

# Azure AD Connect

Thursday, August 3, 2017 9:05 PM

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Work with a mock, on-premises Windows 2016 infrastructure connecting it to an Office 365 tenant via AD Connect.

This workshop centers around helping the user better understand the basics of Azure Active Directory, including Office 365. By participating in this workshop, users will learn how to connect and synchronize an on-premises Active Directory with Azure AD. Participants will also gain insight into configuring filtered synchronization and enabling health monitoring for their on-premises AD.

**What You Will Learn**

- Connecting Office 365 with On-Premises AD
- Azure AD Connect
- Filtering
- Password Synchronization
- Password Writeback
- Azure AD Health

**Ideal Audience**

- CISOs and VPs of Information Security
- CIOs
- IT Managers
- Active Directory and Network Admins

# Overview

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**Time Estimate:** x.x hours

# Requirements

## Setup Requirements

The following workshop assumes that you have used the Azure Workshops CLI to pre-create the necessary lab environment. To use the Azure Workshops CLI, you will need the following applications installed on your local machine:

- [Node.js](#)
- [Git](#)

As stated above, these tools are necessary for downloading and running the CLI locally. Download and install these tools according to the instructions on their respective website.

## Additional Requirements

Additionally, you will need a subscription (trial or paid) to both Office 365 and Microsoft Azure. Please see the [next](#) page for how to create trial subscriptions in both.

# Office 365 and Azure Registration

## Demo Domain

For the purposes of this workshop, you will need a demo domain name - a domain name that you will *not* be required to register with a domain name registrar (DNR), but will be used as your fictitious company. We, of course, do not want to use any domain names associated with production accounts.

The simple way to do this is allow a service to create one for us. So, to create a random domain name, we'll actually use a random username generator.

Open a browser to <http://jimpix.co.uk/words/random-username-generator.asp> and click the green "Go!" button close to the top of the page. Upon doing this, you will be presented with 25 different two-word combinations. Pick one that you like or click the green "Refresh" button until you do.

Once you find a domain name, write it down; you will use it for the remainder of the workshop.

## Office 365

Now that we have a domain name, let's create a 1-month trial Office 365 account. This will automatically create a domain in Azure AD which we'll connect to virtual datacenter later in the workshop.

Direct your browser to <https://products.office.com/en-us/business/office-365-affiliate-program-try-business-premium>. In order to take advantage of some of the Azure Active Directory premium features, we will need the Business Premium edition of Office 365.

1. Begin by clicking on the green button "Start your free business trial".
2. Complete the form on the first page:
  - Choose your country (this cannot be changed later due to data sovereignty and other factors)
  - Enter your name
  - Enter an email address (this should be a *legitimate email address* as this will be the administrator's security/reset email)
  - Enter a phone number (enter a *legitimate cell phone number* in order to test multi-factor authentication)
  - Enter your company name from above
  - Choose a company size

3. For the form on the second page:

- Enter a username for yourself in a format you prefer (e.g. if your name was John Doe, you could enter: john.doe, jdoe, john\_doe, etc.)
- For your company, enter the company name from above (NOTE: you will see here that the initial domain name will be *yourcompany.onmicrosoft.com*. This is the Azure Active Directory domain to which we will connect later in the workshop.) If your domain name has already been used, try another one from the previous list.
- Enter and confirm your password

4. Prove you are not a robot by entering a telephone number at which you can receive a text or phone call.

5. Enter the code that was text'ed to you or that you received from the auto-attendant.

It should take less than a minute to create your account. After the process is complete, you should see a message stating that you are ready to go. While your account was *created* in less than a minute, it may take up to another 15 minutes or so to finish creating all of the additional services in Office 365. That's fine, as it will be a while before we actually need them.

Finally, remember this trial account is only good for 30 days. While Microsoft will not initially *delete* your account, they will disable functionality.

## Azure

Finally, we need to create a trial Azure subscription. Believe it or not, we are already using Azure Active Directory because we just set up Office 365. Office 365 uses Azure AD underneath to manage all of our exchange users. We simply need to create a subscription so that we can leverage Azure's other offerings.

Direct your browser to <https://azure.microsoft.com/en-us/free/> and begin by clicking on the green button that reads **Start free**.

**IMPORTANT:** On the sign-up form page, you should see your new email address that associated with your new Office 365 account. If not, click on **Sign Out** and re-authenticate using your newly formed credentials (e.g. username@yourcompany.onmicrosoft.com).

1. In the first section, complete the form in its entirety. Make sure you use your *real* email address for the important notifications.
2. In the second section, enter a *real* mobile phone number to receive a text verification number. Click send message and re-type the received code.
3. Enter a valid credit card number. **NOTE:** You will *not* be charged. This is for verification of identity only in order to comply with federal regulations. Your account statement may see a temporary hold of \$1.00 from Microsoft, but, again, this is for verification only and will "fall off" your account within 2-3 banking days.
4. Agree to Microsoft's Terms and Conditions and click **Sign Up**.

This may take a minute or two, but you should see a welcome screen informing you that your subscription is ready. Like the Office 365 trial above, the Azure subscription is good for up to \$200 of resources for 30 days. After 30 days, your subscription (and resources) will be suspended unless you convert your trial subscription to a paid one. And, should you choose to do so, you can elect to use a different credit card than the one you just entered.

Congratulations! You've now created an Office 365 tenant; an Azure tenant and subscription; and, have linked the two together.



# Setup

## Installing the CLI

Once you have the requisites installed, you will then need to install the CLI. The CLI can be installed from the command-line or terminal prompt using Node.js.

First, open a command-line window or terminal prompt. Then, type the following command:

```
#install azworkshops CLI globally  
npm install azworkshops-cli -g
```

Running this command will take a few seconds to complete. But, doing so will download the Azure Workshops CLI, along with its dependencies, into a directory that is located in a globally accessible path.

## Azure Subscription

As stated in the requirements section, the workshop requires an active Azure subscription.

### **Recommendation**

It is recommended that you do not use an Azure subscription that is currently being used for production. The CLI will create its own resource groups, but it is not the best practice to utilize production environments for testing and workshops, such as this.

For best results, it is recommended that you setup register for the trial subscription as outlined on the [previous](#) page.

## Creating the Lab Environment

## Build Time

The automated building of the lab environment can take approximately 30 minutes to complete. It is best to begin this process while you are reviewing the workshop material.

## Verify Installation of the CLI

From a prompt, enter the following command:

```
#get version  
azworkshops --version
```

A successful execution of the command should print the current version of the Azure Workshops CLI which can be found in the right column, slightly down the page, of the Node Package Manager [website](#). If you do not see a version number, return to the requirements [setup](#) and try reinstalling them.

If you successfully see the correct version number, you are ready to begin the lab setup.

## Build the Environment

From a prompt, enter the following:

```
azworkshops
```

1. You will be presented with a menu from which to choose a base configuration. Choose the base configuration for **Basic Active Directory**.
2. You will then need to authenticate with Azure. Visit <http://aka.ms/devicelogin> and enter the code provided to you.
3. Choose the subscription that you would like to use for this workshop.
4. Select the location for the created resources. It is best to choose a location that is closest to you in order to reduce latency.
5. You will then be prompted with additional configuration questions.
  1. For the AD domain name, enter your company name from the previous page with '.local' as the TLD (e.g. mycompany.local).
  2. For the NETBIOS name, it should automatically be an ALLCAPS version of the company name that you just entered (without the '.local' TLD extension). If so, just press Enter to accept the default. If not, enter a valid NETBIOS name.

6. After completing the configuration questions, the building of the lab environment will begin. Once completed, you will be presented with all of the lab's configured settings (e.g. resource group, domain, domain admin, password, etc.) It is best to copy this down for future use.

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