# How to implement an SSO solution on Synology NAS with Microsoft Azure AD Domain Services

Synology provides a single-sign-on (SSO) solution to integrate all your web applications and services. Once users sign in to any one of your web applications and services with their credentials, they can access any other ones without signing in again.

Aside from the benefits mentioned above, with your existing subscription to Microsoft Azure™, you can also join your Synology NAS as an SSO client to Microsoft Azure Active Directory Domain Services. This exempts you from the need to deploy and manage domain controllers on premises.

This tutorial will guide you through how to join your Synology NAS to Azure AD Domain Services, and how to enable Azure SSO service.

## Contents



### 1. Before you start

Before you proceed with the setup, please make sure you have already had an adequate environment as described below.

- The operating system of your Synology NAS has been updated to **DiskStation Manager** (**DSM**) 6.2 or above.
- An IPSec VPN tunnel has been set up between Microsoft Azure virtual network and the network where your Synology NAS is located. We recommend setting up your local network with a Synology Router. For detailed steps, please refer to this **tutorial**.

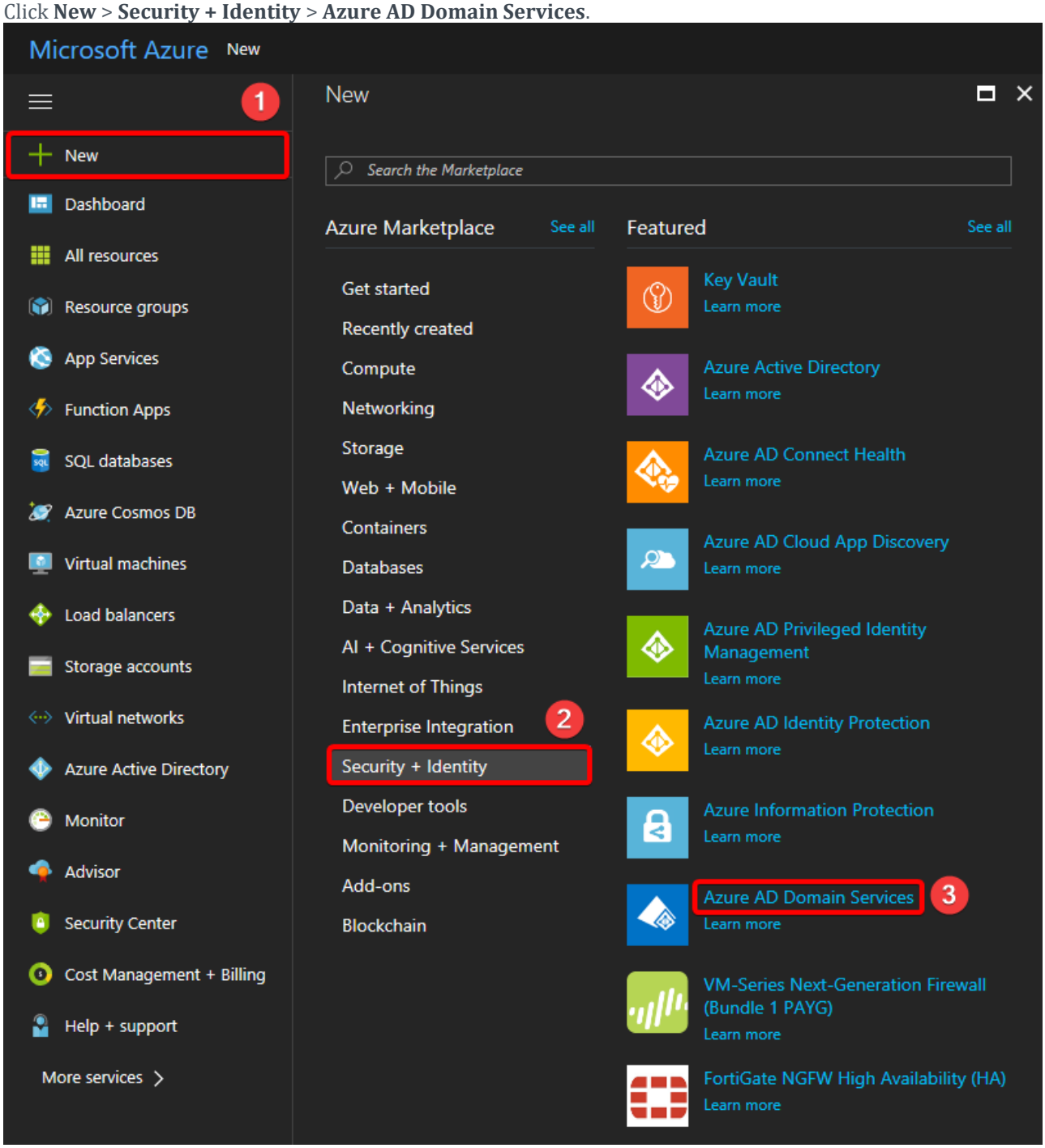
**Note:**

- The domain join function is not available on Synology Embedded DataStation and Network Video Recorder products.
- Visit **Microsoft Azure AD Domain Services** website to learn more on their pricing details.

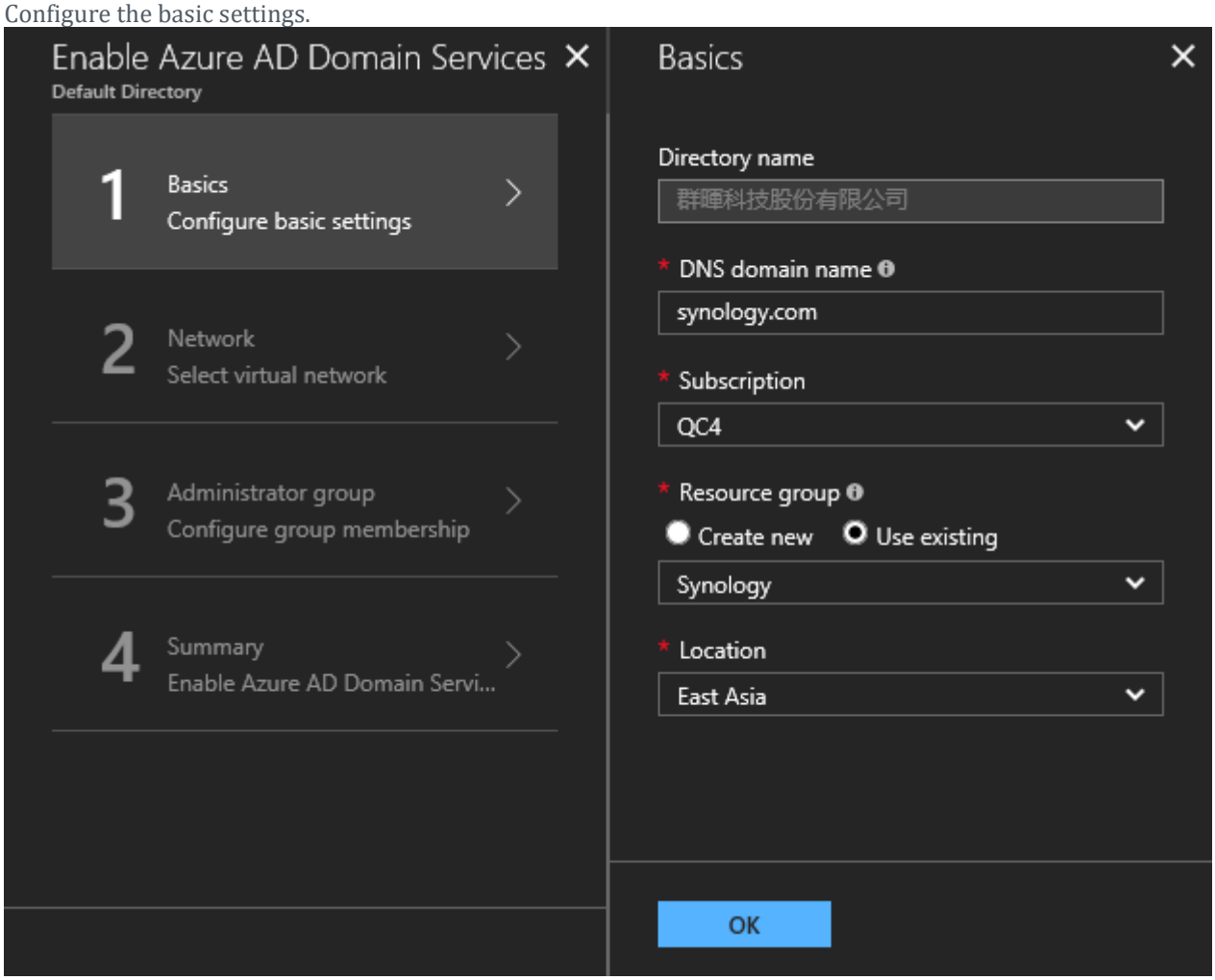
### 2. Enable Microsoft Azure AD Domain Services

1. Log in to your **Microsoft Azure** account.

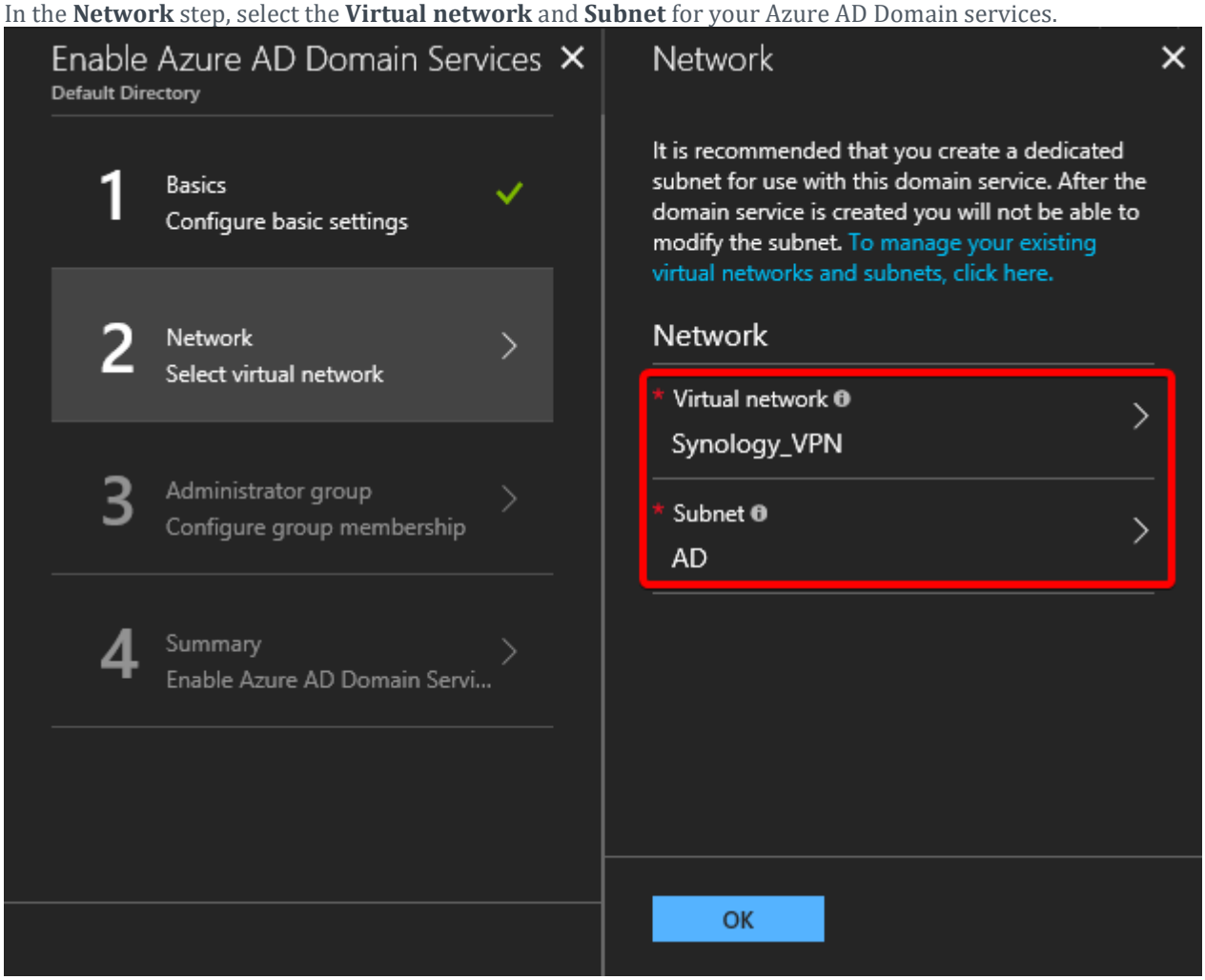
2. Click **New** > **Security + Identity** > **Azure AD Domain Services**.



3. Configure the basic settings.



4. In the **Network** step, select the **Virtual network** and **Subnet** for your Azure AD Domain services.

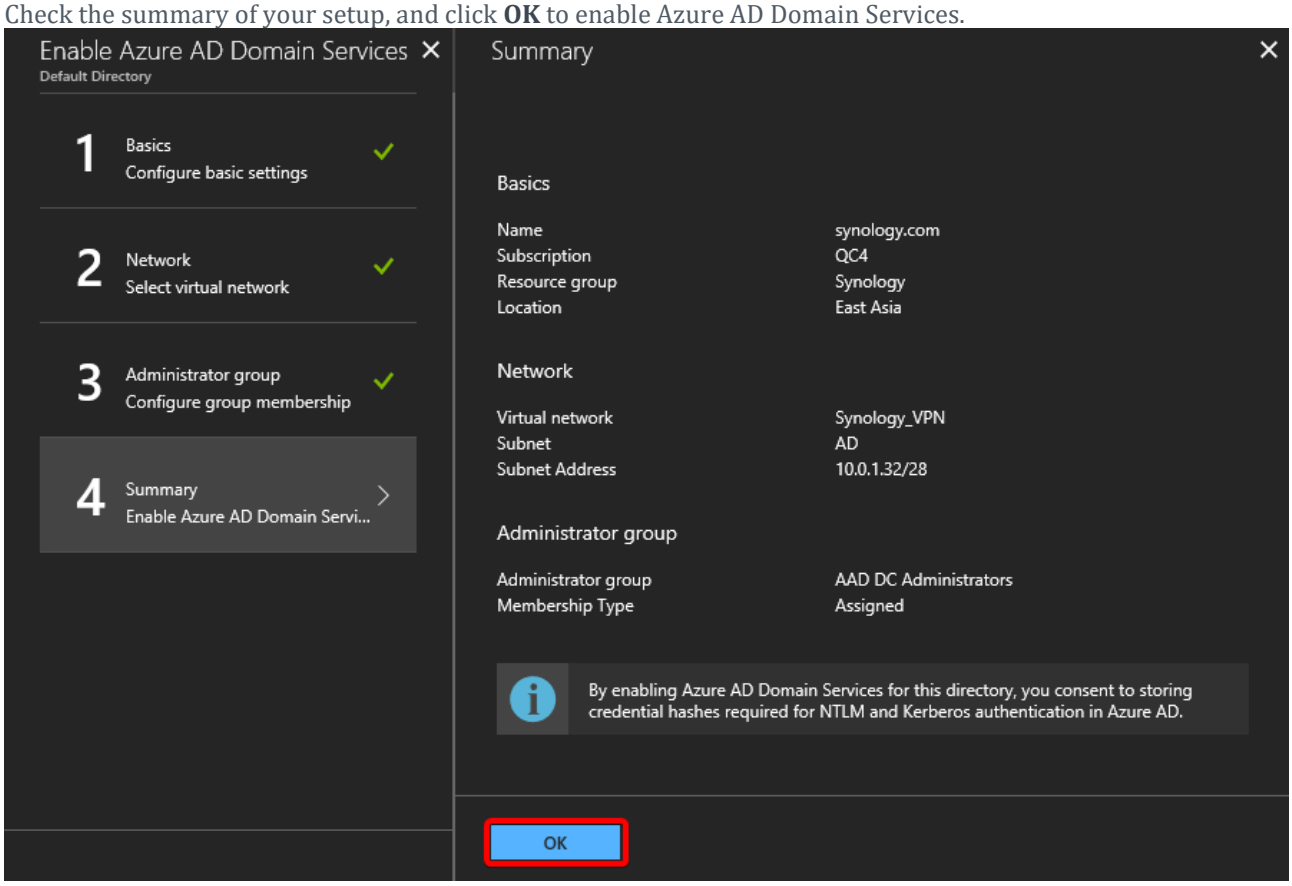



**Note:**

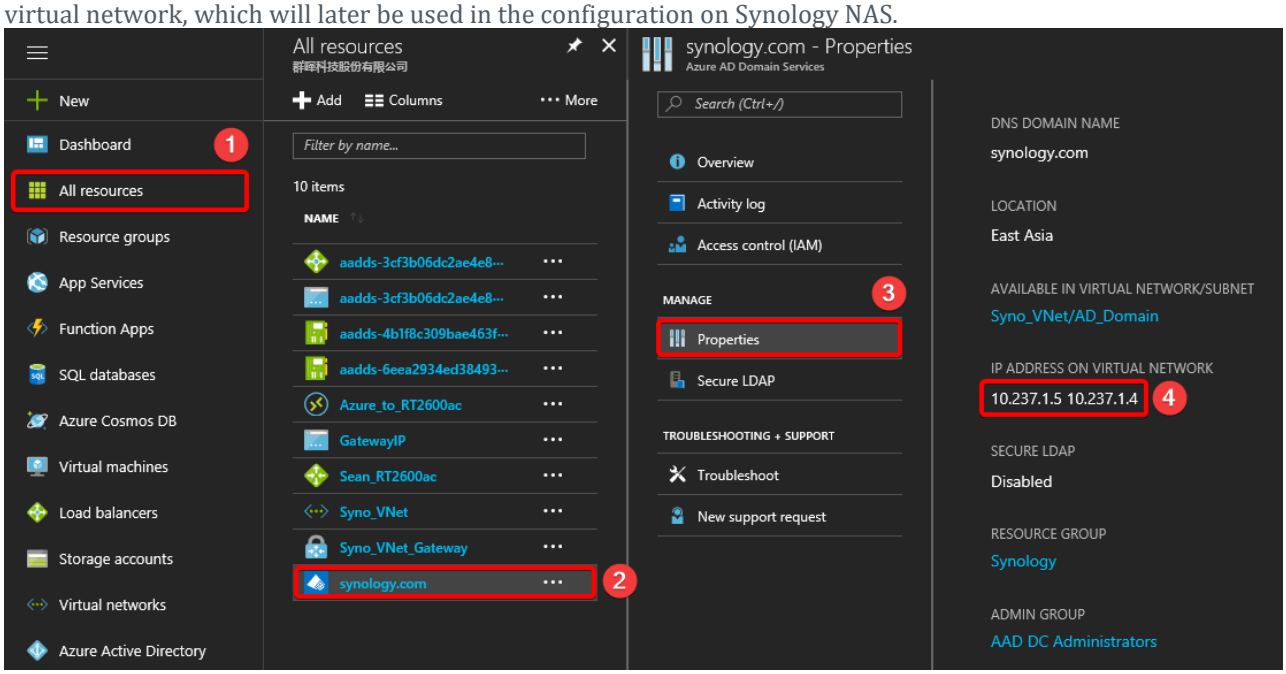
- For the configuration of Azure Virtual Network, you may refer to the **tutorial** on how to set up Site-to-Site VPN between Synology Router and Microsoft Azure.

5. In the **Administrator group** step, specify the members who are given the privileges to manage the domain.

6. Check the summary of your setup, and click **OK** to enable Azure AD Domain Services.




7. Once the deployment of your newly created Azure AD Domain is complete, find the domain's IP addresses on the virtual network, which will later be used in the configuration on Synology NAS.

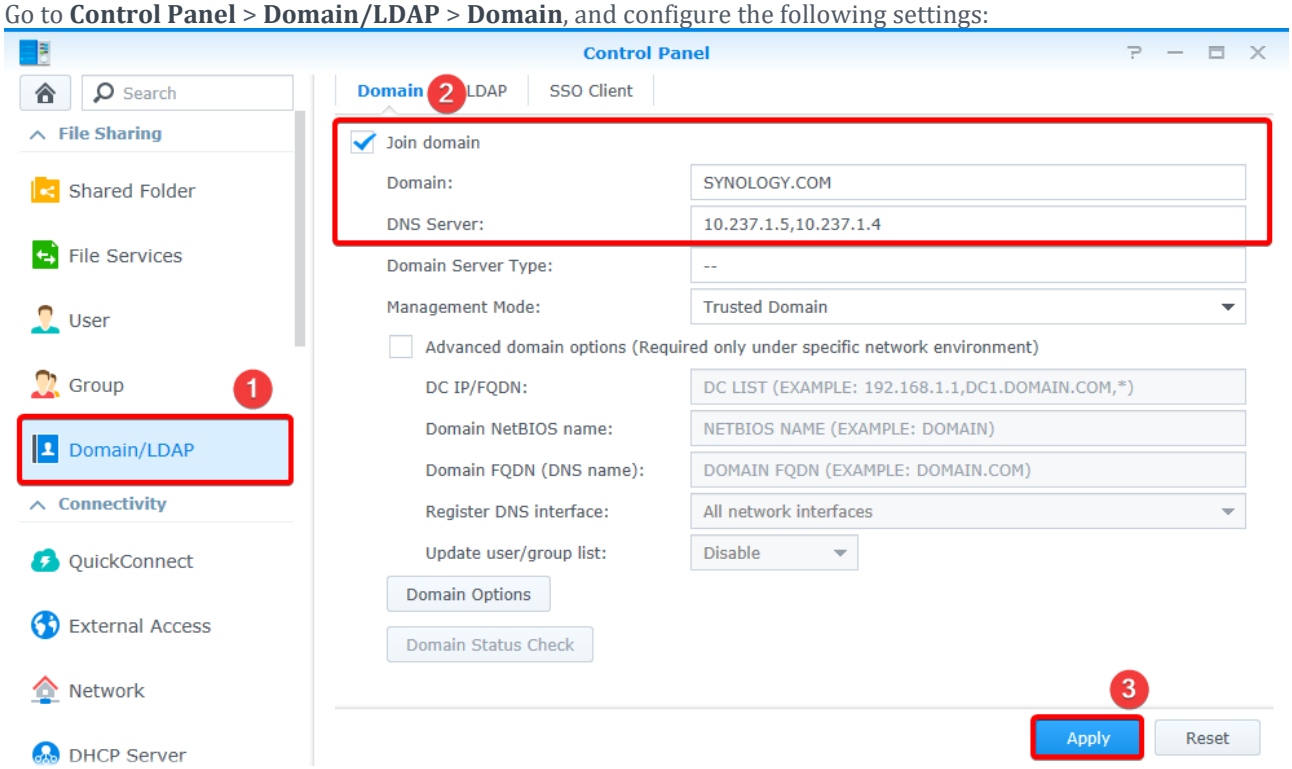



8. You may need to update DNS server and set up password synchronization on Azure Portal. For detailed steps, please follow the instructions on Azure Portal.

## 3. Join Synology NAS to Azure AD Domain

1. Sign in as administrator to DSM on the Synology NAS that you wish to join to Azure AD Domain.

2. Go to **Control Panel** > **Domain/LDAP** > **Domain**, and configure the following settings:



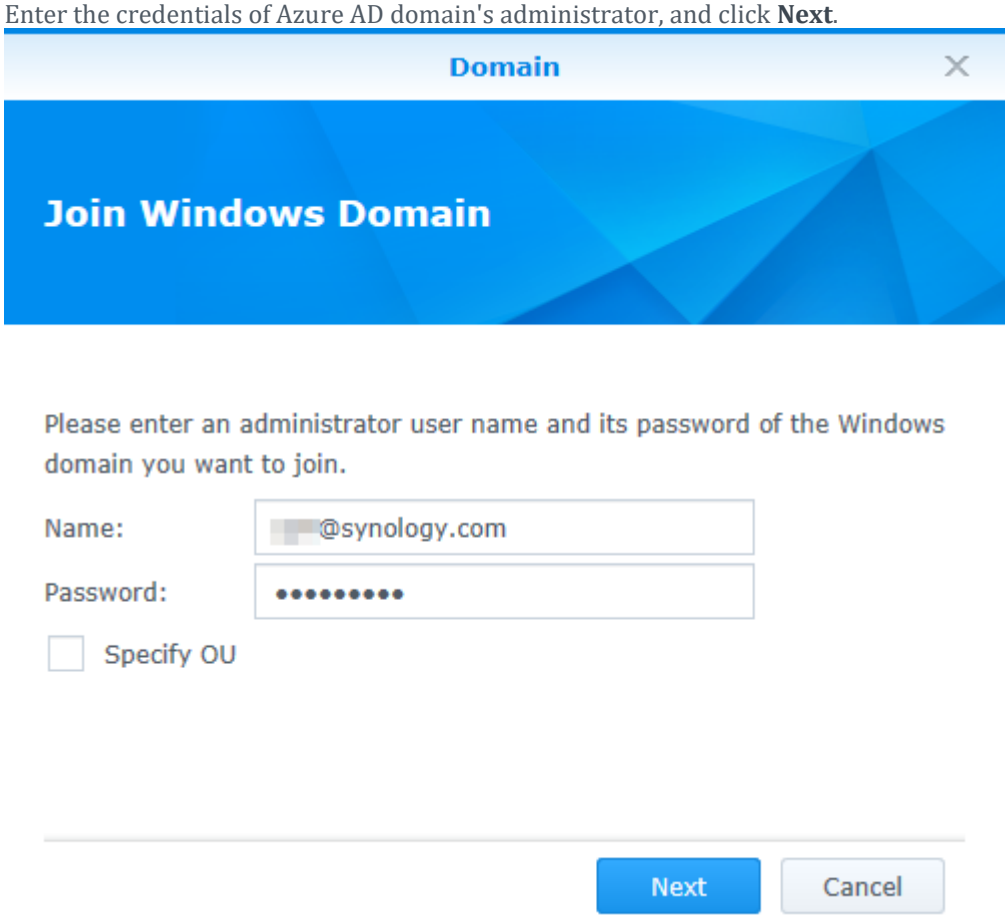

a. Tick the **Join domain** checkbox.

b. **Domain**: Here, we enter *SYNOLOGY.COM*.

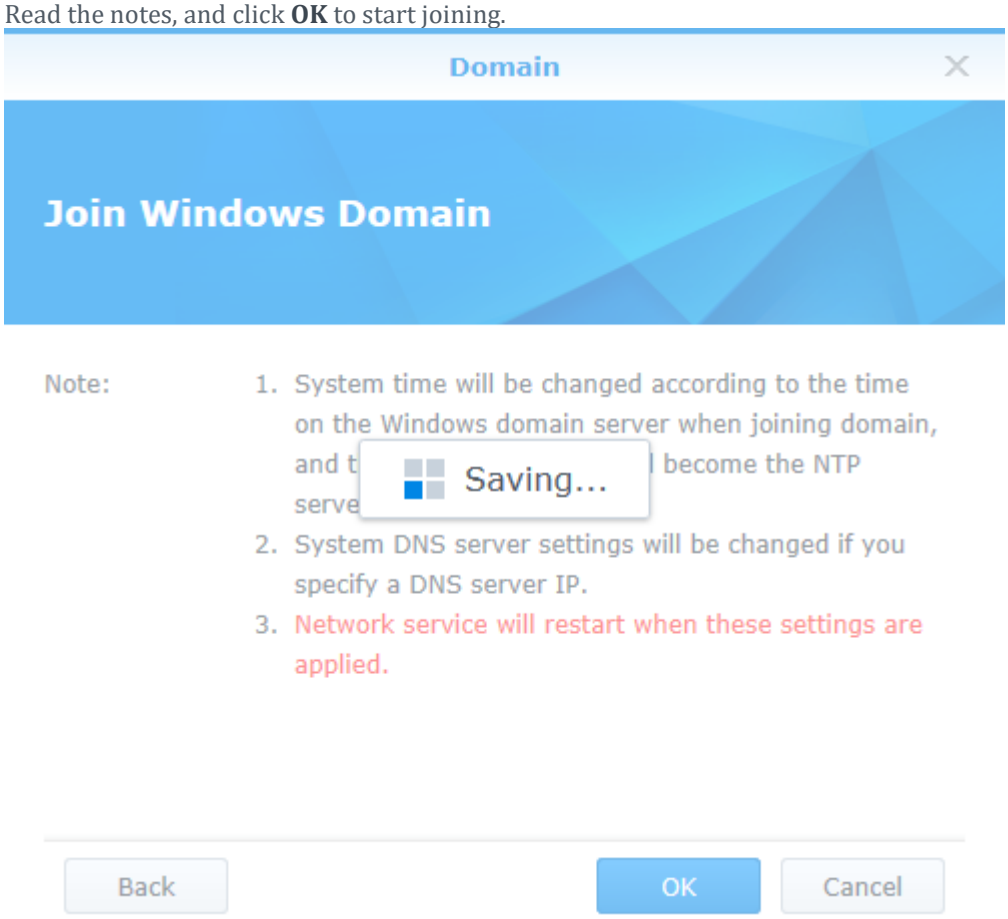
c. **DNS Server**: Enter the Azure AD domain's IP address. If you have more than one address, simply separate them with comma.

d. Click **Apply**.

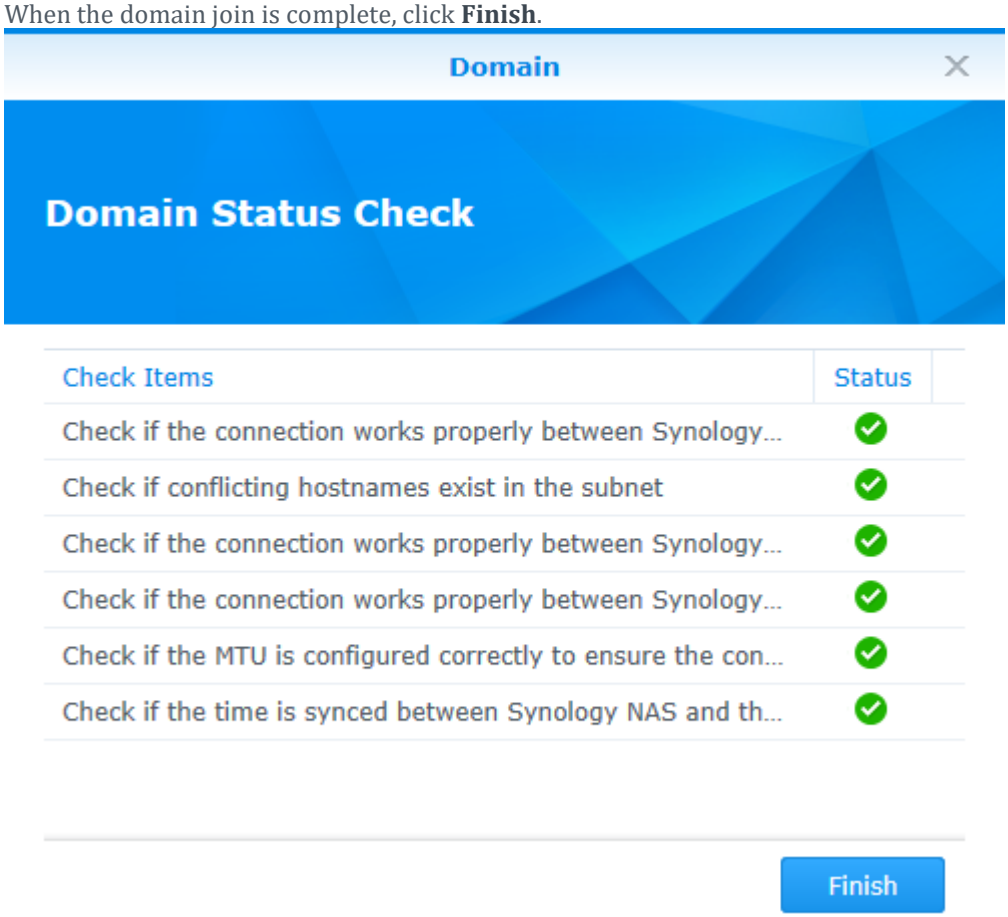
3. Enter the credentials of Azure AD domain's administrator, and click **Next**.



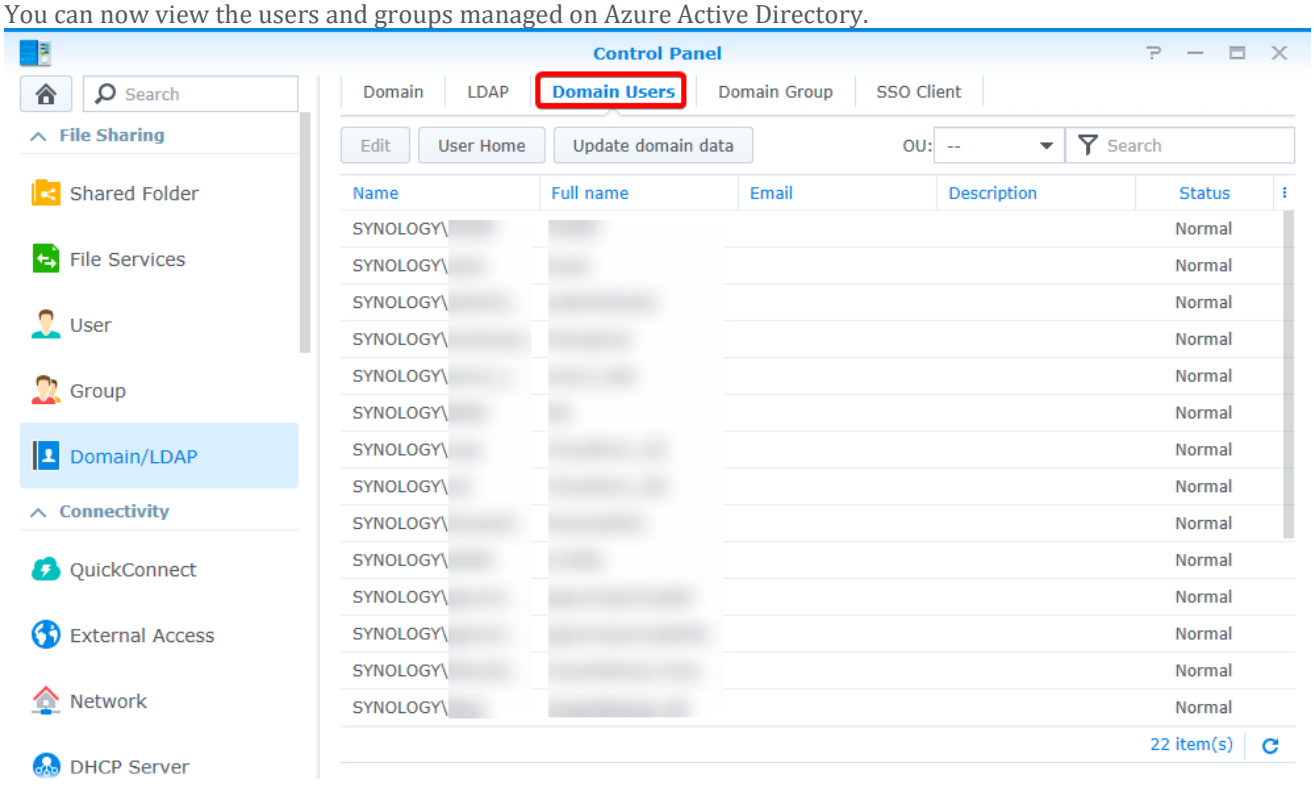
4. Read the notes, and click **OK** to start joining.




5. When the domain join is complete, click **Finish**.

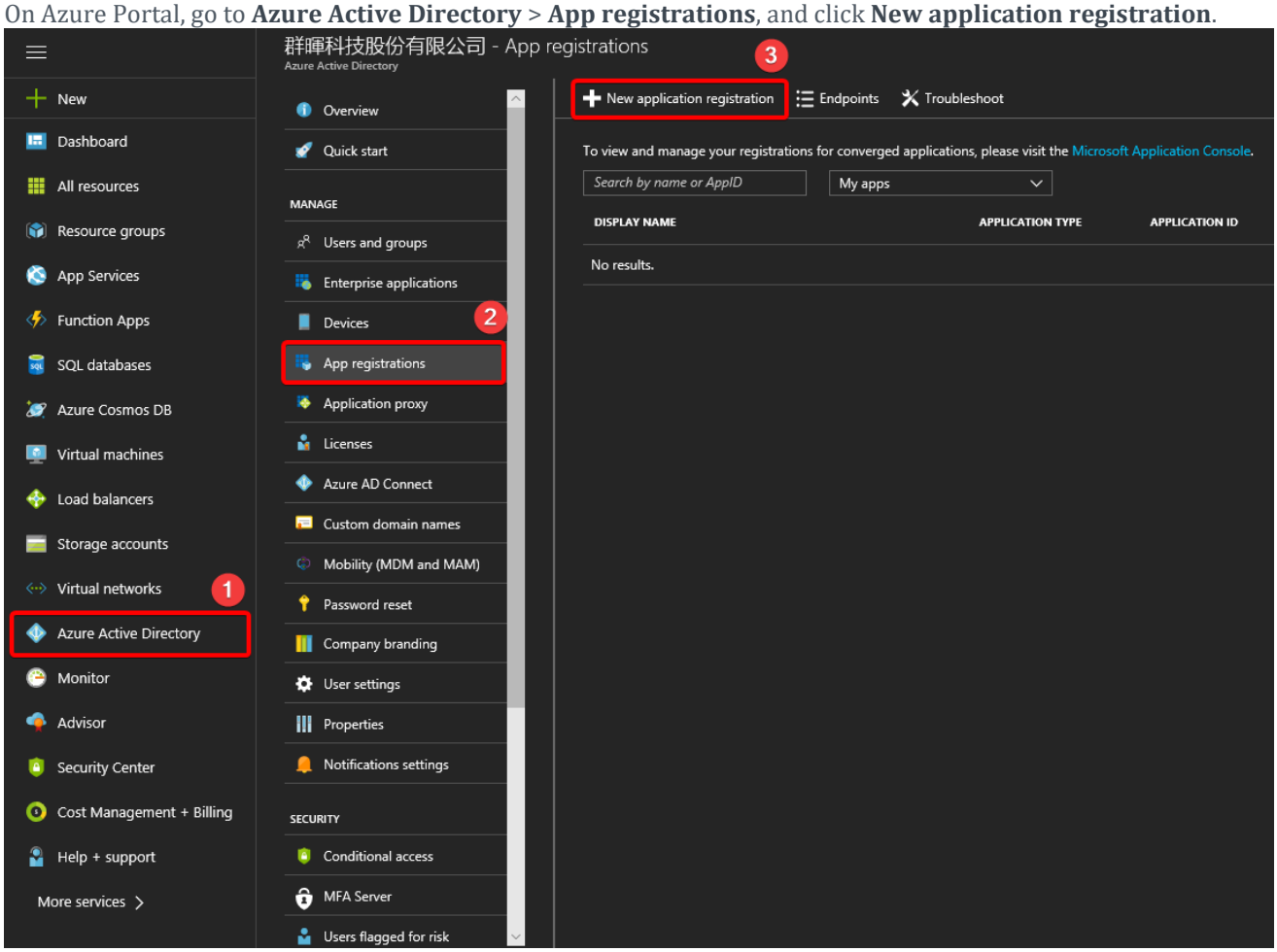


6. You can now view the users and groups managed on Azure Active Directory.

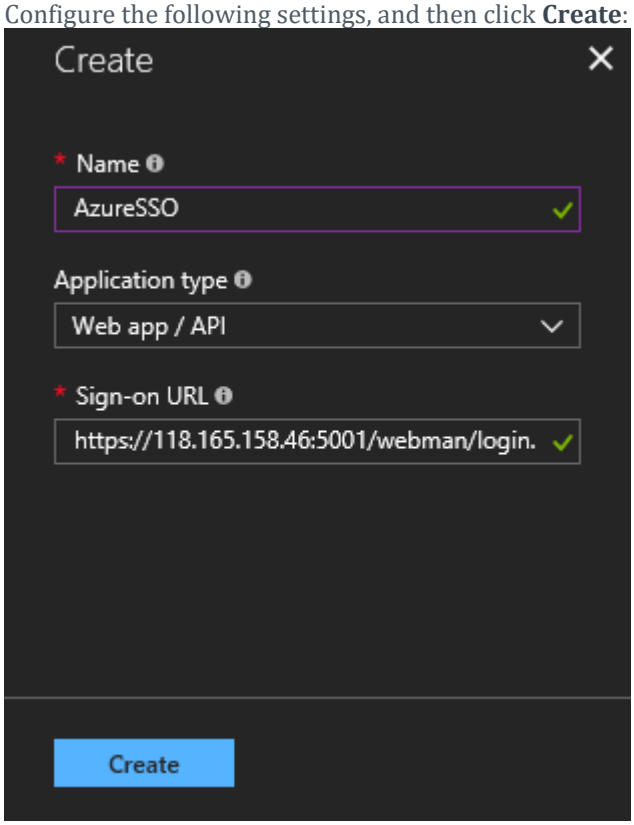



## 4. Enable Azure SSO service on Synology NAS

1. On Azure Portal, go to **Azure Active Directory** > **App registrations**, and click **New application registration**.

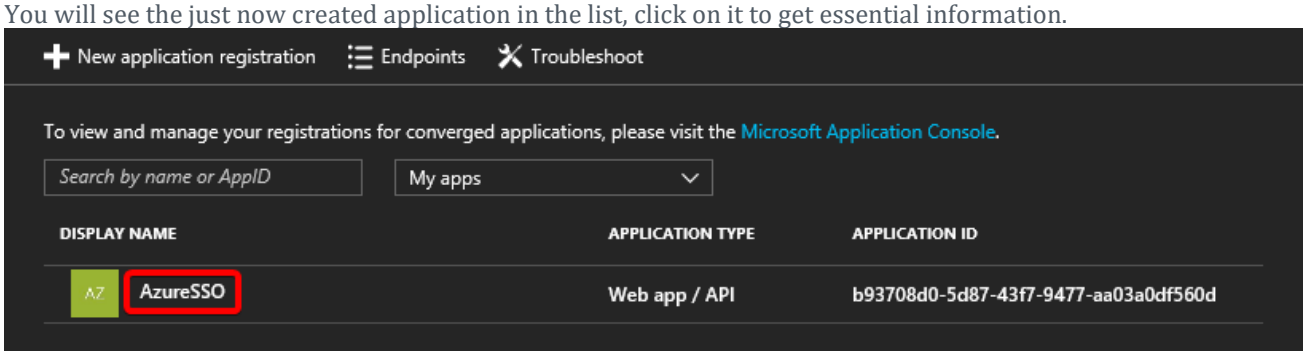


2. Configure the following settings, and then click **Create**:



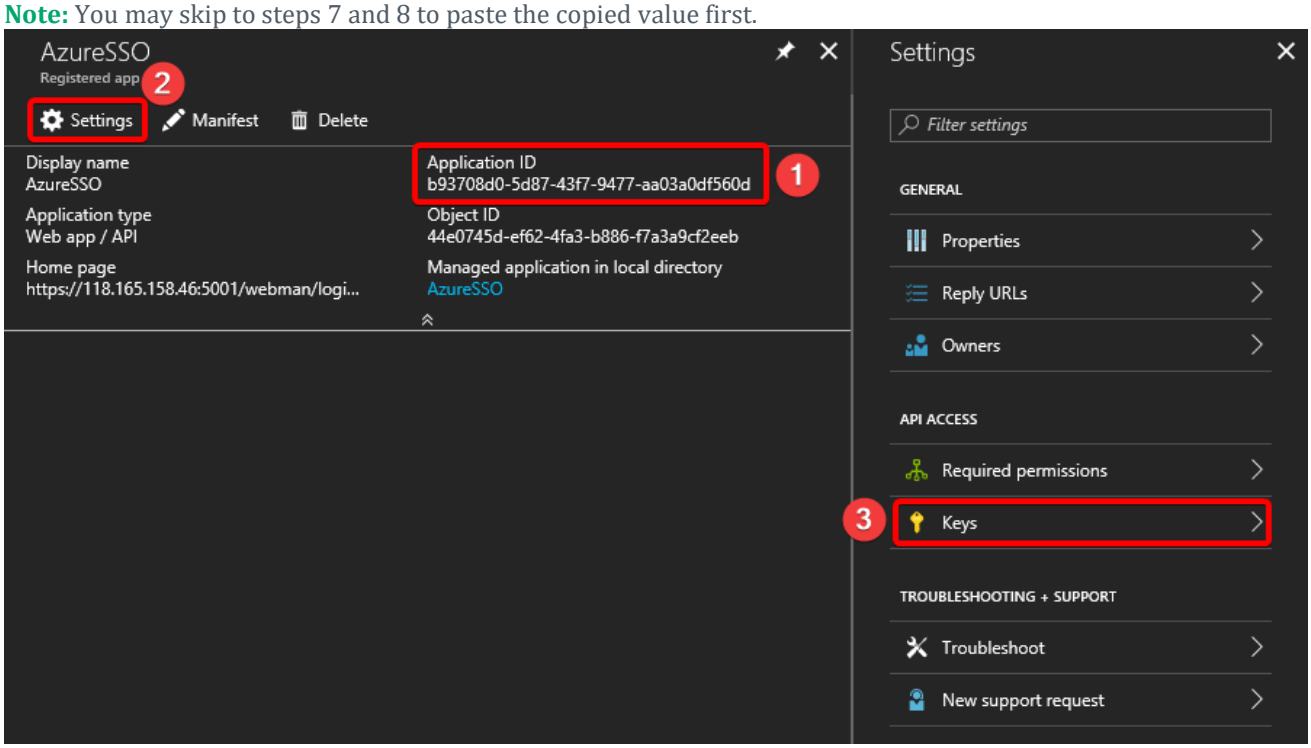

   - **Name**: Enter the application's name.
   - **Application type**: Select **Web app / API**.
   - **Sign-on URL**: Enter the URL of your application's login page.

3. You will see the just now created application in the list, click on it to get essential information.

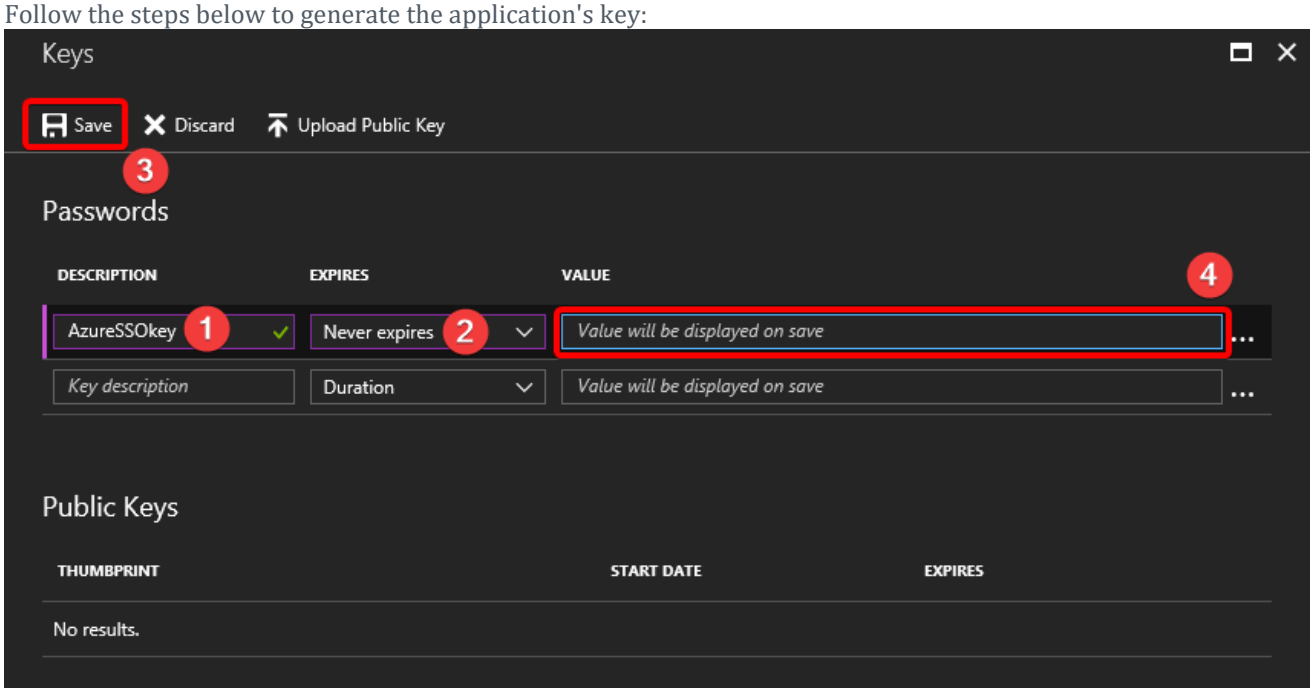


4. Copy the **Application ID**. Then, click **Settings** > **Keys**.

   **Note:** You may skip to steps 7 and 8 to paste the copied value first.




5. Follow the steps below to generate the application's key:



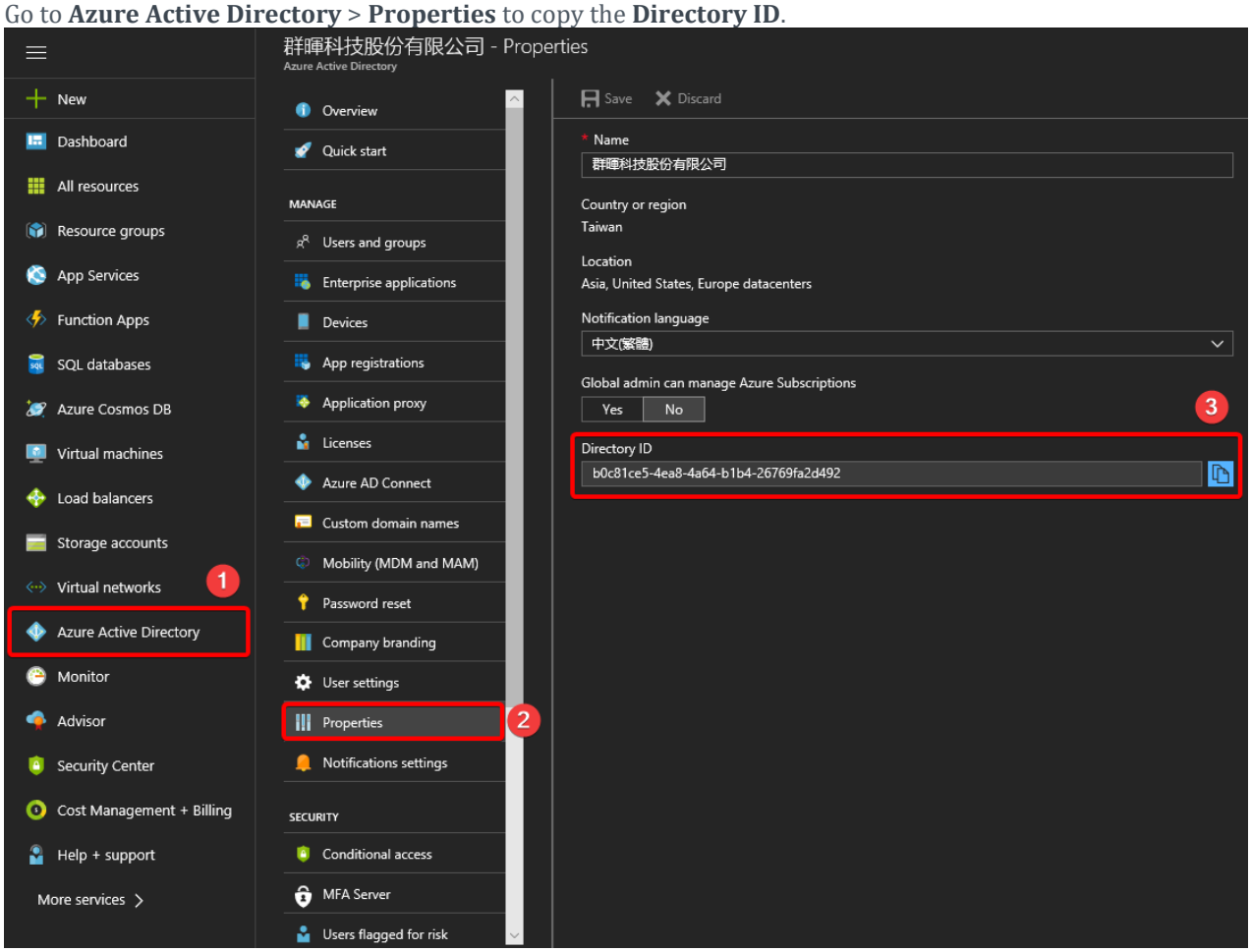

   . Set up the key's **DESCRIPTION** and duration of validity (**EXPIRES**).

   a. Click **Save**.

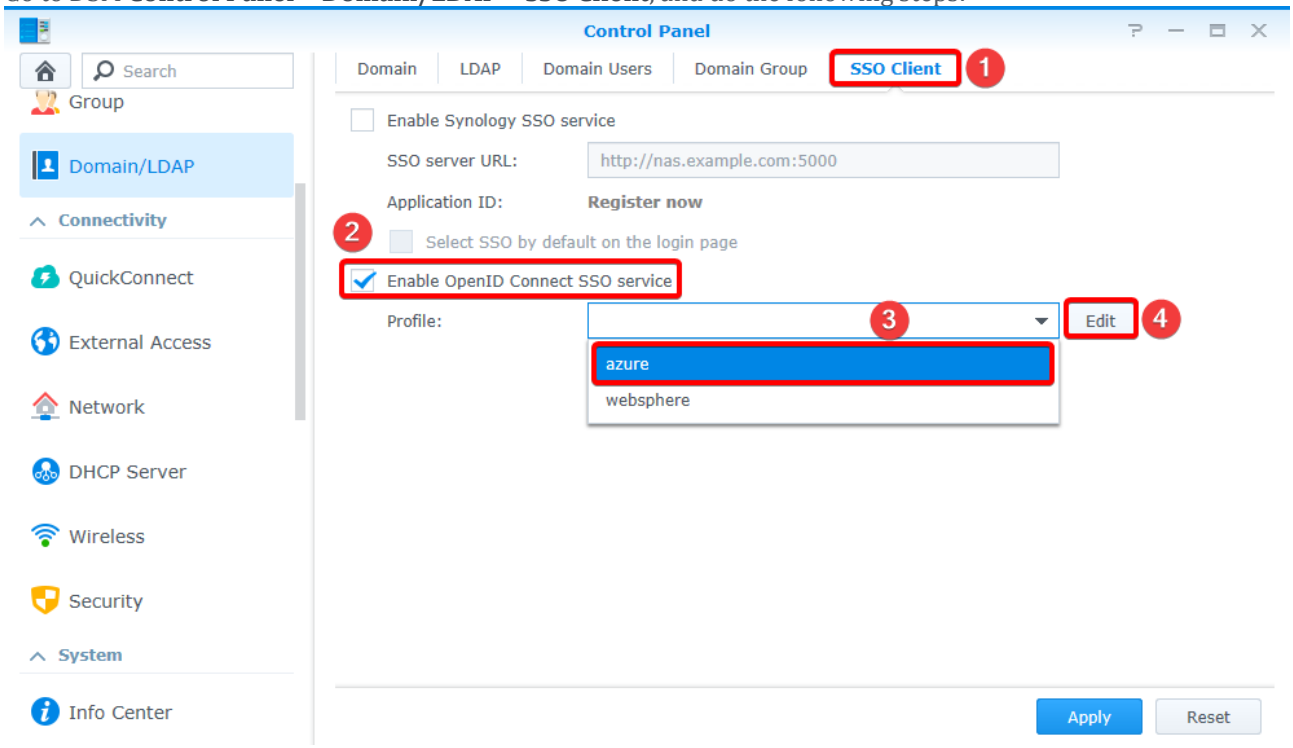
   b. The key will show at the **VALUE** column. You must copy it right away before leaving this page.

      **Note:** You may skip to steps 7 and 8 to paste the copied value first.

6. Go to **Azure Active Directory** > **Properties** to copy the **Directory ID**.




7. Go to DSM **Control Panel** > **Domain/LDAP** > **SSO Client**, and do the following steps:

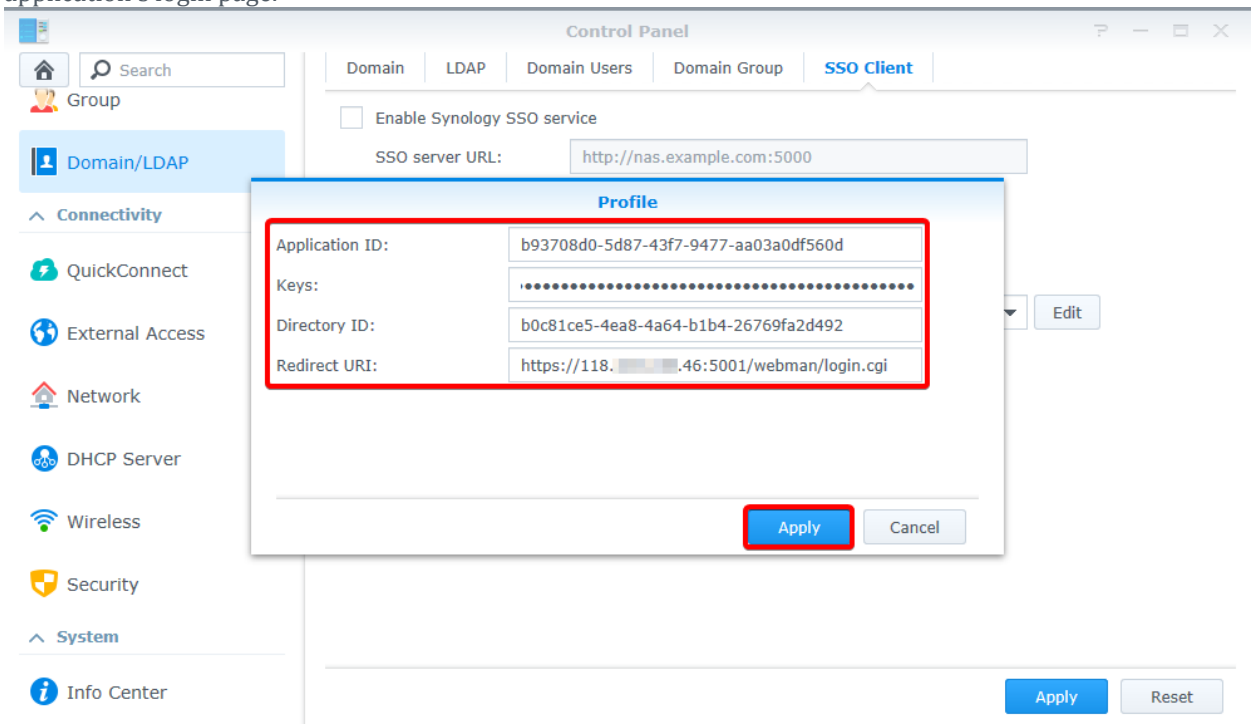



. Tick **Enable OpenID Connect SSO service**.

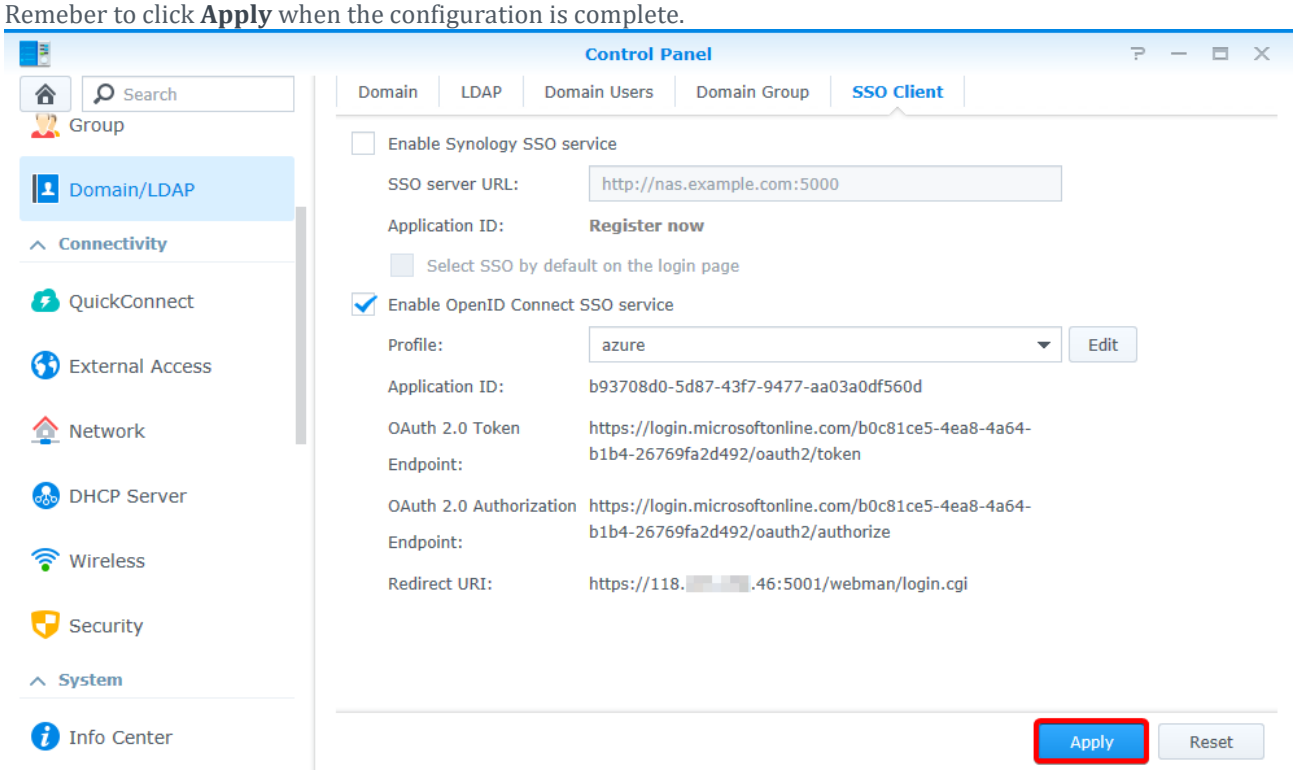
a. Select **azure** in the **Profile** drop-down list.

b. Click **Edit**.

8. Paste the copied values of **Application ID**, **Keys**, and **Directory ID**, as well as enter the **Redirect URI** of your application's login page.

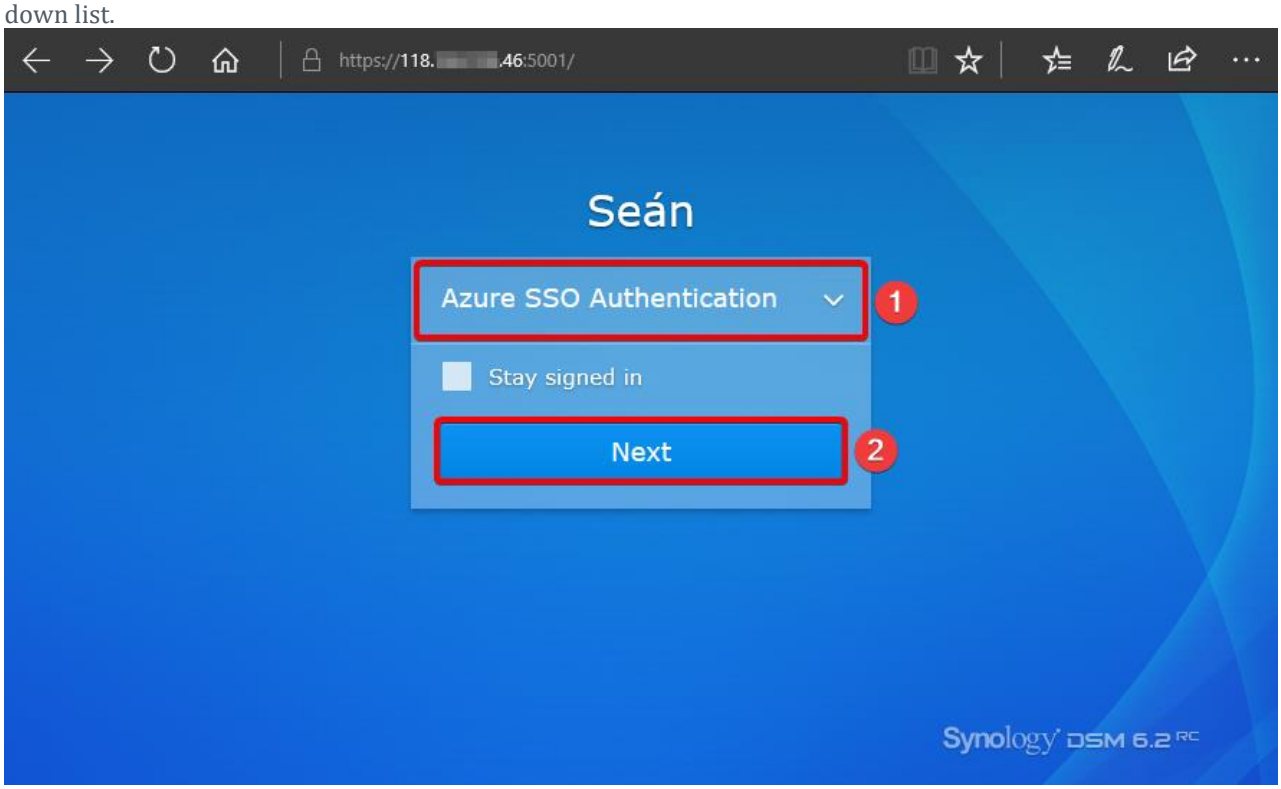



9. Remeber to click **Apply** when the configuration is complete.

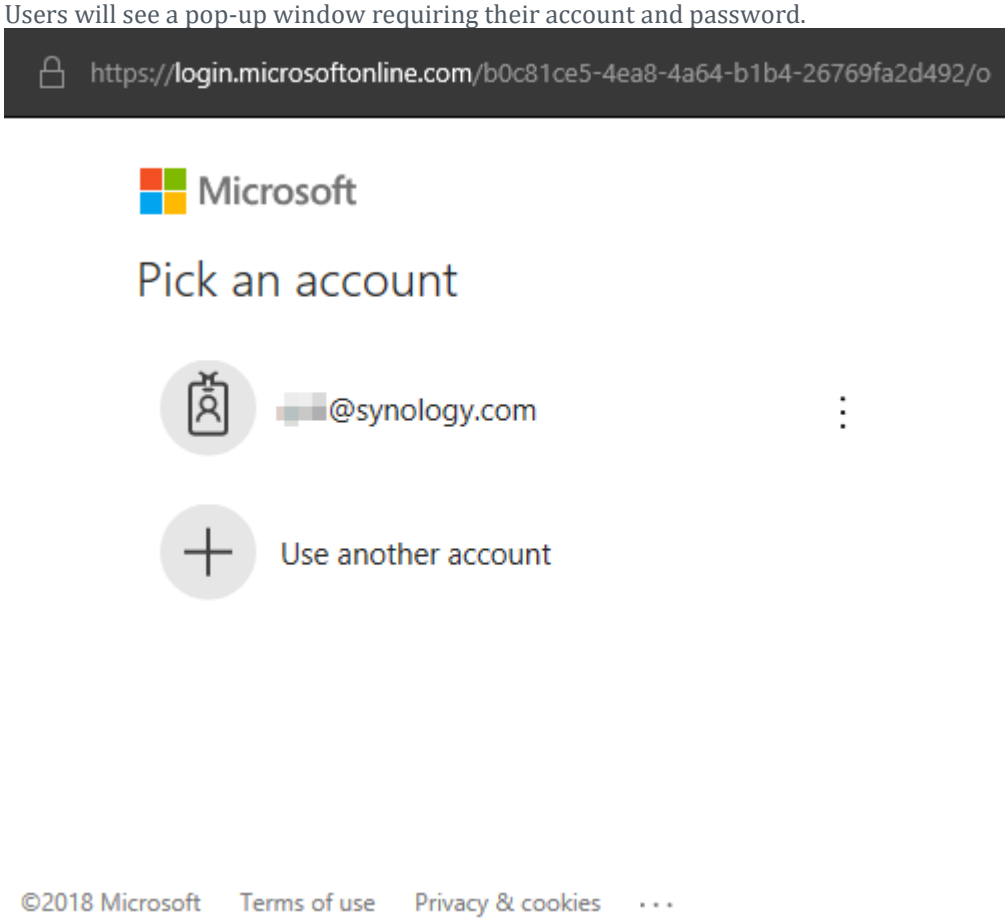



10. Valid users managed by your Azure Active Directory can now sign in to your Synology NAS hosting web application with their original credentials. To sign in with SSO, select **Azure SSO Authentication** from the drop-

down list.




11. Users will see a pop-up window requiring their account and password.



12. Users will then see a confirmation. Just click **Accept** to sign in.