



Privileged Access Strategy - Best Practices and Common Mistakes when Tiering Cloud and AD

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Cloud & Security Architect, freelance*

How many roles do we have today in Entra ID and Azure ?



Date	6 th April 2026	30 th Jan 2026	9 th June 2025	27 th May 2024	Change in Last 10 months
Entra ID Roles	143	134	123	110	+20
Azure Roles	868	838	688	542	+180



Session Objective



- Inspiration of how to design cloud services with delegation levels & service RBACs "PIM v2" (Microsoft Enterprise Access Model & RAMP)
- Lessons learned – Pitfalls & Recommendations
- PIM for AD – using PIM for Entra ID 😊

Understanding the audience 😊



- Works with PIM design & implementation ?
- Experience with PIM Automations using IaC ?
- Use RBACs in your PIM designs already?
- Use Administrative Units in your PIM designs ?
- Knows about Microsoft Enterprise Access model with cloud tiering ?

Morten Knudsen

- Microsoft MVP Azure, Security & Security Copilot (triple-MVP)
- Freelance cloud & security architect, 2LINKIT
- Sold my 1st company (MindZet) in 2016 – 75 employees



Co-founder



Lead-organizer

#ELDK2025, #ELDK26



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Agenda



Challenges



Demo PIM
v2



PIM "v2"
design



"Lessons
learned"



PIM for AD

Rapid Modernization Plan (RAMP)

Quickly adopt Microsoft's recommended privileged access strategy

- **Separate and manage privileged accounts**

- Emergency access accounts
- Enable Entra ID Privileged Identity Management
- Identify and categorize privileged accounts (Entra ID)
- Separate accounts (On-premises AD accounts)

- **Monitoring of Active Directory**

- Defender for Identity

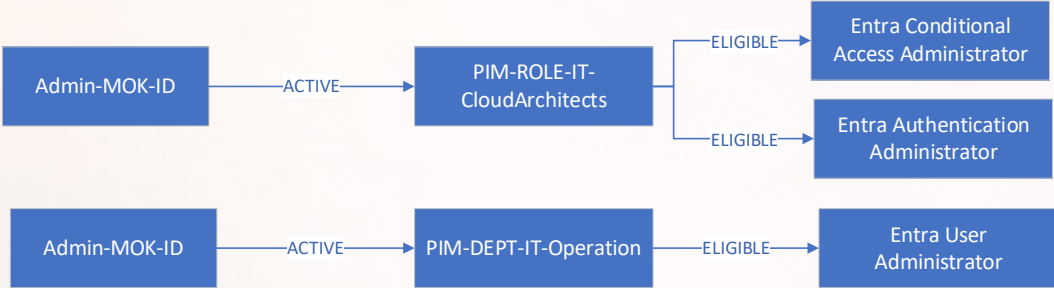
- **Improve credential management experience**

- Implement and document self-service password reset and combined security information registration
- Protect admin accounts - Enable and require MFA / Passwordless for Entra ID privileged users
- Block legacy authentication protocols for privileged user accounts
- Application consent process
- Clean up account and sign-in risks
- End-to-End Protection for Privileged Sessions
 - Admin workstations initial deployment



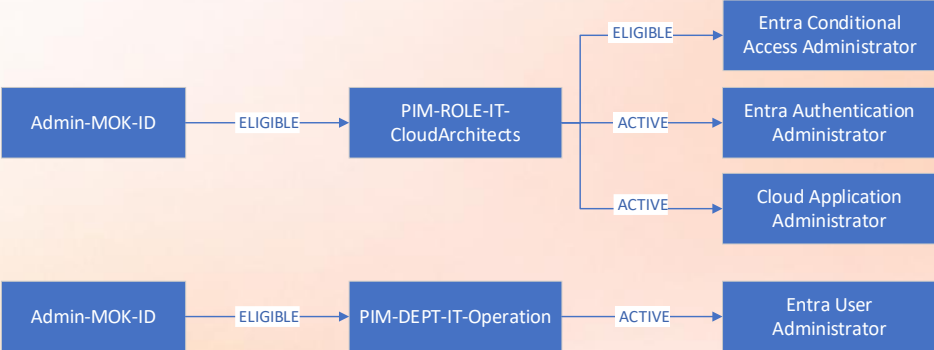
Challenges in early PIM designs

Forced to give too high/many permissions (tenantwide-permissions, project lifecycle) or had to use custom permissions



**PIM v1 – “Just Enough, Just In Time”
OnDemand Activation of Permission
according to my Job-role**

**PIM v1 – Bundles / Compromise
“Activate Job-role in the morning and get
bundles of permissions”**



Challenges in early PIM designs



Missing RBACs

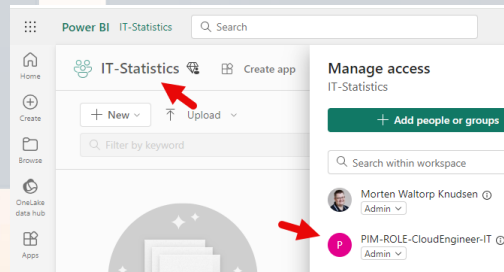
- Missing RBACs roles in individual services – or we didn't use them

Usage where ?

- Missing documentation of usage (Admin -> Role-group -> Delegation in app)

Delegation mis-configs

- Use of role groups for both internals and externals (consultants)
- Lack of Admin separation (Tier-1 Day2Day vs. Tier-0 = GA)



Challenges in early PIM designs



Scaling

- No focus on legacy system fx. AD – we focused on MS cloud – missing scale 1:N, multi-cloud
- Some systems have separate directory (no Entra integration) – “islands”

Onboarding

- Review process / no revoke – focus on assignments
- Lifecycle breaks -> Permissions expire - no license on admin account (no mail)
- Implementation completion lacked on all systems - focus on role (people) – instead of ‘per service’
- Confusions about groups (synced vs. cloud-only groups)



DEMO of PIM v2

Let's start with lots of demos to understand concept 😊

Entra ID PIM Assignments using PIM v2 Framework



Admin:
App Registration
Role or Task



DEMO

Home > My roles

My roles | Groups

Privileged Identity Management | My roles

Refresh | Got feedback?

Activate

Microsoft Entra roles

Groups

Azure resources

Troubleshooting + Support

Troubleshoot

New support request

Eligible assignments | Active assignments | Expired assignments

Search by role or group

Role	Group	Group type	Membership	End time
Member	PIM-Entra-ID-Bundle-GlobalRoles-L1-T0-CP-ID	Security	Direct	4/21/2026, 11:2
Member	PIM-ROLE-Management-IT-OperationSecurity	Security	Direct	5/21/2025, 5:44
Member	PIM-AD-GroupPolicyMgmt-Scoped-ClientsDevices-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41
Member	PIM-AD-GroupPolicyMgmt-Scoped-Servers-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41
Member	PIM-AD-GroupPolicyMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41
Member	PIM-AD-UserMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	4/5/2026, 4:31:
Member	PIM-AD-DomainAdministrators-L1-T0-CP-ID-S_AD	Security	Direct	5/1/2026, 11:27
Member	PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD	Security	Direct	5/10/2026, 11:2
Member	PIM-GDAP-Nunagreen-Entra-ID-GlobalAdministrator-L0-T0-CP-ID	Security	Direct	5/18/2026, 9:33
Member	PIM-GDAP-Nunagreen-Entra-ID-D365-BusinessCentralAdministrator-L1-T0-CP-ID	Security	Direct	4/26/2026, 3:57
Member	PIM-Entra-ID-SecurityAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:
Member	PIM-Entra-ID-PrivilegedAuthenticationAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:!
Member	PIM-Entra-ID-AuthenticationPolicyAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:!
Member	PIM-Entra-ID-LicenseAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:!
Member	PIM-Entra-ID-BillingAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:!
Member	PIM-Entra-ID-CloudApplicationAdministrator-L1-T0-CP-ID	Security	Group	4/1/2026, 8:25:!



Use of Entra Administrative Units with PIM (Active)



Helpdesk:
Manage Corp Users

Note:
Cannot manage Admins, Guests,
Service Accounts, Shared Device
Users, BGAs, etc.

DEMO



My roles | Groups

Privileged Identity Management | My roles

Refresh | Got feedback?

Eligible assignments | **Active assignments** | Expired assignments

Search by role or group

Role	Group	Group type	Membership	State
Member	PIM-ROLE-Helpdesk-IT	Security	Direct	Assigned
Member	PIM-AD-ClientDevicesMgmt-Scoped-L2-T0-CP-ID-S_AD	Security	Direct	Assigned
Member	PIM-AD-GroupMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD	Security	Direct	Assigned
Member	PIM-AD-GroupMembershipMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD	Security	Direct	Assigned
Member	PIM-AD-UserMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	Assigned
Member	PIM-ORG-IT	Security	Direct	Assigned



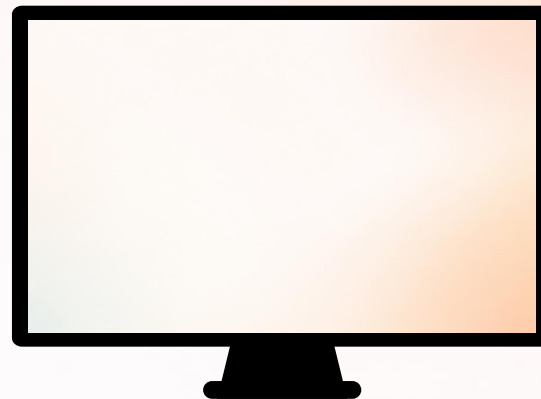
Use of Entra Administrative Units with PIM (Active)



Helpdesk:
Elevate to Tenant-wide User Mgmt
(Service Accounts, Guests, Shared
Device Users)

Note:
Cannot manage Admins, BGAs

DEMO



Home > 2linkIT | Users > Users >



Info Screen 13 [DEMO]

User

Search

- Edit properties
- Delete
- Refresh
- Reset password
- Revoke sessions
- Manage view
- Got feedback?

Overview

- Audit logs
- Sign-in logs
- Diagnose and solve problems
- Custom security attributes
- Assigned roles
- Administrative units
- Groups
- Applications
- Licenses
- Devices
- Azure role assignments
- Authentication methods
- New support request

Overview Monitoring Properties

Basic info



Info Screen 13 [DEMO]

Infopc13@mortenknudsen.net
Member

User principal name	Infopc13@mortenknudsen.net	Group memberships	12
Object ID	f4bf70e3-c03e-4613-ad2a-cc22fe68fc26	Applications	0
Created date time	Mar 16, 2025, 8:45 AM	Assigned roles	0
User type	Member	Assigned licenses	2
Identities	myfamilynetwork.onmicrosoft.com		

My Feed



Account status

Enabled

Edit



B2B invitation

Convert to external user



Home > 2linkIT

2linkIT | Administrative units

- Overview
- Preview features
- Diagnose and solve problems
- Manage
 - Users
 - Groups
 - External Identities
 - Roles and administrators
 - Administrative units**
 - Delegated admin partners
 - Enterprise applications
 - Devices
 - App registrations
 - Identity Governance
 - Application proxy

Learn more
 Add
 Delete
 Refresh
 Preview features
 Got feedback?

<input type="checkbox"/>	Entra-CA-Policy-PilotGroups-HighPrivGroups	Pilot Groups for Entra CA P...	No	Assigned
<input type="checkbox"/>	Entra-CA-Policy-TargetGroups-HighPrivGroups	Target Groups for Entra CA ...	No	Assigned
<input type="checkbox"/>	Guests-Tenant-All	All guests, Tenant	No	Dynamic
<input type="checkbox"/>	PIM-Admins-L0-HighPriv	Admins-L0-HighPriv	No	Assigned
<input type="checkbox"/>	PIM-Admins-L1-L9	Admins-L1-L9	No	Assigned
<input type="checkbox"/>	PIM-Groups-L0-T0-HighPrivGlobalRoles	PIM-Groups-L0-T0-HighPriv...	No	Assigned
<input type="checkbox"/>	PIM-Groups-L1-T0-GlobalRoles	PIM-Groups-L1-T0-GlobalR...	No	Assigned
<input type="checkbox"/>	PIM-Groups-L2	PIM-Groups-L2	No	Assigned
<input type="checkbox"/>	PIM-Groups-ORGANIZATION	PIM-Groups-ORGANIZATION	No	Assigned
<input type="checkbox"/>	PIM-Groups-ROLES	PIM-Groups-ROLES	No	Assigned
<input type="checkbox"/>	PIM-Groups-T1	PIM-Groups-T1	No	Assigned
<input type="checkbox"/>	PIM-Groups-T2	PIM-Groups-T2	No	Assigned
<input type="checkbox"/>	Users-Corp-All	All users, Corp	No	Dynamic
<input type="checkbox"/>	Users-Corp-External	External users, Corp	No	Dynamic
<input type="checkbox"/>	Users-Corp-Internal	Internal users, Corp	No	Dyn
<input type="checkbox"/>	Users-Tenant-All	All users, Tenant	No	Dyn

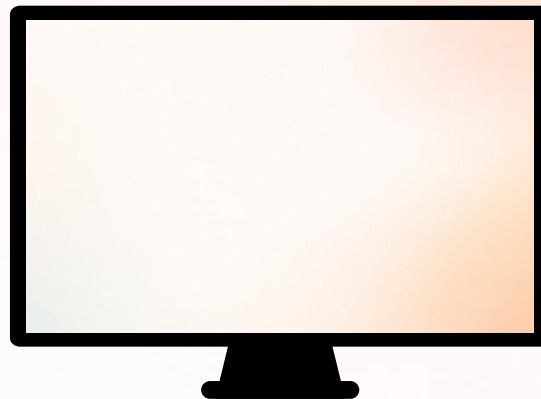


Defender RBAC Permissions for Helpdesk



Helpdesk:
See Clients Only &
Isolate Devices Only

DEMO

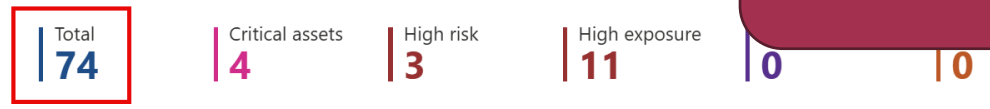


- Threat intelligence
- Assets
- Devices
- Identities
- Applications
- Cloud infrastructure
- Microsoft Sentinel
- Identities
- Endpoints
- Partners and APIs
- Configuration management
- Email & collaboration
- Cloud apps
- Cloud infrastructure

Assign criticality levels to your assets

Transient devices have been automatically filtered out from some tabs to minimize noise. frequency of appearances of these discovered devices. To disable this automatic filtering,

All devices Computers & Mobile Network devices IoT/OT dev



Complete environment 74 devices incl. servers

Export Search 30 Days Customize columns Filter

Filters: Transient device: No Exclusion state: Not Excluded

Name	IP	Criticality level	Device category	Device type	Domain	Device AAD id
eps-demo-dc1.eps.local	10.94.0.4		Computers and Mo...	Server	eps.local	
demowin1	172.18.0.4		Computers and Mo...	Server	Workgroup	
dc1.2linkit.local	10.100.1.4	Very high	Computers and Mo...	Server	2linkit.local	367e007c-f488-4022-802f...
dons-ekn-dt-01	192.168.1.49		Computers and Mo...	Workstation	AAD joined	30183f13-3254-4613-93ac...
strv-mew-dt-02	192.168.1.134		Computers and Mo...	Workstation	AAD joined	018190d4-856e-4218-9eb...
strv-acw-lt-01	172.20.10.2		Computers and Mo...	Workstation	AAD joined	fa856a95-c61b-4d65-b47f...

- Home
- Incidents & alerts
- Hunting
- Actions & submissions
- Threat intelligence
- Learning hub
- Trials
- Partner catalog
- Assets
- Devices**
- Endpoints
- Partners and APIs
- Configuration management
- Endpoint protection
- Reporting

Device Inventory

Create rules for devices

Transient devices have been automatically filtered out from some tabs to minimize noise. This filtering is determined by an internal algorithm, which mainly depends on the frequency of appearances of these discovered devices. To disable this automatic filtering, navigate to the filter menu.

All devices Computers & Mobile Network devices IoT/OT devices Uncategorized devices



Export Search 30 Days Customize columns Filter

Filters: Tags: MDE_Supported Transient device: No Exclusion state: Not Excluded

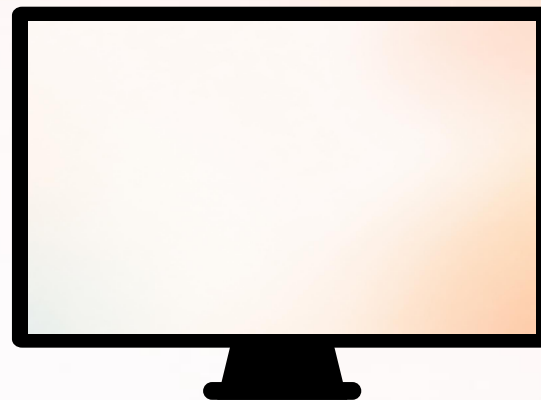
Name	IP	Criticality level	Device category	Device type	Domain	Device AAD id	Risk level
<input type="checkbox"/> dons-ekn-dt-01	192.168.1.49		Computers and Mo...	Workstation	AAD joined	30183f13-3254-4613-93ad-027328468bf1	■■■■
<input type="checkbox"/> strv-mew-dt-02	192.168.1.134		Computers and Mo...	Workstation	AAD joined	018190d4-856e-4218-9eb7-c862f695cecb	■■■■
<input type="checkbox"/> strv-acw-lt-01	172.20.10.2		Computers and Mo...	Workstation	AAD joined	fa856a95-c61b-4d65-b476-7fd1cefcefc4	■■■■
<input type="checkbox"/> cpc-demos-hm99h	10.100.4.4		Computers and Mo...	Workstation	AAD joined	bf7dc23a-edea-46b8-8589-14bfc6f5822f	■■■■
<input type="checkbox"/> tomsdesktop	192.168.12.128		Computers and Mo...	Workstation	Workgroup	e066a676-a3b7-4e91-a17e-8e8df6b08747	■■■■
<input type="checkbox"/> demo-pi6x7vfclz	10.100.7.6		Computers and Mo...	Workstation	AAD joined	e5dad30d-18db-4bd7-8151-c0b7c47fce16	■■■■



Defender RBAC with PIM – with Device Group scoping



Helpdesk:
Activate Security
Operations on Clients



DEMO

Eligible Assignment -> PIM-Defender-XDR-SecurityPosture-Operator-Scope-Clients-L3-T1-MP-ID

Home > Privileged Identity Management | My roles > My roles

My roles | Groups

Privileged Identity Management | My roles

Refresh | Got feedback?

Activate

Microsoft Entra roles

Groups

Azure resources

Troubleshooting + Support

Eligible assignments | Active assignments | Expired assignments

Search by role or group

Role	Group	Group type	Membership	End time
Member	PIM-ROLE-Helpdesk-TenantWide-IT	Security	Direct	6/1/2025, 12:07:49
Member	PIM-Defender-XDR-SecurityPosture-Operator-Scope-Clients-L3-T1-MP-ID	Security	Group	4/1/2026, 8:36:43 P
Member	PIM-Defender-XDR-SecurityOperations-Operator-Scope-Clients-L3-T1-MP-ID	Security	Group	4/5/2026, 10:03:22
Member	PIM-Entra-ID-LicenseAdministrator-L1-T0-CP-ID	Security	Group	4/5/2026, 2:08:46 P
Member	PIM-Entra-ID-Guests-Create-L1-T0-CP-ID	Security	Group	4/8/2026, 5:54:53 P
Member	PIM-Entra-ID-Users-CreateModifyDelete-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:01 P
Member	PIM-Entra-ID-Users-Profile-Photo-People-Update-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:03 P
Member	PIM-Entra-ID-Users-License-AssignRevoke-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:04 P
Member	PIM-Entra-ID-Users-GroupMembership-Manage-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:26 P
Member	PIM-Entra-ID-Users-Sessions-Revoke-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:38 P
Member	PIM-Entra-ID-Users-Sessions-LimitedAdmins-Revoke-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:39 P
Member	PIM-Entra-ID-Users-UPN-LimitedAdmins-Update-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:40 P
Member	PIM-Entra-ID-Users-Password-Reset-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:42 P
Member	PIM-Entra-ID-Groups-CreateModifyDelete-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:44 P
Member	PIM-Intune-ApplicationManager-L3-T1-WDP-ID	Security	Group	5/18/2026, 7:51:23
Member	PIM-Entra-ID-CA-NameLocations-Read-L1-T0-CP-ID	Security	Group	4/8/2026, 5:55:18 P



- Cloud apps
- Cloud infrastructure
- Cases
- SOC optimization
- Reports
- Learning hub
- Trials
- More resources
- System
- Audit
- Data management
- Permissions
- Health
- Settings

Settings

8 items

Name	Description
Microsoft Defender portal	General settings for the Microsoft Defender portal
Microsoft Defender XDR	General settings for Microsoft Defender XDR
Endpoints	General settings for endpoints
Email & collaboration	General settings for email & collaboration
Identities	General settings for identities
Device discovery	Select your device discovery mode and customize standard discovery settings
Cloud Apps	General settings for cloud apps
Microsoft Sentinel	General settings for Microsoft Sentinel



Intune RBAC Permissions for Helpdesk



Helpdesk:
Elevate to Intune
Application Manager
to Add New App



DEMO

Active Assignment -> PIM-Intune-ApplicationManager-L3-T1-WDP-ID

- Home
- Dashboard
- All services
- Devices
- Apps
- Endpoint security
- Reports
- Users
- Groups
- Tenant administration
- Troubleshooting + support

Home > Tenant admin | Roles >

Intune roles | All roles

Microsoft Intune

+ Create Refresh Export Columns

10 items

Manage

All roles

Scope tags

Administrator Licensing

Monitor

My permissions

Roles by permission

Admin permissions

Help and support

Help and support

Name	Type	Description
Policy and Profile manager	Built-in Role	Policy and Profile Managers manage compliance policy, configuration profiles, Apple enrollment, Android Enterprise enrollment profiles and corporate device identifiers.
School Administrator	Built-in Role	School Administrators can manage apps and settings for their groups. They can take remote actions on devices, including remotely locking them, restarting them, and retiring them from management.
Endpoint Privilege Reader	Built-in Role	Endpoint Privilege Readers can view Endpoint Privilege Management (EPM) policies in the Intune console.
Help Desk Operator	Built-in Role	Help Desk Operators perform remote tasks on



Azure DevOps RBAC delegation using PIM

Developer:
Elevate as Project
Administrator on
Azure DevOps
Project

DEMO



2 2linkit

[New organization](#)

ⓘ You have been assigned Stakeholder access and will experience limited features in Azure DevOps. [Learn more](#) ✕

2linkit

Projects My work items My pull requests

☰ Filter projects

C

Contoso-FirewallHub-Platform-Connec...

• • • •



Power BI RBAC delegation using PIM



Data Admin:
Power BI Workspace

DEMO



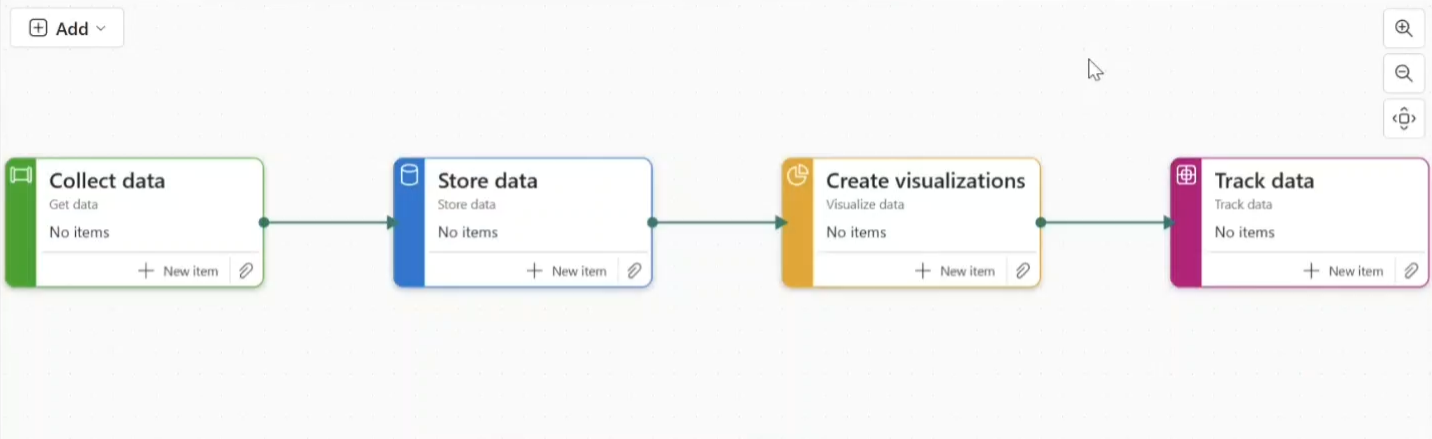
Eligible Assignment -> [PIM-PowerBI-WS-MyCompanyKPIs-Prod-Admins-L3-T1-WDP-ID](#)

- Home
- Create
- Browse
- OneLake catalog
- Apps
- Metrics
- Monitor
- Learn
- Real-Time
- Workspaces
- MyCompanyKPIs-Prod

MyCompanyKPIs-Prod

+ New item New folder Import Migrate

Filter by keyword Filter



Basic data analytics

Task flow details

Follow these steps to obtain your batch data, store it in a warehouse, process the data, build a semantic model, and finally use the results to create quick insights through visualizations.

Edit

Tasks

Name	Type	Task	Owner	Refreshed	Next refresh	Endorsement	Sensitivity
Weekly Sales	Dashboard	—	MyCompanyKP...	—	—	—	—



Azure Resources RBAC delegation using PIM



Admin:
Azure Resources

DEMO



Eligible Assignment -> PIM-AzRes-2LINKIT-Owner-L1-T1-WDP-ID

Home > My roles

My roles | Azure resources

Privileged Identity Management | My roles

Refresh Open in mobile Got feedback?

Activate

- Microsoft Entra roles
- Groups
- Azure resources**

Troubleshooting + Support

- Troubleshoot
- New support request

Eligible assignments **Active assignments** Expired assignments

Search by role or resource

Role	Resource	Resource type	Membership	Condition	State	End time	Action
Owner	Platform	Management group	Group	None	Assigned	7/20/2025, 11:26:35 ...	Deactiv...



Partner Center GDAP delegation with PIM



Partner:
Activate GDAP Role
Access at Customer



DEMO

Eligible Assignment -> PIM-GDAP-Nunagreen-Entra-ID-D365-BusinessCentralAdministrator-L1-T0-CP-ID

Please enable Auto Extend using Partner Center UI or API for needed MLT GDAPs nearing their expiration to ensure uninterrupted business continuity.

Nunagreen | Service Management

Lists AOBO (Admin On Behalf Of) links to different workloads and links to Service Health.

Administer Services

If you don't see a link to administer the desired service, click [here](#) to find out why.

[Microsoft Entra ID](#)

[Dynamics 365 Business Central](#)

[Microsoft Intune](#)

[Exchange](#)

[Lifecycle Services](#)

[Microsoft 365](#)

[Microsoft 365 Compliance](#)

[Microsoft 365 Defender \(Use for GDAP relationships only\)](#)

[Microsoft 365 Lighthouse](#)

[Microsoft Azure Management Portal](#)

[Power BI](#)

[Power Platform](#)

[Teams](#)

Service Health



PIM for AD | Local Server Permissions

Admin:
Elevate With Local
Server Admin
Permissions

NOTE: No AD Domain Permissions

DEMO



Home > My roles

My roles | Groups

Privileged Identity Management | My roles

Refresh Got feedback?

Eligible assignments Active assignments Expired assignments

Search by role or group

Role	Group	Group type	Membership	End time	Action
Member	PIM-Entra-ID-Bundle-GlobalRoles-L1-T0-CP-ID	Security	Direct	4/21/2026, 11:28:02 ...	Activate Extend
Member	PIM-ROLE-Management-IT-OperationSecurity	Security	Direct	5/21/2025, 5:44:53 PM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-ClientsDevices-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:32 AM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-Servers-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:33 AM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:34 AM	Activate Extend
Member	PIM-AD-UserMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	4/5/2026, 4:31:49 PM	Activate Extend
Member	PIM-AD-DomainAdministrators-L1-T0-CP-ID-S_AD	Security	Direct	5/1/2026, 11:27:31 PM	Activate Extend
Member	PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD	Security	Direct	5/10/2026, 11:25:53 ...	Activate Extend
Member	PIM-GDAP-Nunagreen-Entra-ID-GlobalAdministrator-L0-T0-CP-ID	Security	Direct	5/18/2026, 9:33:00 AM	Activate Extend
Member	PIM-GDAP-Nunagreen-Entra-ID-D365-BusinessCentralAdministrator-L1-T0-CP-ID	Security	Direct	4/26/2026, 3:57:42 PM	Activate Extend



PIM for AD | Domain Admin Permissions



Admin:
Elevate With Domain
Admin Permissions



DEMO

Eligible Assignment -> [PIM-AD-DomainAdministrators-L1-T0-CP-ID-S_AD](#)

Home > Privileged Identity Management > My roles

My roles | Groups

Privileged Identity Management | My roles

Refresh Got feedback?

Your active assignments have changed. Click here to view your active assignments →

Eligible assignments Active assignments Expired assignments

Search by role or group

Role	Group	Group type	Membership	End time	Action
Member	PIM-Entra-ID-Bundle-GlobalRoles-L1-T0-CP-ID	Security	Direct	4/21/2026, 11:28:02 ...	Activate Extend
Member	PIM-ROLE-Management-IT-OperationSecurity	Security	Direct	5/21/2025, 5:44:53 PM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-ClientsDevices-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:32 AM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-Servers-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:33 AM	Activate Extend
Member	PIM-AD-GroupPolicyMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	6/22/2025, 2:41:34 AM	Activate Extend
Member	PIM-AD-UserMgmt-Scoped-Users-L2-T0-CP-ID-S_AD	Security	Direct	4/5/2026, 4:31:49 PM	Activate Extend
Member	PIM-AD-DomainAdministrators-L1-T0-CP-ID-S_AD	Security	Direct	5/1/2026, 11:27:31 PM	Activate Extend
Member	PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD	Security	Direct	5/10/2026, 11:25:53 ...	Activate Extend
Member	PIM-GDAP-Nunagreen-Entra-ID-GlobalAdministrator-L0-T0-CP-ID	Security	Direct	5/18/2026, 9:33:00 AM	Activate Extend
Member	PIM-GDAP-Nunagreen-Entra-ID-D365-BusinessCentralAdministrator-L1-T0-CP-ID	Security	Direct	4/26/2026, 3:57:42 PM	Activate Extend





Download Presentation with all demo's



<https://sharing.mortenknudsen.net/Privileged-Access-Strategy---Best-Practices-and-Common-Mistakes-when-Tiering-Cloud-and-AD-MEMSummit2026.pptx>



Designing “PIM v2”

Use RBAC features, where possible



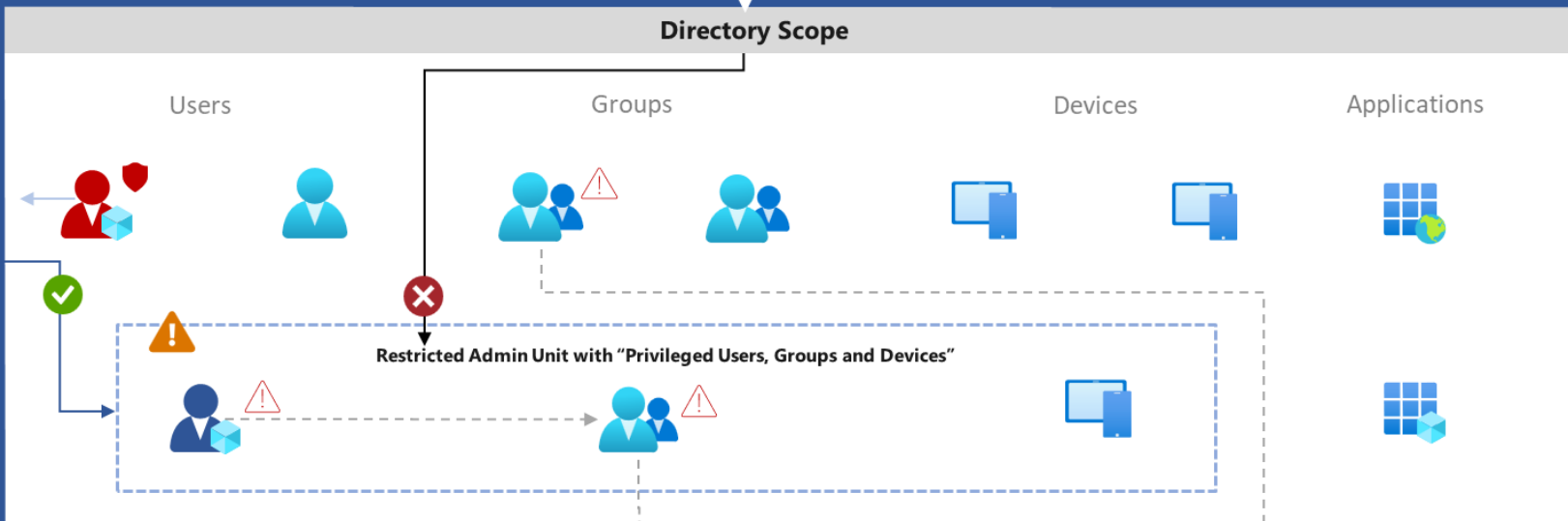
Entra ID

Entra ID

Admin Roles

- Global Admin
- Security Admin
- ...
- Authenticator Admin
- Application Admin
- Groups Admin
- Helpdesk Admin
- Password Admin
- User Admin
- Custom Roles
- ...
- Intune Admin
- Teams Devices Admin
- ...

Directory Scope



Microsoft 365 RBAC

Intune RBAC

- Help Desk Operator
- Application Admin.
- Other Built-in Roles
- Custom Roles

Exchange RBAC

- Organization Mgmt
- Recipient Mgmt.
- Other Built-in Roles
- Custom Roles

...

...



Azure RBAC



Root management group

Subscriptions

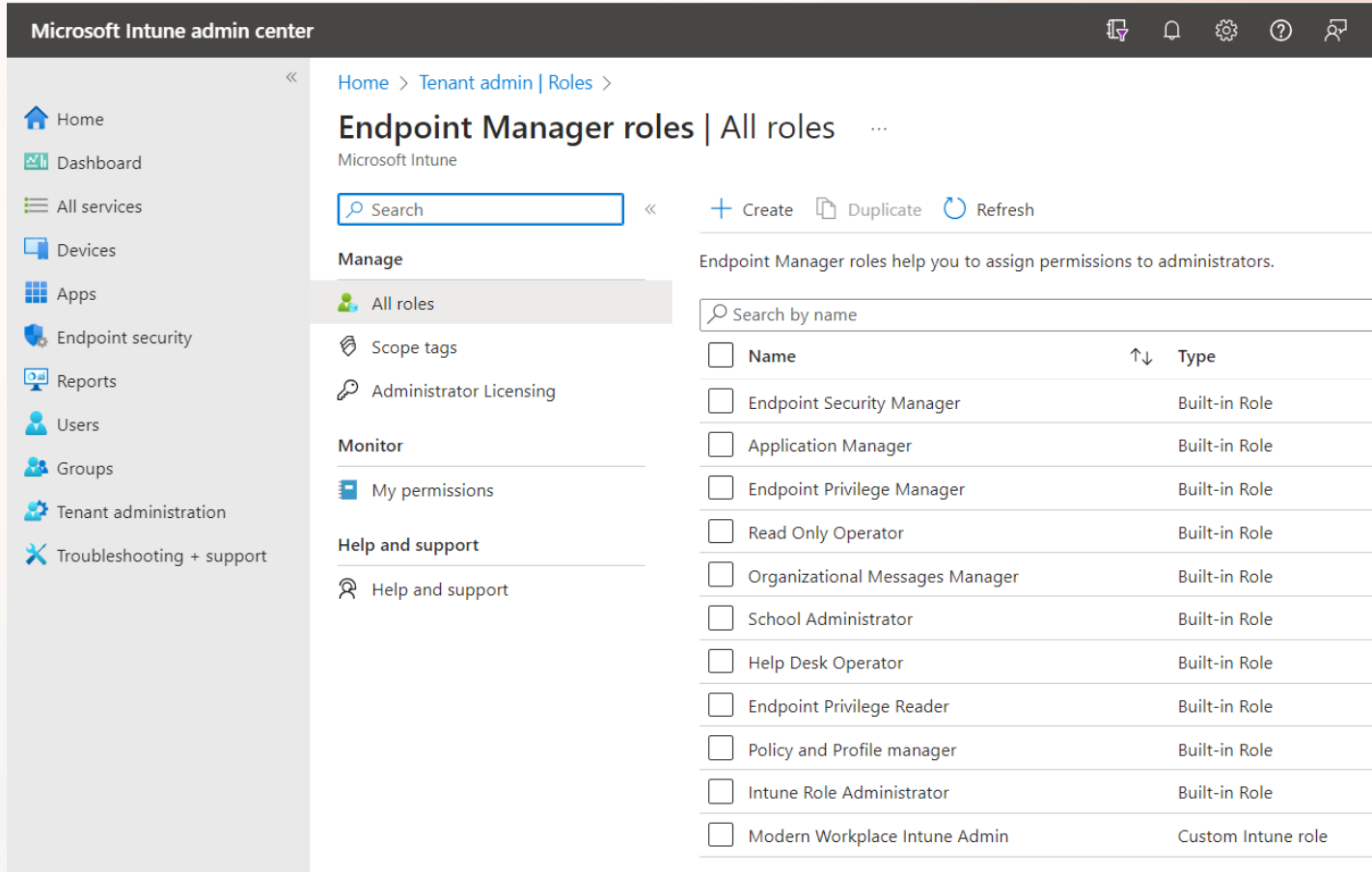
Resource group

Resource



SaaS/3rd Party Application RBAC

Intune RBAC



Microsoft Intune admin center

Home > Tenant admin | Roles >

Endpoint Manager roles | All roles

Microsoft Intune

Search

+ Create Duplicate Refresh

Endpoint Manager roles help you to assign permissions to administrators.

Search by name

<input type="checkbox"/>	Name	↑↓	Type
<input type="checkbox"/>	Endpoint Security Manager		Built-in Role
<input type="checkbox"/>	Application Manager		Built-in Role
<input type="checkbox"/>	Endpoint Privilege Manager		Built-in Role
<input type="checkbox"/>	Read Only Operator		Built-in Role
<input type="checkbox"/>	Organizational Messages Manager		Built-in Role
<input type="checkbox"/>	School Administrator		Built-in Role
<input type="checkbox"/>	Help Desk Operator		Built-in Role
<input type="checkbox"/>	Endpoint Privilege Reader		Built-in Role
<input type="checkbox"/>	Policy and Profile manager		Built-in Role
<input type="checkbox"/>	Intune Role Administrator		Built-in Role
<input type="checkbox"/>	Modern Workplace Intune Admin		Custom Intune role

Manage

- All roles
- Scope tags
- Administrator Licensing

Monitor

- My permissions

Help and support

- Help and support

Navigation: Home, Dashboard, All services, Devices, Apps, Endpoint security, Reports, Users, Groups, Tenant administration, Troubleshooting + support





[Home](#) > [Tenant admin | Roles](#) > [Endpoint Manager roles | All roles](#) > [Help Desk Operator](#)



Help Desk Operator | Assignments

Microsoft Intune



Overview

Manage

Properties

Assignments

Role assignments tie together a role definition with members and assignments per role. This applies to custom and built-in roles.

Assign Refresh Export Columns



Name

[PIM-Intune-HelpDeskOperator-L4-T1-WDP-ID](#)



Home



Dashboard



All services



Devices



Apps



Endpoint security



Reports



Users



Groups



Tenant administration



Troubleshooting + support

Defender XDR RBAC

The screenshot shows the Microsoft Defender console interface. The top navigation bar is blue with the Microsoft Defender logo and a search bar. On the left, a vertical sidebar contains navigation icons and a breadcrumb trail: 'Basics' (checked), 'Permissions' (selected), 'Assignments', and 'Review and finish'. The main content area is titled 'Choose permissions' and includes the instruction: 'Select permissions from each permission group to customize this role.' Below this is a table with three permission groups, each with a 'None selected' status.

Permission group	Description
<input checked="" type="radio"/> Security operations None selected	Manages day-to-day operations and responds to incidents and advisories
<input checked="" type="radio"/> Security posture None selected	Manages the organization's security posture, performs Defender Vulnerability Management
<input checked="" type="radio"/> Authorization and settings None selected	Manages the security and system settings, creates and assigns roles

Security operations

Select the permissions in this group to users who perform security who respond to incidents and advisories.

Clear all permissions

- All read-only permissions
- All read and manage permissions
- Select custom permissions

Security data

- Read-only
- Select all permissions
- Select custom permissions

- Security data basics (read) ⓘ
- Alerts (manage) ⓘ
- Response (manage) ⓘ
- Basic live response (manage) ⓘ
- Advanced live response (manage) ⓘ
- File collection (manage) ⓘ
- Email & collaboration quarantine (manage) ⓘ
- Email & collaboration advanced actions (manage) ⓘ

Raw data (Email & collaboration)

- Read-only
- Select custom permissions
 - Email & collaboration metadata (read) ⓘ
 - Email & collaboration content (read) ⓘ





Microsoft Sentinel

Identities

Endpoints

Email & collaboration

Cloud apps

SOC optimization

Reports

Learning hub

Trials

More resources

System

Audit

Permissions

Health

Settings

Settings > Microsoft Defender XDR > Microsoft Defender XDR

Permissions and roles

Roles give users permission to view data and complete tasks in Microsoft Defender XDR. Help permissive role to users.

[Export](#) [+ Create custom role](#) [Import roles](#) [Delete roles](#)

Filters: [Add filter](#)

<input type="checkbox"/> Role name	Description
<input type="checkbox"/> PIM-Defender-XDR-AuthorizationAndSettings-Admin-L2-T1-MP-ID	⋮
<input type="checkbox"/> PIM-Defender-XDR-AuthorizationAndSettings-Reader-L4-T1-MP-ID	⋮
<input type="checkbox"/> PIM-Defender-XDR-SecurityPosture-Operator-L3-T1-MP-ID	⋮
<input type="checkbox"/> PIM-Defender-XDR-SecurityPosture-Reader-L4-T1-MP-ID	⋮
<input type="checkbox"/> PIM-Defender-XDR-SecurityOperations-Reader-L4-T1-MP-ID	⋮
<input type="checkbox"/> PIM-Defender-XDR-SecurityOperations-Operator-L3-T1-MP-ID	⋮
<input type="checkbox"/> Microsoft Defender for Identity Administrator	⋮ [Imported] Azi
<input type="checkbox"/> Audit Manager	⋮ [Imported]
<input type="checkbox"/> Defender for Cloud, manage alerts role	⋮
<input type="checkbox"/> Microsoft Defender for Identity Administrator	⋮ [Imported] Azi

Power BI RBAC

The screenshot displays the Power BI workspace interface for 'MyCompanyKPIs-Prod'. The top navigation bar includes a search box and a 'Create app' button. The left sidebar contains navigation options: Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitor, and Learn. The main workspace area features a '+ New' dropdown, an 'Upload' button (highlighted with a red arrow), and a 'Filter by key' search box. Below these is a large circular graphic with a plus sign and the text 'Select a task flow or build your own to get started (preview)'. On the right, the 'Manage access' panel is open, showing a search box and a list of users with their roles. A red arrow points to the user 'PIM-PowerBI-WS-MyCompanyKPIs-Prod-Contributors-L4-T2-USER-ID', who is assigned the 'Admin' role. Other users listed include 'Morten Waltorp Knudsen' (Admin) and another 'PIM-PowerBI-WS-MyCompanyKPI...' user (Viewer).

Power BI MyCompanyKPIs-Prod Search

Home Create Browse OneLake data hub Apps Metrics Monitor Learn

MyCompanyKPIs-Prod Create app

+ New Upload Filter by key

Manage access MyCompanyKPIs-Prod

+ Add people or groups

Search within workspace

Morten Waltorp Knudsen Admin

PIM-PowerBI-WS-MyCompanyKPI... Admin

PIM-PowerBI-WS-MyCompanyKPIs-Prod-Contributors-L4-T2-USER-ID Admin

PIM-PowerBI-WS-MyCompanyKPI... Viewer

Select a task flow or build your own to get started (preview)

Select from one of Microsoft's predesigned task flows or add a task to start building one yourself

RBAC support (samples)

- Intune
- Defender
- Power BI
- AzDevOps
- Azure
- Entra ID
- Purview
- Github Enterprise Cloud
- D365 Business Central
- D365 CRM
- Salesforce
- ServiceNow
- Dropbox Business
- Workday
- Slack
- Atlassian Jira



Designing “PIM v2”

Entra ID Groups

Entra ID PIM Assignments using PIM v2 Framework



Great Documentation
using Entra ID Groups
(seen from backend)

DEMO



PIM-Entra-ID-CloudApplicationAdministrator-L1-T0-CP-ID | Assigned roles

Group

+ Add assignments Refresh | Got feedback?

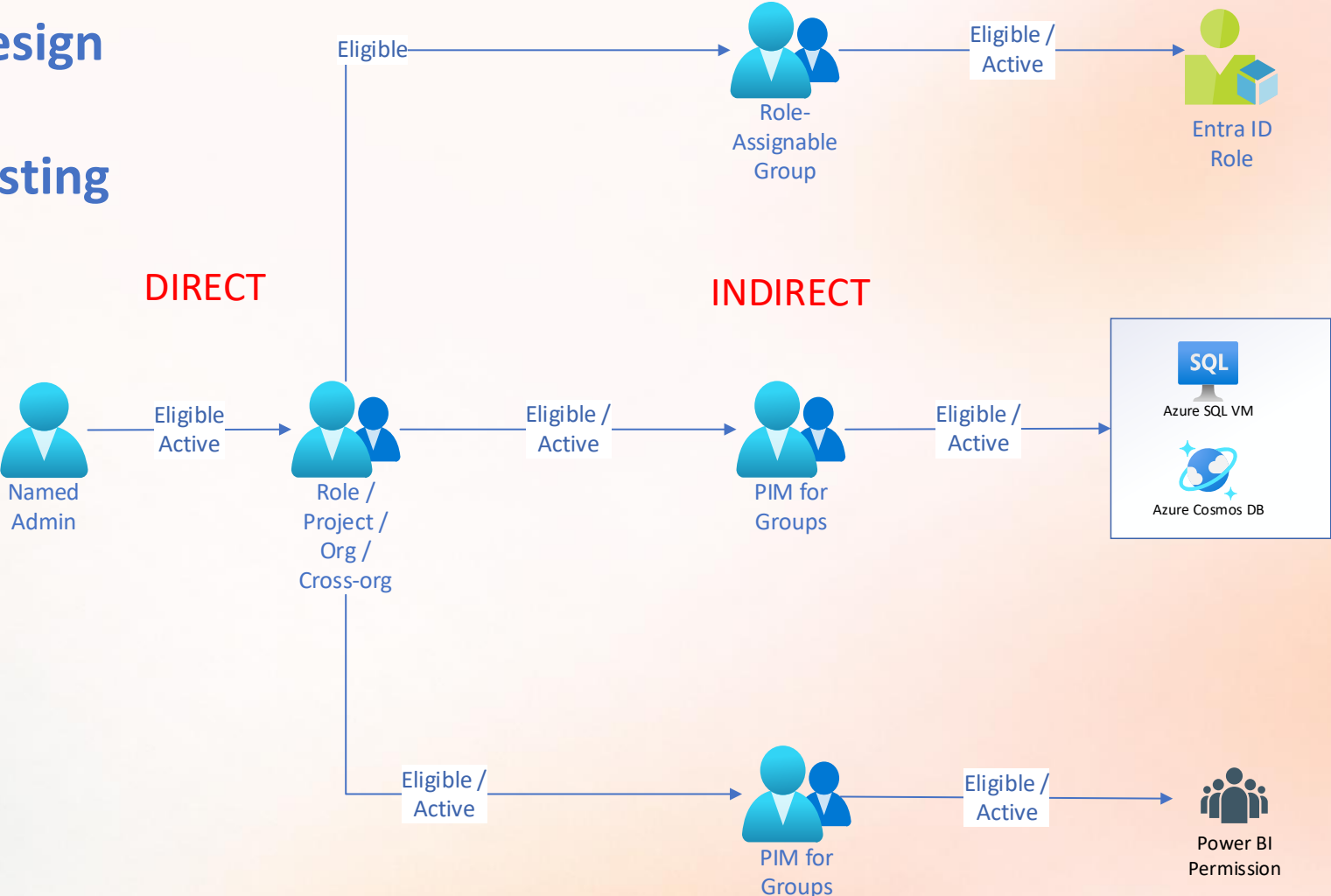
Eligible assignments **Active assignments** Expired assignments

Search by role

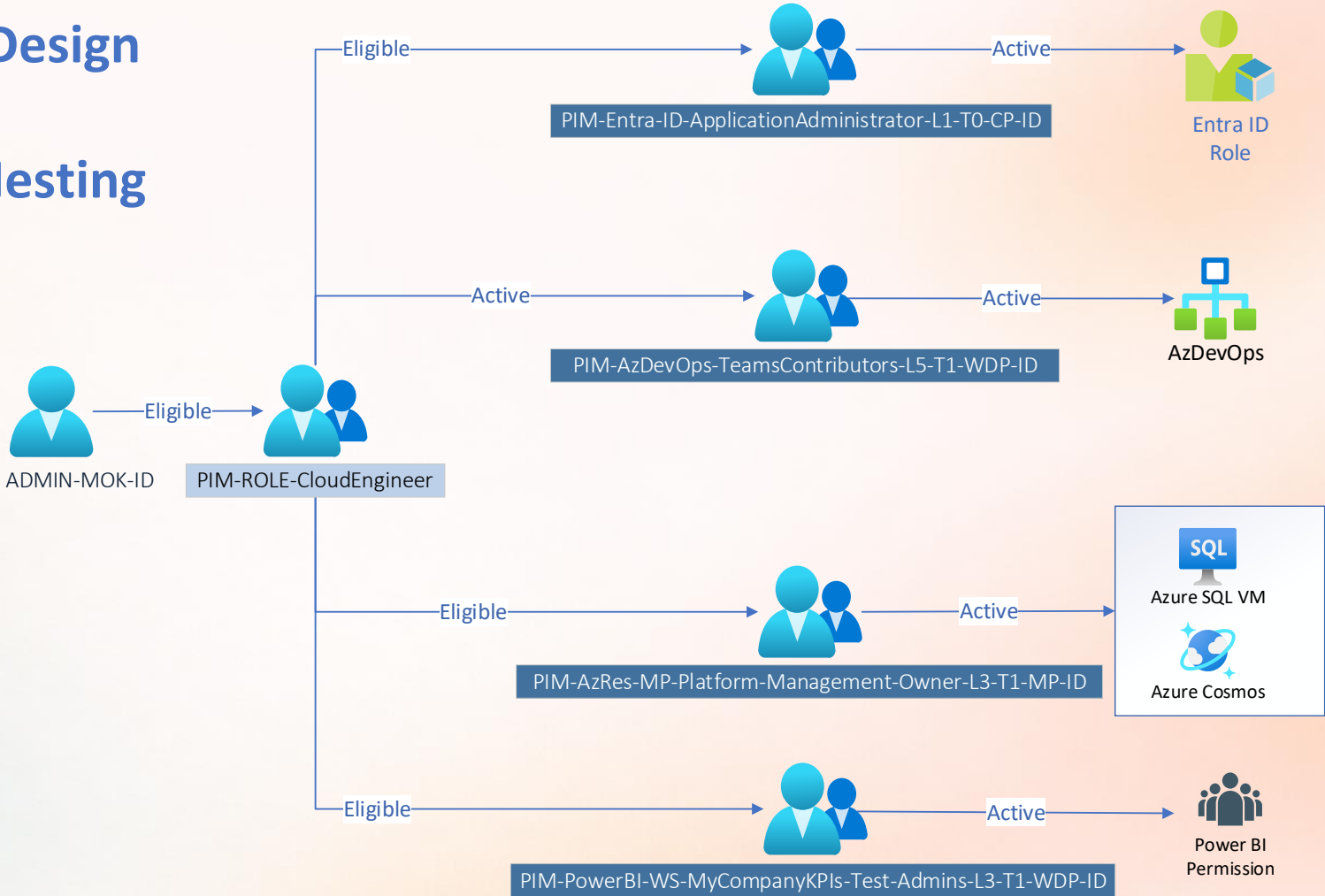
Role	↑↓ Principal name	Scope	↑↓ Membership	↑↓ State	St
Cloud Application Administrator		Directory	Direct	Active	5/



PIM v2 Design with Group Nesting



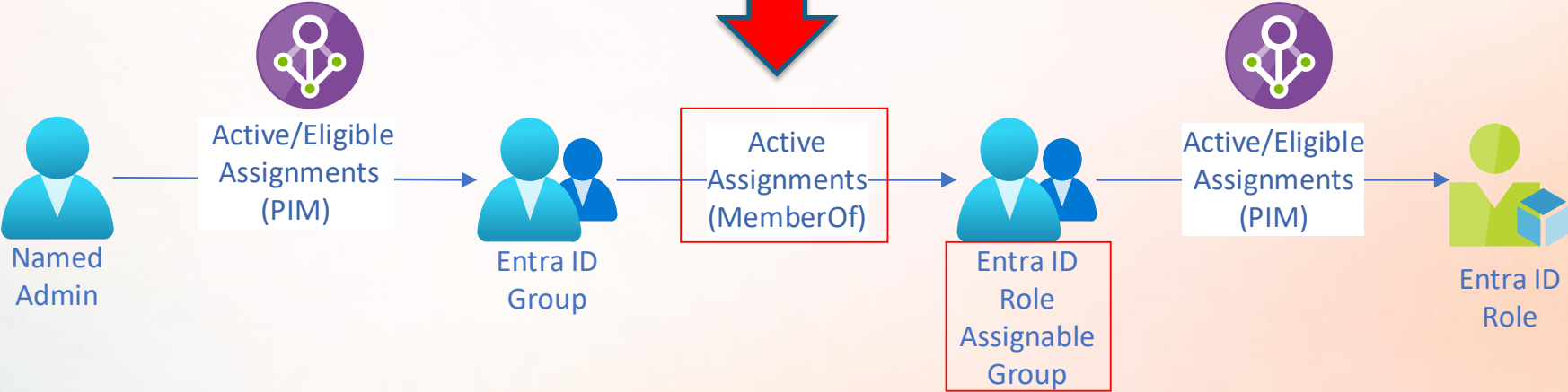
PIM v2 Design with Group Nesting



Group Nesting scenario NOT SUPPORTED

NOT SUPPORTED !

Must be Eligible for Role-assignable groups



Entra ID PIM Activation – Use AI to help



PIM Activation:
Use AI to help which
role to choose 😊

DEMO



Loading Data [Step 1 of 5: Entra Role Definitions]





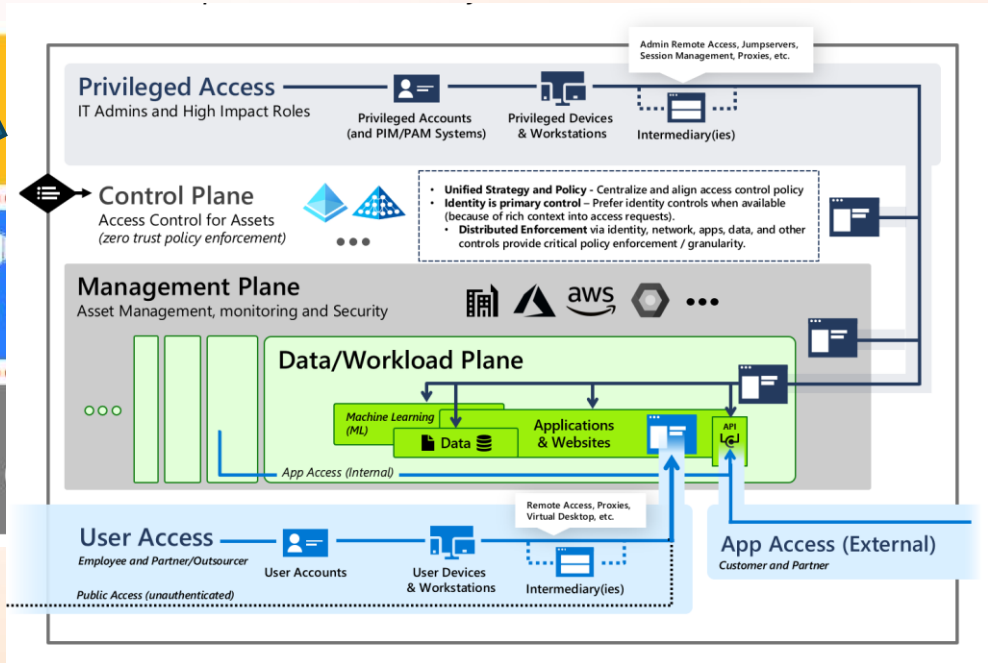
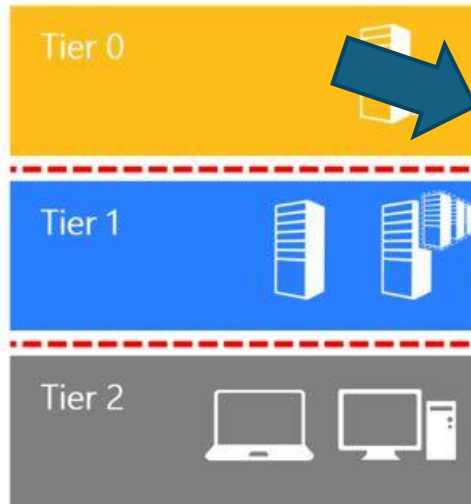
Designing “PIM v2”

Delegation Levels with Tiering

Legacy Tier-model

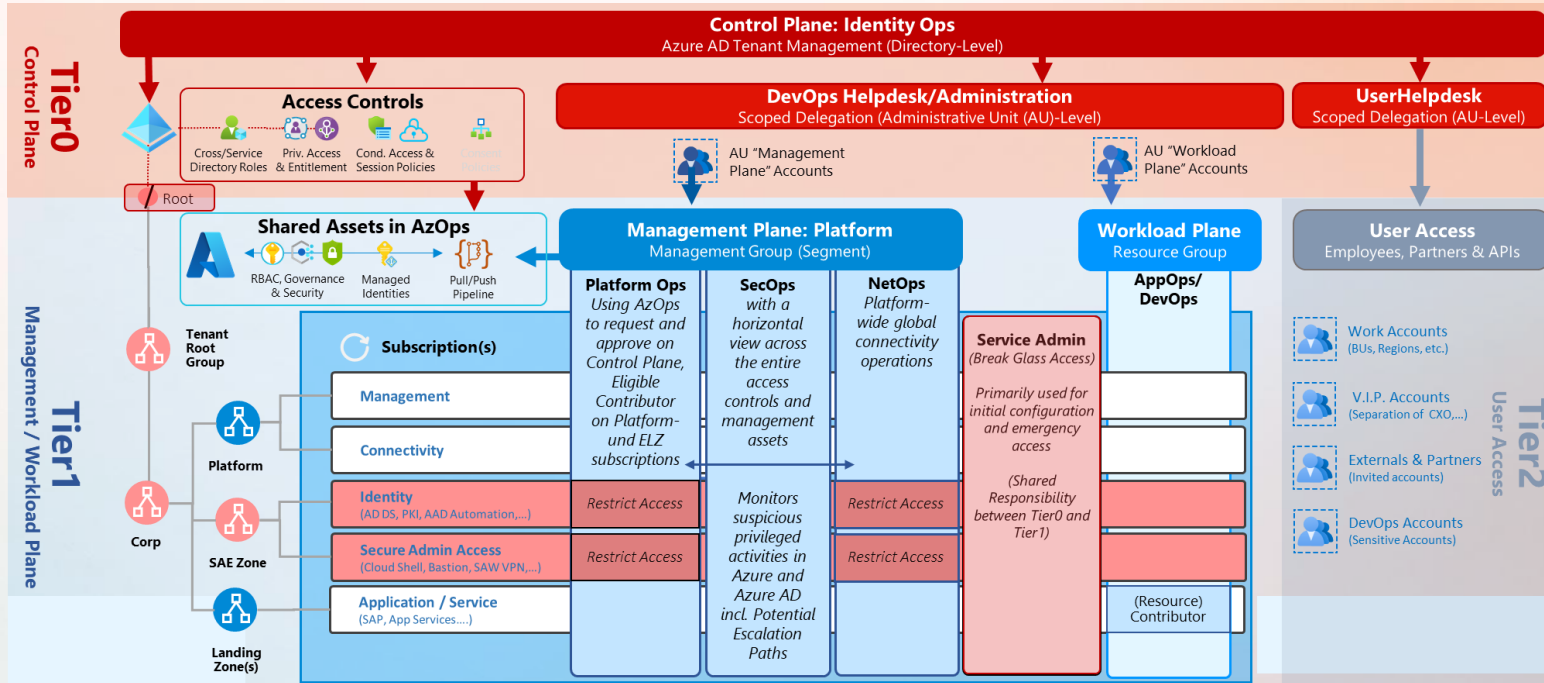
The enterprise access model supersedes and replaces the legacy tier model that was focused on containing unauthorized escalation of privilege in an on-premises Windows Server Active Directory environment.

The enterprise access model incorporates these elements as well as full access management requirements of a modern enterprise that spans on-premises, multiple clouds, internal or external user access, and more.



Enterprise Access and Tiered Administration Model

Holistic overview with tiering



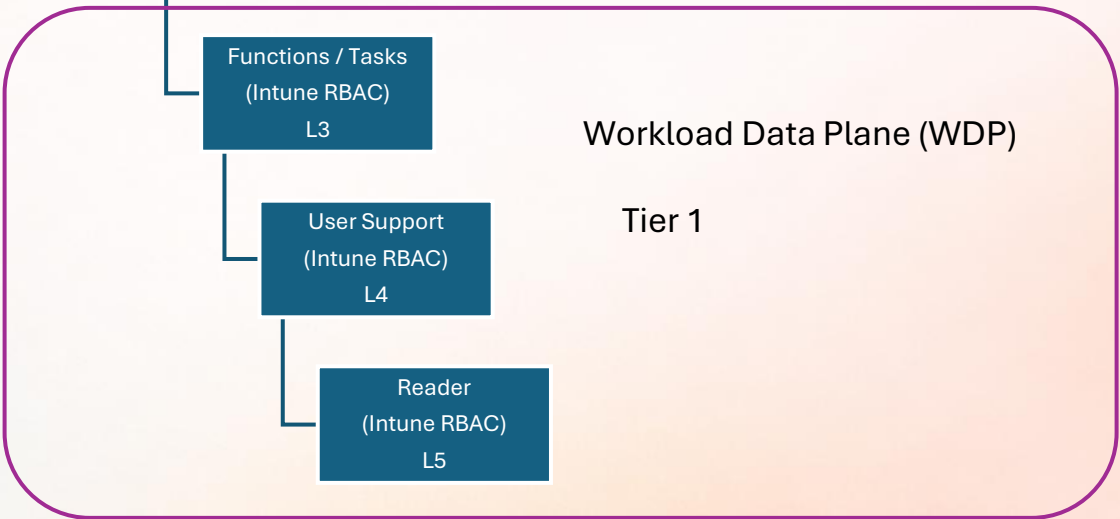
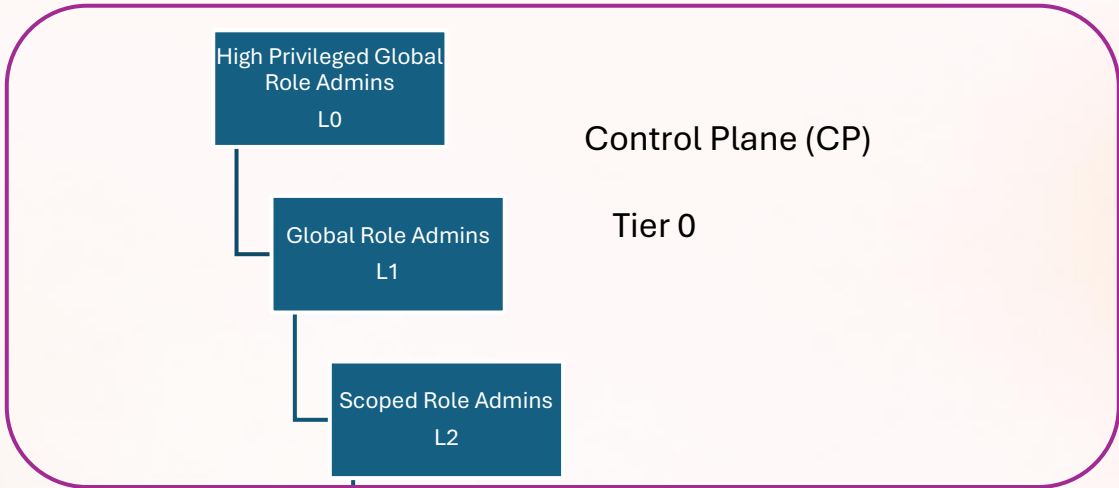
Credit drawing: Thomas Naunheim

Tiering Levels

Tiering	Tiering Acronym	Permission Plane	Purpose
T0	T0-CP	Control Plane	Global roles and services like conditional access
T1	T1-WDP	Workload / Data Plane	Business data or application
T1	T1-MP	Management Plane	Management platform (logging, security, identity, connectivity). Cross-platform
T2	T2-App	App Access	Read/Write specific data – for example for integration with partner
T2	T2-User	User Access	User access to service fx. Power BI platform

Delegation Levels

Level	Tier	Level	Samples
L0	T0	High Privileged Global Role	Entra ID <ul style="list-style-type: none">Global Administrator Active Directory <ul style="list-style-type: none">Forest Administrator
L1	T0	Global Role Admins	Entra ID <ul style="list-style-type: none">All 100+ Tenant Roles except for Global Administrator Active Directory <ul style="list-style-type: none">Domain Administrator
L2	T0	Scoped Role Admins	Entra ID <ul style="list-style-type: none">Specific Tenant Roles delegated to Administrative Unit (AU) targeted for specific set of users/devices/groups Active Directory <ul style="list-style-type: none">Specific permissions delegated to Organizational Unit (OU) targeted for specific set of users/devices/groups
L3-L9	T1	Service Admins	Service/Workload/Data



Example
Intune

Services

Service Name	Service Acronym	Delegations			
		TOTAL	Tier 0	Tier 1	Tier 2
Active Directory	AD	3	3 (L0-L2)		
Entra ID	Entra-ID	3	3 (L0-L2)		
Conditional Access	Entra-CA	3	3 (L0-L2)		
Privileged Identity Management	Entra-PIM	2	2 (L0-L1)		
Entra Private/Internet Access	Entra-GSA	2	2 (L0-L1)		
Intune	Intune	6	3 (L0-L2)	3 (L3-L5)	
Exchange	Exchange	3	3 (L0-L2)	4 (*)	
Teams	Teams	3	3 (L0-L2)		
Sharepoint	Sharepoint	7	3 (L0-L2)	1 (*)	3
PowerBI (master data)	PowerBI-MasterData	6	2 (L0-L1)	2 (L2-L3)	2
Power BI (Business data)	PowerBI-WS	5	2 (L0-L1)	3 (L2-L4)	1
Azure Resources	Azure	10	1 (L0)	9 (L1-L9)	(2)
Azure DevOps	AzDevOps	6	2 (L0-L1)	4 (L2-L5)	
Defender XDR	Defender	6	2 (L0-L1)	4 (L2-L5)	

(*) T1 RBAC doesn't support PIM as they require mail-enabled security group type, only T0 roles

DELEGATION GROUPS

Level	Tier	Group Name	Role assignable
L0	T0	PIM-Entra-ID-GlobalAdministrator-L0-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-IntuneAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-CloudDeviceAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-WindowsUpdateAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-AzureADJoinedDeviceLocalAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-MicrosoftHardwareWarrantyAdministrator-L1-T0-CP-ID	Yes
L3	T1	PIM-Intune-IntuneRoleAdministrator-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-OrganizationalMessagesManager-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-PolicyAndProfileManager-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-SchoolAdministrator-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-ApplicationManager-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-EndpointPrivilegeManager-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-EndpointSecurityManager-L3-T1-WDP-ID	No
L3	T1	PIM-Intune-CloudPCAdministrator-L3-T1-WDP-ID	No
L4	T1	PIM-Intune-HelpDeskOperator-L4-T1-WDP-ID	No
L5	T1	PIM-Intune-EndpointPrivilegeReader-L5-T1-WDP-ID	No
L5	T1	PIM-Intune-ReadOnlyOperator-L5-T1-WDP-ID	No
L5	T1	PIM-Intune-CloudPCReader-L5-T1-WDP-ID	No

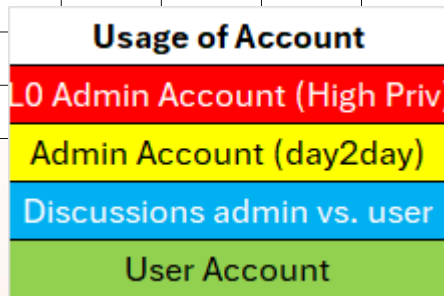
DELEGATION GROUPS

Level	Tier	Group Name	Role Assignable
L0	T0	PIM-Entra-ID-GlobalAdministrator-L0-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-PowerPlatformAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-PowerBIAdministrator-L1-T0-CP-ID	Yes
L1	T0	PIM-Entra-ID-FabricAdministrator-L1-T0-CP-ID	Yes
L2	T1	PIM-PowerBI-MasterData-OrgAdmins-L2-T1-WDP-ID	No
L3	T1	PIM-PowerBI-MasterData-DataSet-Admins-L3-T1-WDP-ID	No
L3	T1	PIM-PowerBI-WS-ASSETMANAGEMENT-Prod-Admins-L3-T1-WDP-ID	No
L3	T1	PIM-PowerBI-WS-ASSETMANAGEMENT-Test-Admins-L3-T1-WDP-ID	No
L3	T1	PIM-PowerBI-WS-HR-Prod-Admins-L3-T1-WDP-ID	No
L3	T1	PIM-PowerBI-WS-HR-Test-Admins-L3-T1-WDP-ID	No
		... (more workspaces here)	No
L4	T2	PIM-PowerBI-MasterData-Build-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-MasterData-Read-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-MasterData-Share-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-BIDATAMODEL-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-BIDATAMODEL-Test-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-BUSINESSINTELLIGENCE-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-BUSINESSINTELLIGENCE-Test-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-DRIFT-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-DRIFT-Test-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-FJERNVARMFYNKPI-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-FJERNVARMFYNKPI-Test-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-FJERNVARMFYNPUBLIC-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-FJERNVARMFYNPUBLIC-Test-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-GUIDELINESPOWERBI-Prod-Contributors-L4-T2-USER-ID	No
L4	T2	PIM-PowerBI-WS-GUIDELINESPOWERBI-Test-Contributors-L4-T2-USER-ID	No

Be Prepared for Discussions

- Everyone needs to understand the WHY
- Admin vs. User Account (when to use) - examples
- PowerBI Contributor Workspace
- Developers need User Account access to AzDevOps
- User account must have access to Storage Account

Level	Entra ID	Entra-CA	Entra-PIM	Entra-GSA	Intune	Exchange	Teams	Sharepoint	Power BI (master data)	Power BI (ws data)	Azure	Azure DevOps	Defender XDR
L0	High	High	High	High	High	High	High	High	High	High	Tenant Root	High	High
L1	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Corp	Global	Global
L2	Scoped	Scoped			Scoped	Scoped	Scoped	Scoped	Org	Org	WDP: Regions MP: Platform	Org Collection Admins	Org settings
L3					Function	Org		Site Admin	Data Set Admins	Workspace Admins	WDP: Environm. MP: Platform Type	Project Admins	Org Admins
L4					Support	Function		Site Owner	User Std Roles	User Workspace Contributor	WDP: Corp/Online MP: Platform Type	Teams Admins	Function Admins
L5					Reader	Support		Site Member	User Custom Roles		MP: Platform Type	Teams Contributors	Reader
L6						Reader		Site Viewer			LZ Workload (MG)		
L7											Subscription		
L8											RG		
L9											Resource		





PIM for Active Directory

Using PIM for Entra ID as Session Initiator to legacy AD

Groups & Members are created in AD (separate)

Validating PIM members for group PIM-AD-AccountOperators-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-ClientDevicesMgmt-Scoped-L2-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-ComputerMgmt-Domain-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-DHCPAdministrators-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-DNSAdministrators-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-DomainAdministrators-L1-T0-CP-ID-S_AD

PIM for AD: Adding user x-Admin-MOK-AD with group membership for 144 min (PIM for AD)

Validating PIM members for group PIM-AD-EnterpriseAdministrators-L0-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupMembershipMgmt-Domain-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupMembershipMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupMgmt-Domain-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupPolicyMgmt-Domain-L1-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-ClientsDevices-L2-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-Servers-L2-T0-CP-ID-S_AD

Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-Users-L2-T0-CP-ID-S_AD

Auto-remove, if user manually deactivates PIM-session or session TTL runs out (auto-deactivated)

```
Validating PIM members for group PIM-AD-EnterpriseAdministrators-L0-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupMembershipMgmt-Domain-L1-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupMembershipMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupMgmt-Domain-L1-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupMgmt-Scoped-Groups-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupPolicyMgmt-Domain-L1-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-ClientsDevices-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-Servers-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-GroupPolicyMgmt-Scoped-Users-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD
    PIM for AD: Removing User x-Admin-MOK-AD from group PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-PrintOperators-L1-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-SchemaAdministrators-L0-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-UserMgmt-Domain-L1-T0-CP-ID-S_AD
Validating PIM members for group PIM-AD-UserMgmt-Scoped-Users-L2-T0-CP-ID-S_AD
```

```
Validating PIM members for group PIM-AD-SRV-Mgmt1-ID-S_AD
```

```
    PIM for AD: Removing User x-Admin-MOK-AD from group PIM-AD-SRV-Mgmt1-ID-S_AD
```

TTL check each cycle

```
Validating PIM members for group PIM-AD-SRV-Mgmt1-ID-S_AD
```

```
Current TTL in AD is 26096 for user x-Admin-MOK-AD  
Expected TTL from ID PIM-session is 26112  
Deviation of seconds is -16  
Deviation of seconds is acceptable
```

```
PIM for AD: User x-Admin-MOK-AD is already member of PIM-AD-SRV-Mgmt1-ID-S_AD
```

```
Validating PIM members for group PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD
```

```
Current TTL in AD is 24779 for user x-Admin-MOK-AD  
Expected TTL from ID PIM-session is 24765  
Deviation of seconds is 14  
Deviation of seconds is acceptable
```

```
PIM for AD: User x-Admin-MOK-AD is already member of PIM-AD-LocalServerAdmins-Scoped-L2-T0-CP-ID-S_AD
```

Auto-correct TTL if deviations more than +/- 2 min



```
Validating PIM members for group PIM-AD-SRV-Mgmt1-ID-S_AD
```

```
Current TTL in AD is 8021 for user x-Admin-MOK-AD
```

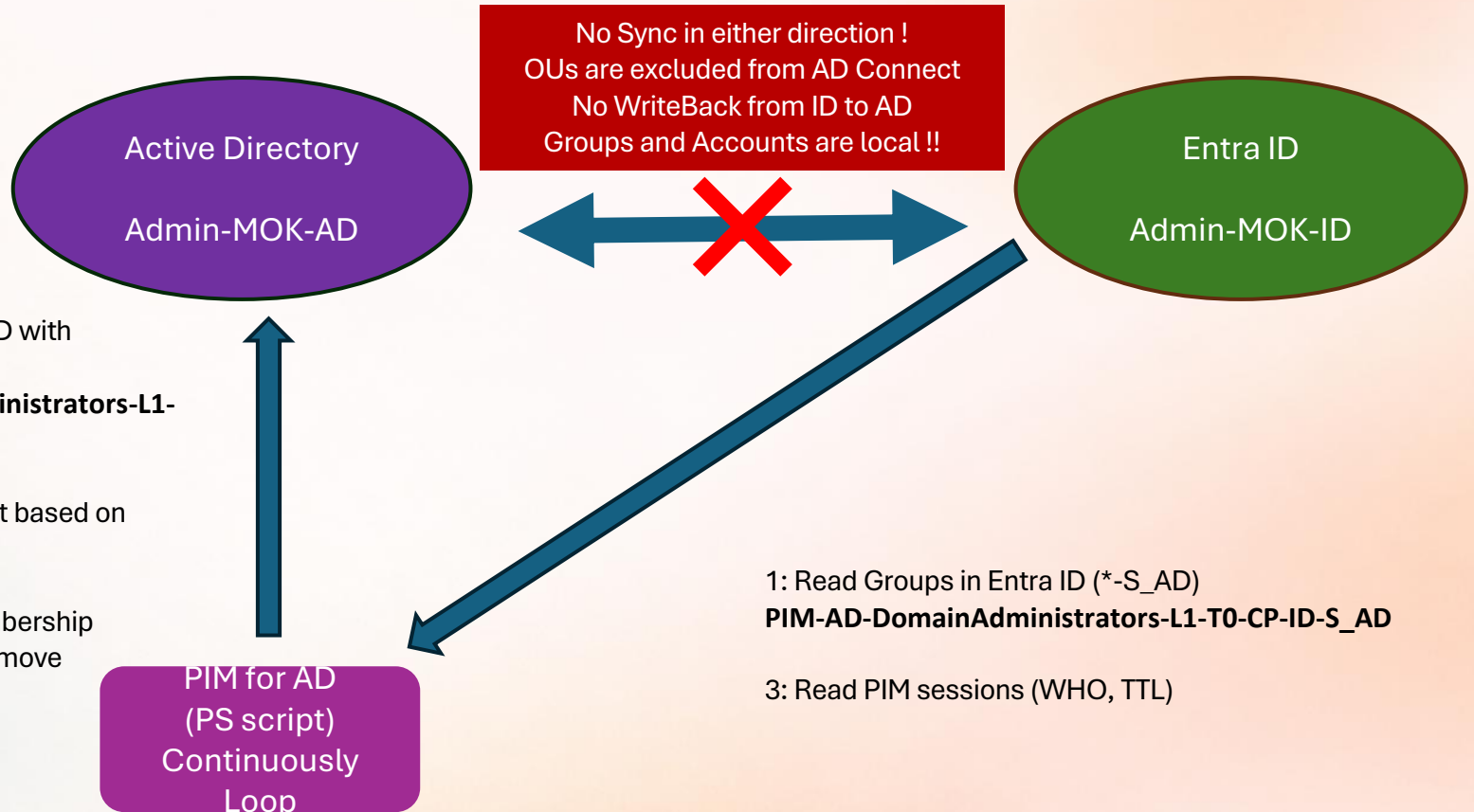
```
Expected TTL from ID PIM-session is 7114
```

```
Deviation of seconds is 907
```

```
Deviation of seconds is NOT acceptable (+/-2 min)
```

```
PIM for AD: Adding user x-Admin-MOK-AD with group membership for 119 min (PIM for AD)
```

PIM for legacy AD Flow





TTL feature group membership

Windows Server 2016 forest functional level features

- Privileged Access Management

```
Add-ADGroupMember -Identity $AD_GroupName  
-Members $AD_UserName  
-MemberTimeToLive $AD_TimeSpanTotalMinutesGroupMemberShip  
-Credential $AD_Credentials
```

Supported domain controller operating systems:

Windows Server 2022
Windows Server 2019
Windows Server 2016

The minimum requirement to add one a domain controller of one of these versions of Windows Server is a Windows Server 2008 functional level.

The domain also has to use DFS-R as the engine to replicate SYSVOL.

Check PAM-support:

```
Get-ADOptionalFeature -filter "name -eq 'privileged access management feature'"
```

Enable PAM-support:

```
Enable-ADOptionalFeature 'Privileged Access Management Feature' -Scope ForestOrConfigurationSet -Target 2linkit.local
```

Automation



- **Automation of Entra PIM – full & delta – CSV, SQL, cmdlets** (private right now, public soon)
 - PIM Assignment Wizard, PIM Revoker, PIM Exporter
- **<https://github.com/KnudsenMorten/PIM4ActiveDirectoryPS>** (private right now, public soon)
 - Automation of PIM for AD
- **<https://github.com/KnudsenMorten/EntraPolicySuite>**
 - Command line management of Entra Conditional Access Policies, Named Locations, Authentication Strengths and more
 - +120 Conditional Access policies with full documents
- **<https://github.com/KnudsenMorten/PIM-Role-Advisor>**
 - Show PIM role to solve a task - and group to activate the needed permission



Download Presentation with all demo's



<https://sharing.mortenknudsen.net/Privileged-Access-Strategy---Best-Practices-and-Common-Mistakes-when-Tiering-Cloud-and-AD-MEMSummit2026.pptx>



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Love to connect with you 😊
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