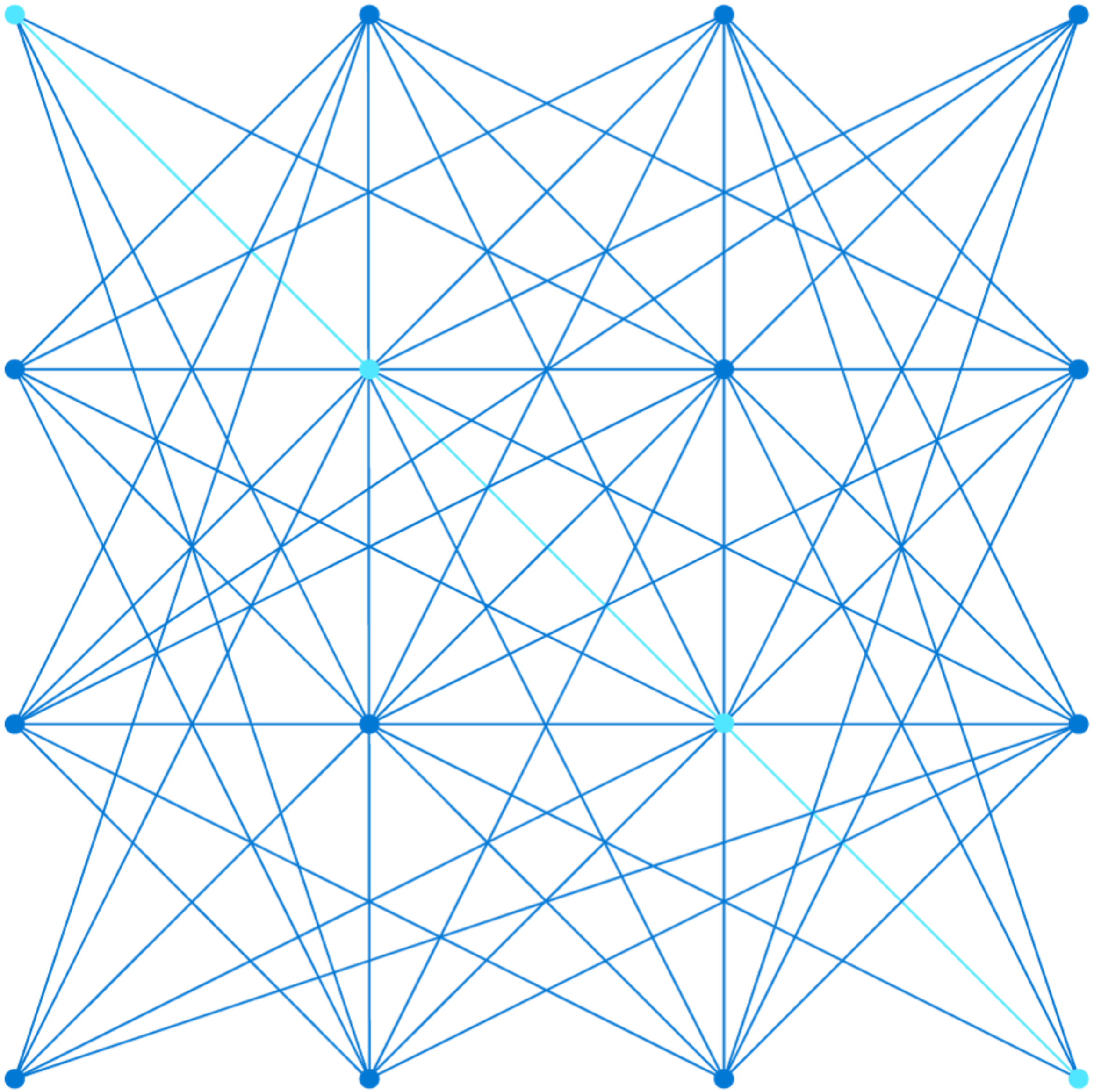
Microsoft Azure

AZ-104

Administer Identity



About this course: Course Outline

01: Administer Identity

02: Administer Governance and Compliance

RBAC Policies

03: Administer Azure Resources

04: Administer Virtual Networking

05: Administer Intersite Connectivity

06: Administer Network Traffic Management

07: Administer Azure Storage

08: Administer Azure Virtual Machines

09: Administer PaaS Compute Options

10: Administer Data Protection

11: Administer Monitoring

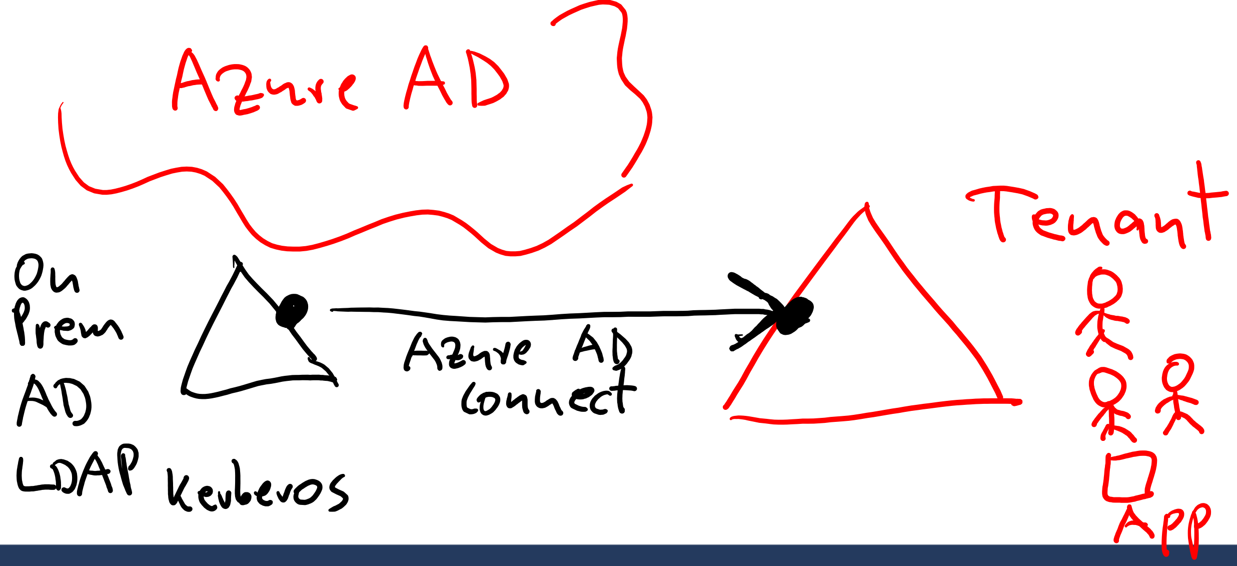
Administer Identity Introduction

Configure Azure Active Directory

Configure User and Group Accounts

Lab 01 - Manage Azure Active Directory Identities

Skillable



User

Groups

Devices

Service Principal

az sp create

Configure Azure Active Directory

wer kann authentifizieren ✓ PHS * ✓

AD-1 ✓ SAML Fed ✗

✓ ✗

Configure Azure Active Directory Introduction

- Describe Azure Active Directory Benefits and Features
- Describe Azure AD Concepts
- Compare AD DS to Azure Active Directory
- Select Azure AD Editions
- Implement Azure AD Device Identities
- Implement Self-Service Password Reset
- Summary and Resources

Describe Azure Active Directory Benefits and Features

ID
Access Token

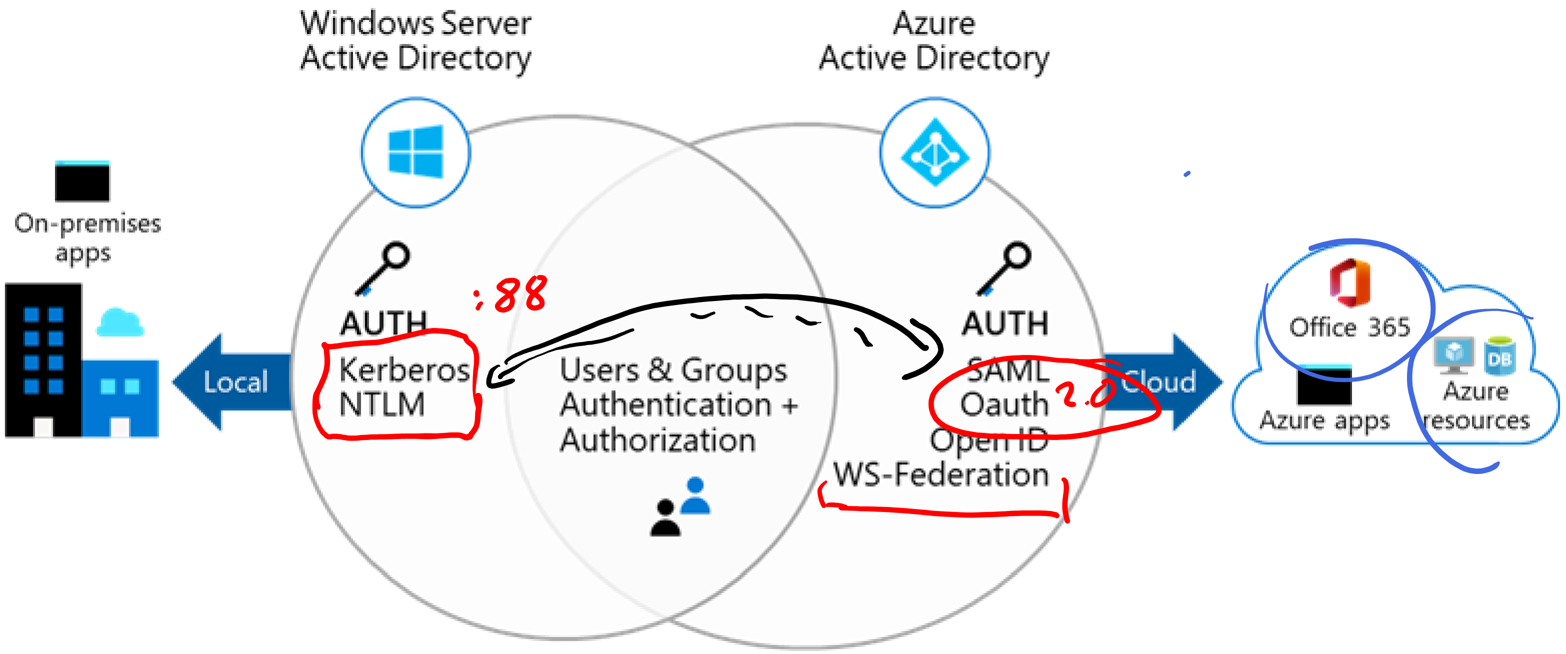
AuthN
AuthZ

Permissi

A cloud-based suite of identity management capabilities that enables you to securely manage access to Azure services and resources for your users

Provides application management, authentication, device management, and hybrid identity

On Prem



Describe Azure AD Concepts

Concept	Description
Identity	An object that can be authenticated
Account	An identity that has data associated with it
Azure AD account	An identity created through Azure AD or another Microsoft cloud service
Azure AD tenant/directory / Root	A dedicated and trusted instance of Azure AD, a Tenant is automatically created when your organization signs up for a Microsoft cloud service subscription • Additional instances of Azure AD can be created • Azure AD is the underlying product providing the identity service • The term *Tenant* means a single instance of Azure AD representing a single organization • The terms *Tenant* and *Directory* are often used interchangeably
Azure subscription	Used to pay for Azure cloud services

Compare AD DS to Azure Active Directory

Azure AD is primarily an identity solution, and designed for HTTP and HTTPS communications

Queried using the REST API over HTTP and HTTPS. Instead of LDAP

Uses HTTP and HTTPS protocols such as SAML, WS-Federation, and OpenID Connect for authentication (and OAuth for authorization). Instead of Kerberos

Includes federation services, and many third-party services (such as Facebook)

Azure AD users and groups are created in a flat structure, and there are no Organizational Units (OUs) or Group Policy Objects (GPOs)

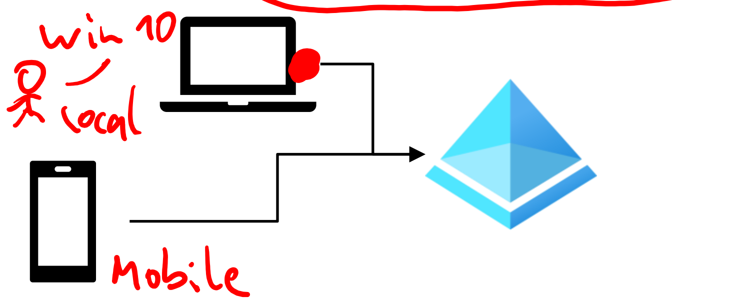
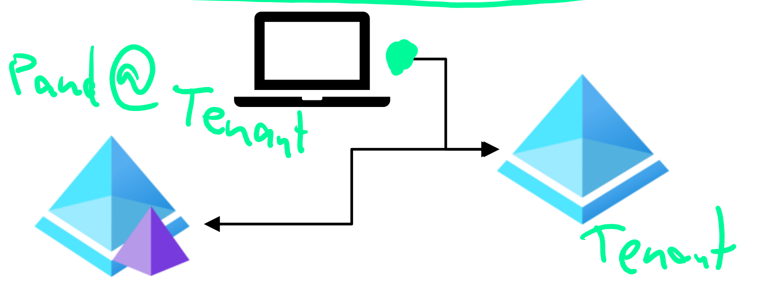
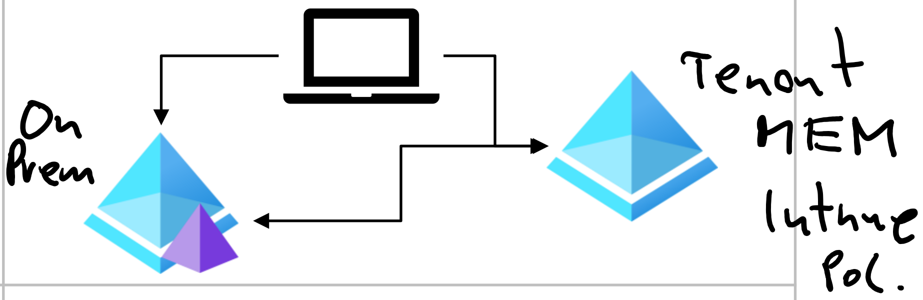
Select Azure Active Directory Editions

No costs

Feature	Free	Microsoft 365 Apps	Premium P1	Premium P2
Directory Objects	500,000 objects	No object limit	No object limit	No object limit
Single Sign-On	Unlimited	Unlimited	Unlimited	Unlimited
Core Identity and Access	X	X	X	X
B2B Collaboration	X	X	X	X
Identity & Access for O365		X	X	X
Premium Features			X	X
Hybrid Identities			X	X
Advanced Group Access			X	X
Conditional Access			X	X
Identity Protection				X
Identity Governance				X

Risk

Configure Azure AD Device Identities

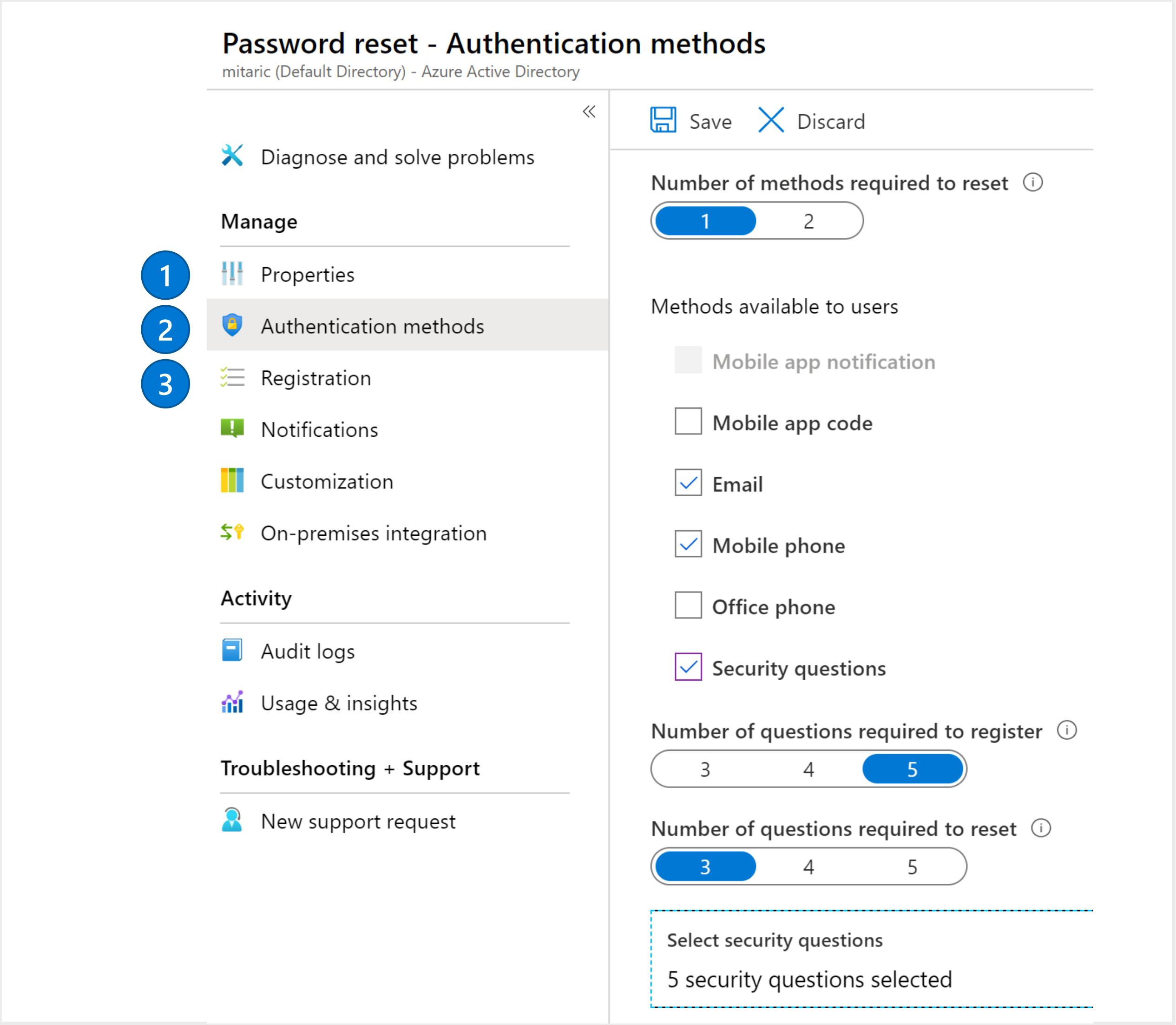
Azure AD registered devices	Azure AD joined devices	Hybrid Azure AD joined devices
		
• Supports Bring Your Own Device • Registered devices sign-in using a Microsoft account • Attached to an Azure AD account granting access to resources • Control using Mobile Device Management (MDM) tools like Microsoft Intune • OS – Windows 10⁺, iOS, Android, and MacOS	• Intended for cloud-first or cloud-only organizations • Organization-owned devices • Joined only to Azure AD - organizational account required • Can use Conditional Access policies • OS – Windows 10⁺ devices	• You have Win32 apps deployed to these devices using Active Directory machine authentication • You want to continue to use Group Policy to manage the device • You want to use existing image solutions to deploy devices • OS - Windows 7⁺ devices

Implement Self-Service Password Reset

1. Determine who can use self-service password reset

2. Choose the number of authentication methods required and the methods available (email, phone, questions)

3. You can require users to register for SSPR (same process as MFA)



Password reset - Authentication methods

mitaric (Default Directory) - Azure Active Directory

Number of methods required to reset: [✓ 1] 2

Methods available to users

- □ Mobile app notification
- □ Mobile app code
- ☑ Email
- ☑ Mobile phone
- □ Office phone
- ☑ Security questions

Number of questions required to register: 3 4 [✓ 5]

Number of questions required to reset: [✓ 3] 4 5

Select security questions

5 security questions selected

Summary and Resources – Configure Azure Active Directory

Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

Allow users to reset their password with Azure Active Directory self-service password reset (Sandbox)

Manage device identity with Azure AD join and Enterprise State Roaming

Implement and manage hybrid identity

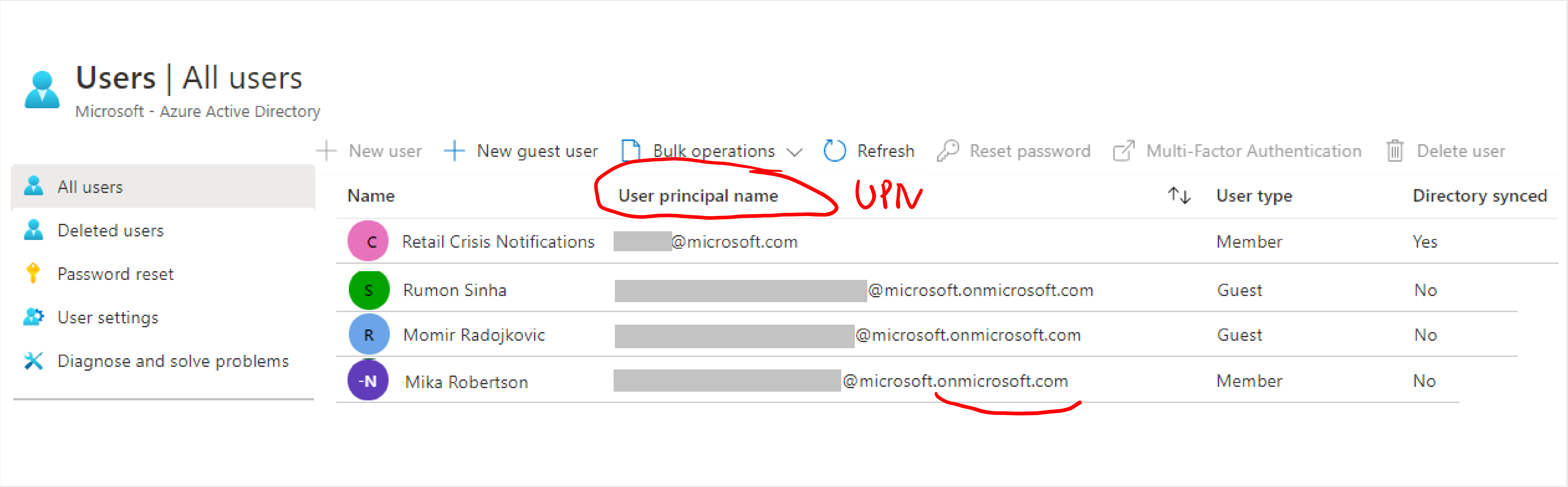
A *sandbox* indicates a hands-on exercise.

Configure User and Group Accounts

Configure User and Group Accounts Introduction

- Create User Accounts
- Manage User Accounts
- Create Bulk Accounts
- Create Group Accounts
- Assign Licenses to Users and Groups (extra topic)
- Create Administrative Units
- Demonstration – Users and Groups
- Summary and Resources

Create User Accounts



Name	User principal name	User type	Directory synced
C Retail Crisis Notifications	[redacted]@microsoft.com	Member	Yes
S Rumon Sinha	[redacted]@microsoft.onmicrosoft.com	Guest	No
R Momir Radojkovic	[redacted]@microsoft.onmicrosoft.com	Guest	No
-N Mika Robertson	[redacted]@microsoft.onmicrosoft.com	Member	No

All users must have an account

The account is used for authentication and authorization

Each user account has additional properties

Manage User Accounts

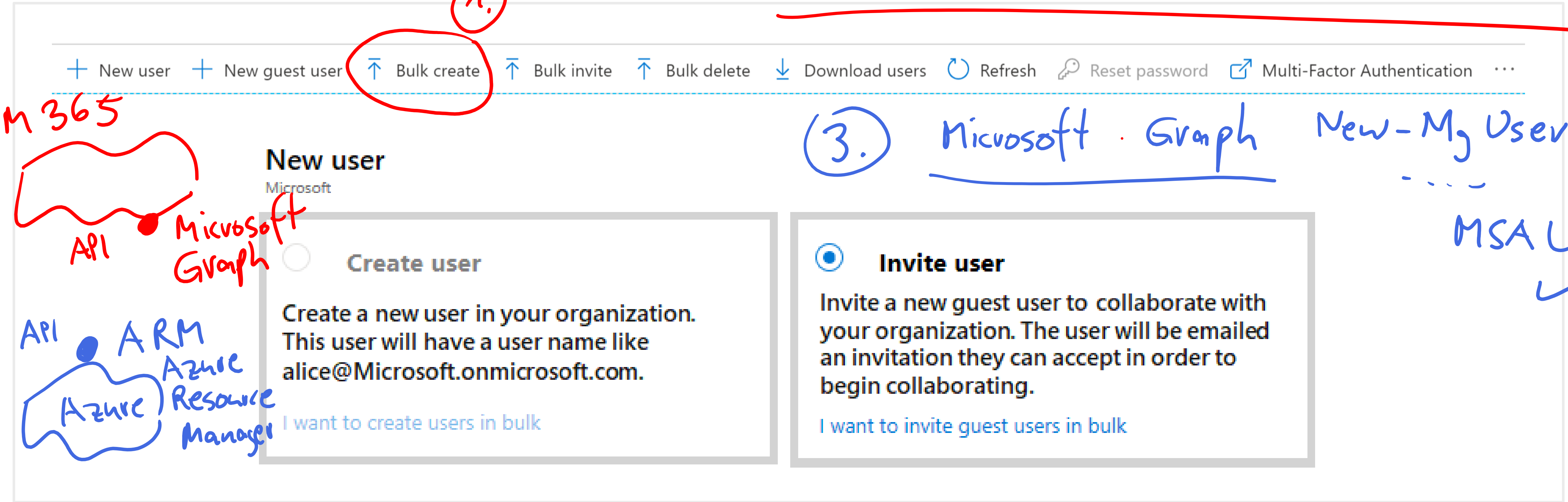
Auto ?

2. PS module

AzureADGraph ADAL deprecated

AzureAD

New-AzureADUser ....



New user

Microsoft

○ Create user

Create a new user in your organization. This user will have a user name like alice@Microsoft.onmicrosoft.com.

I want to create users in bulk

● Invite user

Invite a new guest user to collaborate with your organization. The user will be emailed an invitation they can accept in order to begin collaborating.

I want to invite guest users in bulk

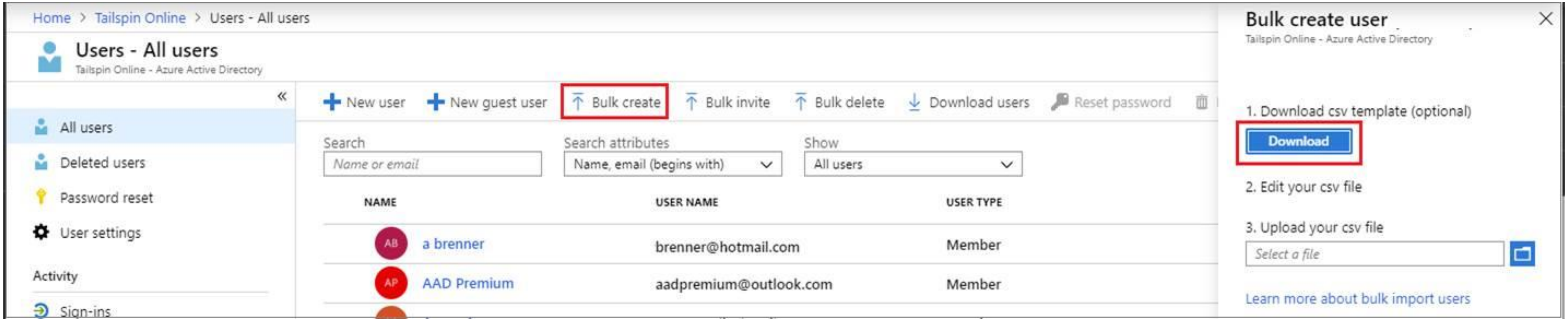
Must be Global Administrator or User Administrator to manage users

User profile (picture, job, contact info) is optional

Deleted users can be restored for 30 days

Sign in and audit log information is available

Perform bulk account updates



NAME	USER NAME	USER TYPE
a brenner	brenner@hotmail.com	Member
AAD Premium	aadpremium@outlook.com	Member

1. Download csv template (optional)

2. Edit your csv file

3. Upload your csv file

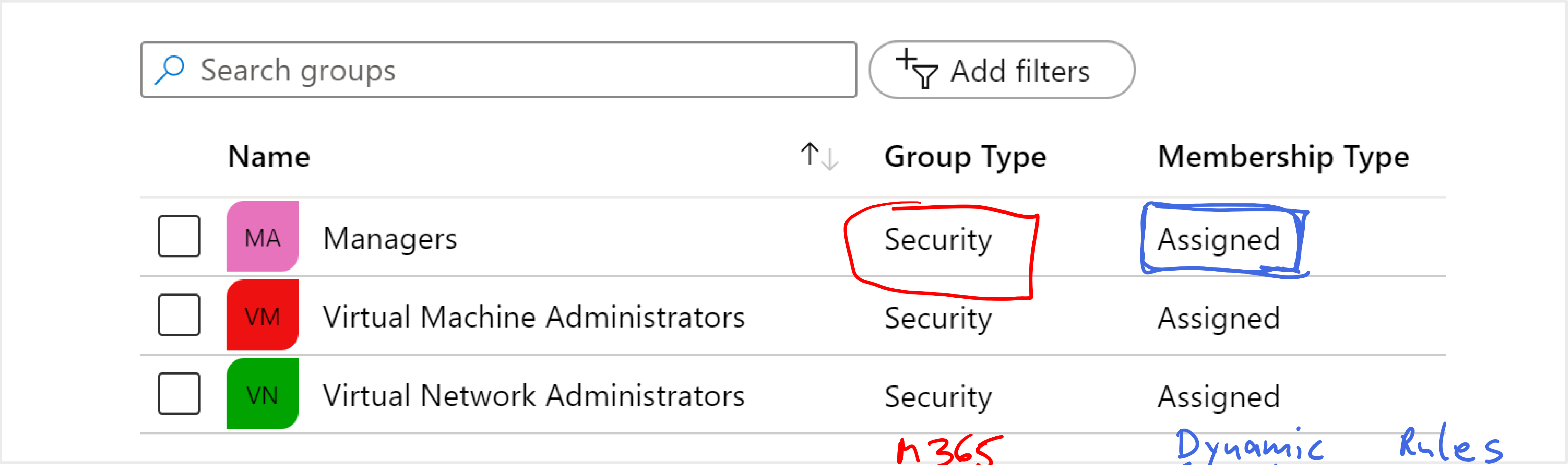
Azure AD supports bulk user and group member updates

Create the comma-separated values (CSV) template you can download from the Portal

Must be signed in as a Global administrator or User administrator

Create Group Accounts

On Prem
GPO
OU
Tenant
~~OU~~
AU



Search groups

Add filters

		Name ↑↓	Group Type	Membership Type
□	MA	Managers	Security	Assigned
□	VM	Virtual Machine Administrators	Security	Assigned
□	VN	Virtual Network Administrators	Security	Assigned

M365

Dynamic User

Rules

Assignes

Dynamic Device

Group Types

- Security groups
- Microsoft 365 groups = Security Group + more

Assignment Types

- Assigned
- Dynamic User
- Dynamic Device (Security groups only)

Assign Licenses to Users and Groups

Microsoft Azure is a cloud service that provides many built-in services for free.

- Azure AD comes as a free service
- Gain additional Azure AD functionality with a P1 or P2 license

Additional Services (like O365 are paid cloud services)

- Microsoft paid cloud services require licenses
- Licenses are assigned to those who need access to the services
- Each user or group requires a separate paid license
- Administrators use management portals and PowerShell cmdlets to manage licenses

❑ View license plans and plan details

❑ Set the Usage Location parameter

❑ Assign licenses to users and groups

❑ Change license plans for users and groups

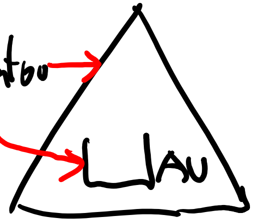
❑ Remove a license

RBAC

AzureAD Role

Global Administrator

User Administrator



Tenant

Paul

Global Admin

Self Elevatin

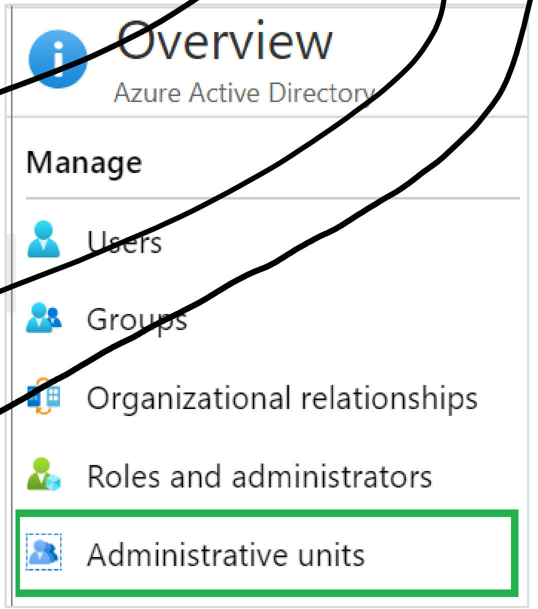
Create Administrative Units

Create an administrative unit

Populate the administrative unit with Azure AD users or groups

Create a role with appropriate permissions scoped to the administrative unit

Add IT members to the role



Azure AD Premium P1 or P2 for each Privileged Role Administrator or Global Administrator

RBAC

Owner
Contributor
Reader
User Access Administrator
....

Azure

MG
Sub
RG
R

Demonstration – Users and Groups

Determine domain information

Explore user accounts

Explore group accounts

Explore PowerShell for group management

Summary and Resources – Configure User and Group Accounts

Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

Create Azure users and groups in Azure Active Directory (Sandbox)

Manage users and groups in Azure Active Directory

A *sandbox* indicates a hands-on exercise.

Lab 01 - Manage Azure Active Directory Identities

Lab 01 – Manage Azure Active Directory Identities

Lab scenario

In order to allow Contoso users to authenticate by using Azure AD, you have been tasked with provisioning users and group accounts. Membership of the groups should be updated automatically based on the user job titles. You also need to create a test Azure AD tenant with a test user account and grant that account limited permissions to resources in the Contoso Azure subscription.

Objectives

Task 1:
Create and configure Azure AD users

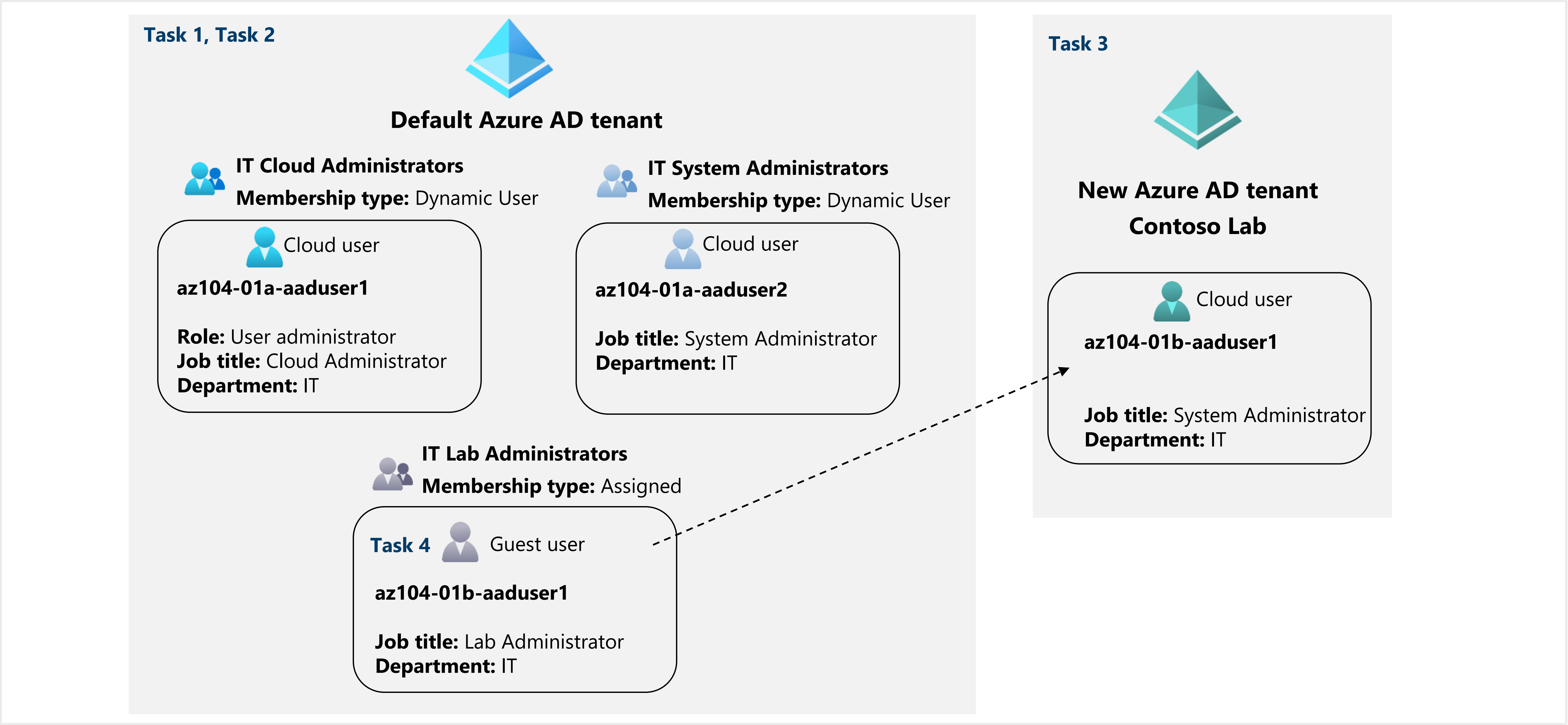
Task 2:
Create Azure AD groups with assigned and dynamic membership

Task 3:
Create an Azure Active Directory (AD) tenant

Task 4:
Manage Azure AD guest users

Next slide for an architecture diagram →

Lab 01 – Architecture diagram



Task 1, Task 2

Default Azure AD tenant

IT Cloud Administrators
Membership type: Dynamic User

Cloud user
az104-01a-aaduser1
Role: User administrator
Job title: Cloud Administrator
Department: IT

IT System Administrators
Membership type: Dynamic User

Cloud user
az104-01a-aaduser2
Job title: System Administrator
Department: IT

IT Lab Administrators
Membership type: Assigned

Task 4 Guest user
az104-01b-aaduser1
Job title: Lab Administrator
Department: IT

Task 3

New Azure AD tenant
Contoso Lab

Cloud user
az104-01b-aaduser1
Job title: System Administrator
Department: IT

End of presentation