

AAD Connect setup guide

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Introduction

In this guide you will find a customized configuration of AAD Connect. This setup is done with mostly default and Microsoft recommended settings. This document is part of a set of information about Office 365/Azure AD and SURFnet SURFconext. More information about this can be found on <https://wiki.surfnet.nl/display/services/Office+365+Reference+environments>

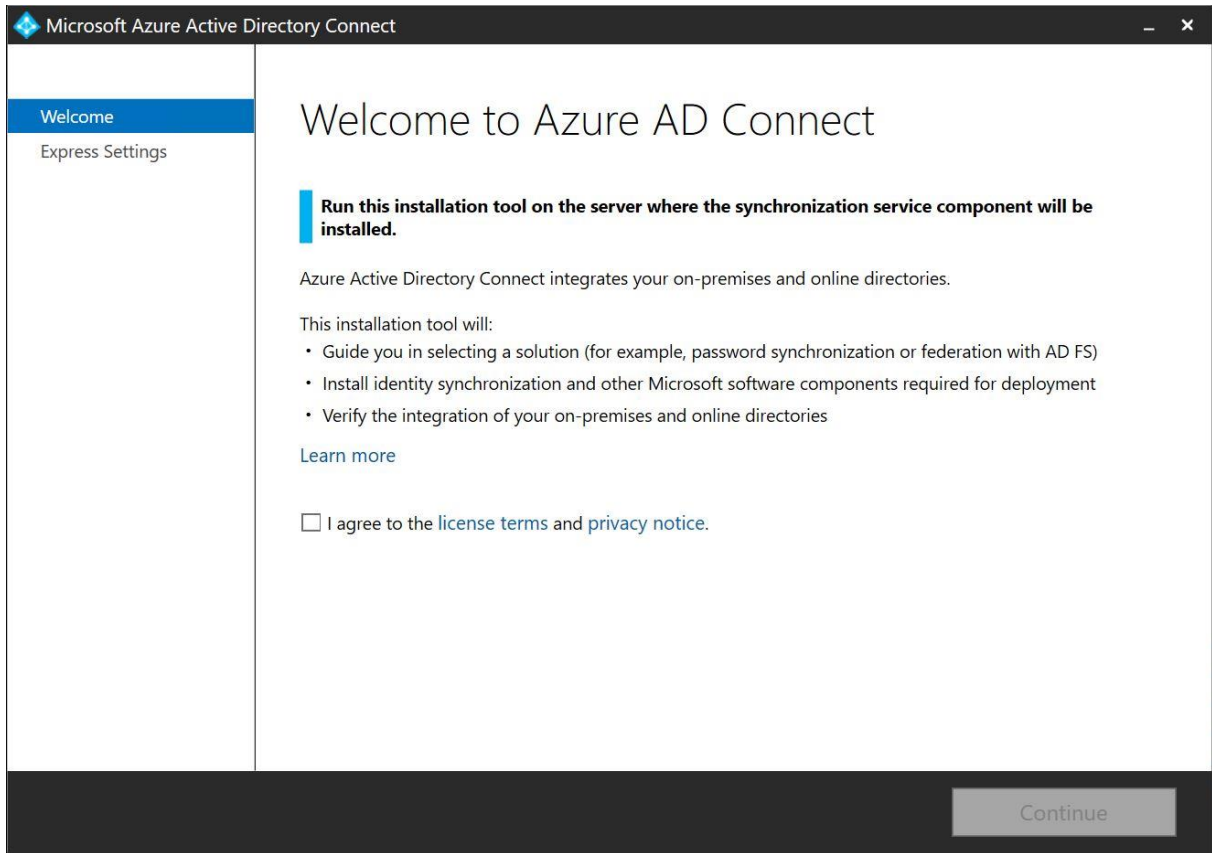
The set was created to help SURF institutions decide whether and how they can use SURFconext federated authentication (and related technology like SURFconext Strong Authentication) with Azure AD services, like Office 365.”

We have tested this working setup in our own environment and if you have any questions or you need help, feel free to contact us via support@surfconext.nl

This document is created on 11-07-2017 based on the components that are current at this date. The most up-to-date version can be found on <https://wiki.surfnet.nl/display/services/Microsoft+Office+365>

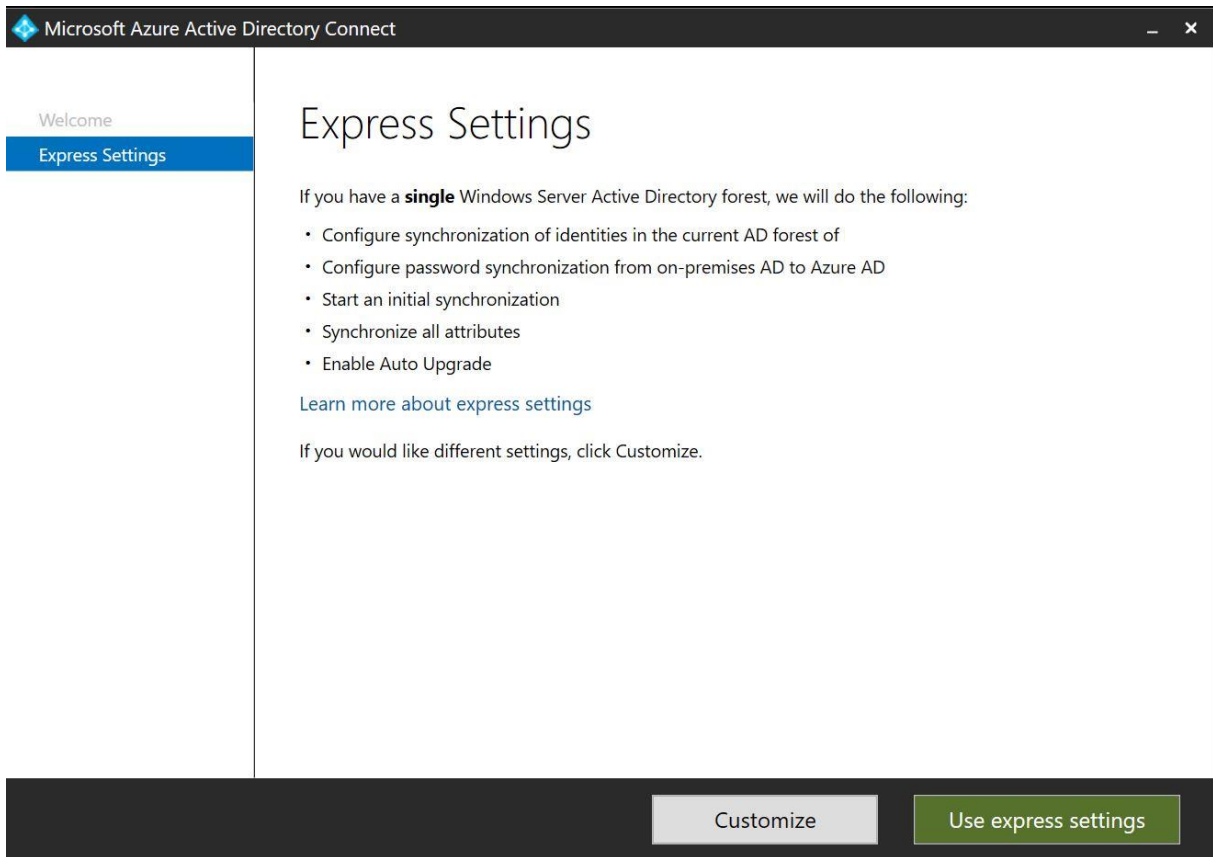
Step 1: Run the AAD Connect tool

Run the AAD Connect tool setup on a server in your domain. The AAD Connect tool can be found [here](#).



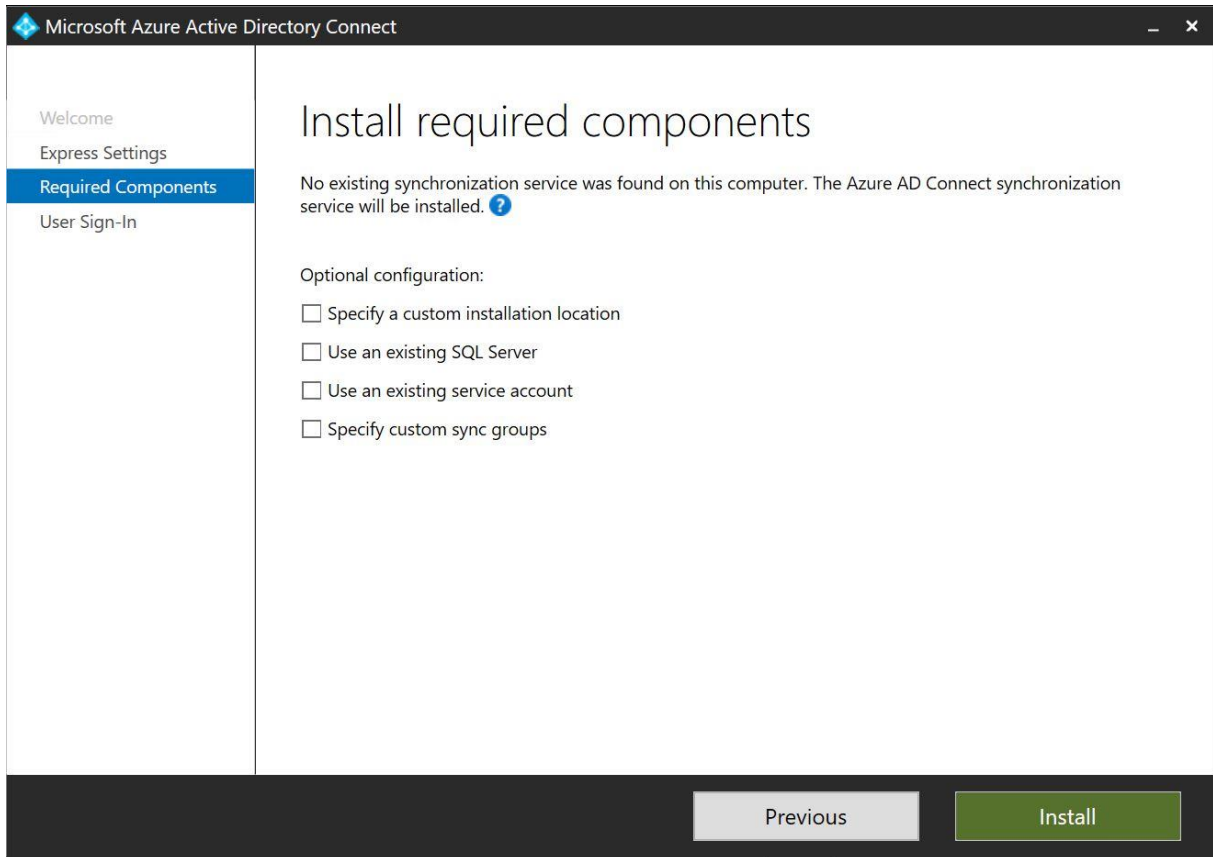
Step 2: Select your setup type

You can choose the express settings or to customize your settings. This guide will show you a customized setup.



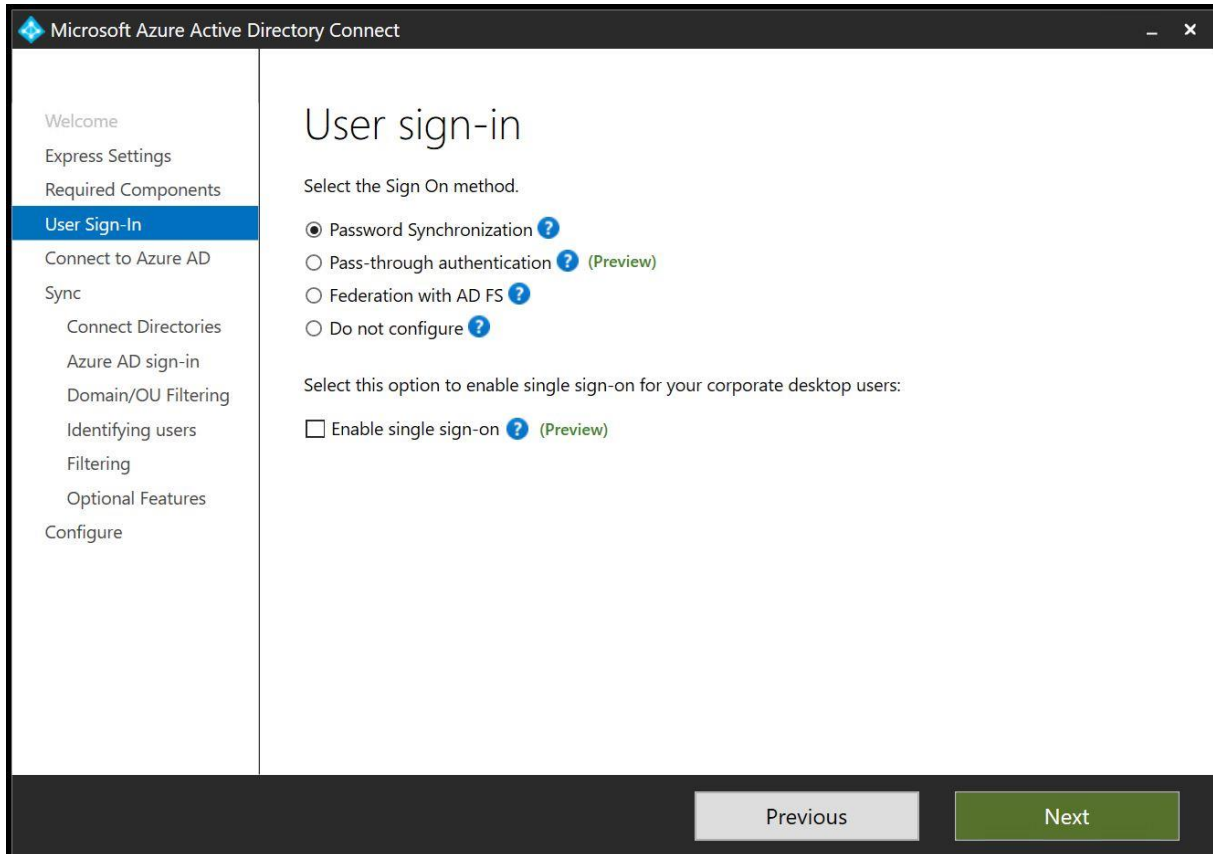
Step 3: Install required components

You can choose your own components in this screen. When you don't select a component, AAD Connect will create them for you. In case you don't use a SQL Server installation, AAD Connect will install SQL Express. When you are working with big numbers of users, then SQL Express is not recommended. We did not add any optional configurations.



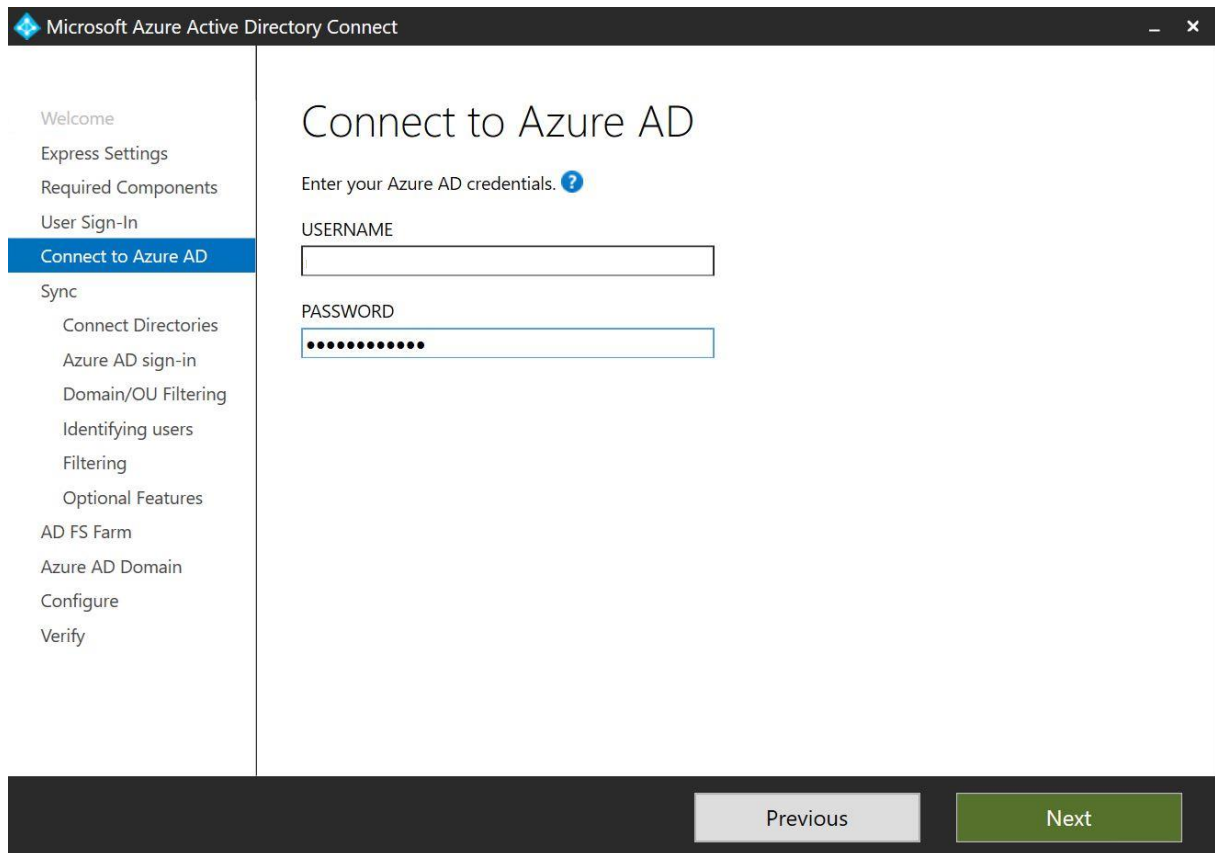
Step 4: User Sign-in

In this step you can choose the way users are going to sign in. In this case we are going to choose the 'Password Synchronisation' option. When you select the 'Enable single sign-on' option, you will provide users with domain joined devices to use single sign on.



Step 5: Connect to Azure AD

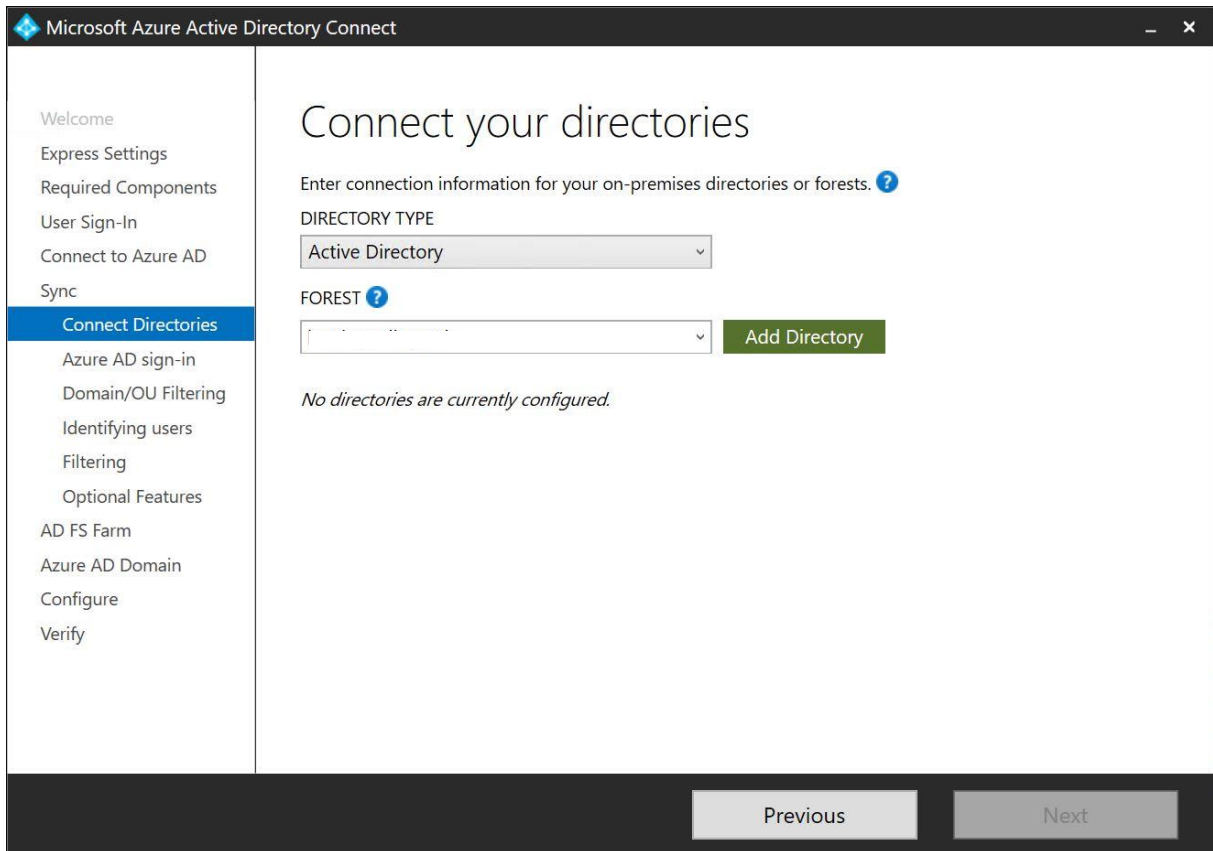
Fill in your Office 365 tenant admin password to connect to Azure AD



The screenshot shows the 'Microsoft Azure Active Directory Connect' application window. The title bar includes the Microsoft logo and the text 'Microsoft Azure Active Directory Connect'. On the left is a navigation pane with the following items: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Azure AD' (highlighted in blue), 'Sync', 'Connect Directories', 'Azure AD sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'AD FS Farm', 'Azure AD Domain', 'Configure', and 'Verify'. The main content area is titled 'Connect to Azure AD' and contains the instruction 'Enter your Azure AD credentials.' with a help icon. Below this are two input fields: 'USERNAME' and 'PASSWORD'. The 'PASSWORD' field is currently filled with ten black dots. At the bottom of the window, there are two buttons: 'Previous' (disabled) and 'Next' (active).

Step 6: Connect your directories

Azure AD Connect will need the forest name to connect with your AD domain services



The screenshot shows the 'Microsoft Azure Active Directory Connect' application window. The title bar includes the Microsoft logo and the text 'Microsoft Azure Active Directory Connect'. On the left is a navigation pane with the following items: Welcome, Express Settings, Required Components, User Sign-In, Connect to Azure AD, Sync, **Connect Directories** (highlighted in blue), Azure AD sign-in, Domain/OU Filtering, Identifying users, Filtering, Optional Features, AD FS Farm, Azure AD Domain, Configure, and Verify. The main content area is titled 'Connect your directories' and contains the instruction 'Enter connection information for your on-premises directories or forests. ?'. Below this, there are two dropdown menus: 'DIRECTORY TYPE' with 'Active Directory' selected, and 'FOREST ?' which is currently empty. To the right of the 'FOREST' dropdown is a green 'Add Directory' button. Below the form fields, the text 'No directories are currently configured.' is displayed. At the bottom of the window, there are two buttons: 'Previous' and 'Next'.

Step 7: AD Forest account

Azure AD Connect will need an AD Forest account to connect with your AD domain services. If you don't have one, you could let AD connect create one for you.

AD Forest account

AD Forest account

An account with sufficient permissions is required for periodic synchronization. You can use an existing AD account or alternatively Azure AD Connect can create an account for you. This option requires you to enter Enterprise Admin credentials.

Select whether to use an existing AD account or create a new one by entering Enterprise Admin credentials.

Use existing account.

Create new account.

USERNAME

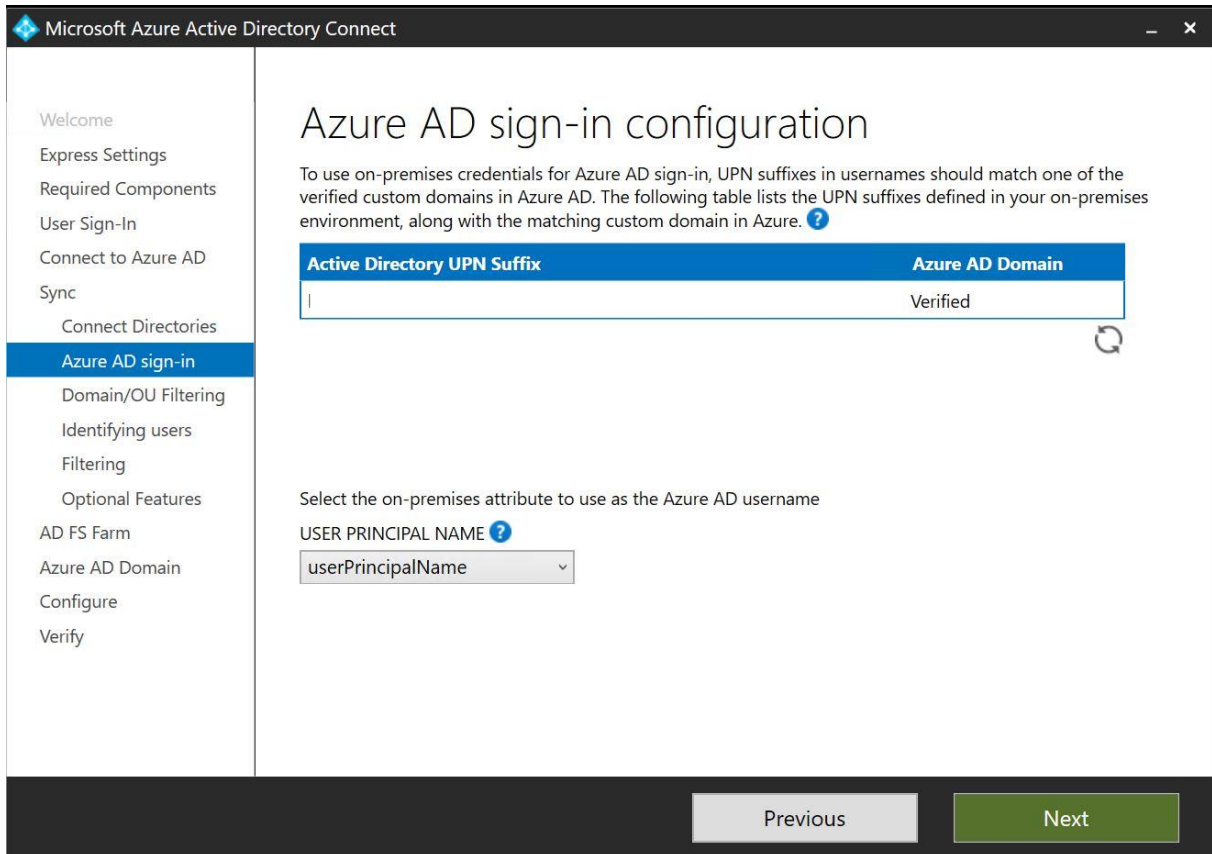
CONTOSO.COM\username

PASSWORD

OK Cancel

Step 8: Azure AD sign-in configuration

On this page your Office 365 domains will be visible. The verification status will also be visible. In this step, you can choose what AD attribute will be used as User Principal Name. The use of an alternative UPN (such as email), is not supported by every Office 365 application.



Microsoft Azure Active Directory Connect

Azure AD sign-in configuration

To use on-premises credentials for Azure AD sign-in, UPN suffixes in usernames should match one of the verified custom domains in Azure AD. The following table lists the UPN suffixes defined in your on-premises environment, along with the matching custom domain in Azure. ?

Active Directory UPN Suffix	Azure AD Domain
	Verified

Select the on-premises attribute to use as the Azure AD username

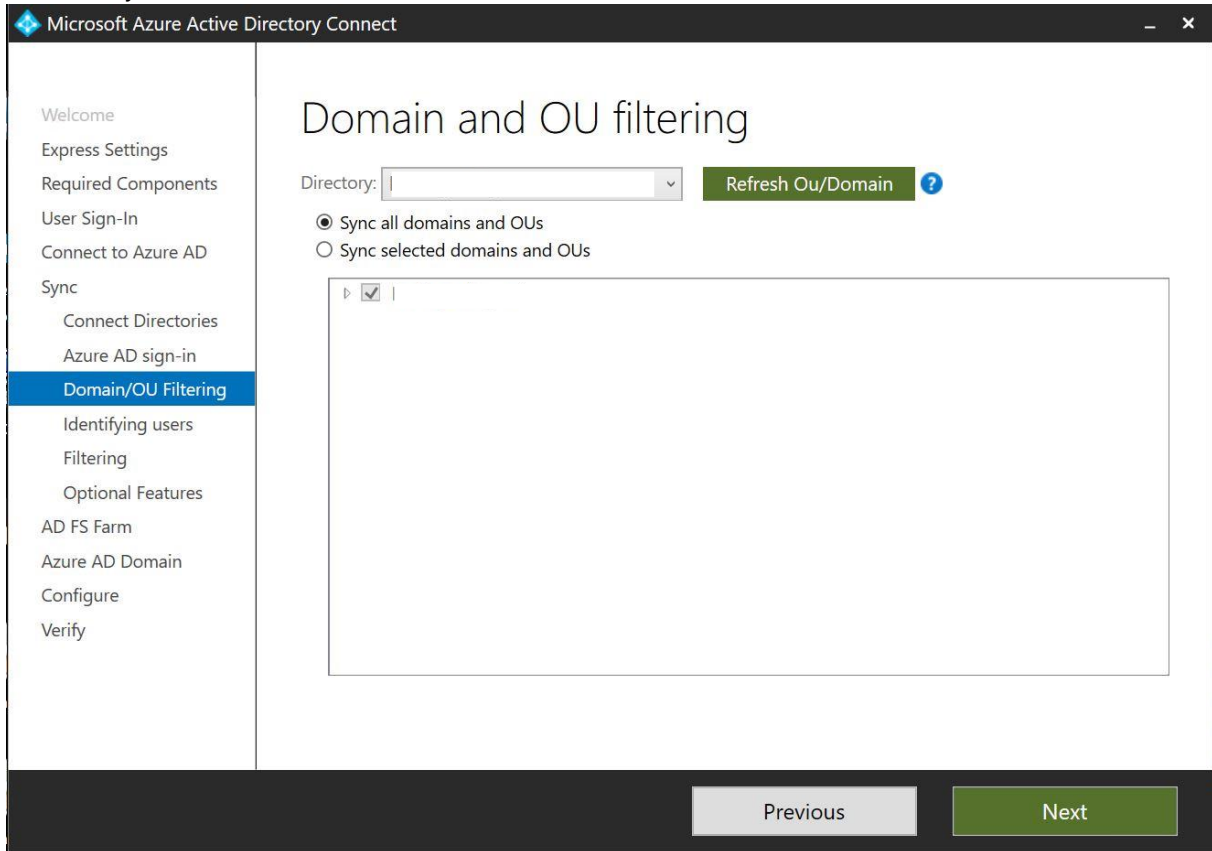
USER PRINCIPAL NAME ?

userPrincipalName

Previous Next

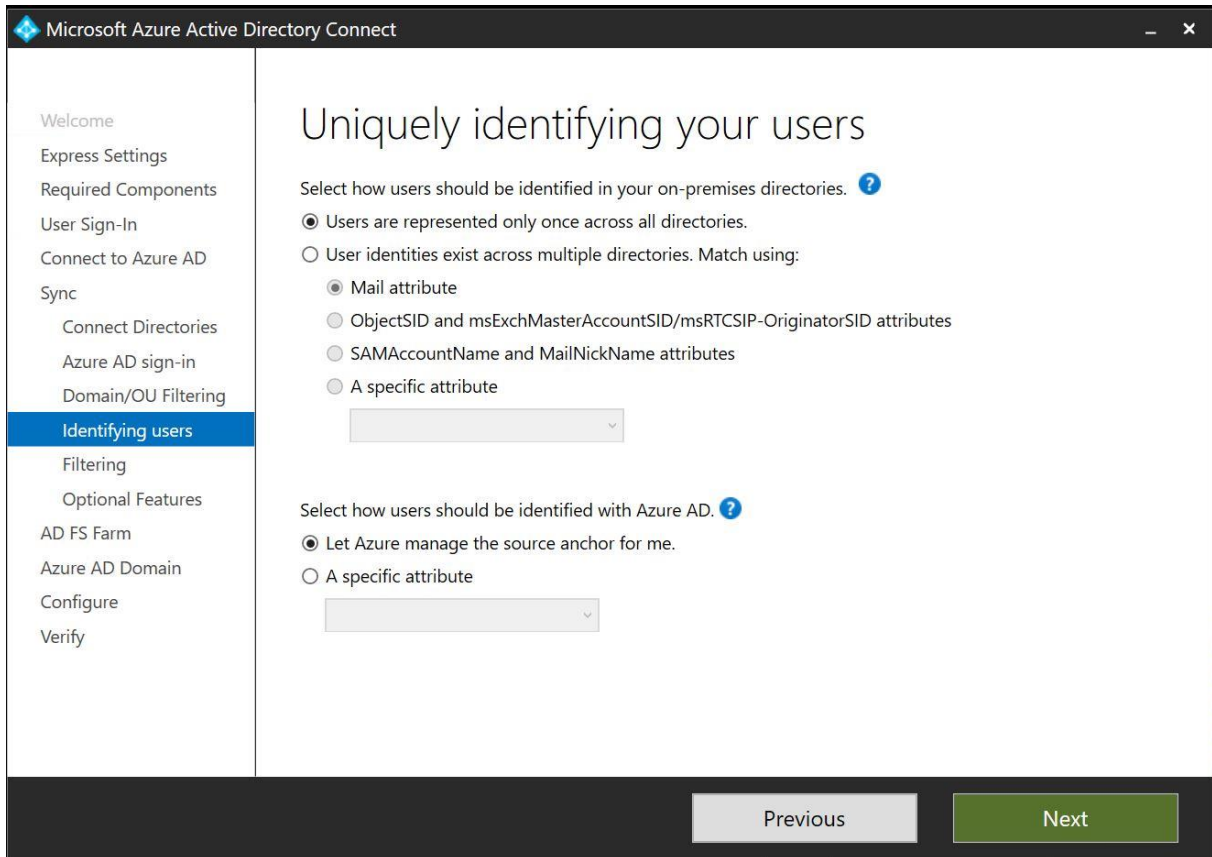
Step 9: Domain and OU filtering

In this step you can select the domains and OU's you would want to sync. By default all domains and OU's are synced.



Step 10: Uniquely identifying your users

In this step, you can select if users are represented only once across all directories or not. If not, you are able to select an attribute by which the users are identified. You can also select the way users in Azure AD should be identified. You can only set this once for a user! ObjectGUID would be a good attribute to use, or you could just let Azure choose the source anchor for you.



The screenshot shows the 'Uniquely identifying your users' configuration window in Microsoft Azure Active Directory Connect. The window title is 'Microsoft Azure Active Directory Connect'. The left sidebar contains a navigation menu with the following items: Welcome, Express Settings, Required Components, User Sign-In, Connect to Azure AD, Sync, Connect Directories, Azure AD sign-in, Domain/OU Filtering, **Identifying users** (highlighted), Filtering, Optional Features, AD FS Farm, Azure AD Domain, Configure, and Verify.

The main content area is titled 'Uniquely identifying your users'. It contains two sections:

Select how users should be identified in your on-premises directories. ?

- Users are represented only once across all directories.
- User identities exist across multiple directories. Match using:
 - Mail attribute
 - ObjectSID and msExchMasterAccountSID/msRTCSIP-OriginatorSID attributes
 - SAMAccountName and MailNickName attributes
 - A specific attribute

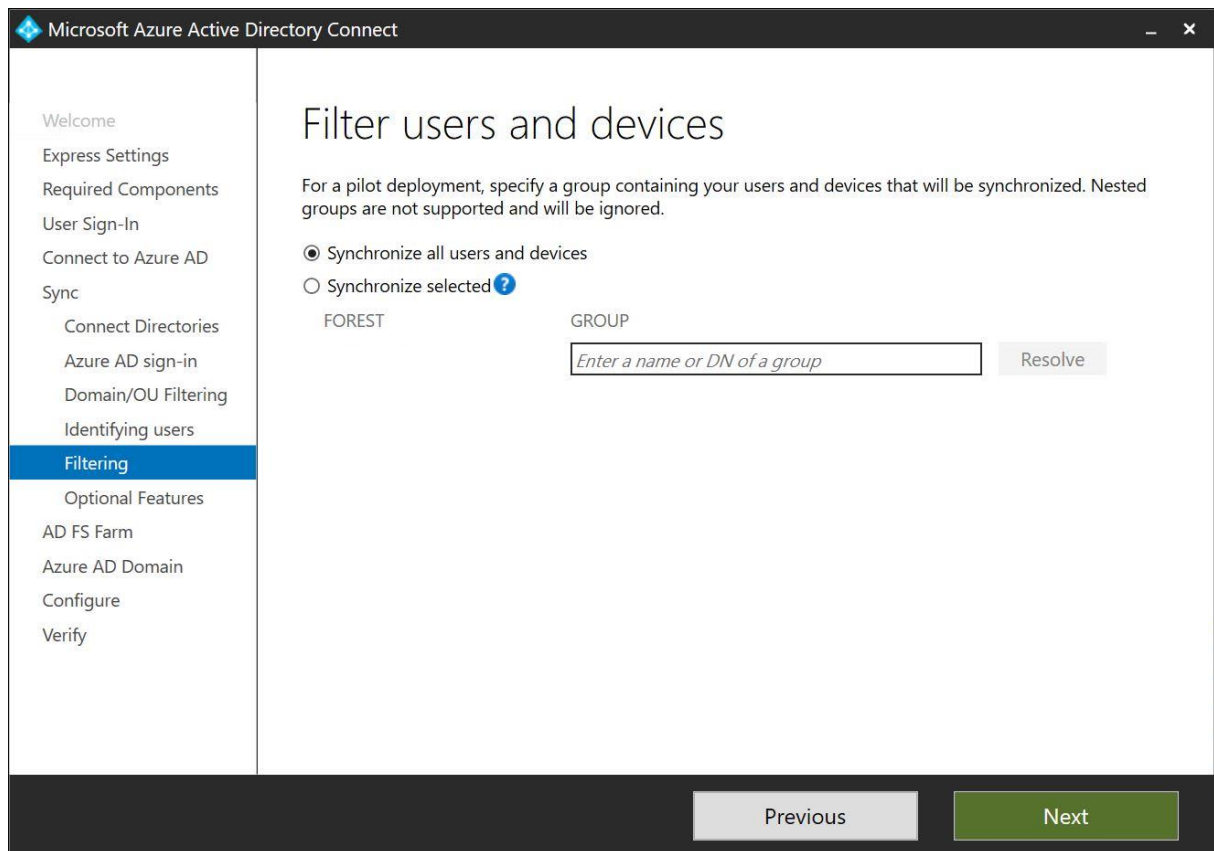
Select how users should be identified with Azure AD. ?

- Let Azure manage the source anchor for me.
- A specific attribute

At the bottom of the window, there are two buttons: 'Previous' (disabled) and 'Next' (active).

Step 11: Filter users and devices

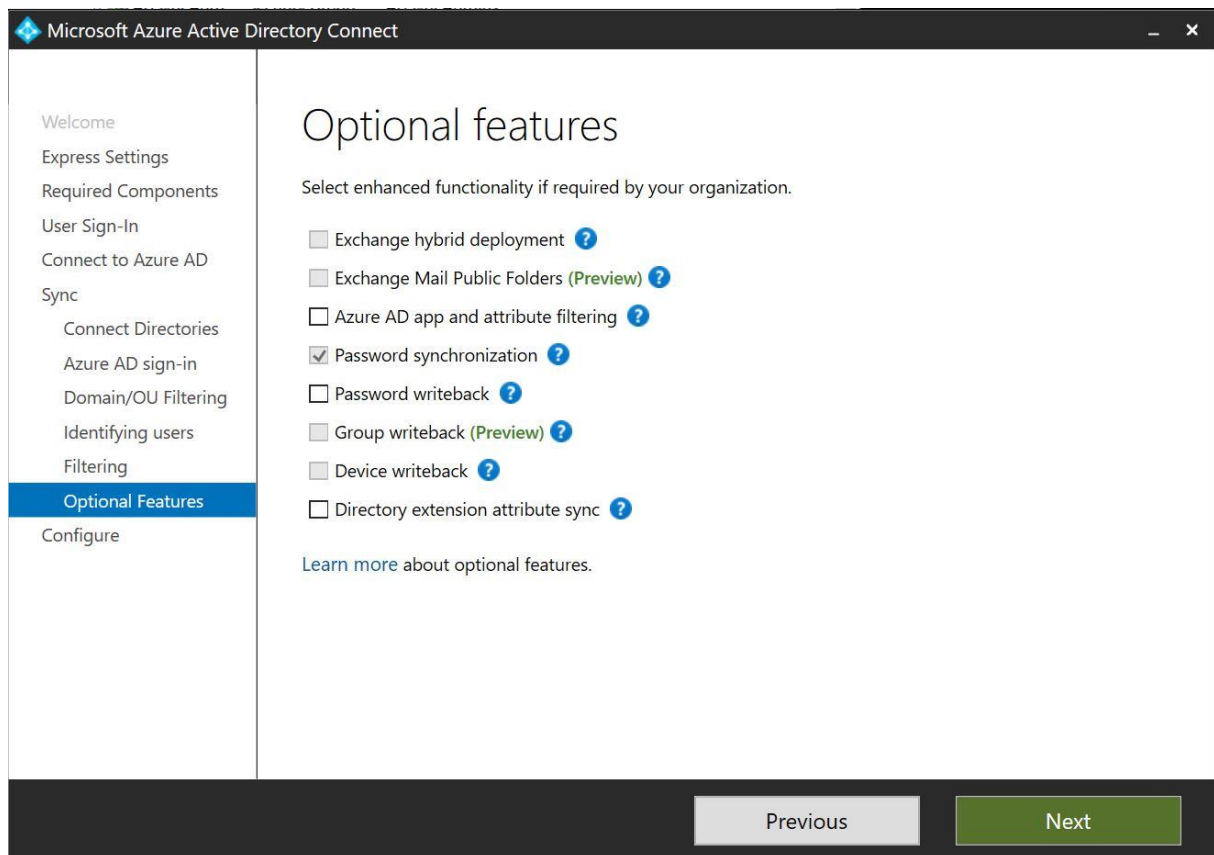
In this step, you are able to select users and devices that should or should not be synchronized. By default all users and devices are being synced.



The screenshot shows the 'Filter users and devices' configuration window in Microsoft Azure Active Directory Connect. The window title is 'Microsoft Azure Active Directory Connect'. The left sidebar contains a navigation menu with the following items: Welcome, Express Settings, Required Components, User Sign-In, Connect to Azure AD, Sync, Connect Directories, Azure AD sign-in, Domain/OU Filtering, Identifying users, Filtering (highlighted in blue), Optional Features, AD FS Farm, Azure AD Domain, Configure, and Verify. The main content area is titled 'Filter users and devices' and contains the following text: 'For a pilot deployment, specify a group containing your users and devices that will be synchronized. Nested groups are not supported and will be ignored.' Below this text are two radio button options: 'Synchronize all users and devices' (selected) and 'Synchronize selected' (with a help icon). Under the 'Synchronize selected' option, there are two input fields: 'FOREST' and 'GROUP'. The 'GROUP' field contains the placeholder text 'Enter a name or DN of a group' and a 'Resolve' button. At the bottom of the window, there are two buttons: 'Previous' and 'Next'.

Step 12: Optional features

In this step you can select optional features based on your situation. We are using the Password synchronization, but NOT the password writeback because this is not recommended by Microsoft.



The screenshot shows the 'Optional features' configuration window in Microsoft Azure Active Directory Connect. The window title is 'Microsoft Azure Active Directory Connect'. On the left, a navigation pane lists various steps: Welcome, Express Settings, Required Components, User Sign-In, Connect to Azure AD, Sync, Connect Directories, Azure AD sign-in, Domain/OU Filtering, Identifying users, Filtering, **Optional Features** (highlighted), and Configure. The main content area is titled 'Optional features' and contains the instruction: 'Select enhanced functionality if required by your organization.' Below this, there is a list of seven optional features, each with a checkbox and a help icon (a question mark in a blue circle):

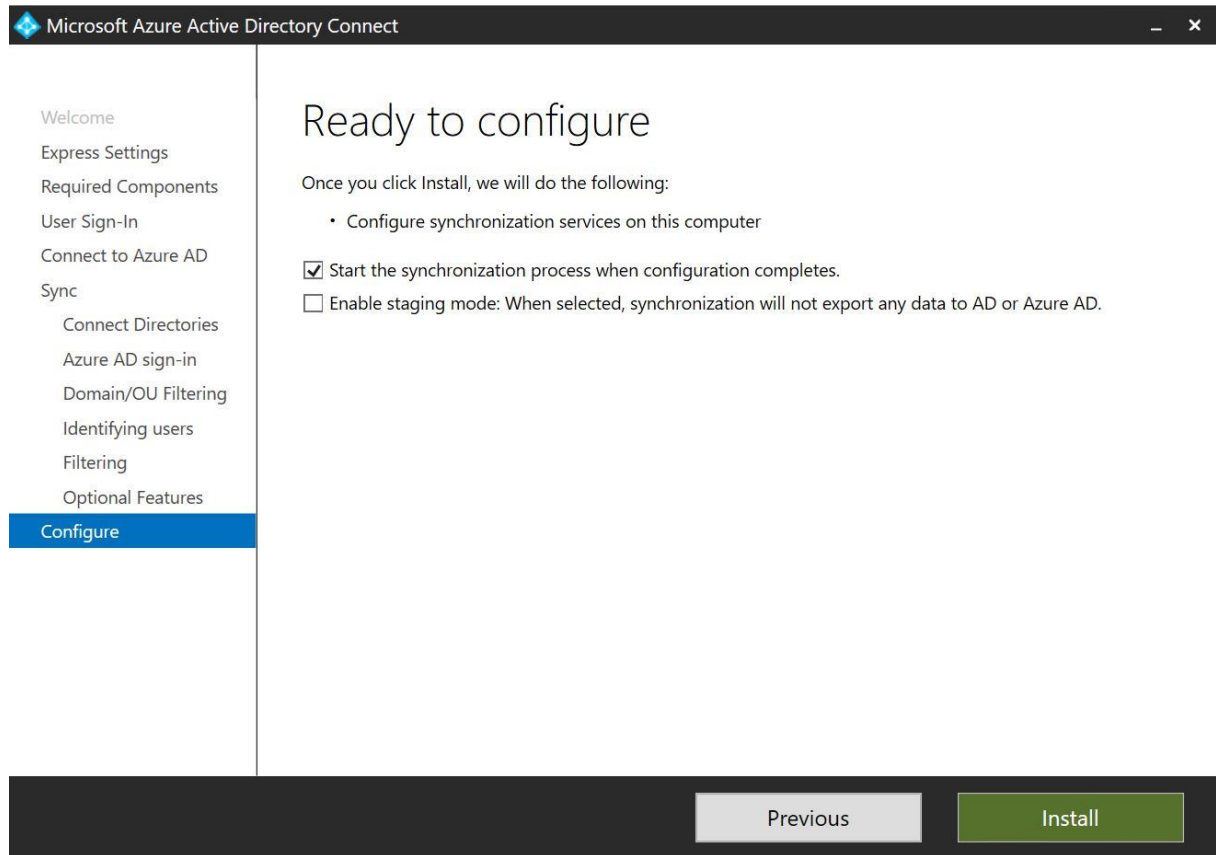
- Exchange hybrid deployment ?
- Exchange Mail Public Folders (Preview) ?
- Azure AD app and attribute filtering ?
- Password synchronization ?
- Password writeback ?
- Group writeback (Preview) ?
- Device writeback ?
- Directory extension attribute sync ?

At the bottom of the main content area, there is a link: [Learn more about optional features.](#)

At the bottom of the window, there are two buttons: 'Previous' (disabled) and 'Next' (active).

Step 13: Ready to configure

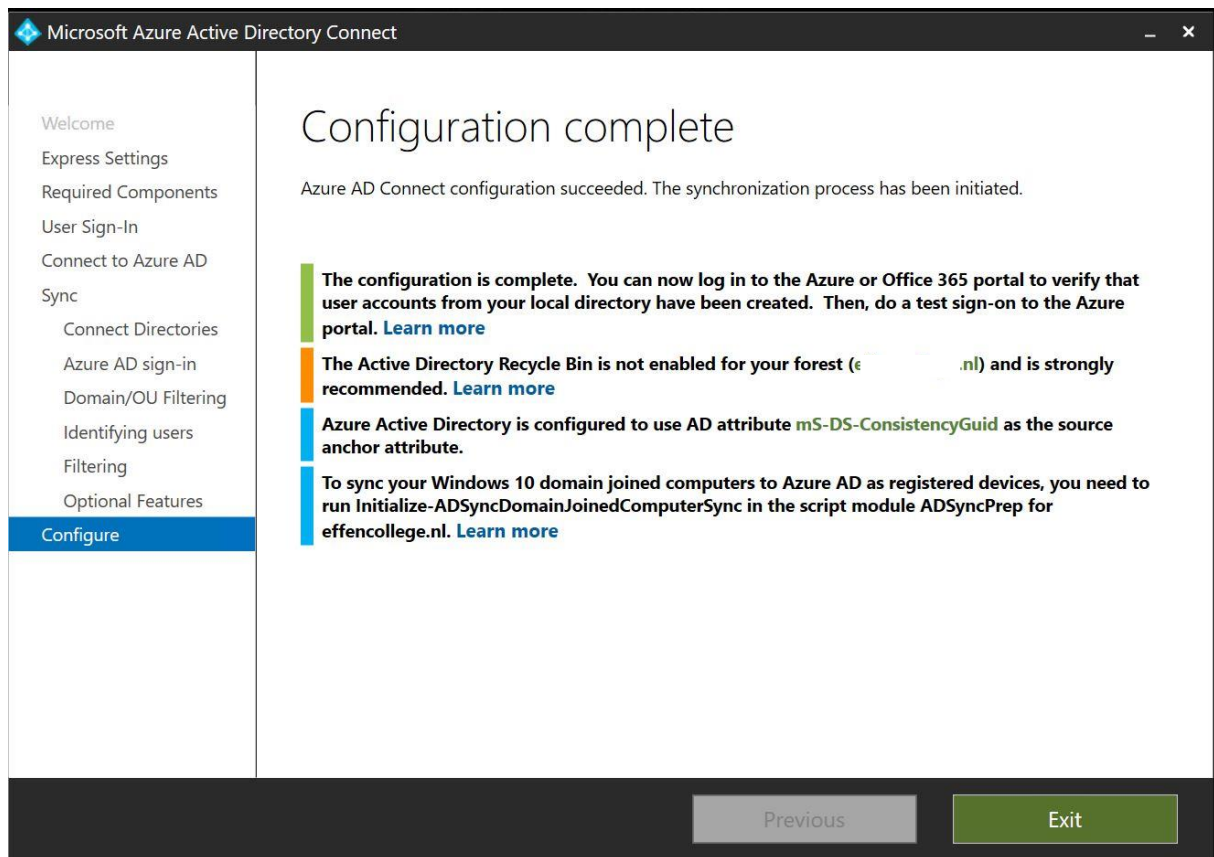
In this step you are able to start the configuration of all of the settings you've selected.



The screenshot shows the 'Ready to configure' window in Microsoft Azure Active Directory Connect. The window title is 'Microsoft Azure Active Directory Connect'. On the left, a navigation pane lists various steps: Welcome, Express Settings, Required Components, User Sign-In, Connect to Azure AD, Sync, Connect Directories, Azure AD sign-in, Domain/OU Filtering, Identifying users, Filtering, Optional Features, and Configure (which is highlighted in blue). The main content area is titled 'Ready to configure' and contains the following text: 'Once you click Install, we will do the following:'. Below this, there is a bulleted list: '• Configure synchronization services on this computer'. There are two checkboxes: the first is checked and labeled 'Start the synchronization process when configuration completes.', and the second is unchecked and labeled 'Enable staging mode: When selected, synchronization will not export any data to AD or Azure AD.'. At the bottom of the window, there are two buttons: 'Previous' (disabled) and 'Install' (active).

Step 14: Configuration Complete

In this step you will see a summary of completed steps, warnings and errors. In this case it is recommended to enable the AD recycle bin.



The screenshot shows the 'Microsoft Azure Active Directory Connect' application window. The title bar includes the Microsoft logo and the text 'Microsoft Azure Active Directory Connect'. The window is divided into a left-hand navigation pane and a main content area. The navigation pane lists several steps: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Azure AD', 'Sync', 'Connect Directories', 'Azure AD sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', and 'Configure'. The 'Configure' option is highlighted with a blue background. The main content area has the heading 'Configuration complete' and a sub-heading 'Azure AD Connect configuration succeeded. The synchronization process has been initiated.' Below this, there are three informational messages, each with a colored bar on the left: a green bar for the completion message, an orange bar for the AD Recycle Bin warning, and a blue bar for the source anchor attribute information. At the bottom of the window, there are two buttons: 'Previous' (disabled) and 'Exit' (active).

Microsoft Azure Active Directory Connect

Welcome
Express Settings
Required Components
User Sign-In
Connect to Azure AD
Sync
Connect Directories
Azure AD sign-in
Domain/OU Filtering
Identifying users
Filtering
Optional Features
Configure

Configuration complete

Azure AD Connect configuration succeeded. The synchronization process has been initiated.

- The configuration is complete.** You can now log in to the Azure or Office 365 portal to verify that user accounts from your local directory have been created. Then, do a test sign-on to the Azure portal. [Learn more](#)
- The Active Directory Recycle Bin is not enabled for your forest (€ .nl) and is strongly recommended.** [Learn more](#)
- Azure Active Directory is configured to use AD attribute `mS-DS-ConsistencyGuid` as the source anchor attribute.**
- To sync your Windows 10 domain joined computers to Azure AD as registered devices, you need to run `Initialize-ADSyncDomainJoinedComputerSync` in the script module `ADSyncPrep` for `effencollege.nl`.** [Learn more](#)

Previous Exit