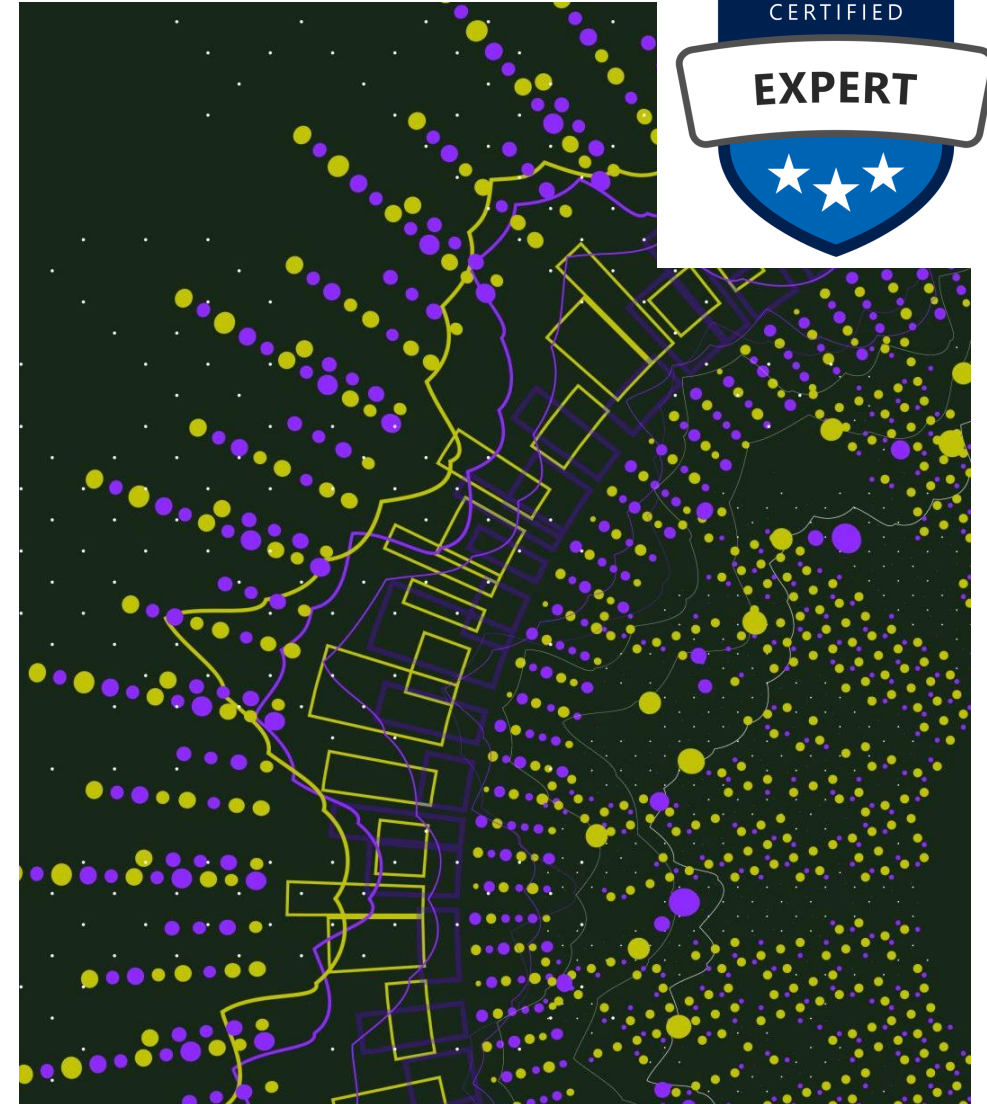


Hybrid Identity Lab Microsoft Entra Connect + On-Prem AD Sync

Real-world hybrid identity setup using Password Hash Sync + Seamless SSO

Perparim Abdullahu AZ-305 Certified |
SC-300 in Progress | #PerparimLabs



✂ Step 1 – Download Connect Sync Agent

- Started by downloading the **Microsoft Entra Connect Sync Agent** from the portal to enable hybrid identity sync.

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Home > Perparims Cloud Solutions | Microsoft Entra Connect >

Microsoft Entra Connect | Get started

Microsoft Entra ID

Got feedback?

- Get started
- Cloud Sync
- Connect Sync

Manage your infrastructure

Determine the best solution to manage the lifecycle of your users and groups.

Manage from the cloud: Cloud Sync

Cloud Sync is the right solution for you if you are a multi-national org that wants to consolidate your identities from various disconnected Active Directories into a single Microsoft Entra tenant, or if your company is building a cloud first strategy and want to reduce the on-premises footprint. With a lightweight agent and high availability feature, Cloud Sync is the next generation synchronization tool for your needs.

Get started with Cloud Sync by downloading and installing the provisioning agent.

[Download Provisioning agent](#)

Manage from on-premises: Connect Sync

Microsoft Entra Connect Sync is an on-premises solution that takes care of all the operations that are related to synchronize identity data between your on-premises environment and Microsoft Entra ID. Connect Sync is used for complex topologies and by organizations that rely on their on-premises infrastructure to manage their business.

[Download Connect Sync Agent](#)

Microsoft Entra ID

Download Agent

By downloading the agent, you

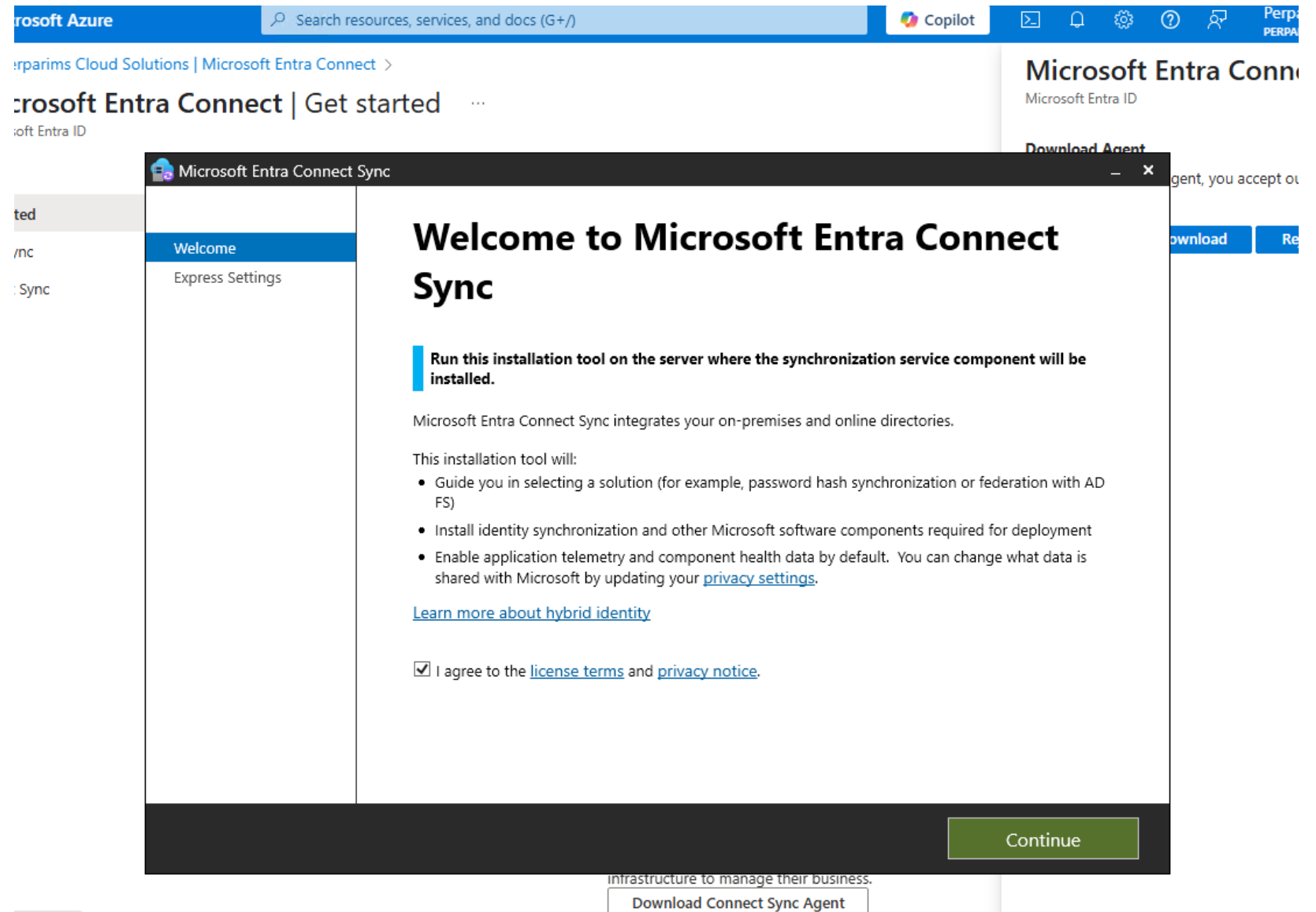
[Terms of Service](#)

[Accept terms & download](#)

Add or remove favorites by pressing Ctrl+Shift+F

Step 2 – Install & Launch Wizard

- Installed the agent on the domain controller and launched the configuration wizard.



Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Microsoft Entra Connect | Get started

Microsoft Entra ID

Microsoft Entra Connect Sync

Welcome

Express Settings

Welcome to Microsoft Entra Connect Sync

Run this installation tool on the server where the synchronization service component will be installed.

Microsoft Entra Connect Sync integrates your on-premises and online directories.

This installation tool will:

- Guide you in selecting a solution (for example, password hash synchronization or federation with AD FS)
- Install identity synchronization and other Microsoft software components required for deployment
- Enable application telemetry and component health data by default. You can change what data is shared with Microsoft by updating your [privacy settings](#).

[Learn more about hybrid identity](#)

☒ I agree to the [license terms](#) and [privacy notice](#).

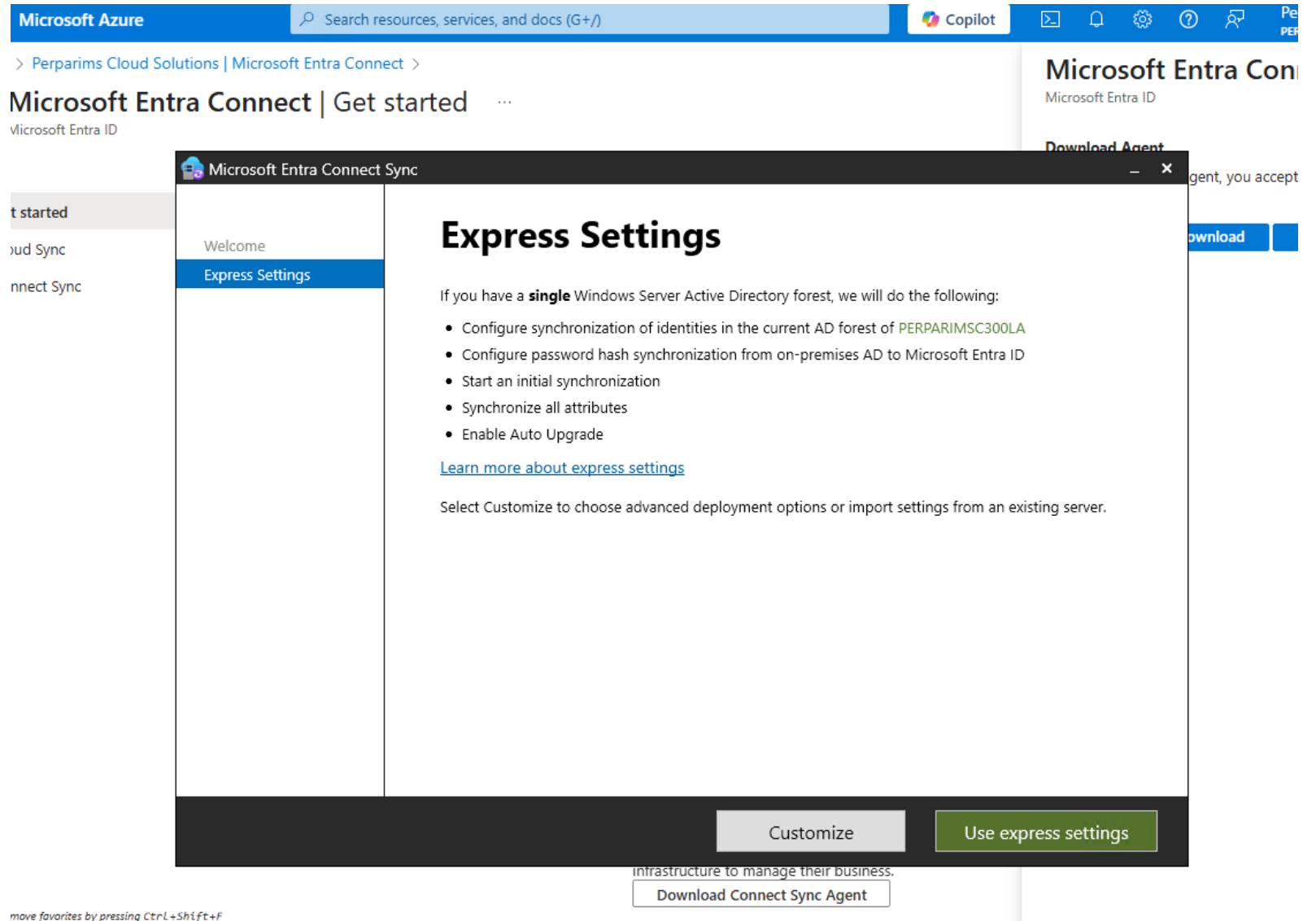
Continue

infrastructure to manage their business.

Download Connect Sync Agent

Step 3 – Chose Express Settings

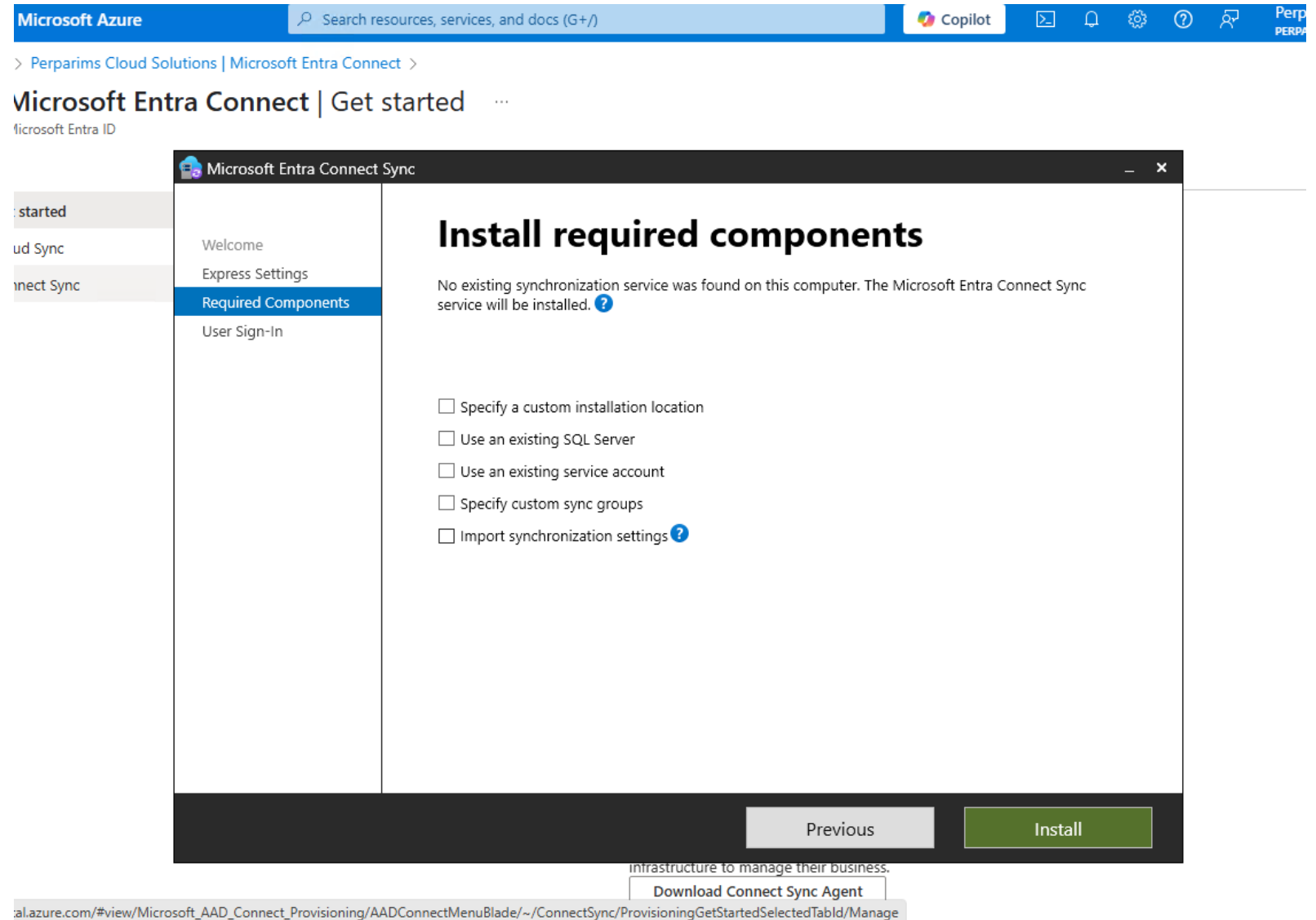
- Since I had a single AD forest, I used **Express Settings** to simplify setup.



The screenshot shows the Microsoft Azure portal interface. At the top, there's a blue header with 'Microsoft Azure' and a search bar. Below it, a breadcrumb trail reads '> Perparims Cloud Solutions | Microsoft Entra Connect >'. The main heading is 'Microsoft Entra Connect | Get started' with a dropdown arrow. Below this, it says 'Microsoft Entra ID'. On the left, there's a sidebar with 'Get started', 'Cloud Sync', and 'Connect Sync'. The 'Connect Sync' option is selected. The main content area shows the 'Microsoft Entra Connect Sync' window. It has a left sidebar with 'Welcome' and 'Express Settings' (which is highlighted). The main pane is titled 'Express Settings' and contains the following text: 'If you have a **single** Windows Server Active Directory forest, we will do the following:'. This is followed by a bulleted list: '• Configure synchronization of identities in the current AD forest of PERPARIMSC300LA', '• Configure password hash synchronization from on-premises AD to Microsoft Entra ID', '• Start an initial synchronization', '• Synchronize all attributes', and '• Enable Auto Upgrade'. Below the list is a link: '[Learn more about express settings](#)'. Further down, it says 'Select Customize to choose advanced deployment options or import settings from an existing server.' At the bottom of the window, there are two buttons: 'Customize' (grey) and 'Use express settings' (green). Below the window, there's a footer with the text 'infrastructure to manage their business.' and a button labeled 'Download Connect Sync Agent'. At the very bottom, there's a small text: 'move favorites by pressing Ctrl+Shift+F'.

Step 4 – Install Required Components

- Let the wizard install the required sync engine and components.



Microsoft Azure Search resources, services, and docs (G+/)

Copilot

> Perparims Cloud Solutions | Microsoft Entra Connect >

Microsoft Entra Connect | Get started ...

Microsoft Entra ID

started

ud Sync

nect Sync

Microsoft Entra Connect Sync

Welcome

Express Settings

Required Components

User Sign-In

Install required components

No existing synchronization service was found on this computer. The Microsoft Entra Connect Sync service will be installed. ?

- ☐ Specify a custom installation location
- ☐ Use an existing SQL Server
- ☐ Use an existing service account
- ☐ Specify custom sync groups
- ☐ Import synchronization settings ?

Previous Install

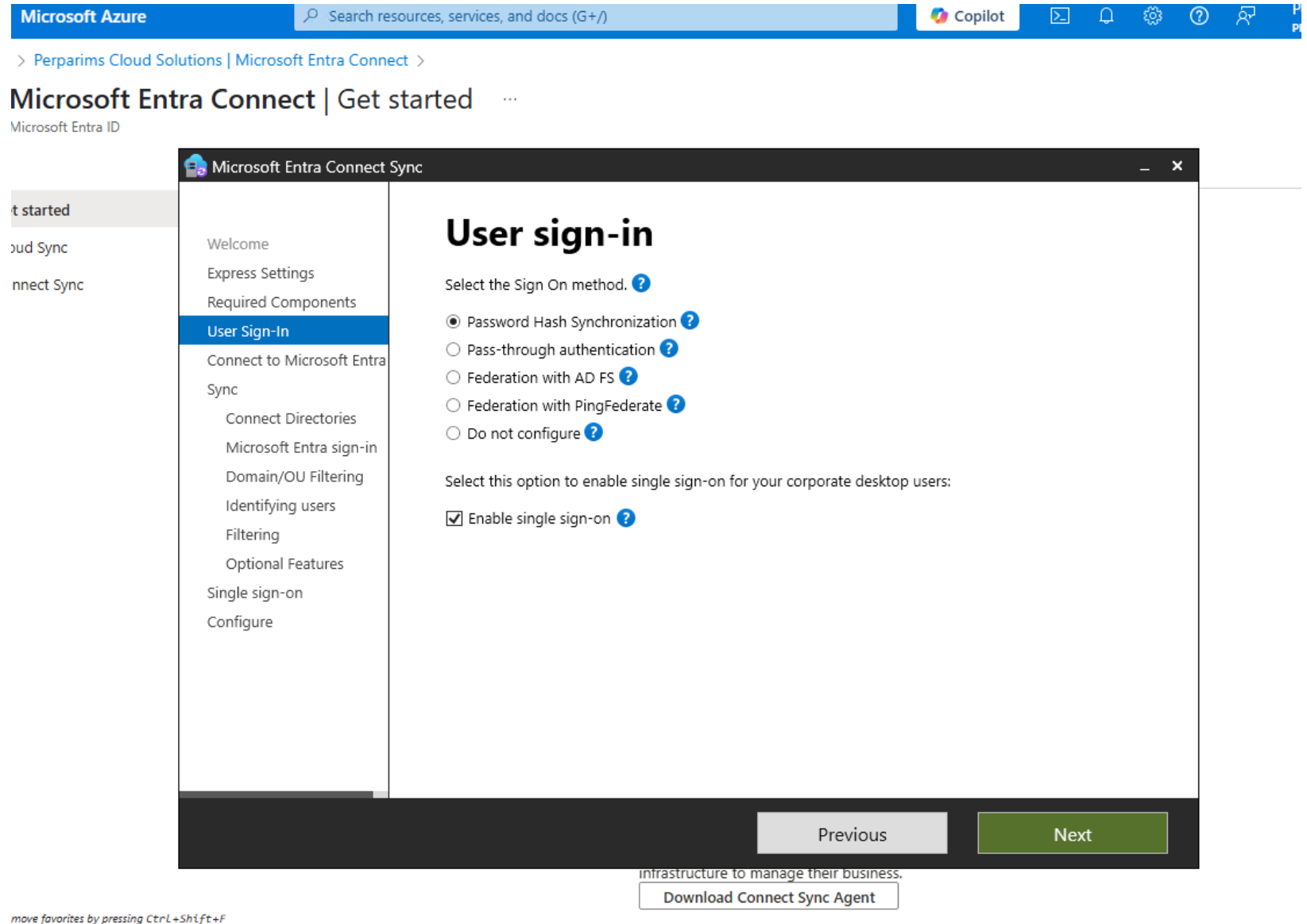
infrastructure to manage their business.

[Download Connect Sync Agent](#)

al.azure.com/#view/Microsoft_AAD_Connect_Provisioning/AADConnectMenuBlade/~:/ConnectSync/ProvisioningGetStartedSelectedTabId/Manage

Step 5 – Choose Sign-In Method

- Selected **Password Hash Synchronization** with **Single Sign-On** for user convenience.



The screenshot shows the Microsoft Azure portal interface. At the top, there's a search bar and navigation links. The main heading is "Microsoft Entra Connect | Get started". Below it, a sidebar lists navigation options: "Get started", "Cloud Sync", and "Connect Sync". The "Connect Sync" option is selected, leading to the "Microsoft Entra Connect Sync" window. This window has a left-hand menu with options: "Welcome", "Express Settings", "Required Components", "User Sign-In" (highlighted), "Connect to Microsoft Entra Sync", "Connect Directories", "Microsoft Entra sign-in", "Domain/OU Filtering", "Identifying users", "Filtering", "Optional Features", "Single sign-on", and "Configure". The main content area is titled "User sign-in" and contains the following text: "Select the Sign On method." followed by four radio button options: "Password Hash Synchronization" (selected), "Pass-through authentication", "Federation with AD FS", "Federation with PingFederate", and "Do not configure". Below this, it says "Select this option to enable single sign-on for your corporate desktop users:" followed by a checked checkbox for "Enable single sign-on". At the bottom right of the window are "Previous" and "Next" buttons. Below the window, there's a footer with the text "infrastructure to manage their business." and a button labeled "Download Connect Sync Agent".

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

> Perparims Cloud Solutions | Microsoft Entra Connect >

Microsoft Entra Connect | Get started ...

Microsoft Entra ID

Get started

Cloud Sync

Connect Sync

Microsoft Entra Connect Sync

Welcome

Express Settings

Required Components

User Sign-In

Connect to Microsoft Entra Sync

Connect Directories

Microsoft Entra sign-in

Domain/OU Filtering

Identifying users

Filtering

Optional Features

Single sign-on

Configure

User sign-in

Select the Sign On method. ?

- ☒ Password Hash Synchronization ?
- ☐ Pass-through authentication ?
- ☐ Federation with AD FS ?
- ☐ Federation with PingFederate ?
- ☐ Do not configure ?

Select this option to enable single sign-on for your corporate desktop users:

- ☒ Enable single sign-on ?

Previous

Next

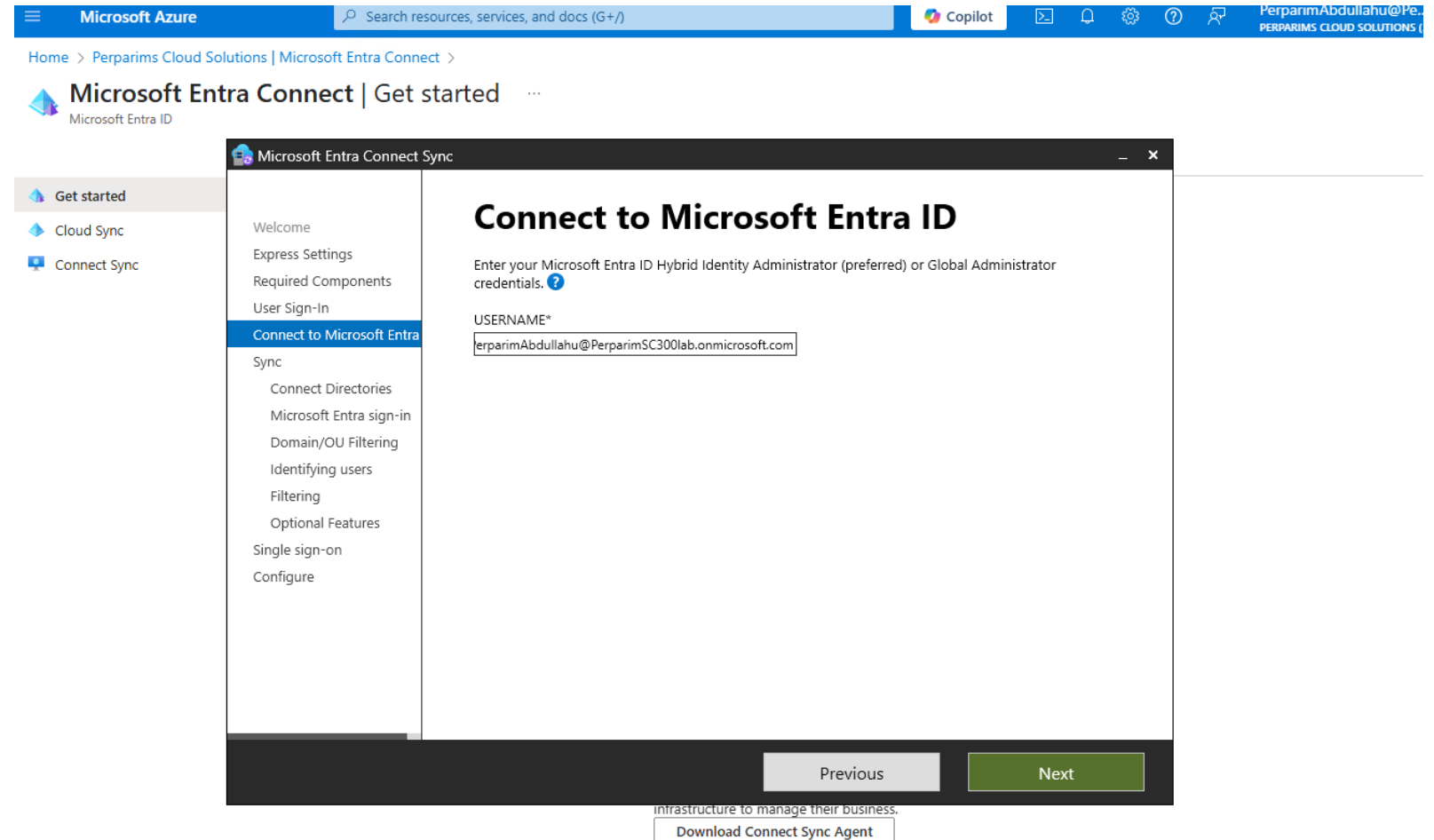
infrastructure to manage their business.

Download Connect Sync Agent

move favorites by pressing Ctrl+Shift+F

Step 6 – Connect to Entra ID

Entered my **Global Administrator** credentials to connect to Microsoft Entra ID.



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the Copilot icon. The breadcrumb trail indicates the path: Home > Perparims Cloud Solutions | Microsoft Entra Connect > Microsoft Entra Connect | Get started. The left sidebar contains a 'Get started' section with links to 'Cloud Sync' and 'Connect Sync'. The main content area is titled 'Microsoft Entra Connect Sync' and displays a list of options on the left: Welcome, Express Settings, Required Components, User Sign-In, **Connect to Microsoft Entra** (highlighted), Sync, Connect Directories, Microsoft Entra sign-in, Domain/OU Filtering, Identifying users, Filtering, Optional Features, Single sign-on, and Configure. The right pane shows the 'Connect to Microsoft Entra ID' step, which prompts the user to enter their Microsoft Entra ID Hybrid Identity Administrator (preferred) or Global Administrator credentials. A text box labeled 'USERNAME*' contains the email address 'terparimAbdullahu@PerparimSC300lab.onmicrosoft.com'. At the bottom of the window, there are 'Previous' and 'Next' buttons, and a 'Download Connect Sync Agent' button.



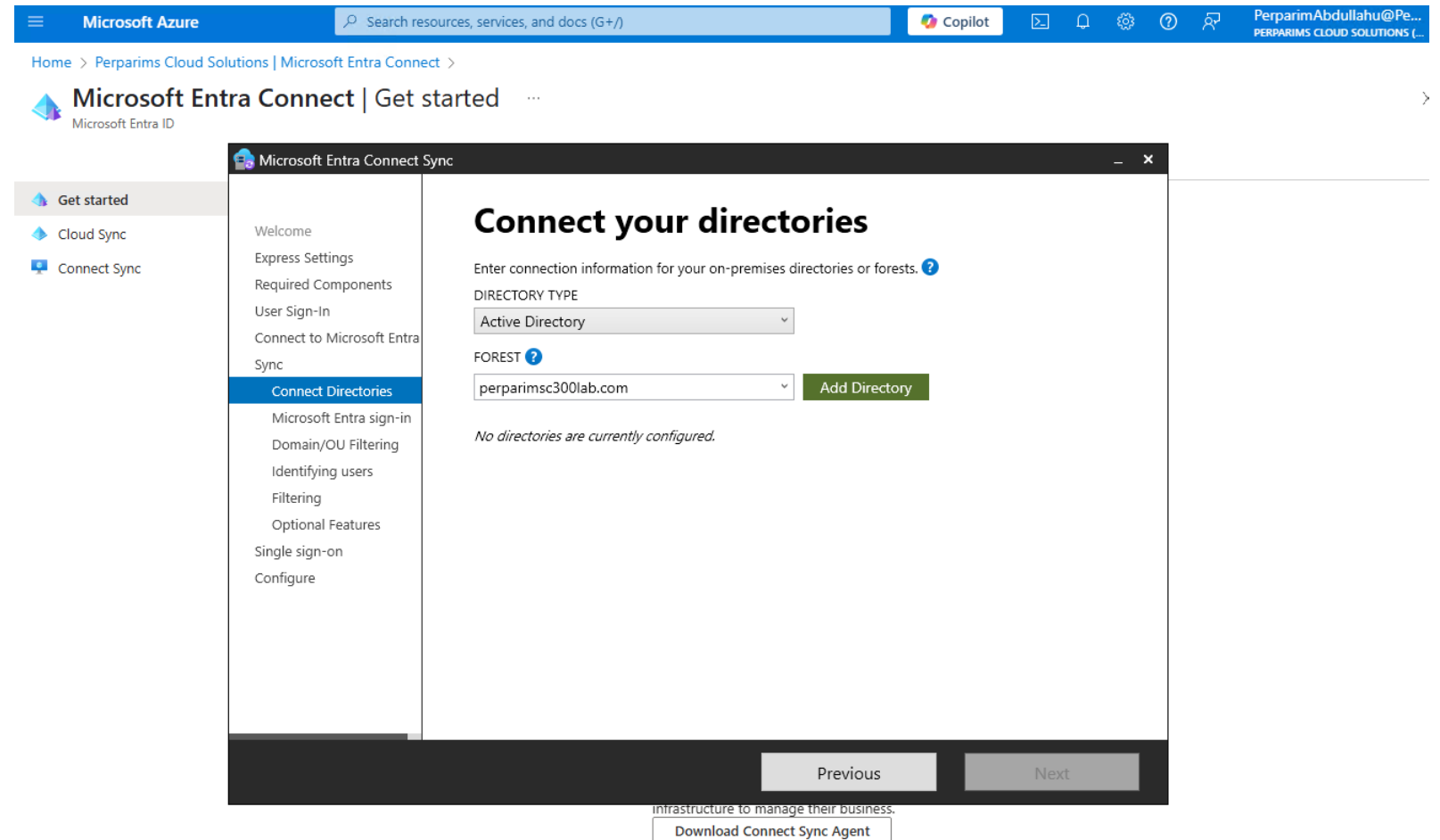
JavaScript Error (Resolved)

- Faced a browser error due to IE Enhanced Security. Fixed it by adding Microsoft URLs to **Trusted Sites**.

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the Copilot icon. The main content area displays the 'Microsoft Entra Connect | Get started' page. A sidebar on the left lists various configuration options: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra', 'Sync', 'Connect Directories', 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'Single sign-on', and 'Configure'. The 'Connect to Microsoft Entra' option is currently selected. Overlaid on the right side of the page is a Windows Internet Explorer security warning dialog. The dialog has a red 'X' icon and text stating: 'Content within this application coming from the website listed below is being blocked by Internet Explorer Enhanced Security Configuration. https://login.microsoftonline.com'. It includes a 'Close' button and a link to 'Learn more about Internet Explorer's Enhanced Security Configuration...'. Below this, it explains that adding the site to the Trusted Sites zone will lower security settings and provides an 'Add...' button. At the bottom of the page, there are 'Previous' and 'Next' navigation buttons, and a footer section with the text 'infrastructure to manage their business.' and a 'Download Connect Sync Agent' button.

Step 7 – Connect Local AD Forest

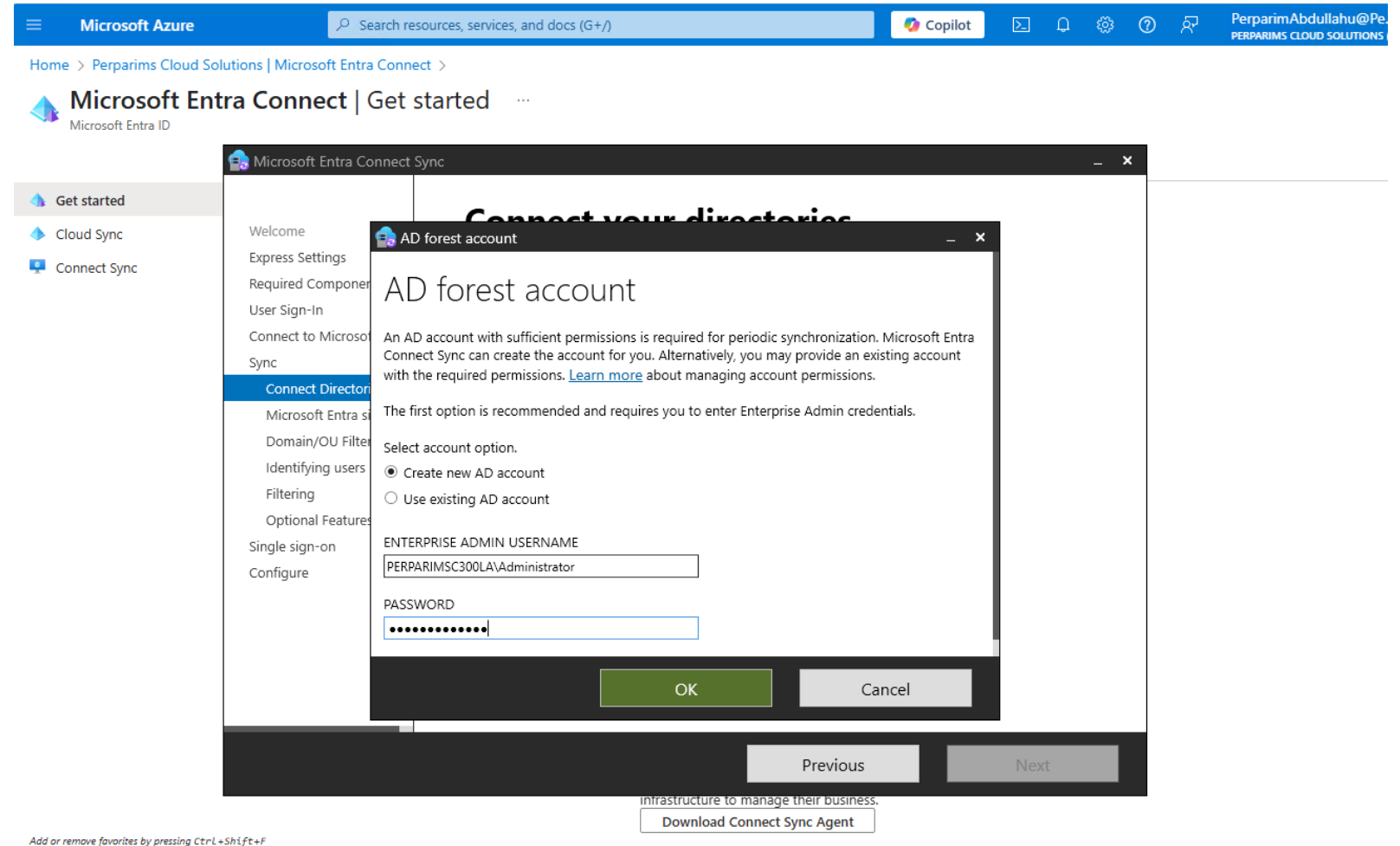
*Specified the AD forest
and authenticated using
Enterprise Admin
credentials.*



The screenshot displays the Microsoft Azure portal interface for Microsoft Entra Connect. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'PerparimAbdullahu@Pe...'. The breadcrumb trail shows 'Home > Perparims Cloud Solutions | Microsoft Entra Connect >'. The main heading is 'Microsoft Entra Connect | Get started'. The left sidebar contains a 'Get started' section with links to 'Cloud Sync' and 'Connect Sync'. The 'Connect Sync' link is selected, leading to the 'Microsoft Entra Connect Sync' window. This window has a left-hand menu with options: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra Sync', 'Connect Directories' (highlighted), 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'Single sign-on', and 'Configure'. The main content area is titled 'Connect your directories' and prompts the user to 'Enter connection information for your on-premises directories or forests.' It features a 'DIRECTORY TYPE' dropdown menu set to 'Active Directory' and a 'FOREST' dropdown menu set to 'perparimsc300lab.com'. An 'Add Directory' button is present. Below these fields, it states 'No directories are currently configured.' At the bottom of the window, there are 'Previous' and 'Next' buttons. A footer note at the bottom of the screenshot reads 'Add or remove favorites by pressing Ctrl+L+Shift+F'.

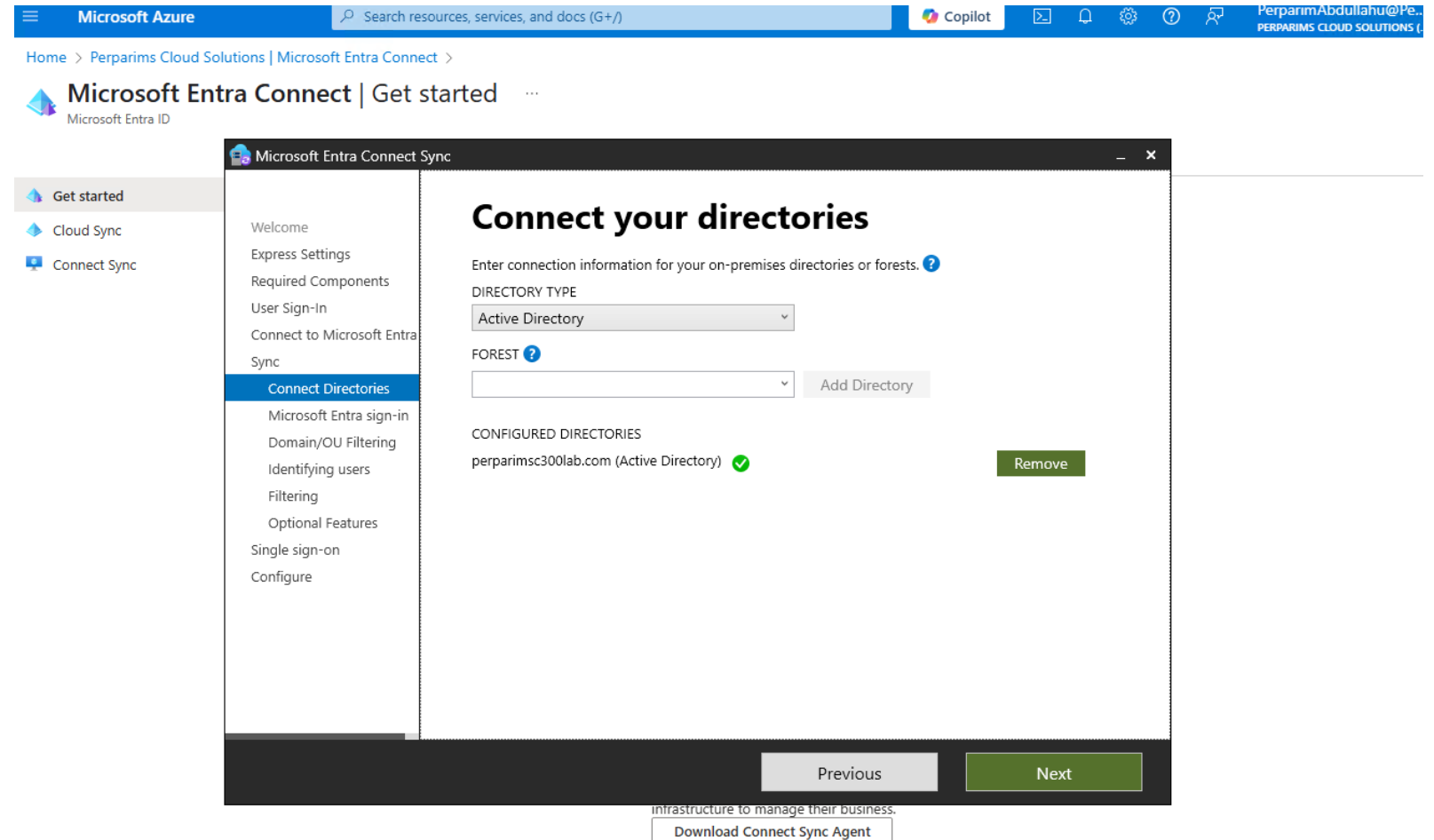
Forest Connection Confirmed

Successfully connected to
perparimsc300lab.com
for sync.



Step 8 – UPN Configuration

*Notified that my custom
UPN suffix wasn't verified.
Continued with a warning
for lab purposes.*



The screenshot displays the Microsoft Azure portal interface for Microsoft Entra Connect. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'PerparimAbdullahu@Pe...'. The breadcrumb trail shows 'Home > Perparims Cloud Solutions | Microsoft Entra Connect >'. The main heading is 'Microsoft Entra Connect | Get started'. The left sidebar contains a menu with 'Get started', 'Cloud Sync', and 'Connect Sync'. The 'Connect Sync' section is expanded, showing a list of options: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra Sync', 'Connect Directories' (highlighted), 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'Single sign-on', and 'Configure'. The main content area is titled 'Connect your directories' and prompts the user to 'Enter connection information for your on-premises directories or forests'. It features a 'DIRECTORY TYPE' dropdown set to 'Active Directory' and a 'FOREST' dropdown. Below these, a table lists 'CONFIGURED DIRECTORIES' with one entry: 'perparimsc300lab.com (Active Directory)' with a green checkmark and a 'Remove' button. At the bottom, there are 'Previous' and 'Next' buttons, and a 'Download Connect Sync Agent' button.

Step 3 OU Filtering Option

*Filtered the
synchronization scope by
selecting only relevant
OUs.*

The image shows two screenshots of the Microsoft Entra Connect Sync configuration interface. The top screenshot displays the 'Microsoft Entra sign-in configuration' page. It includes a table for 'Active Directory UPN Suffix' and 'Microsoft Entra ID Domain'. The table has two rows: 'perparimsc300lab.com' with status 'Not Added' and 'abc-corp.com' with status 'Not Verified'. Below the table, there is a section for 'Select the on-premises attribute to use as the Microsoft Entra ID username' with a dropdown menu set to 'userPrincipalName'. A warning message states: 'Continue without matching all Users will not be able to sign-in if suffix does not match a verified domain'. The bottom screenshot shows the 'Domain and OU filtering' page. It has a 'Directory' dropdown set to 'perparimsc300lab.com' and a 'Refresh Domains' button. Two radio buttons are present: 'Sync all domains and OUs' (selected) and 'Sync selected domains and OUs'. Below the radio buttons, there is a list box containing 'perparimsc300lab.com' with a checkbox that is checked. At the bottom of the interface, there are 'Previous' and 'Next' buttons, and a 'Download Connect Sync Agent' button.

Active Directory UPN Suffix	Microsoft Entra ID Domain
perparimsc300lab.com	Not Added
abc-corp.com	Not Verified

USER PRINCIPAL NAME
userPrincipalName

☒ Continue without matching all
Users will not be able to sign-in if suffix does not match a verified domain

Directory: perparimsc300lab.com Refresh Domains

☒ Sync all domains and OUs
☐ Sync selected domains and OUs

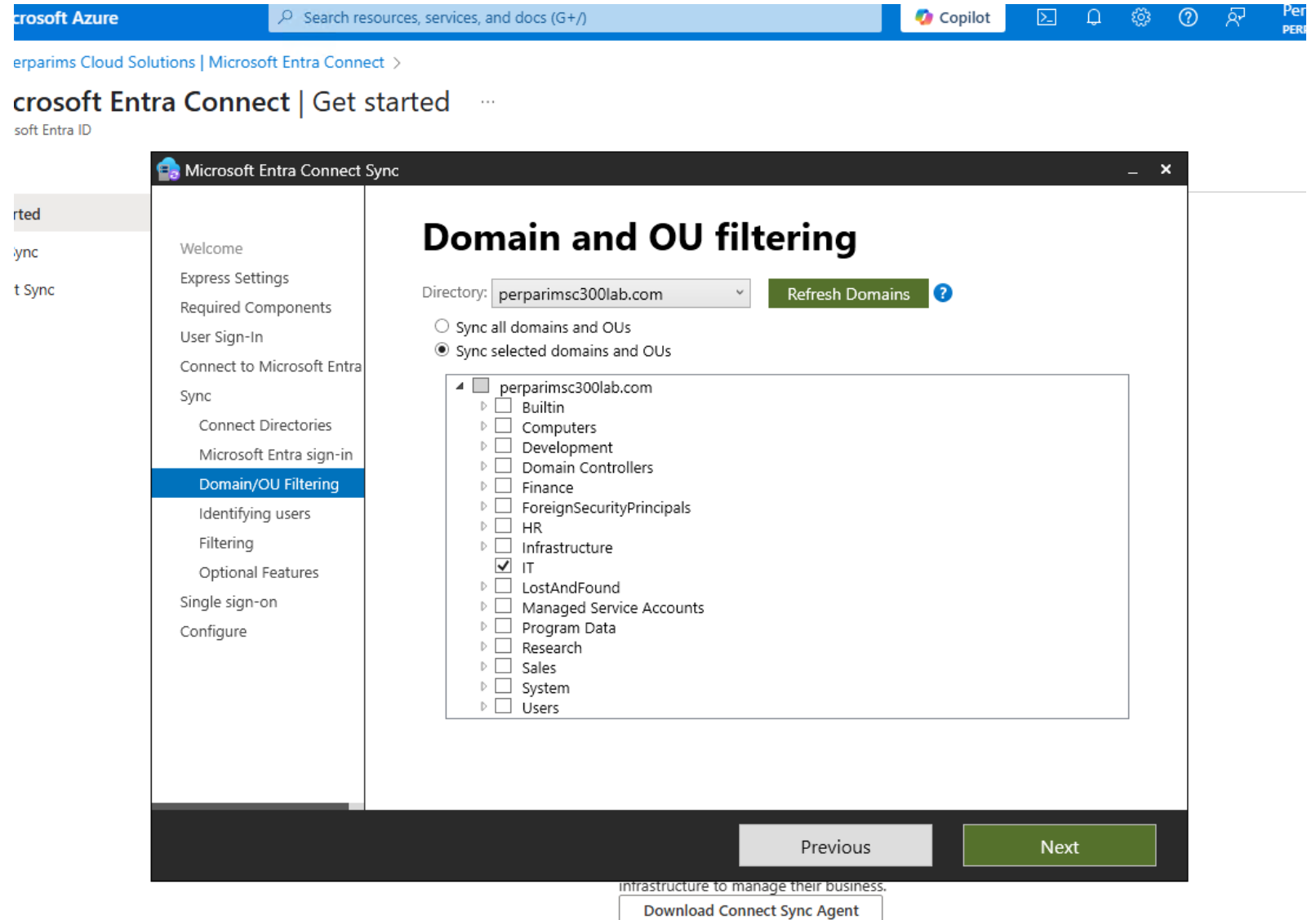
☒ perparimsc300lab.com

Previous Next

Download Connect Sync Agent

Step 10 – Identify Users

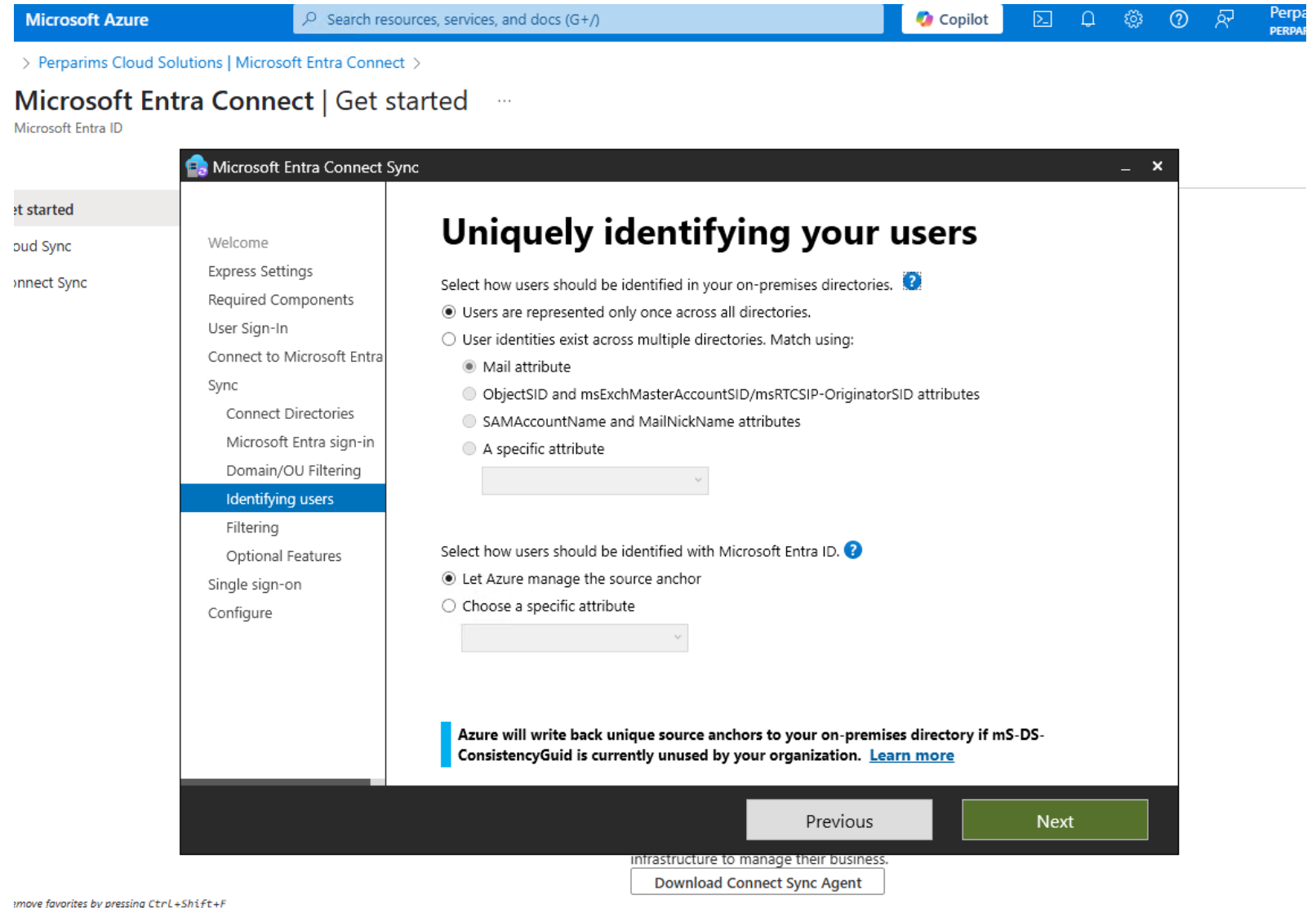
- Chose **mail attribute** for user matching and allowed Azure to manage the source anchor.



The screenshot displays the Microsoft Entra Connect Sync application window. The title bar reads "Microsoft Entra Connect Sync". The left sidebar contains a navigation menu with the following items: Welcome, Express Settings, Required Components, User Sign-In, Connect to Microsoft Entra Sync, Connect Directories, Microsoft Entra sign-in, **Domain/OU Filtering** (highlighted), Identifying users, Filtering, Optional Features, Single sign-on, and Configure. The main content area is titled "Domain and OU filtering". It features a "Directory:" dropdown menu set to "perparimsc300lab.com" and a "Refresh Domains" button. Below this, there are two radio button options: "Sync all domains and OUs" and "Sync selected domains and OUs" (which is selected). A list of domains and organizational units (OUs) is displayed, each with a checkbox. The "IT" OU is checked. The list includes: Built-in, Computers, Development, Domain Controllers, Finance, ForeignSecurityPrincipals, HR, Infrastructure, IT, LostAndFound, Managed Service Accounts, Program Data, Research, Sales, System, and Users. At the bottom of the window, there are "Previous" and "Next" buttons. Below the window, there is a link to "Download Connect Sync Agent" and a small text snippet "infrastructure to manage their business."

Step 11 – Filtering Users & Devices

- Selected to sync all users and devices for the lab environment.



The screenshot displays the Microsoft Entra Connect Sync console within the Microsoft Azure portal. The top navigation bar includes the Microsoft Azure logo, a search bar, and the Copilot icon. The breadcrumb trail shows the path: > Perparims Cloud Solutions | Microsoft Entra Connect >. The main heading is 'Microsoft Entra Connect | Get started', with 'Microsoft Entra ID' listed below it. On the left, a sidebar menu contains the following items: 'Get started' (highlighted), 'Cloud Sync', 'Connect Sync', 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra Sync', 'Connect Directories', 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users' (highlighted in blue), 'Filtering', 'Optional Features', 'Single sign-on', and 'Configure'. The main content area is titled 'Uniquely identifying your users' and contains two sections. The first section, 'Select how users should be identified in your on-premises directories.', has two radio button options: 'Users are represented only once across all directories.' (selected) and 'User identities exist across multiple directories. Match using:'. The second section, 'Select how users should be identified with Microsoft Entra ID.', also has two radio button options: 'Let Azure manage the source anchor' (selected) and 'Choose a specific attribute'. At the bottom of the console, there are 'Previous' and 'Next' buttons. A footer note states: 'Azure will write back unique source anchors to your on-premises directory if mS-DS-ConsistencyGuid is currently unused by your organization. [Learn more](#)'. Below the console, a link 'Download Connect Sync Agent' is visible.

Step 12 – Enable Optional Features

Enabled:

- Microsoft Entra ID app filtering
- Password hash sync
- Password writeback
- Directory extension attribute sync

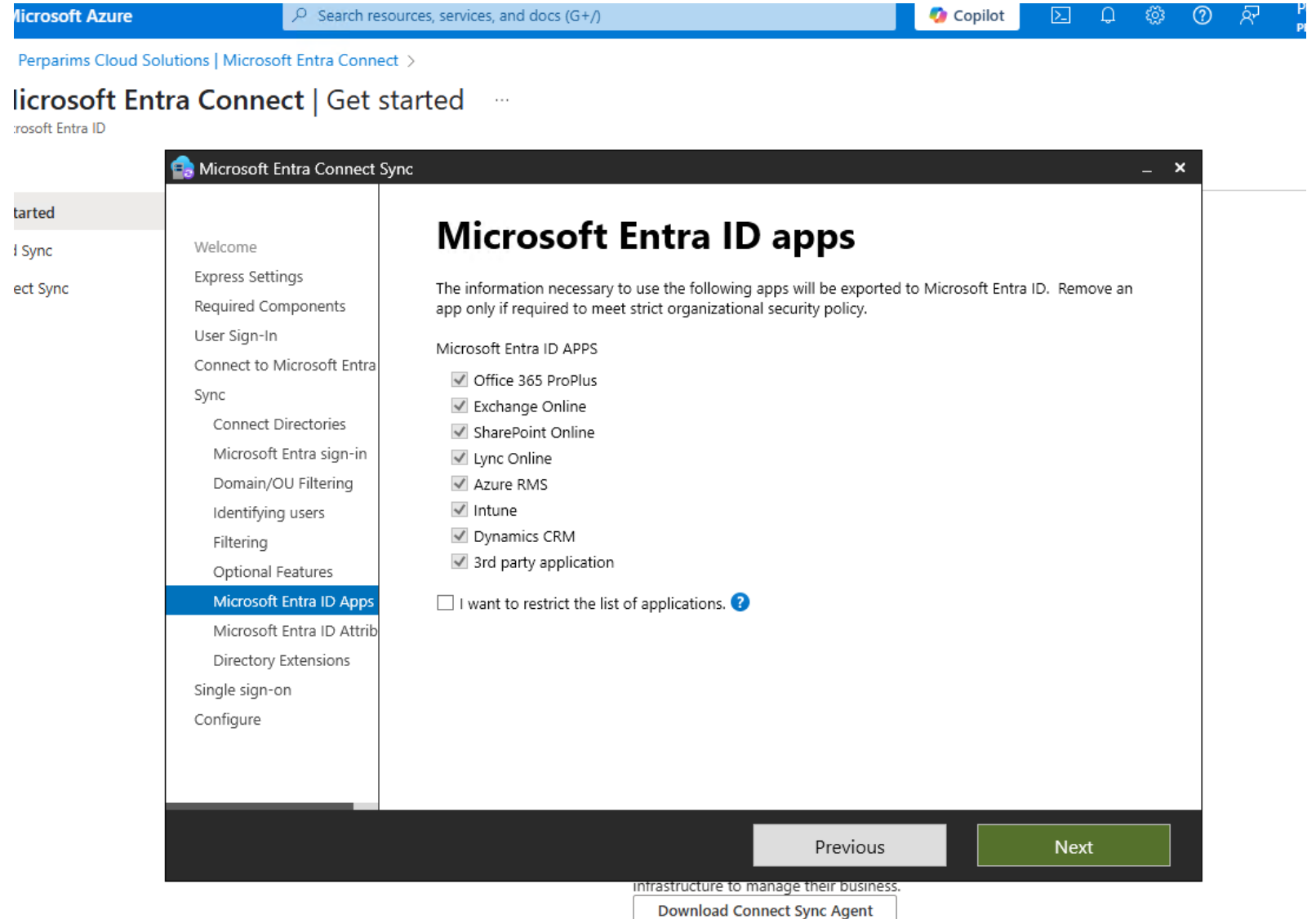
The screenshot displays the Microsoft Entra Connect Sync console in a web browser. The top navigation bar shows 'Microsoft Azure' and 'Search resources, services, and docs (G+)'. The main content area is titled 'Microsoft Entra Connect Sync' and shows a sidebar with navigation options: 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra Sync', 'Connect Directories', 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'Single sign-on', and 'Configure'. The 'Filtering' option is selected in the sidebar.

The main content area is divided into two sections. The top section 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 buttons: 'Synchronize all users and devices' (selected) and 'Synchronize selected'. Under 'Synchronize selected', there is a table with two columns: 'FOREST' and 'GROUP'. The 'FOREST' column contains the value 'perparimsc300lab.com'. The 'GROUP' column contains a text input field with the placeholder 'Enter a name or DN of a group' and a 'Resolve' button.

The bottom section is titled 'Optional features' and contains the following text: 'Select enhanced functionality if required by your organization.' Below this text are several checkboxes: 'Exchange hybrid deployment', 'Exchange Mail Public Folders', 'Microsoft Entra ID app and attribute filtering' (checked), 'Password hash synchronization' (checked), 'Password writeback' (checked), 'Group writeback' (unchecked), 'Device writeback', and 'Directory extension attribute sync' (checked). At the bottom of the console, there are 'Previous' and 'Next' buttons.

Step 13 – Select Apps

- Selected key M365 apps for sync.



The screenshot shows the Microsoft Azure portal interface for Microsoft Entra Connect. The main heading is "Microsoft Entra Connect | Get started". Below it, the "Microsoft Entra ID" section is visible. The "Microsoft Entra Connect Sync" window is open, displaying the "Microsoft Entra ID Apps" step. The left sidebar lists various configuration options, with "Microsoft Entra ID Apps" selected. The main content area shows a list of Microsoft Entra ID apps with checkboxes for selection. The apps listed are Office 365 ProPlus, Exchange Online, SharePoint Online, Lync Online, Azure RMS, Intune, Dynamics CRM, and 3rd party application. All are checked. There is also an unchecked checkbox for "I want to restrict the list of applications." with a help icon. At the bottom, there are "Previous" and "Next" buttons. A link to "Download Connect Sync Agent" is visible at the bottom right.

Microsoft Azure Search resources, services, and docs (G+/)

Copilot

Perparims Cloud Solutions | Microsoft Entra Connect >

Microsoft Entra Connect | Get started

Microsoft Entra ID

Microsoft Entra Connect Sync

Started

Sync

Select Sync

Welcome

Express Settings

Required Components

User Sign-In

Connect to Microsoft Entra Sync

Connect Directories

Microsoft Entra sign-in

Domain/OU Filtering

Identifying users

Filtering

Optional Features

Microsoft Entra ID Apps

Microsoft Entra ID Attribution

Directory Extensions

Single sign-on

Configure

Microsoft Entra ID apps

The information necessary to use the following apps will be exported to Microsoft Entra ID. Remove an app only if required to meet strict organizational security policy.

Microsoft Entra ID APPS

- ☒ Office 365 ProPlus
- ☒ Exchange Online
- ☒ SharePoint Online
- ☒ Lync Online
- ☒ Azure RMS
- ☒ Intune
- ☒ Dynamics CRM
- ☒ 3rd party application

☐ I want to restrict the list of applications. ?

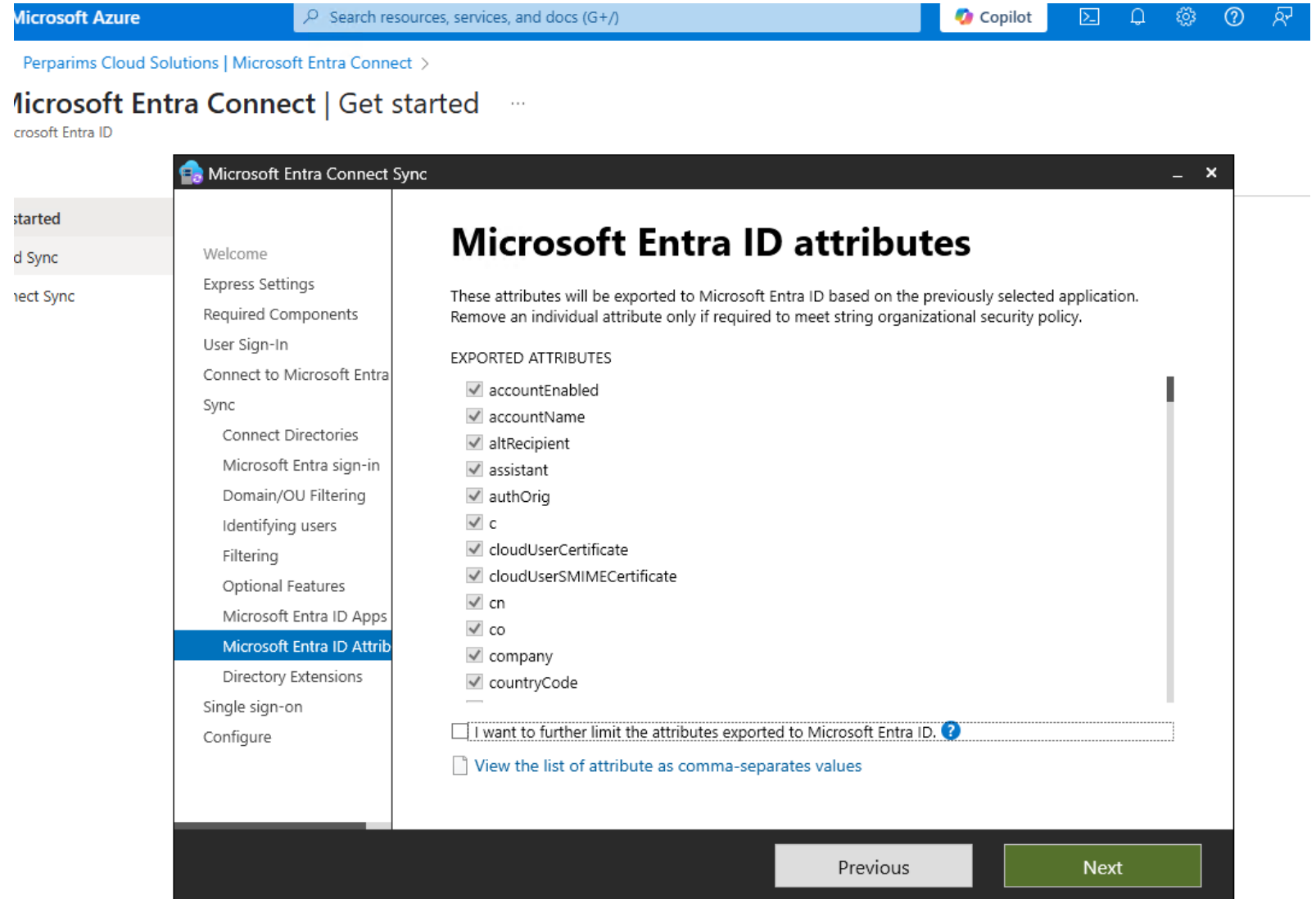
Previous Next

infrastructure to manage their business.

Download Connect Sync Agent

Step 14 – Attribute Sync Preview

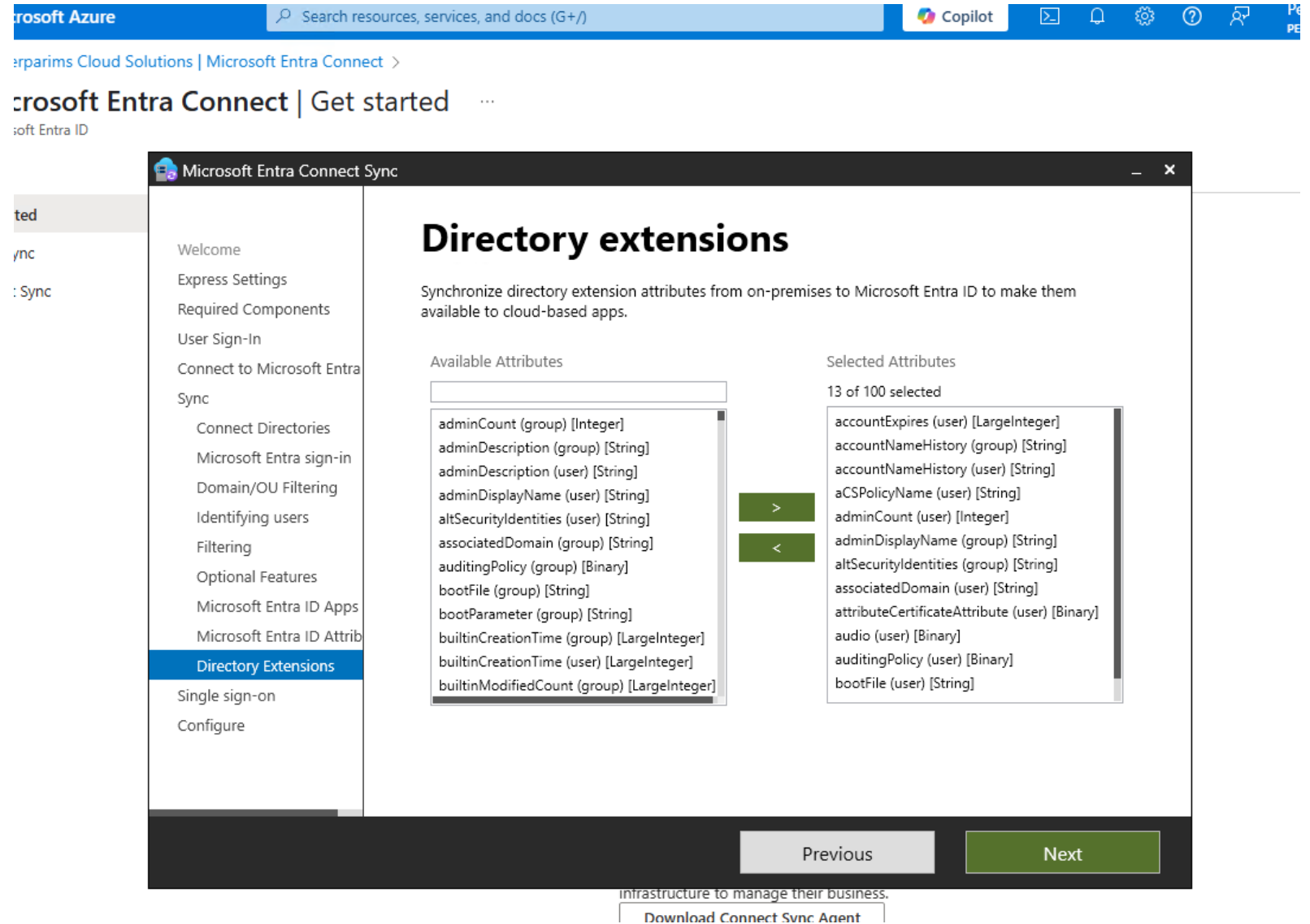
- Previewed the exported attributes to Microsoft Entra ID.



The screenshot shows the Microsoft Azure portal interface. At the top, there's a blue header with 'Microsoft Azure' and a search bar. Below it, the breadcrumb trail reads 'Perparims Cloud Solutions | Microsoft Entra Connect >'. The main heading is 'Microsoft Entra Connect | Get started'. On the left, a sidebar lists navigation options: 'started', 'd Sync', 'ect Sync', 'Welcome', 'Express Settings', 'Required Components', 'User Sign-In', 'Connect to Microsoft Entra Sync', 'Connect Directories', 'Microsoft Entra sign-in', 'Domain/OU Filtering', 'Identifying users', 'Filtering', 'Optional Features', 'Microsoft Entra ID Apps', 'Microsoft Entra ID Attrib' (highlighted), 'Directory Extensions', 'Single sign-on', and 'Configure'. The main content area is titled 'Microsoft Entra ID attributes'. It contains the text: 'These attributes will be exported to Microsoft Entra ID based on the previously selected application. Remove an individual attribute only if required to meet string organizational security policy.' Below this, under 'EXPORTED ATTRIBUTES', there is a list of attributes with checkboxes: 'accountEnabled', 'accountName', 'altRecipient', 'assistant', 'authOrig', 'c', 'cloudUserCertificate', 'cloudUserSMIMECertificate', 'cn', 'co', 'company', and 'countryCode'. All these checkboxes are checked. At the bottom of the list, there is an unchecked checkbox with the text 'I want to further limit the attributes exported to Microsoft Entra ID.' and a help icon. Below that is a link: 'View the list of attribute as comma-separated values'. At the very bottom of the window, there are two buttons: 'Previous' and 'Next'.

Step 15 – Directory Extensions

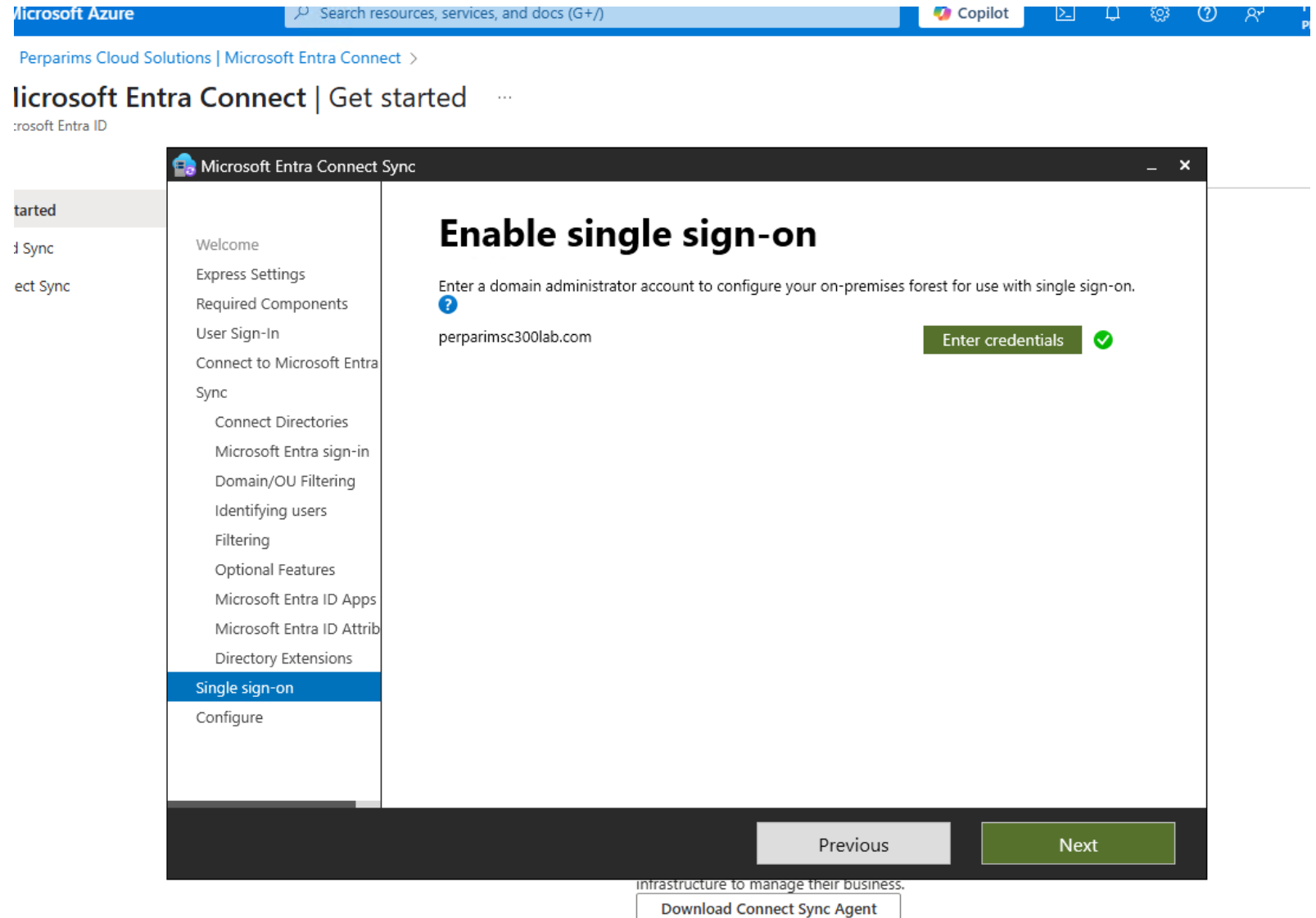
- Selected extra attributes from AD to be available in Microsoft Entra for cloud-based apps.



The screenshot shows the Microsoft Entra Connect Sync console. The left sidebar contains a navigation menu with the following items: Welcome, Express Settings, Required Components, User Sign-In, Connect to Microsoft Entra ID, Sync, Connect Directories, Microsoft Entra sign-in, Domain/OU Filtering, Identifying users, Filtering, Optional Features, Microsoft Entra ID Apps, Microsoft Entra ID Attributes, **Directory Extensions** (highlighted), Single sign-on, and Configure. The main content area is titled "Directory extensions" and includes the instruction: "Synchronize directory extension attributes from on-premises to Microsoft Entra ID to make them available to cloud-based apps." Below this, there are two lists of attributes. The "Available Attributes" list includes: adminCount (group) [Integer], adminDescription (group) [String], adminDescription (user) [String], adminDisplayName (user) [String], altSecurityIdentities (user) [String], associatedDomain (group) [String], auditingPolicy (group) [Binary], bootFile (group) [String], bootParameter (group) [String], builtinCreationTime (group) [LargeInteger], builtinCreationTime (user) [LargeInteger], and builtinModifiedCount (group) [LargeInteger]. The "Selected Attributes" list shows "13 of 100 selected" and includes: accountExpires (user) [LargeInteger], accountNameHistory (group) [String], accountNameHistory (user) [String], aCSPolicyName (user) [String], adminCount (user) [Integer], adminDisplayName (group) [String], altSecurityIdentities (group) [String], associatedDomain (user) [String], attributeCertificateAttribute (user) [Binary], audio (user) [Binary], auditingPolicy (user) [Binary], and bootFile (user) [String]. At the bottom of the console, there are "Previous" and "Next" buttons, and a link to "Download Connect Sync Agent".

Step 16 – Enable Seamless SSO

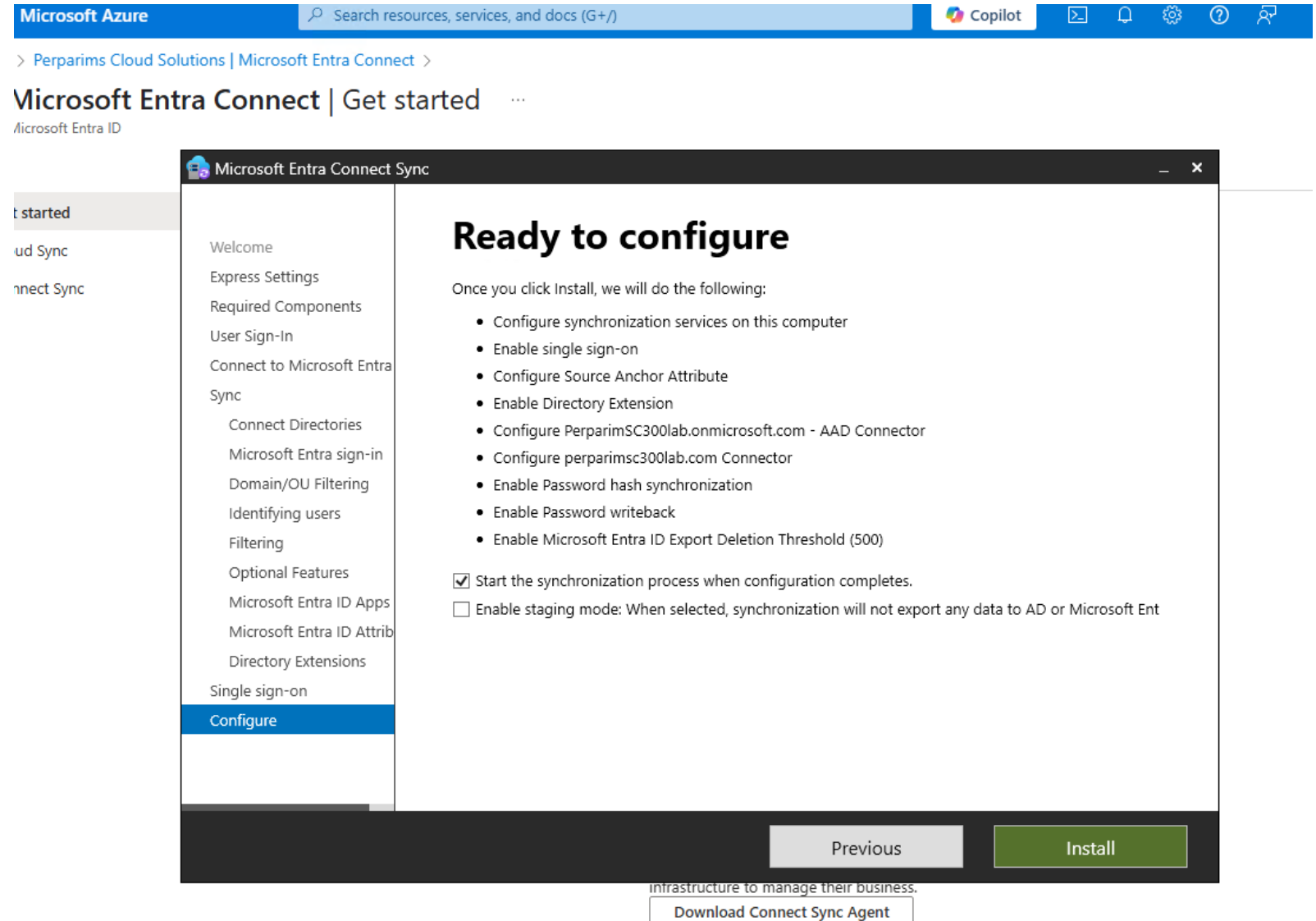
- Enabled seamless SSO by authenticating with domain credentials.



The screenshot displays the Microsoft Azure portal interface for Microsoft Entra Connect. The main heading is "Microsoft Entra Connect | Get started". Below this, a sidebar lists various configuration steps, with "Single sign-on" currently selected. The main content area is titled "Enable single sign-on" and prompts the user to "Enter a domain administrator account to configure your on-premises forest for use with single sign-on." The domain "perparimsc300lab.com" is entered, and a green "Enter credentials" button with a checkmark is visible. At the bottom, there are "Previous" and "Next" navigation buttons, and a "Download Connect Sync Agent" button.

Step 17 – Start Sync Configuration

- Let the wizard begin synchronization immediately after configuration completed.



Microsoft Azure Search resources, services, and docs (G+/) Copilot

> Perparims Cloud Solutions | Microsoft Entra Connect >

Microsoft Entra Connect | Get started ...

Microsoft Entra ID

Get started

Express Settings

Required Components

User Sign-In

Connect to Microsoft Entra Sync

Connect Directories

Microsoft Entra sign-in

Domain/OU Filtering

Identifying users

Filtering

Optional Features

Microsoft Entra ID Apps

Microsoft Entra ID Attribution

Directory Extensions

Single sign-on

Configure

Ready to configure

Once you click Install, we will do the following:

- Configure synchronization services on this computer
- Enable single sign-on
- Configure Source Anchor Attribute
- Enable Directory Extension
- Configure PerpaimSC300lab.onmicrosoft.com - AAD Connector
- Configure perpaimsc300lab.com Connector
- Enable Password hash synchronization
- Enable Password writeback
- Enable Microsoft Entra ID Export Deletion Threshold (500)

☒ Start the synchronization process when configuration completes.

☐ Enable staging mode: When selected, synchronization will not export any data to AD or Microsoft Ent

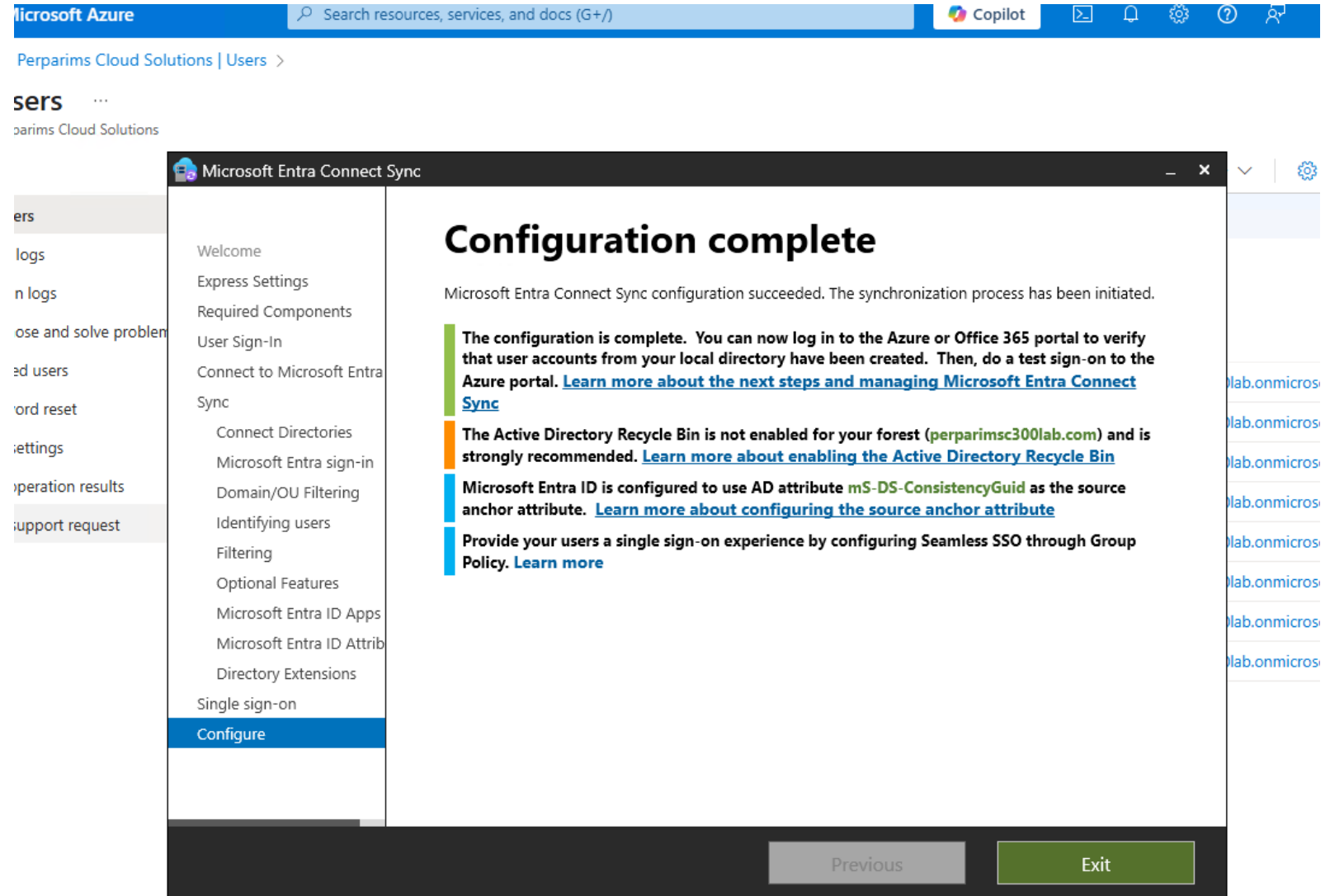
Previous Install

Infrastructure to manage their business.

Download Connect Sync Agent

Sync Configuration Complete

- Wizard successfully finished. Microsoft Entra Connect Sync is now running and syncing users.



Microsoft Azure Search resources, services, and docs (G+/) Copilot

Perparims Cloud Solutions | Users >

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Microsoft Entra Connect Sync

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Welcome

Express Settings

Required Components

User Sign-In

Connect to Microsoft Entra Sync

Connect Directories

Microsoft Entra sign-in

Domain/OU Filtering

Identifying users

Filtering

Optional Features

Microsoft Entra ID Apps

Microsoft Entra ID Attribution

Directory Extensions

Single sign-on

Configure

Configuration complete

Microsoft Entra Connect Sync 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 about the next steps and managing Microsoft Entra Connect Sync](#)

The Active Directory Recycle Bin is not enabled for your forest (perparimsc300lab.com) and is strongly recommended. [Learn more about enabling the Active Directory Recycle Bin](#)

Microsoft Entra ID is configured to use AD attribute mS-DS-ConsistencyGuid as the source anchor attribute. [Learn more about configuring the source anchor attribute](#)

Provide your users a single sign-on experience by configuring Seamless SSO through Group Policy. [Learn more](#)

Previous Exit

Portal Status Check

- Confirmed sync status and password hash sync from the Microsoft Entra Admin Center.

The screenshot shows the Microsoft Azure portal interface for Microsoft Entra Connect. The top navigation bar includes the Microsoft Azure logo, a search bar, and the Copilot icon. The breadcrumb trail indicates the path: Home > Perparims Cloud Solutions | Microsoft Entra Connect > Microsoft Entra Connect. The main heading is 'Microsoft Entra Connect | Connect Sync'. Below this, there are tabs for 'Get started', 'Cloud Sync', and 'Connect Sync' (which is selected). A 'Troubleshoot' button and a 'Refresh' button are also visible. A blue information box states: 'Manage your on-premises resources, authentication configurations, and on-premises infrastructure using Microsoft Entra hybrid services. [Learn more](#)'. The 'PROVISION FROM ACTIVE DIRECTORY' section shows the 'Microsoft Entra Connect sync' status as 'Enabled', with the last sync occurring 'Less than 1 hour ago' and 'Password Hash Sync' also 'Enabled'. Below this, a question 'Is Cloud Sync the right solution for you?' is followed by a recommendation to use the 'Check sync' tool, with a link 'Click here to use the tool.' and a 'View Comparison chart' button. The 'USER SIGN-IN' section shows a table of sign-in methods: 'Federation' (Disabled, 0 domains), 'Seamless single sign-on' (Enabled, 1 domain), 'Pass-through authentication' (Disabled, 0 agents), and 'Email as alternate login ID' (Disabled). The 'STAGED ROLLOUT OF CLOUD AUTHENTICATION' section includes a description: 'This feature allows you to test cloud authentication and migrate gradually from federated authentication.'

PROVISION FROM ACTIVE DIRECTORY			
	Microsoft Entra Connect sync		
Sync status		Enabled	
Last sync		Less than 1 hour ago	
Password Hash Sync		Enabled	

USER SIGN-IN			
	Federation	Disabled	0 domains
	Seamless single sign-on	Enabled	1 domain
	Pass-through authentication	Disabled	0 agents
	Email as alternate login ID	Disabled	

STAGED ROLLOUT OF CLOUD AUTHENTICATION	
	This feature allows you to test cloud authentication and migrate gradually from federated authentication.

User Sync Verification (Before)

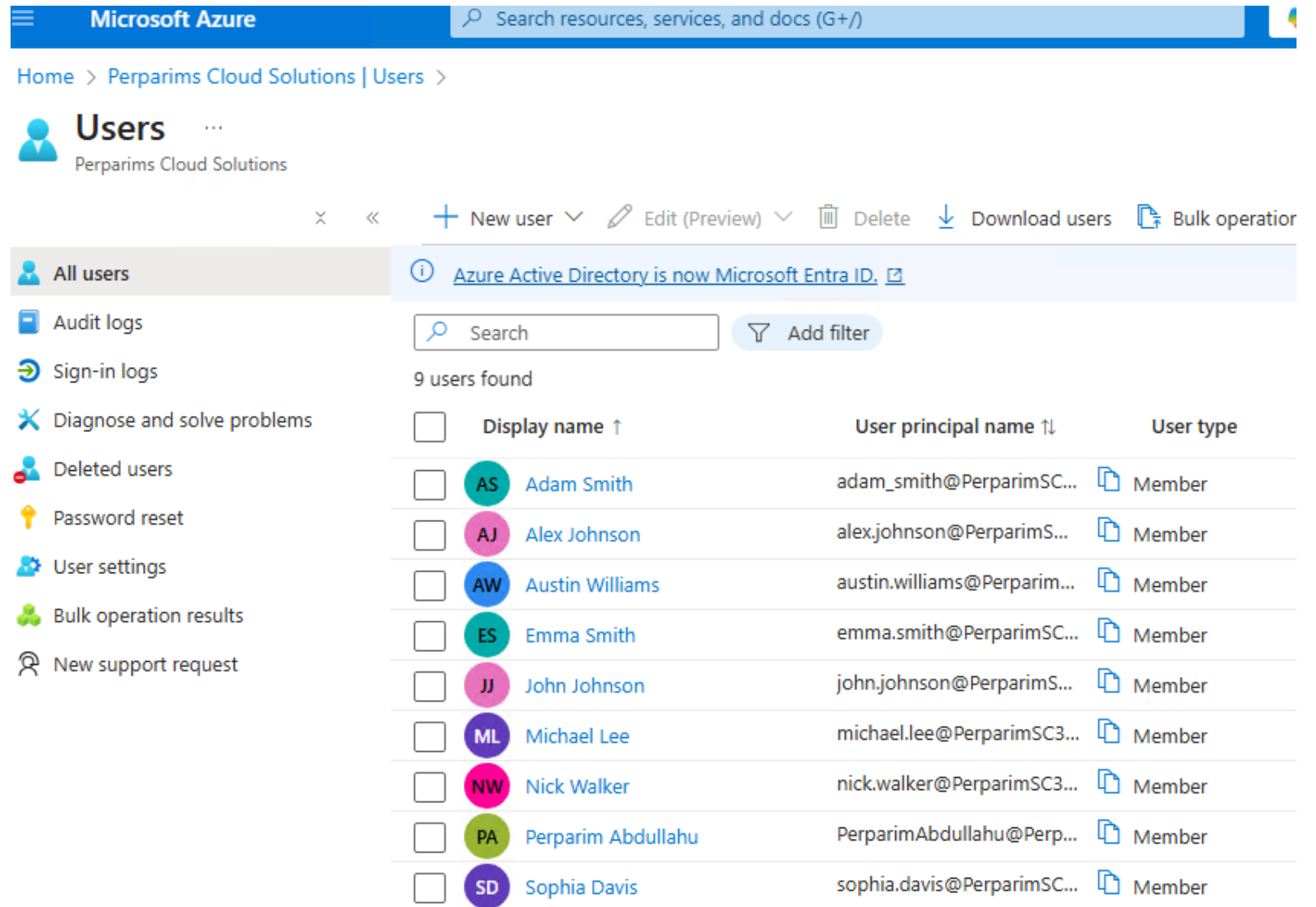
- Before sync – only cloud users existed in Microsoft Entra ID.

The screenshot shows the Microsoft Azure portal interface for managing users. The top navigation bar includes the Microsoft Azure logo, a search bar, and the Copilot icon. The breadcrumb trail indicates the path: Home > Perparims Cloud Solutions | Users > Users. The main heading is 'Users' for 'Perparims Cloud Solutions'. Below the heading, there are several action buttons: '+ New user', 'Edit (Preview)', 'Delete', 'Download users', 'Bulk operations', and 'Refresh'. A notification banner states 'Azure Active Directory is now Microsoft Entra ID'. A search bar and 'Add filter' button are present. The table shows 8 users found, with columns for 'Display name', 'User principal name', 'User type', and 'On-premise' status.

	Display name ↑	User principal name ↑↓	User type	On-premise
<input type="checkbox"/>	AJ Alex Johnson	alex.johnson@PerparimS...	Member	No
<input type="checkbox"/>	AW Austin Williams	austin.williams@Perparim...	Member	No
<input type="checkbox"/>	ES Emma Smith	emma.smith@PerparimSC...	Member	No
<input type="checkbox"/>	JJ John Johnson	john.johnson@PerparimS...	Member	No
<input type="checkbox"/>	ML Michael Lee	michael.lee@PerparimSC3...	Member	No
<input type="checkbox"/>	NW Nick Walker	nick.walker@PerparimSC3...	Member	No
<input type="checkbox"/>	PA Perpaim Abdullahu	PerpaimAbdullahu@Perp...	Member	No
<input type="checkbox"/>	SD Sophia Davis	sophia.davis@PerparimSC...	Member	No

User Sync Verification (After)

- After sync – on-premises AD users appeared in Microsoft Entra ID.



Microsoft Azure

Search resources, services, and docs (G+)

Home > Perparims Cloud Solutions | Users >

Users ...
Perparims Cloud Solutions

+ New user Edit (Preview) Delete Download users Bulk operation

All users

Azure Active Directory is now Microsoft Entra ID.


Search Add filter

9 users found

	Display name ↑	User principal name ↑↓	User type
<input type="checkbox"/>	AS Adam Smith	adam_smith@PerparimSC...	Member
<input type="checkbox"/>	AJ Alex Johnson	alex.johnson@PerparimS...	Member
<input type="checkbox"/>	AW Austin Williams	austin.williams@Perparim...	Member
<input type="checkbox"/>	ES Emma Smith	emma.smith@PerparimSC...	Member
<input type="checkbox"/>	JJ John Johnson	john.johnson@PerparimS...	Member
<input type="checkbox"/>	ML Michael Lee	michael.lee@PerparimSC3...	Member
<input type="checkbox"/>	NW Nick Walker	nick.walker@PerparimSC3...	Member
<input type="checkbox"/>	PA Perpaim Abdullahu	PerpaimAbdullahu@Perp...	Member
<input type="checkbox"/>	SD Sophia Davis	sophia.davis@PerparimSC...	Member



Key Takeaways

- Hybrid identity in action
- Password Hash Sync & Seamless SSO
- Real lab = real job-ready skills
-  Next: Implement Conditional Access for synced users!

