. Go to the Mobile tab and look under the Windows sub-tab.
3. Upload your custom client.msi package on that tab as shown below. Create this installer with the Customer Installer Builder.



Part 2: Setting up Terms and Conditions

What

When a device is enrolled in Windows MDM, a custom end-user terms page is required for the Microsoft application we'll be building later.

When/Why

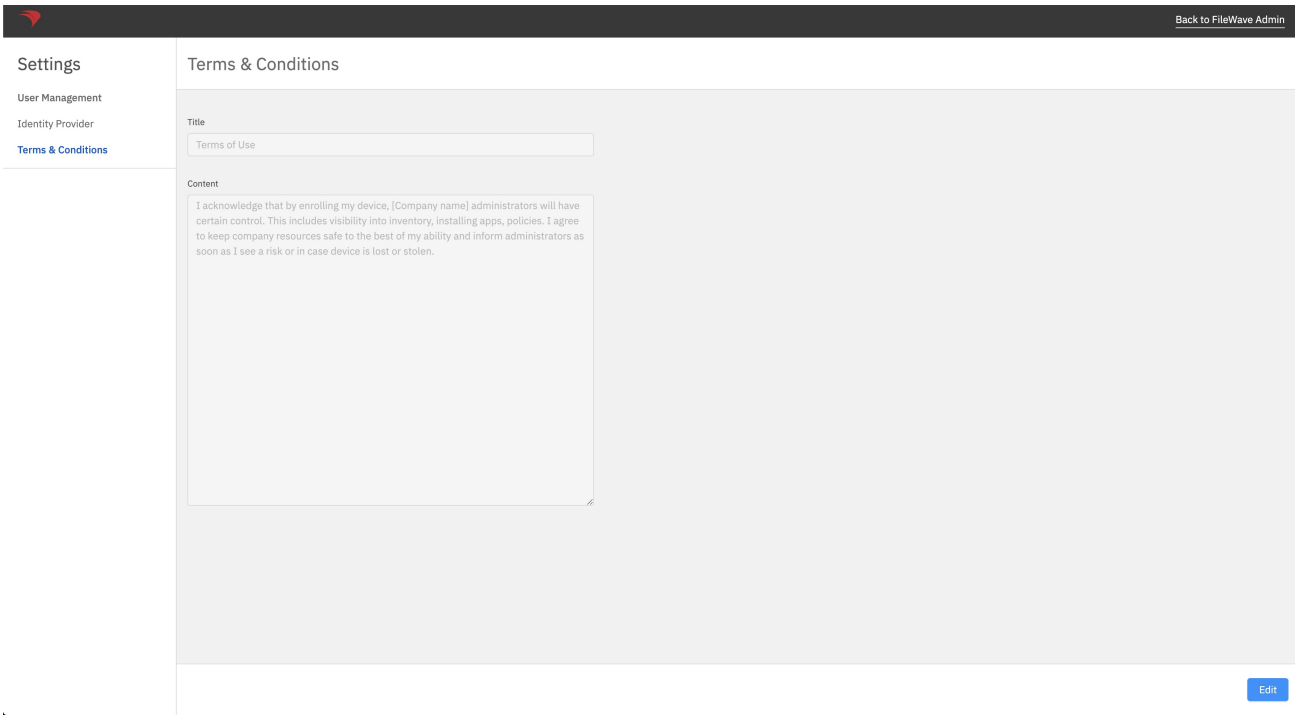
We'll need to establish our terms pages within the FileWave AnyWhere (Web admin), and they'll be used at enrollment time. These terms pages can be customized for your environment with the terms you prefer.

How

Editing Terms & Conditions

Terms & Conditions are for a page that are shows to users who are enrolling to your Server. You can customize this page via the FileWave Web Admin.

1. Click on the gear button next to Model update in FileWave Web Admin.
2. Navigate to Terms & Conditions tab.
3. Edit the title and/or the content of the page.



Part 3: Setting up the Portal App

What

The configuration of your Windows MDM integration will all be driven by an application you yourself create in the Microsoft Entra Portal.

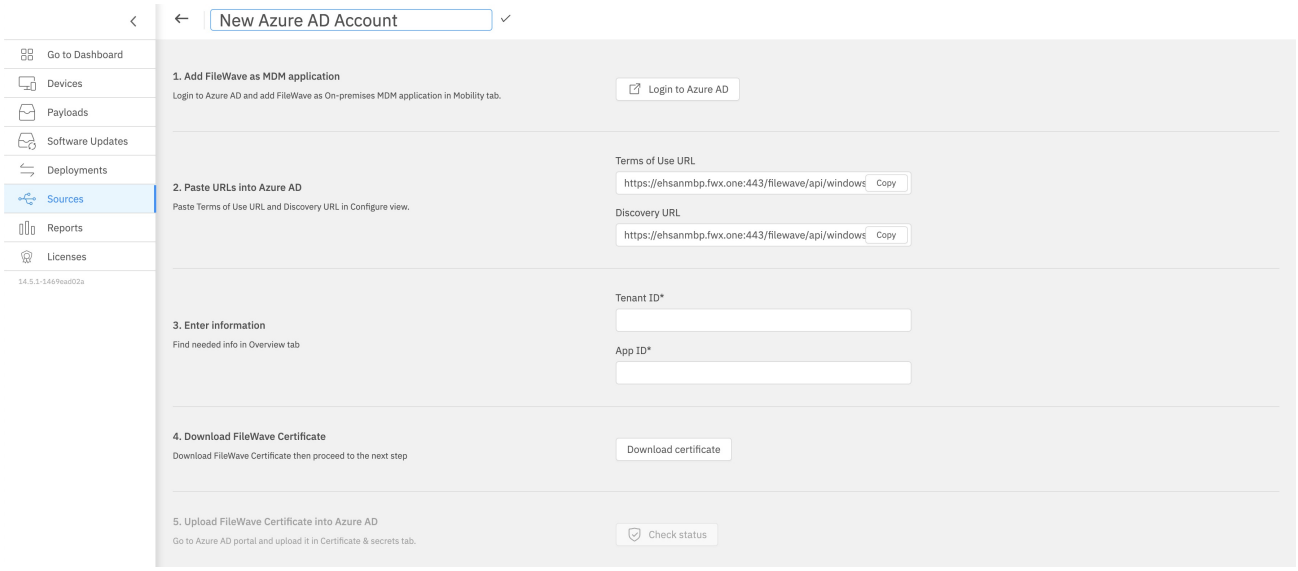
When/Why

This application is the linch pin that ties your devices (in AutoPilot), through your user accounts (the group associated with the app), into redirection to your FileWave MDM server. Detailed setup steps follow.

How

Add Microsoft Entra ID account in FileWave

1. Open your FileWave AnyWhere (Web Admin) page and navigate to sources.
2. Click the Microsoft tab.
3. Click on New account and you should see the following form:



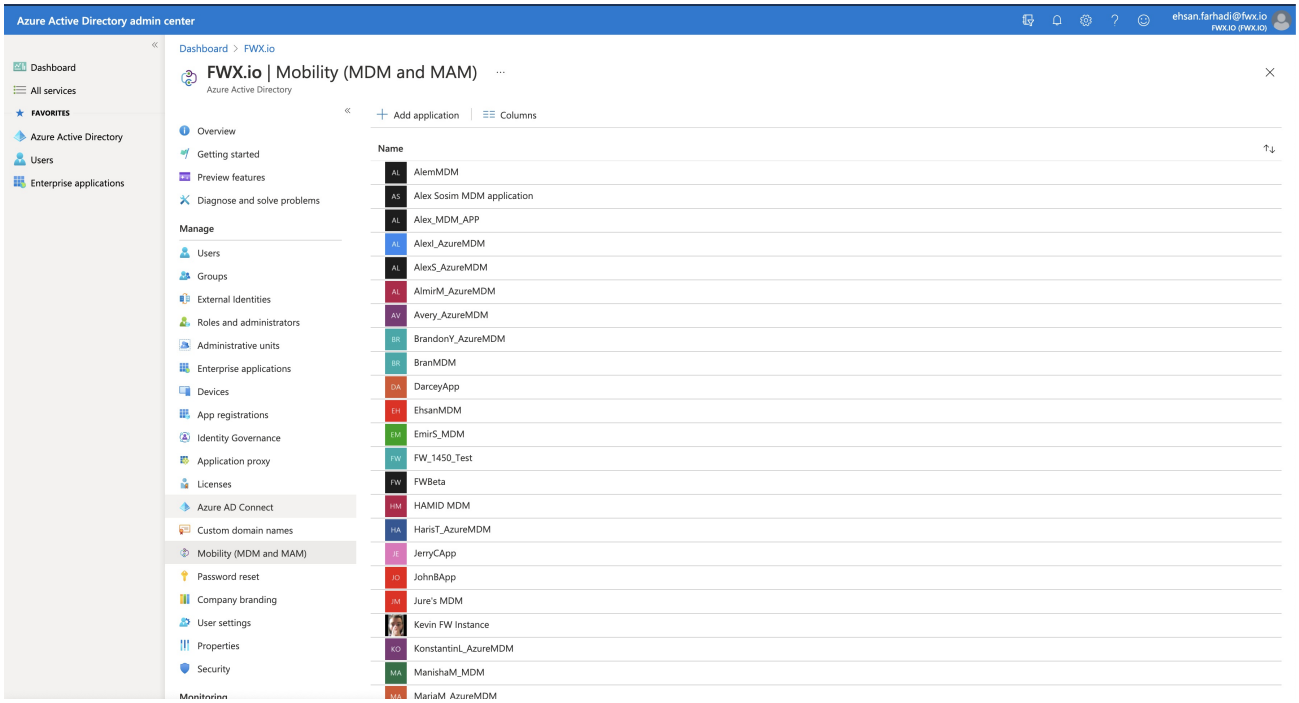
Keep this form open for completion in later steps.

Configuring Microsoft Entra ID

Creating MDM application

In order to enable MDM enrollment, first you need to configure your Microsoft Entra ID to recognizes your FileWave server as your MDM.

1. Go to your Microsoft Entra ID portal: https://aad.portal.azure.com
2. From dashboard navigate to Microsoft Entra Active Directory → Mobility (MDM and MAM) and then click Add application.
3. In new application form, select On-premises MDM application, give it a name and a log and click on add_._



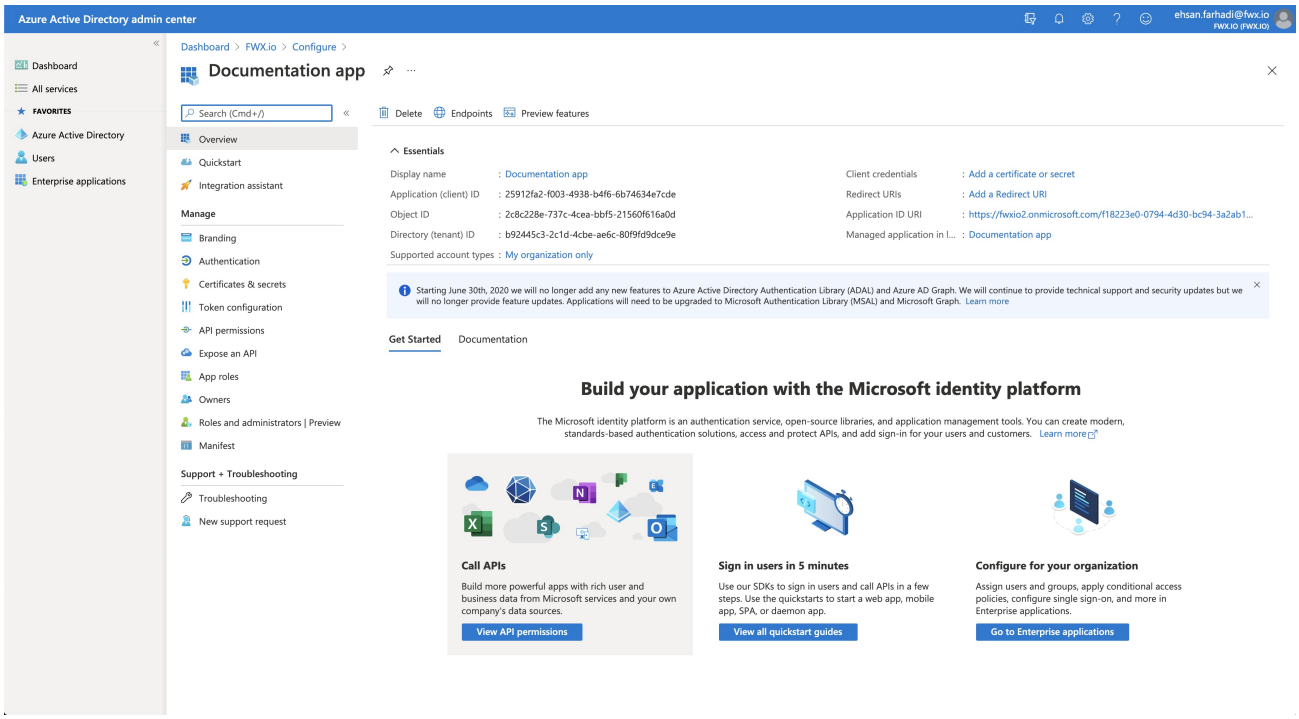
Configuring your MDM application

1. Go back to the list of MDM applications from step 2 above, and open the application you have just created. You should be able to see the following options:
    1. MDM user scope: This is where you indicate which users can enroll their devices using this MDM application. you can either choose:
        1. All: Force all users to use this MDM application. (Preferred)
        2. Some: You can select user groups which are allowed to use this MDM application to enroll their devices. If you do use this then you will need to make sure that you make a Group to restrict this, and add all of the users who will have their devices managed by MDM in that same group.
    2. MDM terms of use URL:
    Copy the value from the form you opened up in you FileWave AnyWhere (Web Admin) earlier.
    3. MDM discovery URL:
    Copy the value from the form you opened up in you FileWave AnyWhere (Web Admin) earlier.

It is very important that if you have another solution in place like InTune that you make sure that you do not have both InTune and FileWave enabled for the same users. You may get an error about not having permission to enroll devices. You can test this by disabling the Intune MDM (or another vendor) in Microsoft Entra by setting it to None and then wait 5 minutes and you would be able to enroll using FileWave. Think about which MDM solution you want to be for your different users in your environment. A single device can only really be in a single MDM. You can enroll to Intune for MDM and install the FileWave agent for instance, but then you could only push Windows Profiles from InTune. Everything else would work just fine in FileWave for those devices.

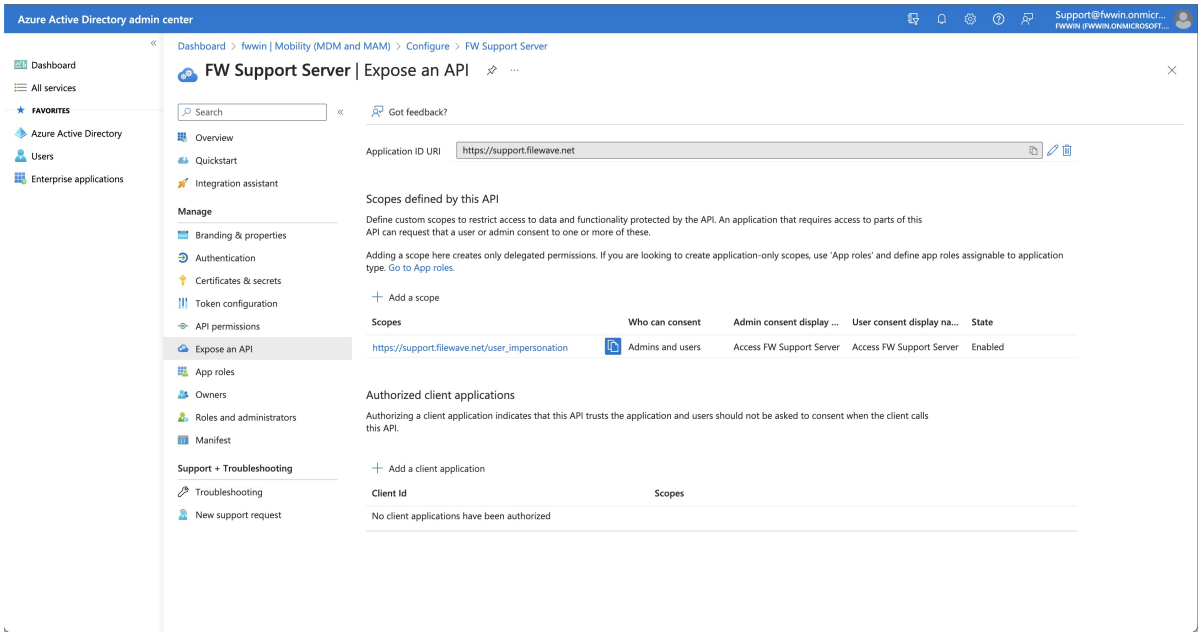
Integrating FileWave and Microsoft Entra

After configuring your MDM application, on the same page, you will see a small link that reads: On-premises MDM application settings. Click on it in order to open your on-premise application settings. You should see the following page:

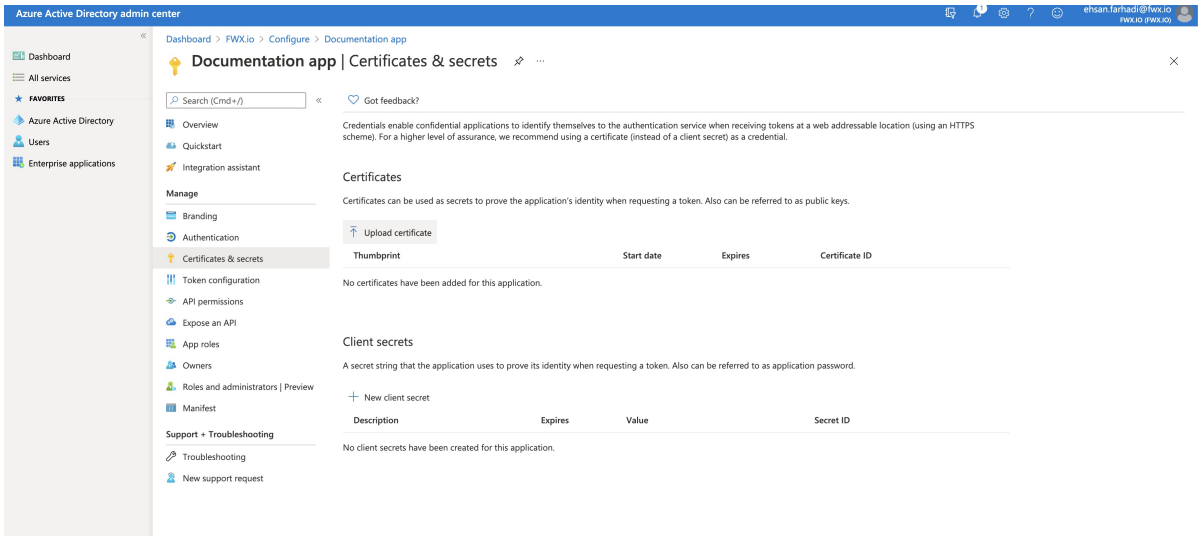


From here there are only few steps left!

1. Copy the Application ID and Tenant ID from this page and paste it in the Microsoft Entra Account form in FileWave AnyWhere (Web Admin) (which you kept open from earlier)
2. The Application ID URI value in your MDM app (in Microsoft Entra ID) must match your FileWave server URL, to fix that, go to "Expose an API" on the left side, and edit the URL there. The URL should be like https://example.filewave.net replacing that with your server's DNS name.



3. Go back to the Microsoft Entra account form in your FileWave AnyWhere (Web Admin), and download the FileWave certificate.
4. Once you have the certificate, go back to the Microsoft Entra ID portal, navigate to Certificates & secrets and upload your certificate to your Microsoft Entra MDM application there.



5. Once the Certificate is uploaded, wait couple of seconds, then go back to FileWave AnyWhere (Web Admin), in the already open Microsoft Entra account form and click on Check Status button.
6. As soon as you see the green light, go ahead and save your Microsoft Entra account.

You are now ready to enroll a device in to Windows MDM.

Application tenant or consent messages

You may see a message similar to below:

- AADSTS500011 – The resource principal named [URI] was not found in the tenant named [guid]. This can happen if the application has not been installed by the administrator of the tenant or consented to by any user in the tenant. You might have sent your authentication request to the wrong tenant.

If you're trying to log in from an application that doesn't support user consent flow or you're unable to use it otherwise, you can use the same special login URL crafting trick that I proposed in my article for resolving consent-related issues when getting error AADSTS650001, and create a URL like this:

- https://login.microsoftonline.com/[tenant_name_in_onmicrosoft.com-form]/oauth2/authorize?client_id=[appId]&response_type=code&redirect_uri=http://your-uri-here&nonce=1234&resource=https://graph.windows.net&prompt=consent.

If the application requires admin consent, you may replace "consent" with "admin_consent".