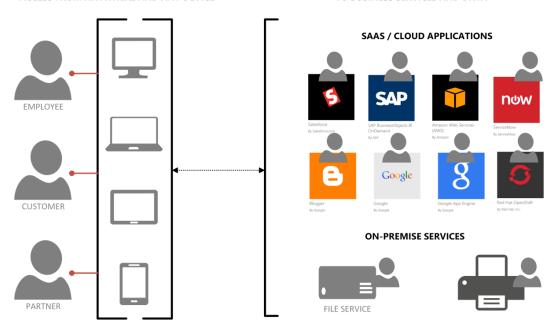
# Mastering Identity and Access Management with Microsoft Azure

Chapter 1: Getting Started with a Cloud-Only Scenario

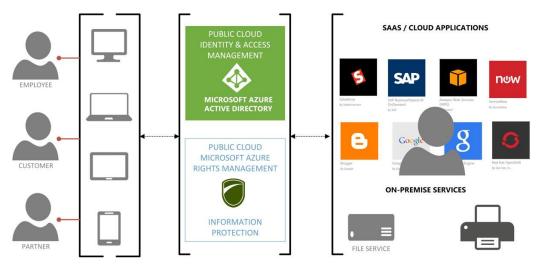


#### ACCESS FROM ANYWHERE AND ANY DEVICE

#### TO BUSINESS SERVICES AND DATA

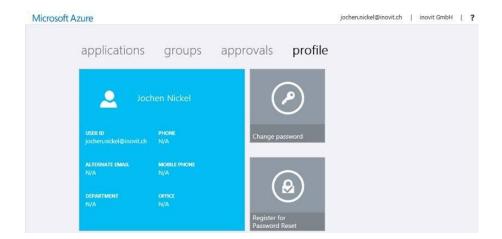


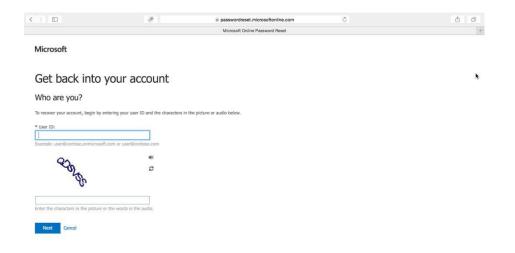
#### ACCESS FROM ANYWHERE AND ANY DEVICE MANAGED AND ACCESSED TROUGH AZURE IDAAS TO BUSINESS SERVICES AND DATA

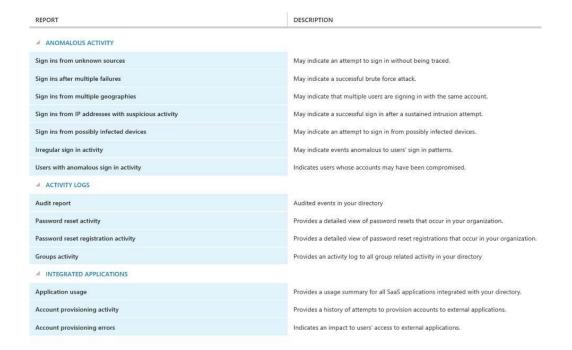


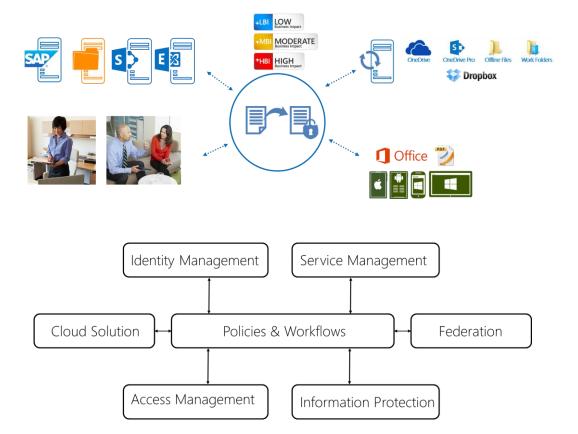




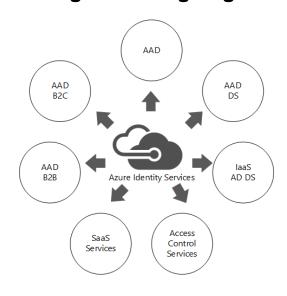


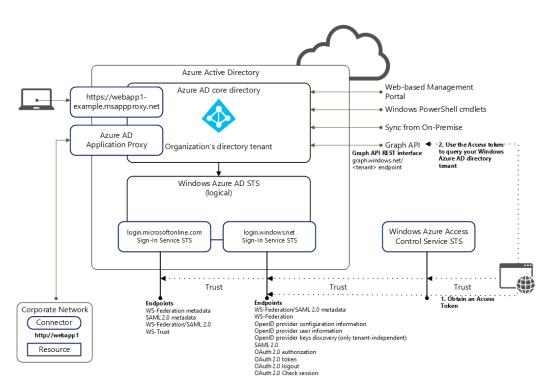






# **Chapter 2: Planning and Designing Cloud Identities**





#### Azure AD Usage Scenarios



Basic

User Management

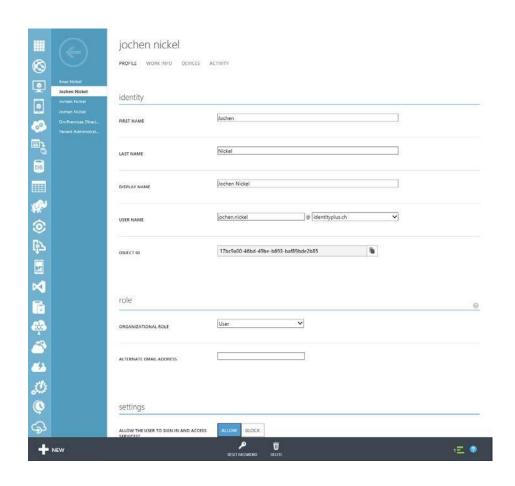
Password Management Group Management Device Management

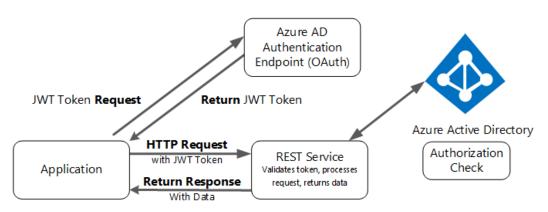
Advanced

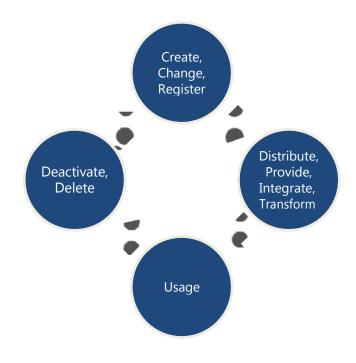
Administrative Units Management

Role-based access Management

Reporting







#### TYPE OF USER

New user in your organization				
User with an existing Microsoft account User in another Microsoft Azure AD directory Users in partner companies				
	@	identityplus.ch	~	

Jochen Nickel	jochen.nickel@identityplus.ch	Microsoft Azure Active Directory
Jochen Nickel	jochen.nickel@azureid.ch	Local Active Directory
Jochen Nickel	jochen.nickel@outlook.com	Microsoft account
Jochen Nickel	jochen.nickel@identityplus.onmicrosoft.com	Microsoft Azure Active Directory

Jochen Nickel	jochen.nickel@outlook.com jochen.nickel@identityplus.onmicrosoft.com	Microsoft account  Microsoft Azure Active Directory
Jochen Nickel	jochen.nickel@azureid.ch	Local Active Directory
Jochen Nickel	jochen.nickel@identityplus.ch	Microsoft Azure Active Directory

Jochen Nickel jo		jochen.nickel@identityplus.ch	Microsoft Azure Active Directory
	Jochen Nickel jochen.nickel@azureid.ch		Local Active Directory
ĺ	Jochen Nickel	jochen.nickel@outlook.com	Microsoft account
	Jochen Nickel	jochen.nickel@identityplus.onmicrosoft.com	Microsoft Azure Active Directory



Login E-mail address SIP address Organization ID User principal name (UPN)

# jochen.nickel@identityplus.ch





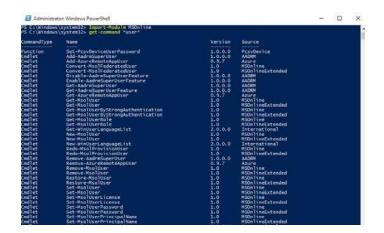
#### settings

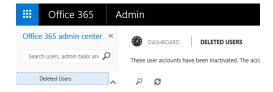
# ALLOW THE USER TO SIGN IN AND ACCESS SERVICES?

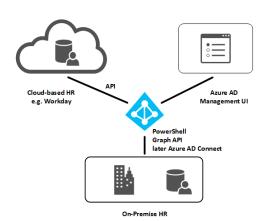


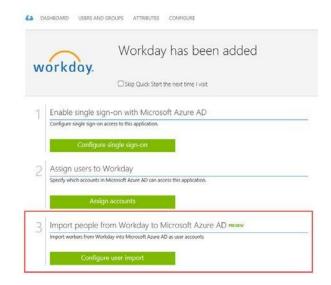
11/25/2015 11:42:57 PM	Microsoft Device Registration Cli	84.75.23.101	Zuerich, Zuerich, CH	Windows
11/25/2015 11:42:40 PM	Universal Store Native Client	84.75.23.101	Zuerich, Zuerich, CH	Windows
11/25/2015 11:42:37 PM	Accounts Control UI	84.75.23.101	Zuerich, Zuerich, CH	Windows
11/25/2015 11:40:22 PM	Unknown First-Party App	84.75.23.101	Zuerich, Zuerich, CH	Windows
11/25/2015 11:40:05 PM	Device Registration Service	84.75.23.101	Zuerich, Zuerich, CH	Windows











# Enable automatic account provisioning to Salesforce Sandbox

Automatically provision accounts from Microsoft Azure AD to Salesforce Sandbox upon account assignment.

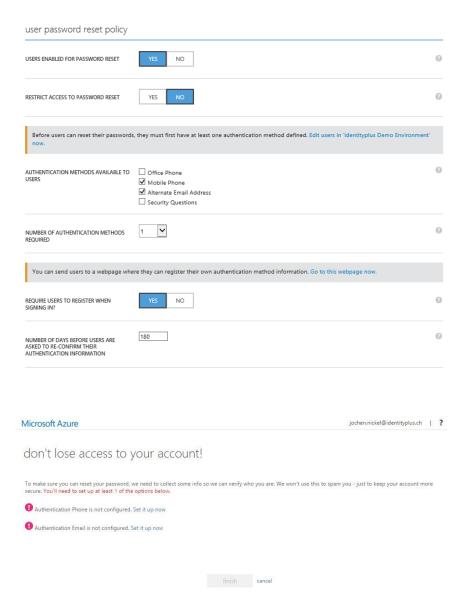
#### Configure account provisioning

#### attribute mappings

TARGET ATTRIBUTE (SALESFORCE SAND	TARGET OBJECT	SOURCE ATTRIBUTE (AZURE AD)	SOURCE OBJECT	REQUIR 🔎
IsActive	User	Not([IsSoftDeleted])	User	Yes
Alias	User	Mid([userPrincipalName], 1, 8)	User	Yes
Email	User	mail	User	Yes
EmailEncodingKey	User	"ISO-8859-1" (default)	-	Yes
LanguageLocaleKey	User	"en_US" (default)	-	Yes
FirstName	User	givenName	User	Yes
LastName	User	surname	User	Yes
LocaleSidKey	User	Replace([preferredLanguage], "-", , , "_", , )	User	Yes
ProfileName	User	Single AppRole Assignment ([appRole Assignments])	User	Yes
TimeZoneSidKey	User	"America/Los_Angeles" (default)	-	Yes
Username	User	userPrincipalName	User	Yes
UserPermissionsCallCenterAutoLogin	User	"False" (default)		Yes
User Permissions Marketing User	User	"False" (default)		Yes
UserPermissionsOfflineUser	User	"False" (default)	-	Yes

#### user password reset policy





Your administrator has required you to verify your contact info. You can use this to reset your password if you ever lose access to your account.

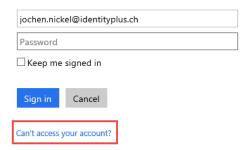
verify now

# Reset your password

verification step 1 > verification step 2 > choose a new password

Email my alternate email	What is your favorite food?
Text my mobile phone	What was the name of your first pet?
Call my mobile phone	
Call my office phone	What was the make and model of your first car?

Sign in with your work or school account



### Get back into your account

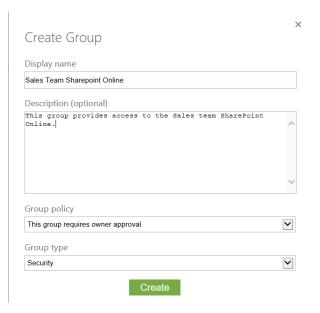
#### Who are you?

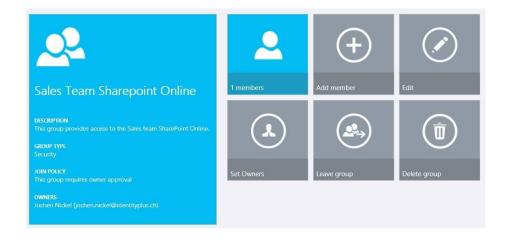
To recover your account, begin by entering your user ID and the characters in the picture or audio below.

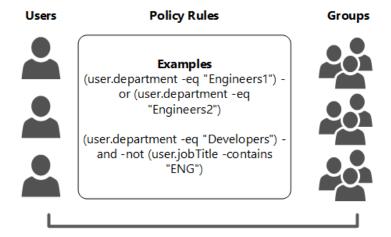


#### group management





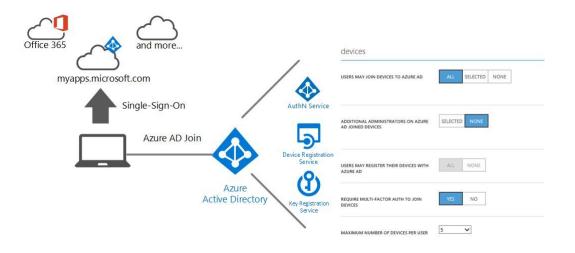




**Dynamic Groups** 

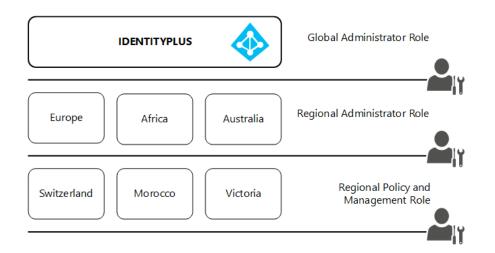
#### sales team sharepoint online

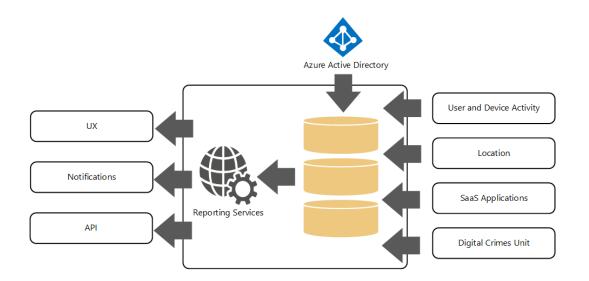






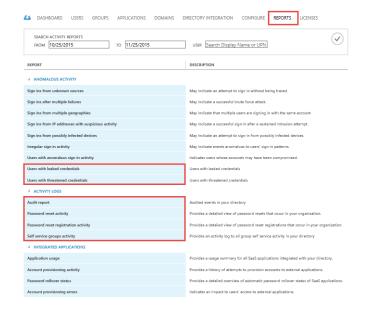








SECURITY AND HEALTH STATUS	STATUS (LAST 30 DAYS)	DETAILS	
Users with Anomalous Logins	0	View Anomalous Sign-in Activity	
Application Usage	25	View Application Usage	
Self-Service Password Reset	0	View SSPR Activity	
Self-Service Password Reset Registration	20	View SSPR Registration Activity	
Self-Service Group Management	0	View SSGM Activity	



#### audit report ----

Audited events in your directory



#### notifications



# **Chapter 3: Planning and Designing Authentication and Application Access**











# OPEN STANDARDS PROVIDED BY AZURE ACTIVE DIRECTORY

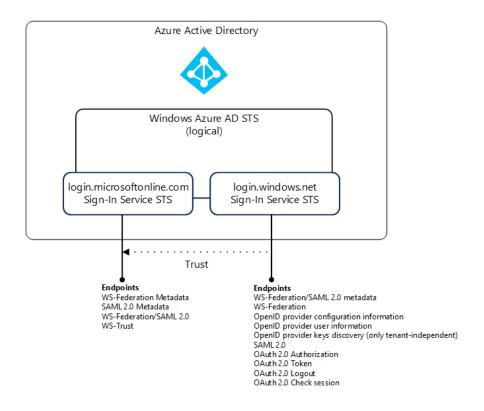
WS-\*, SAML, OAUTH, OPENID CONNECT

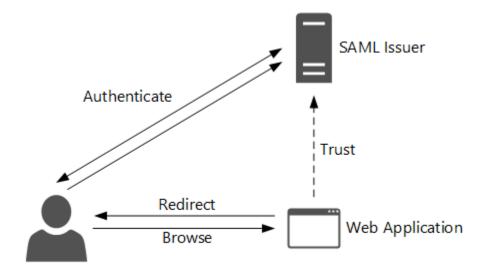




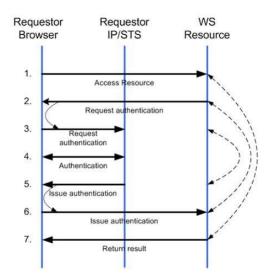


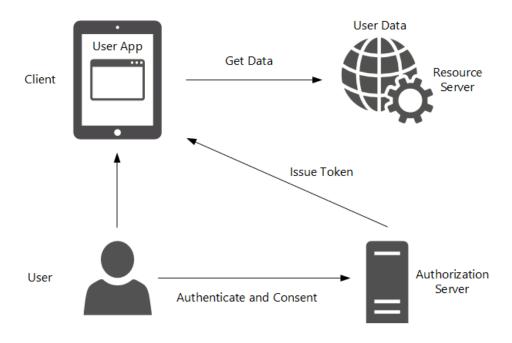
CLOUD SERVICES

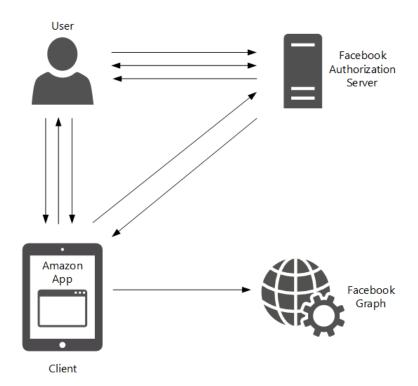


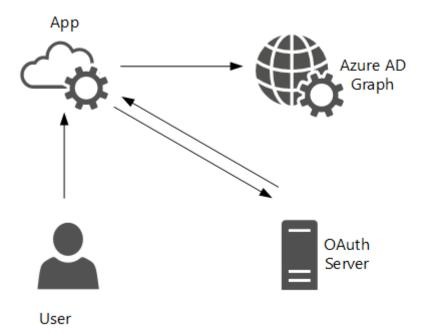


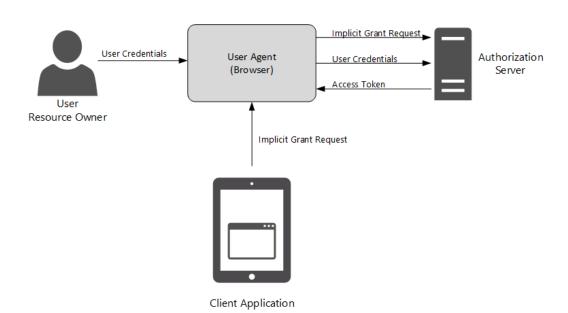
User

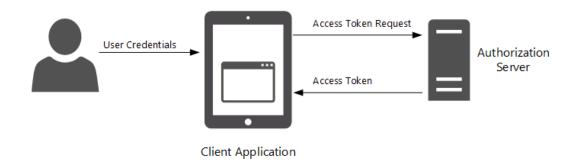




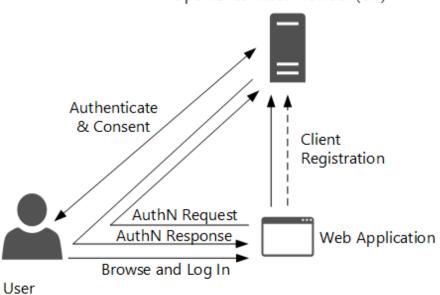


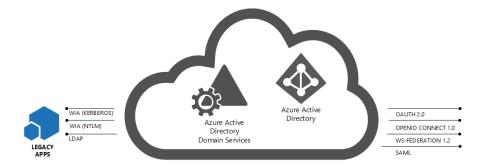




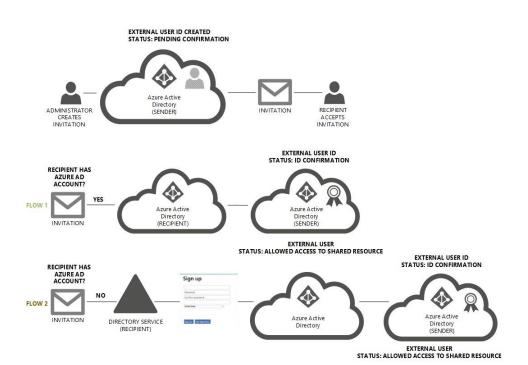


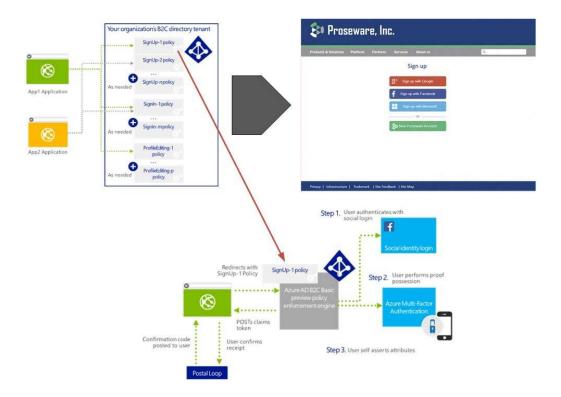
# OpenID Connect Provider (OP)

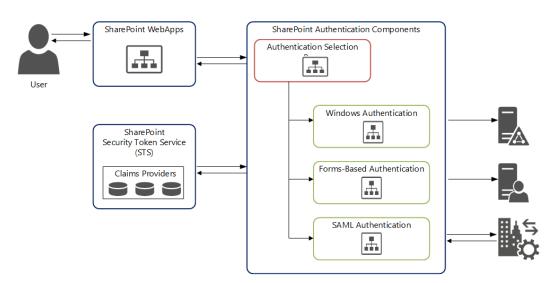


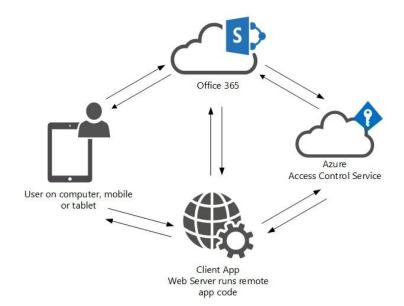


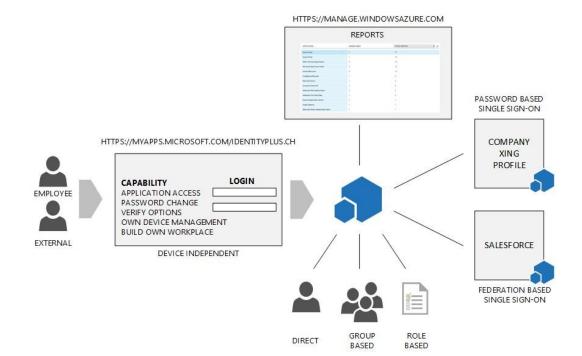








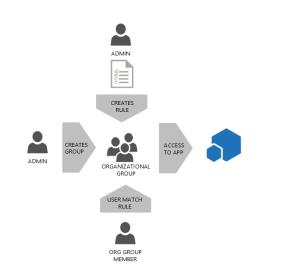


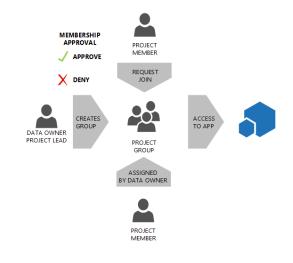


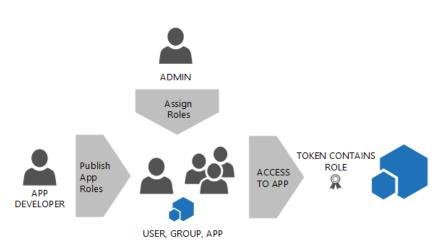
#### linkedin



DISPLAY NAME	USER NAME	JOB TITLE	DEPARTMENT	ACCESS	METHOD	۵
Anas Nickel	anas.nickel@azureid.ch			No	Unassigned	
Azureid Postmaster	postmaster@azureid.ch			No	Unassigned	
Ikram Berady	ikram.berady@identityplus	Senior Sales Manager	Sales	No	Unassigned	
Jochen Nickel	jochen.nickel@identityplus			Yes	Direct	





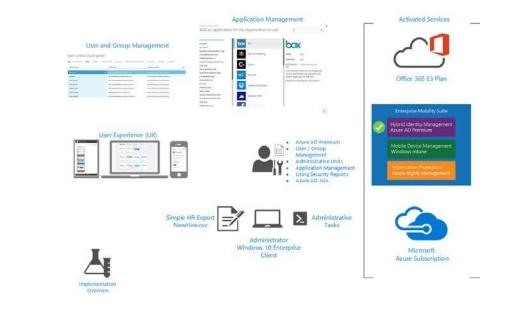


# Assign Users

Select TrainingPoint role

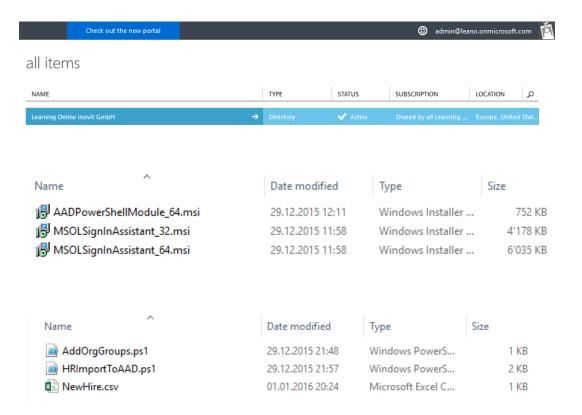


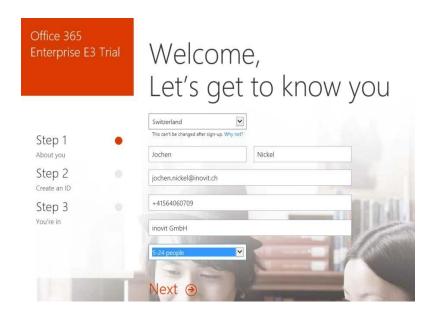
# **Chapter 4: Building and Configuring a Suitable Azure AD**

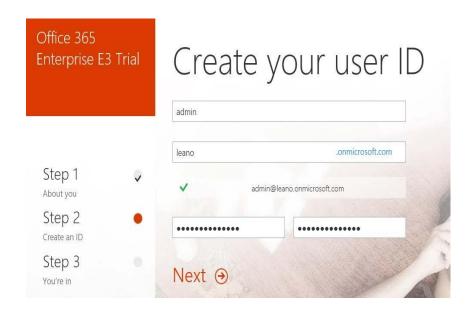












Save this info. You'll need it later.

Office 365 sign-in page https://portal.office.com

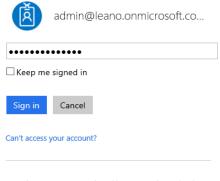
★ Bookmark the sign-in page

admin@leano.onmicrosoft.com

You're ready to go... ⊙

# Microsoft Azure

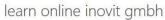
Sign in with your work or school account



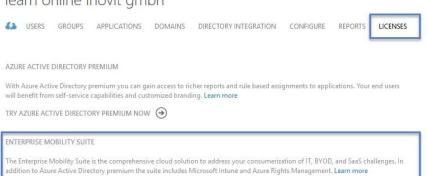
Don't have an account assigned by your work or school? Sign in with a Microsoft account



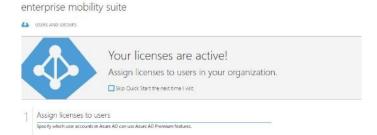




TRY ENTERPRISE MOBILITY SUITE NOW

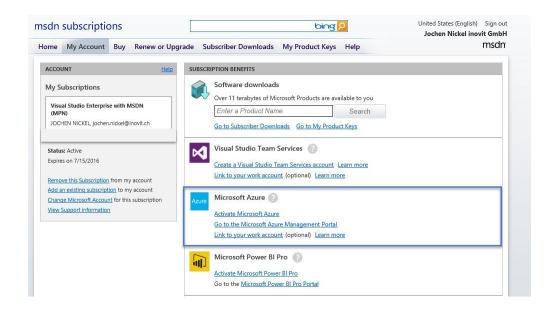


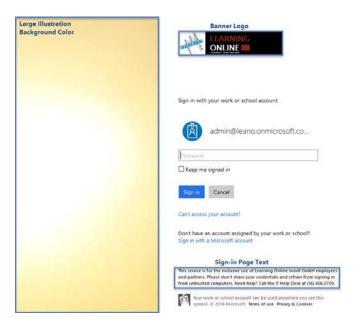






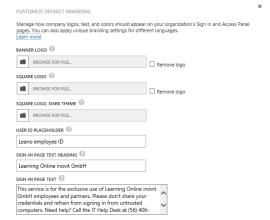






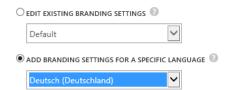
# learn online inovit gmbh





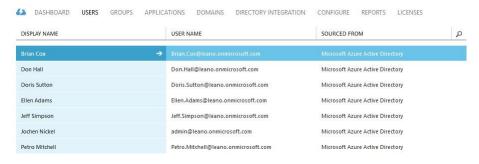
#### CUSTOMIZE BRANDING

Manage how company logos, text, and colors should appear on your organization's default Sign In and Access Panel pages. You can also apply unique branding settings for different languages.



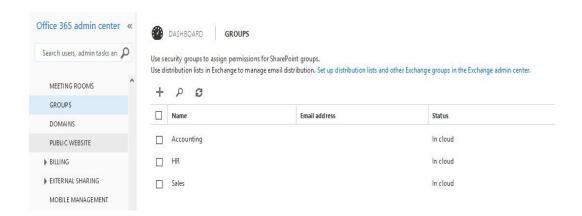


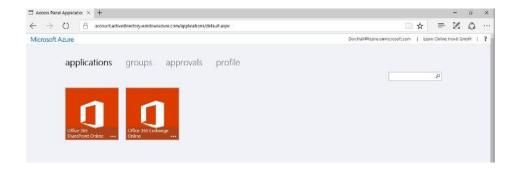
# learn online inovit gmbh



# learn online inovit gmbh





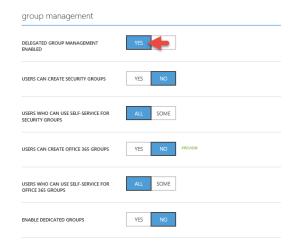


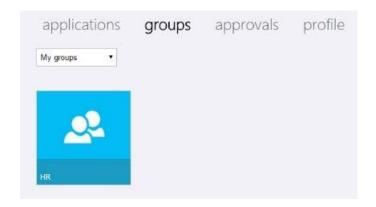
# accounting

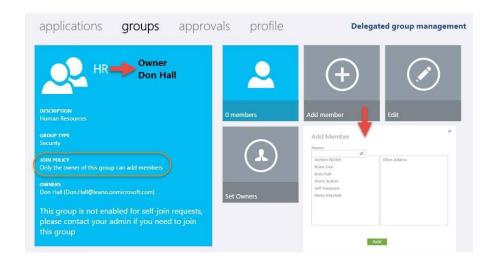
MEMBERS OWNERS PROPERTIES CONFIGURE SELF SERVICE ACTIVITY

NAME USER NAME DEPARTMENT

Brian Cox Brian.Cox@lean.onmicrosoft.com







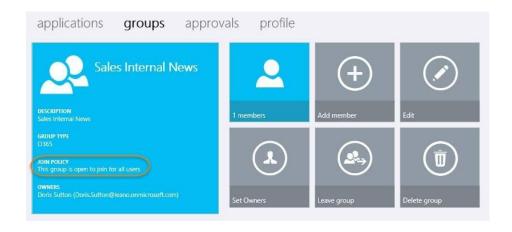
# group management





# Create Group Display name Sales Internal News Description (optional) Sales Internal News Group policy This group is open to join for all users Group type O365

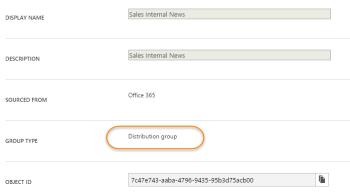
Create



# sales internal news

MEMBERS OWNERS PROPERTIES CONFIGURE SELF SERVICE ACTIVITY

# properties



×

# Update Group

Display name

Sales Internal News

Description (optional)

Sales Internal News

Group policy

This group requires owner approval

Group type

O365

Update







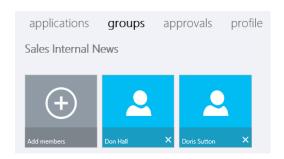
#### Someone wants to join your group

Security group name: Sales Internal News
Requestor: Don.Hall@leano.onmicrosoft.com

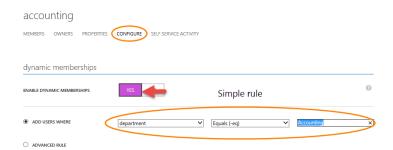
Business justification: **Need to be informed ...**Act on this Request

Manage Groups | Privacy | Legal









DEPARTME	NT		[Accounting] X
JOB TITLE			
job info	)		
PROFILE	WORK INFO	DEVICES	ACTIVITY
brian	COX		

PS C:\> Get-MsolAdministrativeUnit								
ExtensionData	Description	DisplayName	ObjectId					
 System.Runtime.Serialization.ExtensionDataObject	Human Resources Users	HR	 1ae30ead-b1d3-4414-8d86-73861db3f0de					

PS C:\> Write-Host \$au.ObjectID 1ae30ead-b1d3-4414-8d86-73861db3f0de PS C:\> Write-Host \$user.ObjectID 6a6ddd21-b151-4e19-b319-5204fbf36690

```
PS C:\> Get-MsolAdministrativeUnit -UserObjectID $user.ObjectId

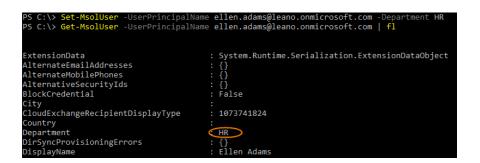
ExtensionData Description DisplayName ObjectId

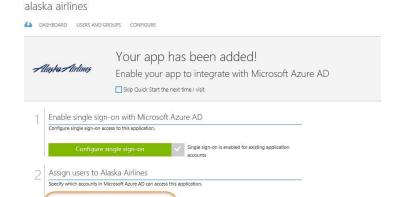
System.Runtime.Serialization.ExtensionDataObject Human Resources Users HR 1ae30ead-b1d3-4414-8d86-73861db3f0de

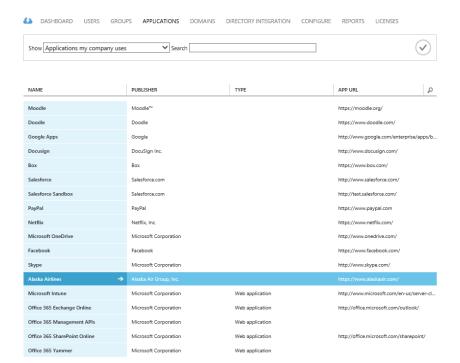
PS C:\> Get-MsolAdministrativeUnitMember -AdministrativeUnitObjectId $uu.ObjectId

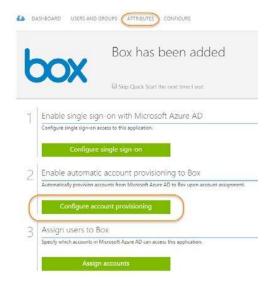
ExtensionData DisplayName EmailAddress ObjectId

System.Runtime.Serialization.ExtensionDataObject Don Hall Don.Hall@leano.onmicrosoft.com 6a6ddd21-b151-4e19-b319-...
```

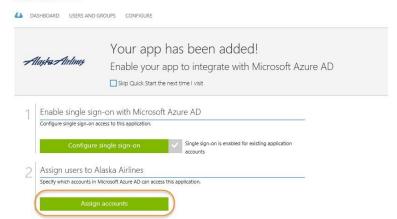








#### alaska airlines

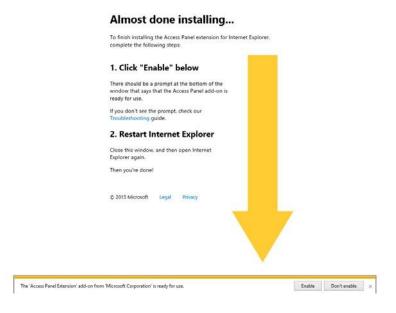


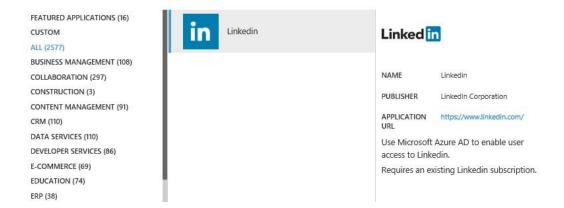


# Microsoft OneDrive

A new version of the software is required in order to sign-in to this application. Please update now:

Undate Now

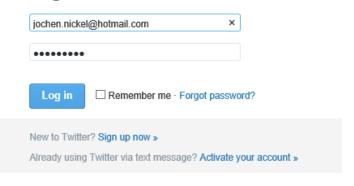






 $\checkmark$ 

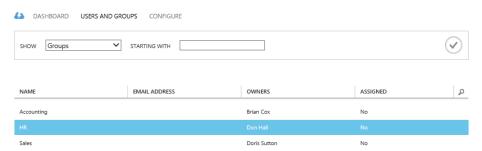
# Log in to Twitter



# Twitter Enter your credentials to sign in for this application Username Password Your sign-in information will be stored securely. Click here for more information.

Sign in

# twitter



Assign Groups

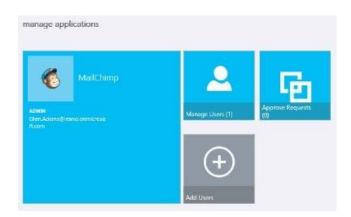
This action will allow the members of selected group to authenticate to the Twitter application from within the Access Panel.





integrated applications

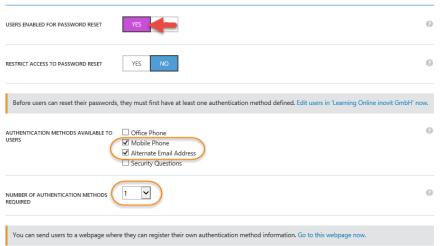


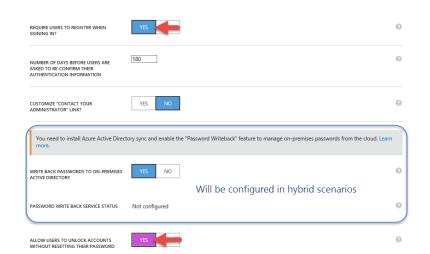




NAME	PUBLISHER	TYPE	APP URL P
Alaska Airlines	Alaska Air Group, Inc.	Web application	https://www.alaskaair.com/
Вох	Box	Web application	https://www.box.com/
Docusign	DocuSign Inc.	Web application	http://www.docusign.com/
Doodle	Doodle	Web application	https://www.doodle.com/
Facebook	Facebook	Web application	https://www.facebook.com/
Google Apps	Google	Web application	http://www.google.com/enterprise/apps/b
Linkedin	LinkedIn Corporation	Web application	https://www.linkedin.com/
MailChimp	The Rocket Science Group	Web application	http://mailchimp.com/
Microsoft Intune	Microsoft Corporation	Web application	http://www.microsoft.com/en-us/server-cl

#### user password reset policy



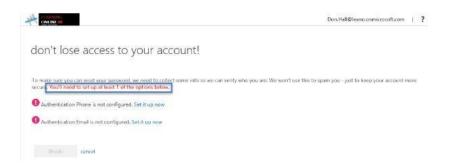


#### notifications

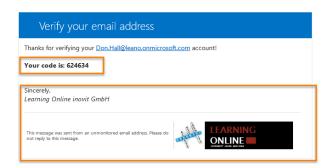


Your administrator has required you to verify your contact info. You can use this to reset your password if you ever lose access to your account.

verify now







# don't lose access to your account!

To make sure you can reset your password, we need to collect secure You'll need to set up at least 2 of the options below.	some info so we can verify who you are. We won't use this to spam you - Just to keep your account more
Authentication Phone is set to 3 +4179Verify	
Authentication Email is not configured. Set it up now	





# Get back into your account

verification step 1 > choose a new password

Please choose the contact method we should use for verification:



You will receive an email containing a verification code at your alternate email address (jo\*\*\*\*\*\*\*@inovit.ch).



# sign ins after multiple failures

May indicate a successful brute force attack.

REPORT CONFIGURE

NUMBER OF CONSECUTIVE FAILED SIGN INS CONSIDERED ANOMALOUS:

10

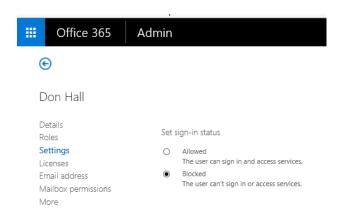
Your account is temporarily locked to prevent unauthorized use. Try again later, and if you still have trouble, contact your support person.



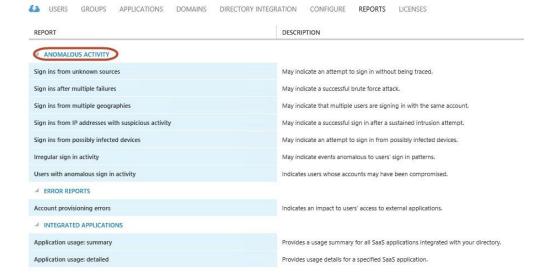
# settings

ALLOW THE USER TO SIGN IN AND ACCESS SERVICES?



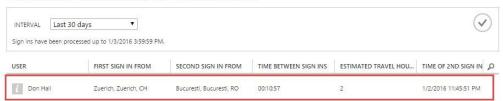






# sign ins from multiple geographies

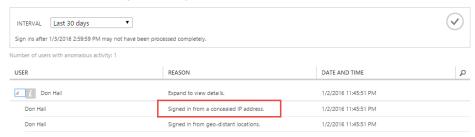
May indicate that multiple users are signing in with the same account.

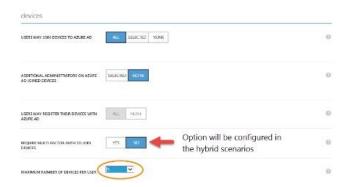




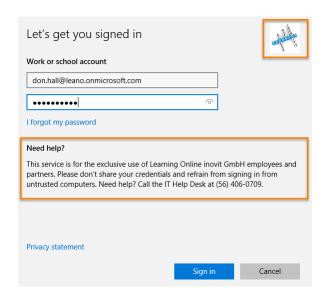
# users with anomalous sign in activity

Indicates users whose accounts may have been compromised.









Make sure this is your organization

# Make sure this is your organization

If you continue, system policies might be turned on or other changes might be made to your PC. Is this the right organization?

Connecting to: leano.onmicrosoft.com User name: Don.Hall@leano.onmicrosoft.com User type: Administrator





Learning Online inovit GmbH

PC name DONHALLNB01 Rename PC

Disconnect from organization

Organization

# don hall

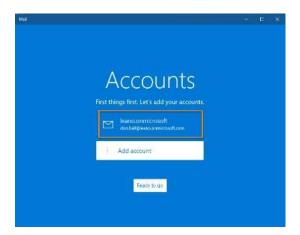


#### Make my PC more secure

You must make your PC more secure to connect to this server. Windows will ensure that your PC complies with any server requirements including password requirements, requiring sign-in after a specified period of inactivity, and limiting the number of incorrect attempts to sign in to your PC. Windows might also limit sign-in methods such as picture password.

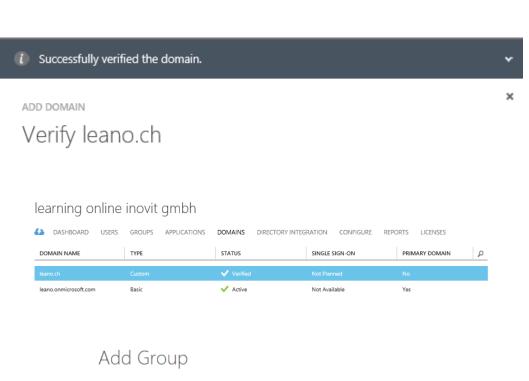
Enforce these policies Cancel







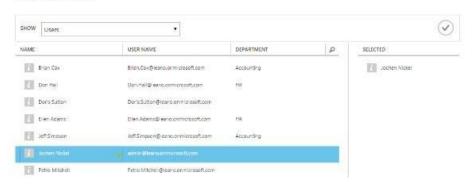


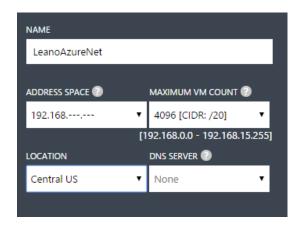




Azure AD Domain Services administrators group

## Add members





VIRTUAL NETWORKS LOCAL NETWORKS DNS SERVERS

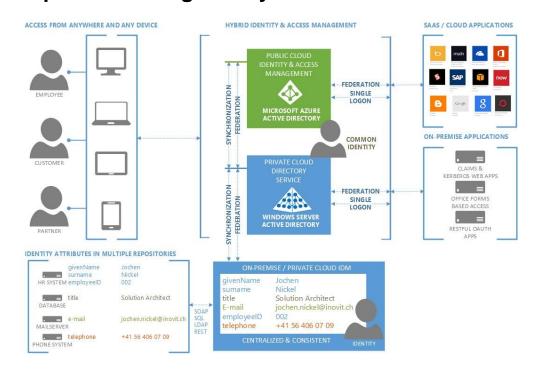




#### dns servers



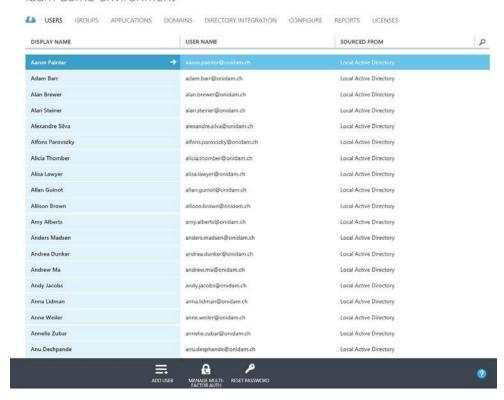
# **Chapter 5: Shifting to a Hybrid Scenario**

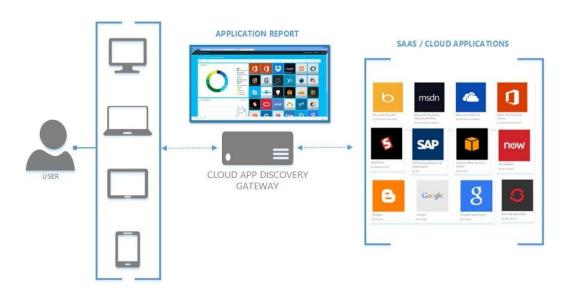


# integration with local active directory

DOMAINS VERIFIED FOR DIRECTORY SYNC	2
DOMAINS PLANNED FOR SINGLE SIGN-ON	0
DOMAINS CONFIGURED FOR SINGLE SIGN-ON	1
DIRECTORY SYNC	ACTIVATED DEACTIVATED
LAST SYNC	2 hours ago

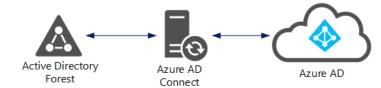
## idam demo environment



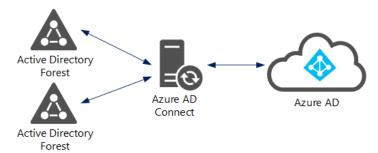




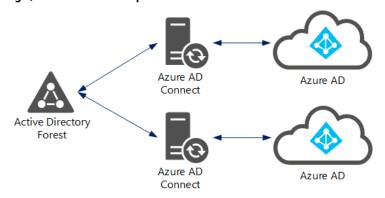
## Single Forest scenario

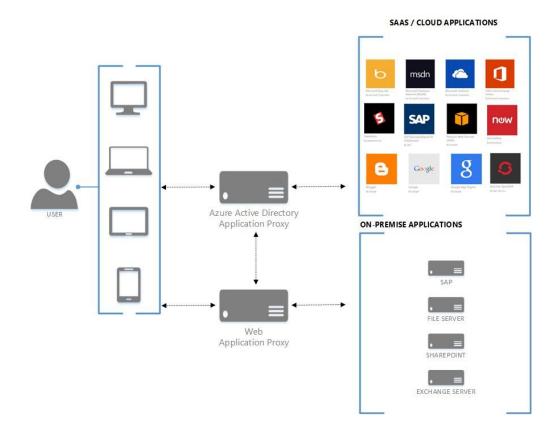


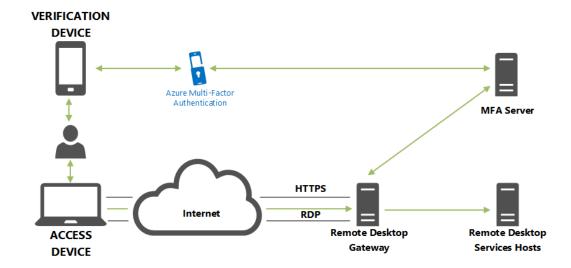
## Multi Forest scenario

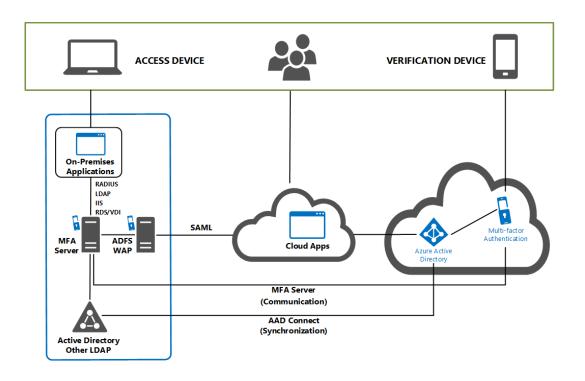


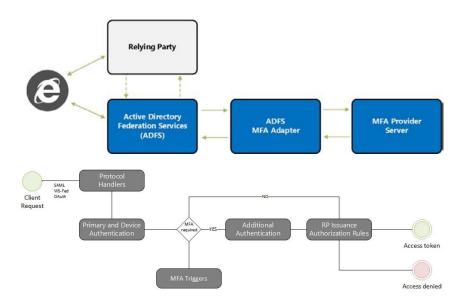
# Single/Multi Forest – Multiple Azure AD scenario

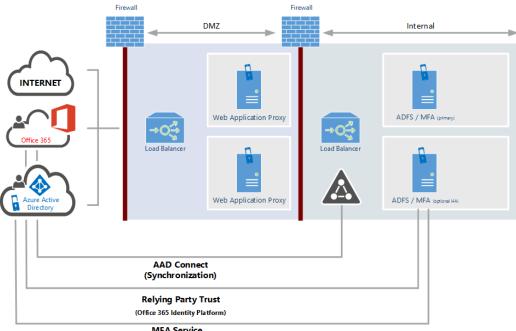




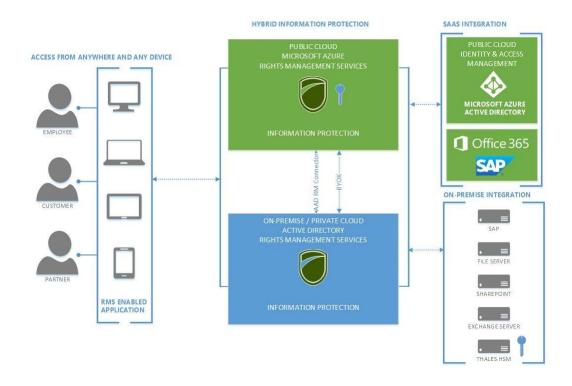




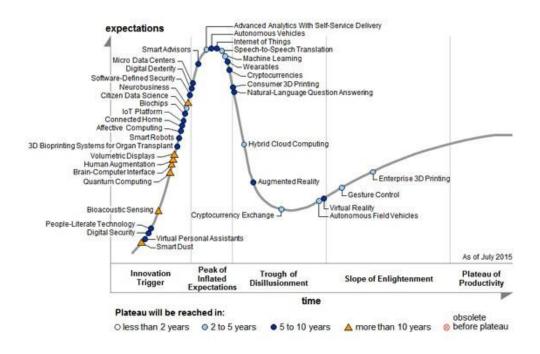


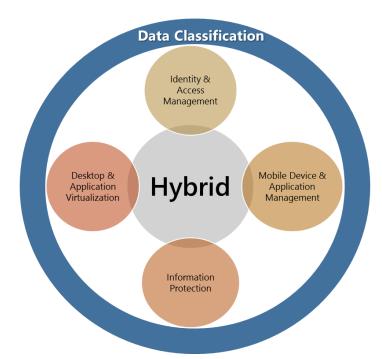


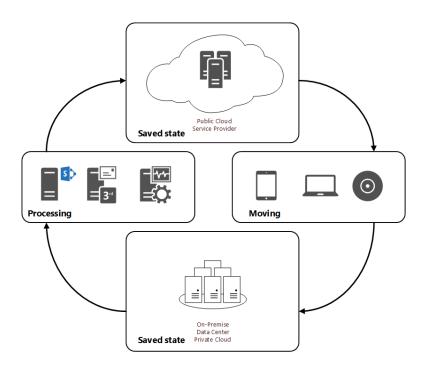
MFA Service (Communication)

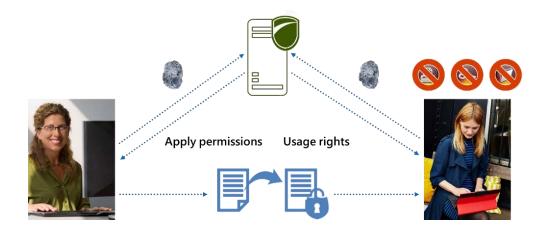


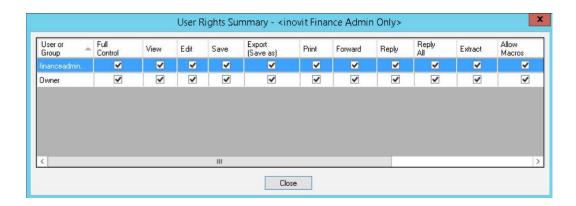
# Chapter 6: Extending to a Basic Hybrid Environment











Attribute Name	Value	Contributing MA	Sync Rule	Туре
countryCode	0	onidam.ch	In from AD - User	number
department	Sales	onidam.ch	In from AD - User	string
displayName	April Stewart	onidam.ch	In from AD - User	string
domainFQDN	onidam.ch	onidam.ch	In from AD - User	string
domain Net Bios	ONIDAM	onidam.ch	In from AD - User	string
forestFQDN	onidam.ch	onidam.ch	In from AD - User	string
forestNetBios	ONIDAM	onidam.ch	In from AD - User	string
givenName	April	onidam.ch	In from AD - User	string
objectSid	01 05 00 00 00 00 00 05 15 00 00 00	onidam.ch	In from AD - User	binary
objectSidString	S-1-5-21-1323180023-1460257248-12	onidam.ch	In from AD - User	string
pwdLastSet	20140912112941.0Z	onidam.ch	In from AD - User	string
sn	Stewart	onidam.ch	In from AD - User	string
sourceAnchor	XurqhcNW+0OR7wpaoHIXdg==	onidam.ch	In from AD - User	string
sourceAnchorBin	5E EA EA 85 C3 56 FB 43 91 EF 0A 5	onidam.ch	In from AD - User	binary
sourceObjectType	User	onidam.ch	In from AD - User	string
telephoneNumber	(312) 555-5454	onidam.ch	In from AD - User	string
thumbnailPhoto	FF D8 FF E0 00 010 4A 46 49 46 00 0	onidam.ch	In from AD - User	binary
title	Sales Manager	onidam.ch	In from AD - User	string
userPrincipalName	april.stewart@onidam.ch	onidam.ch	In from AD - User	string

# Enterprise Cloud Suite

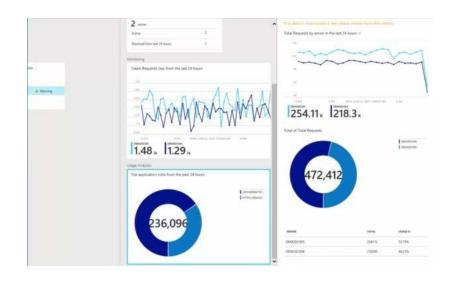
Office 365 Pro Plus
Exchange Online
Lync Online
SharePoint Online
Yammer

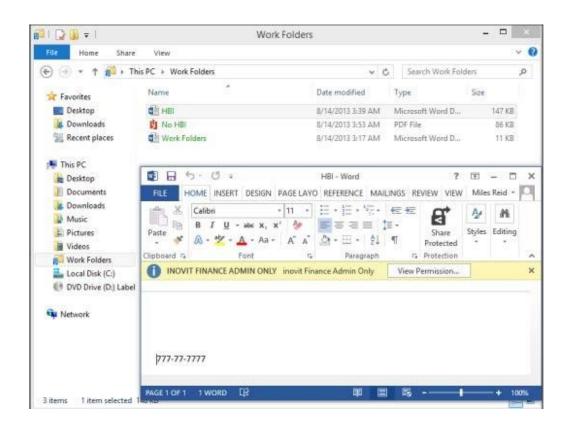
System Center CM
Windows Server CAL
Azure Rights Management
Windows Intune
Azure AD Premium

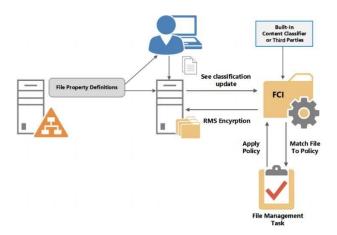
Windows SA Per User

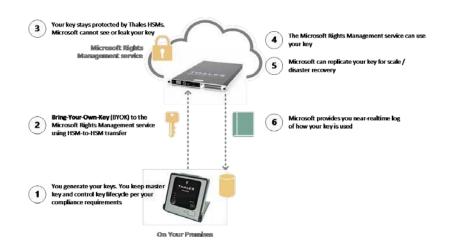
Identity Synchronization	Delegation of Administration	Dynamic Groups
Provisioning / Deprovisioning	Self Service Password Reset	Certificate Management
Access Request Management	Self Service Group Management	Reporting & Compliance
<b>Access Policy Management</b>	Role Management (RBAC, ABAC, SoD)	<b>Access Certification</b>











Product	EA/VL	Open	CSP	MPN use rights	Direct purchase	Trial
Enterprise Mobility Suite	Х	Х	Х	Х		Χ
Azure AD Premium	Х	Х	Х		Х	Х
Azure AD Basic	Х	Χ	Х	Х		

	Global	Central US	East US	East US 2	US Gov Iowa	US Gov Virginia	North Central US	South Central US	West US	North Europe	West Europe	East Asia	Southeast Asia	Japan East	Japan West	Brazil South	Australia East	Australia Southeast
IDENTITY & ACCESS MANAGEMENT																		
Azure AD																		
Azure MFA																		
Azure AD B2B																		
Azure AD DS			•	•				•		•	•	•						















ISO/IEC 27001

SOC 2

PCI DSS L1 version 3

Cloud Security Alliance Cloud Security Matrix

ISO / IEC 27018

United States







FIPS 140-2



FDA







Regional

















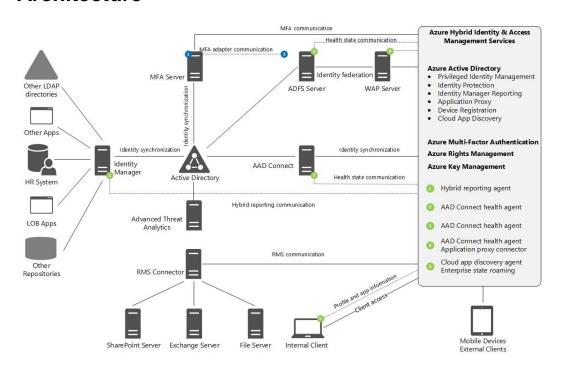
European Union Model Clause

United Kingdom G-Cloud

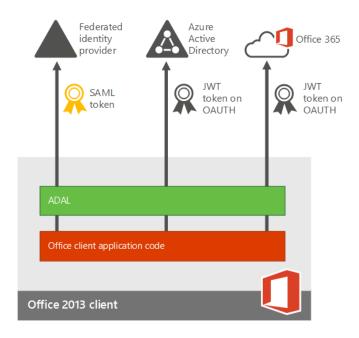
China CCCPPF

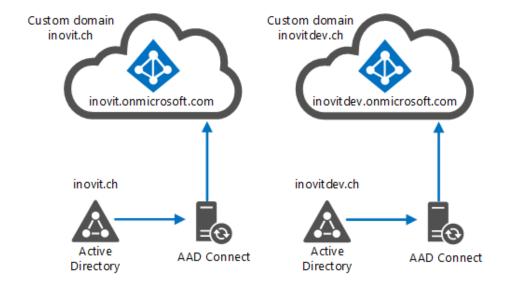
Security

# **Chapter 7: Designing Hybrid Identity Management Architecture**



details	Assign	licenses	
settings	☐ Mi	crosoft Office 365 Plan E3	22 of 25 licenses available
licenses		Yammer Enterprise These licenses do not need to be individually assigned	Buy more licenses
more		Windows Azure Active Directory Rights	
		Office 365 ProPlus	
		Lync Online (Plan 2)	
		Office Online	
		SharePoint Online (Plan 2)	
		Exchange Online (Plan 2)	
	Compare	e the various license options	





# active directory

DIRECTORY ACCESS CONTROL NAMESPACES MULTI-FACTOR AUTH PROVIDERS RIGHTS MANAGEMENT

NAME	STATUS	ROLE	SUBSCRIPTION	DATACENTER REGION	COUNT P
inovit GmbH Development ->	✓ Active	Global Administrator	Shared by all inovit GmbH	Europe, United States	Switzerland
inovit GmbH Production	✓ Active	Global Administrator	Shared by all inovit GmbH	Europe, United States	Switzerland

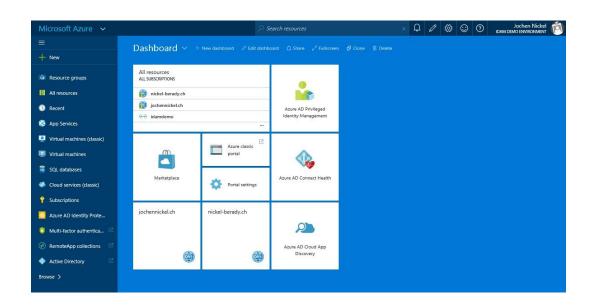
# settings

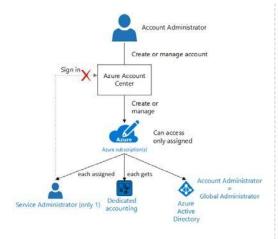
SUBSCRIPTIONS MANAGEMENT CERTIFICATES ADMINISTRATORS AFFINITY GROUPS USAGE REMOTEAPP

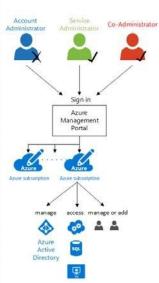
SUBSCRIPTION SUBSCRIPTION ID ACCOUNT ADMINISTRATOR DIRECTORY P

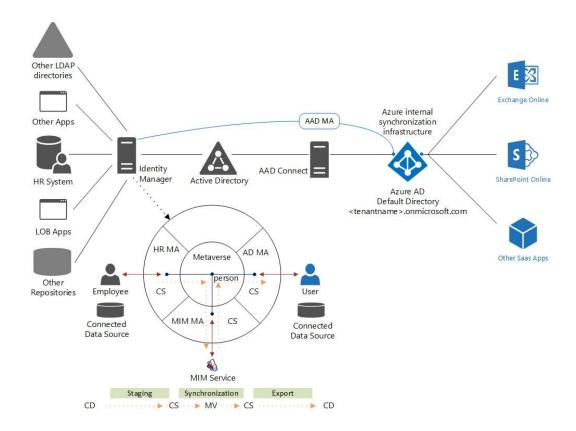
EDIT YOUR SUBSCRIPTION	>
Make it yours	
Personalize your subscriptions to keep them organized. Privacy & Cookies	
SUBSCRIPTION NAME	
Visual Studio Enterprise with MSDN	
SERVICE ADMINISTRATOR	
Service Administrator@outlook.com	











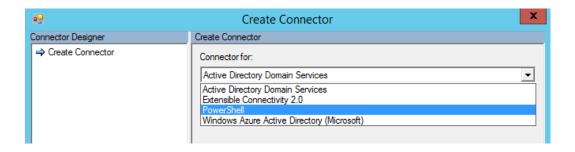
SIMPLE COMPLEX

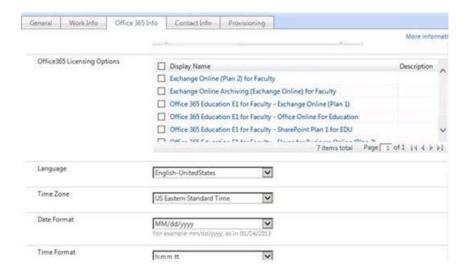
#### AAD Connect

- Single-forest environments
- Common multi-forest environments
- Password hash synchronization for single and multi-forest environments
- Other repositories through ECMAv2

## **Identity Manager**

- Advanced environments
- Multiple repositories
- Custom solutions
- · Workflow-based solutions

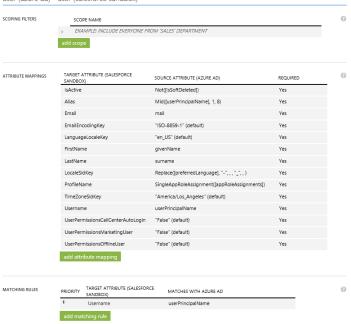


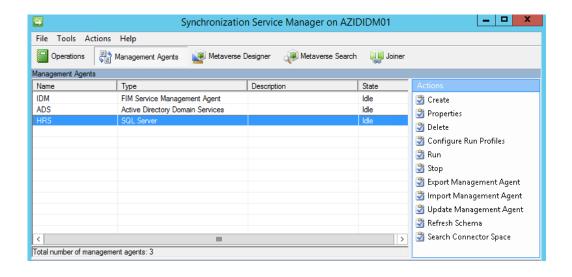


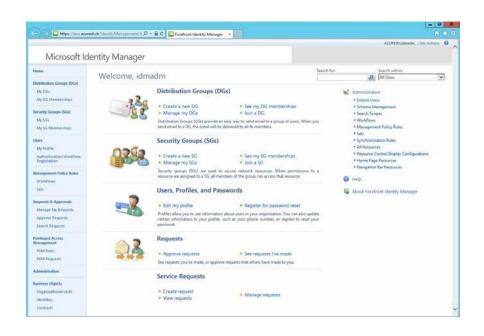


#### SINGLE SIGN-ON PROVISIONING

user (azure ad) - user (salesforce sandbox)



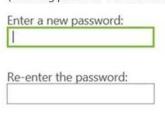




Login Assistant You have been authenticated successfully.

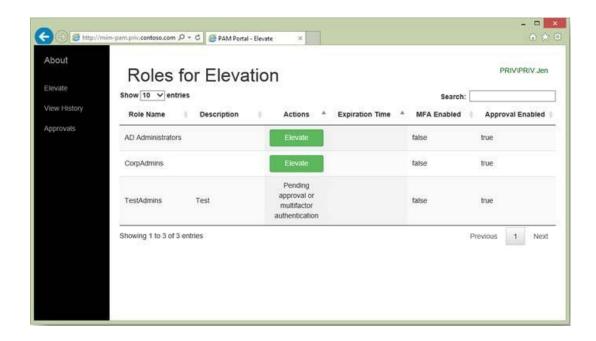
- O Account Unlock: Keep Your Current Password
- Password Reset: Choose Your New Password and Unlock Your Account

(Resetting password for JohnSmith)

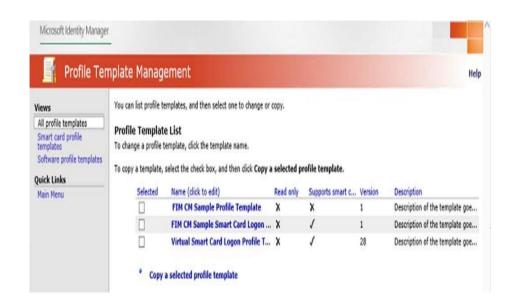


Next

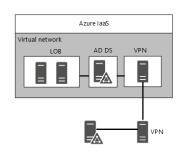
Cancel

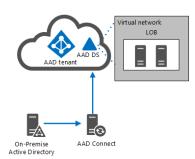


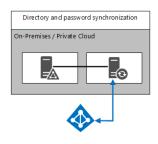


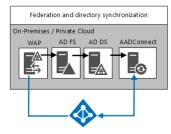


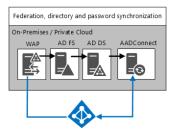


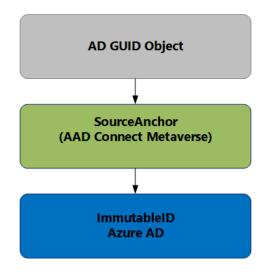


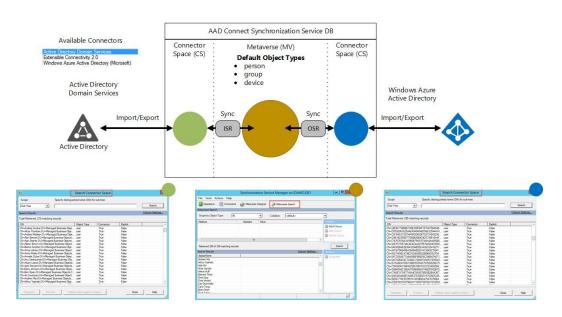




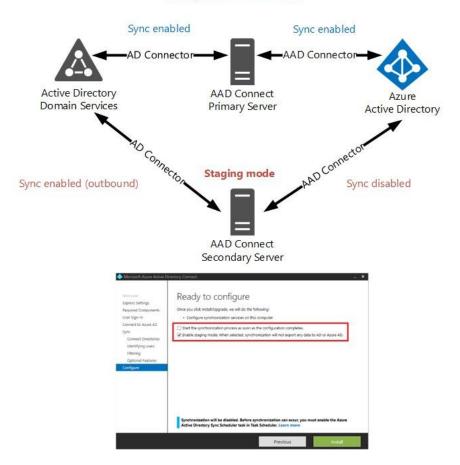


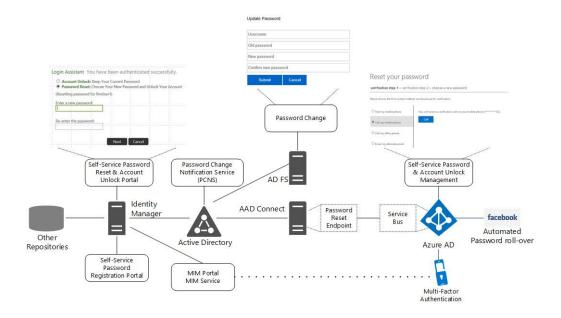


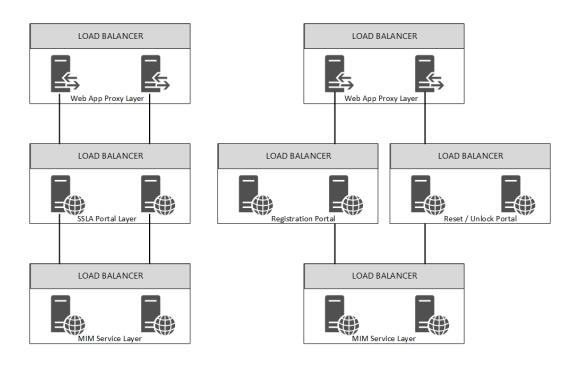




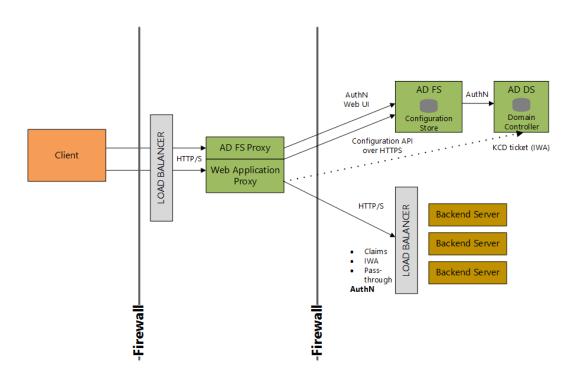
# Full synchronization mode

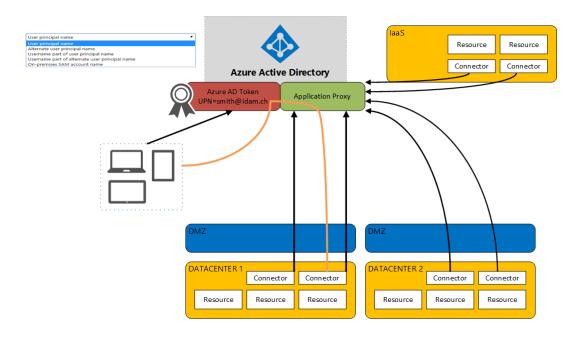


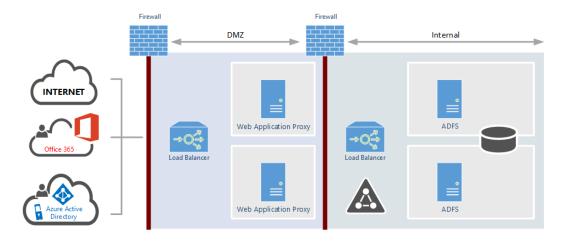


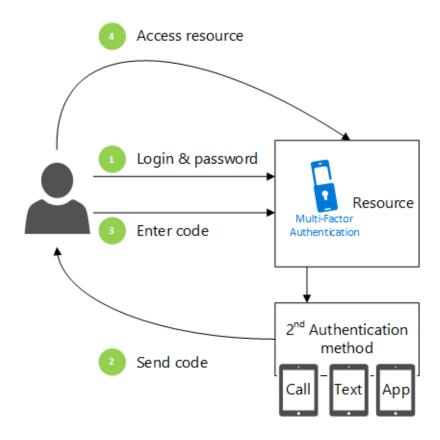


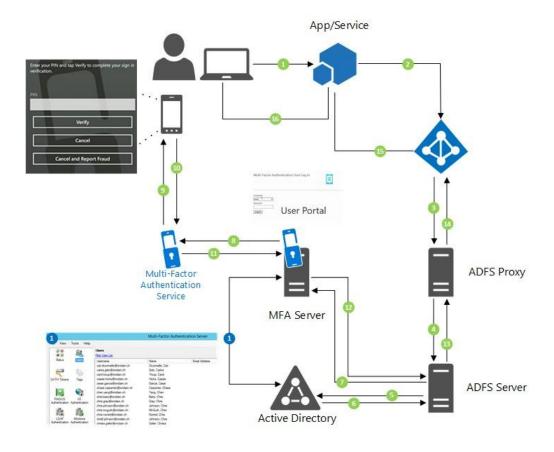
DOMAIN NAME		TYPE	STATUS	SINGLE SIGN-ON	PRI
nickel-berady.ch		Custom	<b>✓</b> Verified	Not Planned	No
jochennickel.ch	Azure AD IDP	Custom	✓ Verified	Not Planned	No
msazure.ch		Custom	✓ Verified	Not Planned	No
onidam.ch	On-Premise AD IDP	Custom	✓ Verified	Configured	No
idam.ch		Custom	✓ Verified	Configured	No
idamcloud.onmic	rosoft.com	Basic	✓ Active	Not Available	Yes

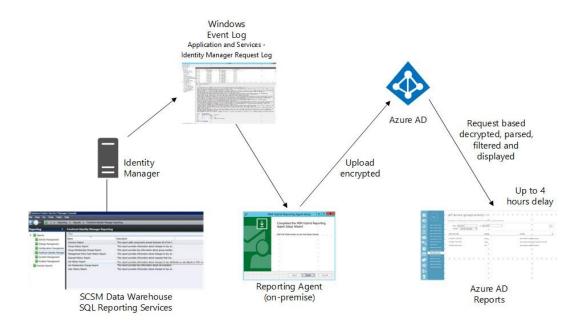














REPORT	DESCRIPTION
A ANDREAS ASSESSMENT	

Sign ins from unknown sources	May indicate an attempt to sign in without being traced.
Sign ins after multiple failures	May indicate a successful brute force attack.
Sign ins from multiple geographies	May indicate that multiple users are signing in with the same account.
Users with threatened credentials	Users with threatened credentials
Users with leaked credentials	Users with leaked credentials
Sign ins from IP addresses with suspicious activity	May indicate a successful sign in after a sustained intrusion attempt.
Sign ins from possibly infected devices	May indicate an attempt to sign in from possibly infected devices.
Irregular sign in activity	May indicate events anomalous to users' sign in patterns.
Users with anomalous sign in activity	Indicates users whose accounts may have been compromised.

#### ▲ ACTIVITY LOGS

Audit report	Audited events in your directory
Password reset activity	Provides a detailed view of password resets that occur in your organization.
Password reset registration activity	Provides a detailed view of password reset registrations that occur in your organization.
Self service groups activity	Provides an activity log to all group self service activity in your directory
Office365 Group Name Changes	Creations and name changes to Office 365 groups.

#### ■ INTEGRATED APPLICATIONS

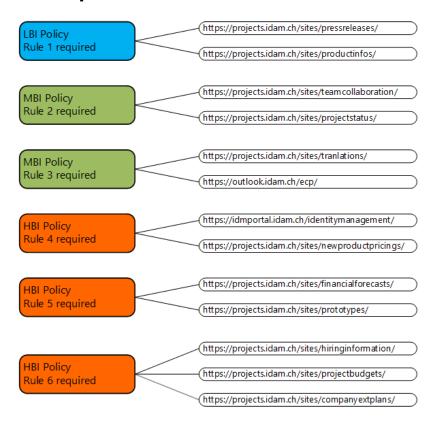
Application usage	Provides a usage summary for all SaaS applications integrated with your directory.
Account provisioning activity	Provides a history of attempts to provision accounts to external applications.
Password rollover status	Provides a detailed overview of automatic password rollover status of SaaS applications.
Account provisioning errors	Indicates an impact to users' access to external applications.

#### 

RMS summary	Rights Management (RMS) usage summary
RMS active users	Top 1000 users who accessed content protected by Rights Management (RMS)
RMS device platforms	List of device platforms used to access content protected by Rights Management (RMS)
RMS application usage	Applications that accessed content protected by Rights Management (RMS)
4 EYTERNAL ACCESS	

Invitation summary	Invitation summary

# **Chapter 8: Planning Authorization and Information Protection Options**





### Device not joined to Active Directory



### Device is Workplace joined



### Device is joined in Active Directory



### Personal device

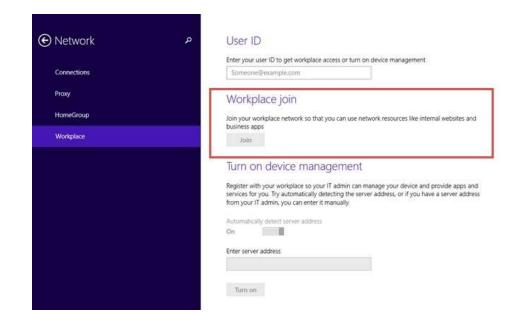
with limited Access and no IT Control No SSO capabilities

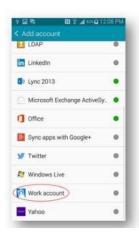
### Personal or corporate device

with applied IT governance and controlled access to applications SSO capabilities SaaS applications

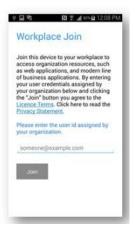
### Company owned device

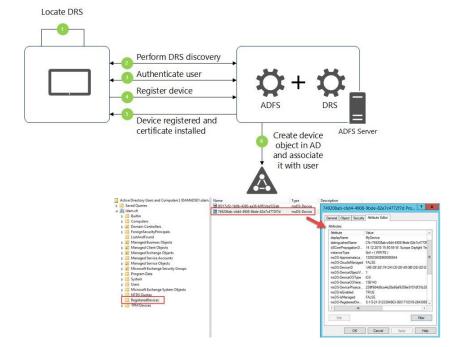
Full IT control and full access to applications SSO capabilities on premise and SaaS applications

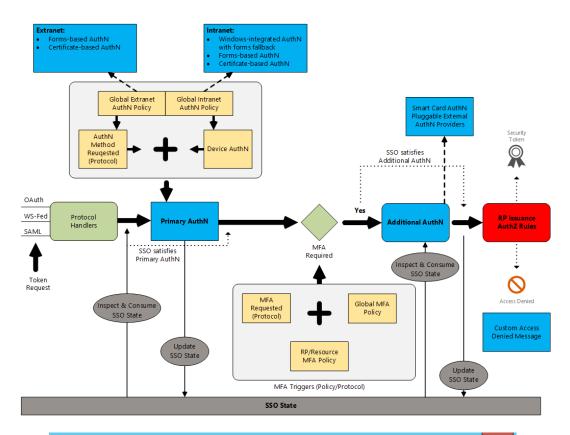














X

Primary Multi-factor

Configure custom authentication settings for this relying party trust.

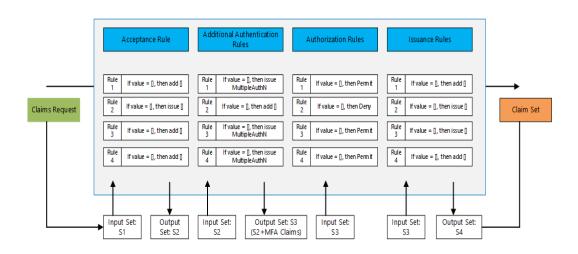
To access global authentication policy settings, navigate to Authentication Policies node.

✓ Users are required to provide credentials each time at sign in.

Select additional authentication methods. You must select at least one of the following methods to enable MFA:

Certificate Authentication

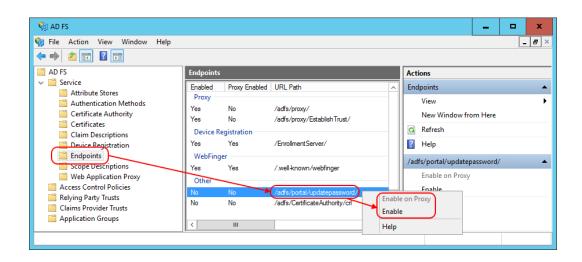
WindowsAzureMultiFactorAuthentication

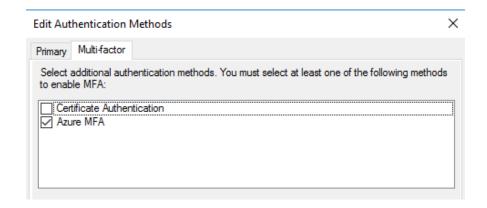


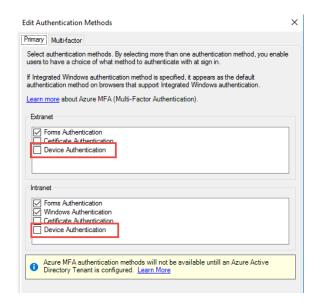
```
Administrator: Windows PowerShell

PS C:\Users\administrator.IDAM> Get-ADGroup sales

DistinguishedName: CN=Sales, OU=Managed Business Objects, DC=idam, DC=ch
GroupCategory: Distribution
GroupScope: Universal
Name: Sales
ObjectClass: group
ObjectClass: group
ObjectGUID: 239271ad-1e63-4ccb-972f-b6936ca3a28a
SamAccountName: Sales
SID: S-1-5-21-3123384963-3601710319-2843089171-2145
```





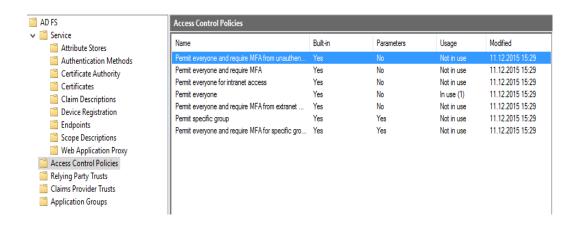


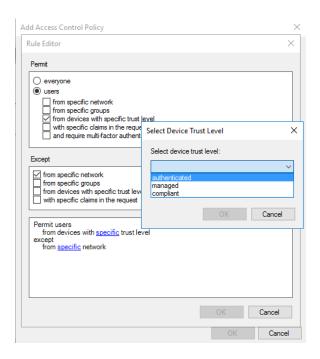
#### Standalone mode: AD FS issues certificates

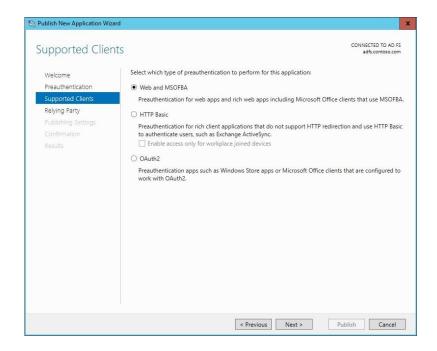
Certificates for user logon and VPN access are issued by AD FS. This option is suitable for organizations that do not have an enterpise public key infrastructure set up.

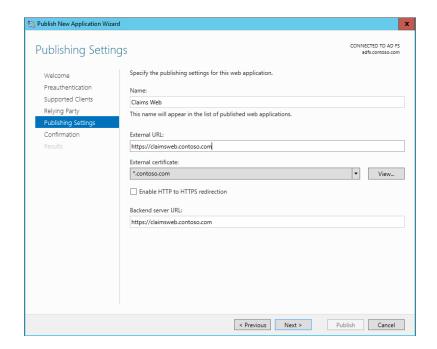
Enrollment agent mode: AD FS requests certificates from Enterprise CA

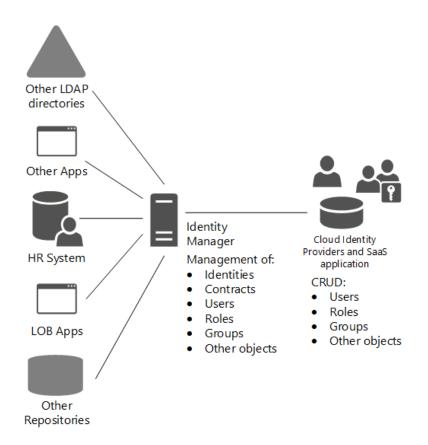
AD FS requests an enterprise CA running Active Directory Certificate Services (AD CS) to issue certificates for user logon and VPN access. This option is suitable for organizations that have an existing public key infrastructure and require all certificates to be issued by the CA.

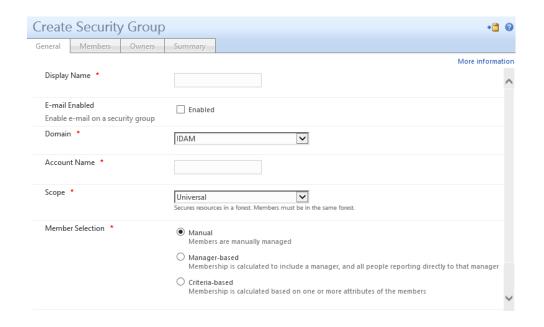


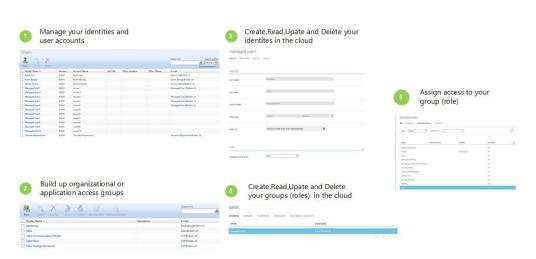


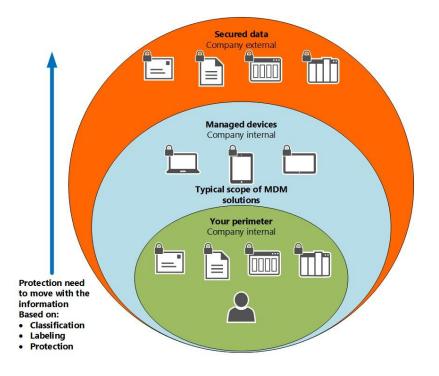


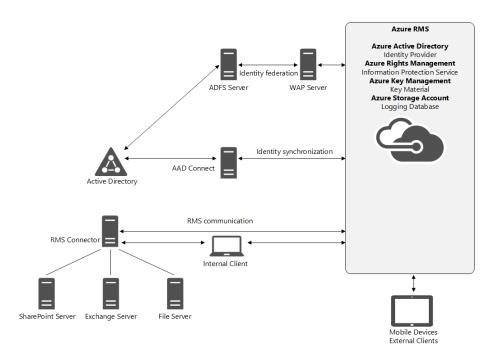


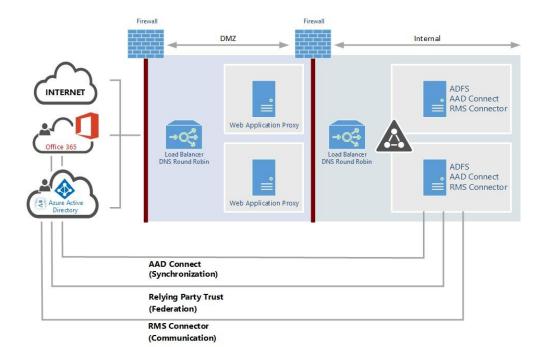




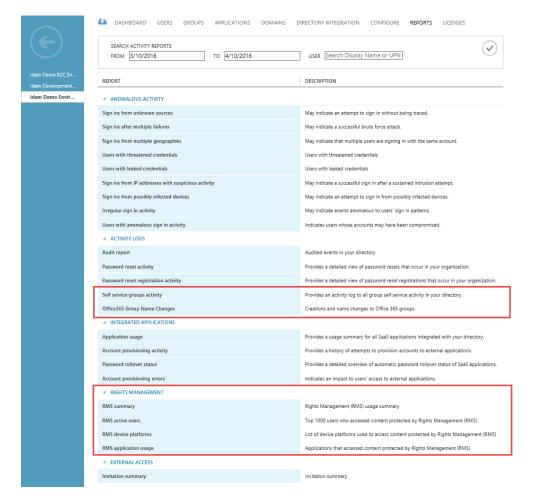


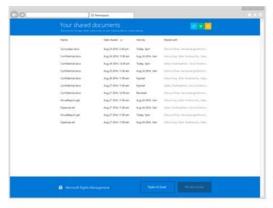


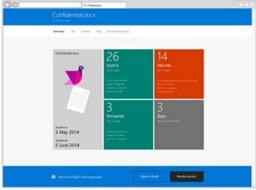


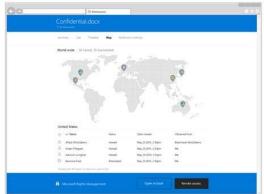


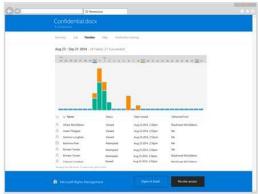
Attribute Name	User	Contact	Group	Comment
accountEnabled	х			Defines if an account is enabled.
cn	х		х	Common name or alias. Most often the prefix of [mail] value.
displayName	х	х	х	A string that represents the name often shown as the friendly name (first name last name).
mail	х	х	x	full email address.
member			x	
objectSID	х		x	mechanical property. AD user identifier used to maintain sync between Azure AD and AD.
proxyAddresses	х	x	x	mechanical property. Used by Azure AD. Contains all secondary email addresses for the user.
pwdLastSet	х			mechanical property. Used to know when to invalidate already issued tokens.
securityEnabled			х	Derived from groupType.
sourceAnchor	х	х	х	mechanical property. Immutable identifier to maintain relationship between ADDS and Azure AD.
usageLocation	х			mechanical property. The user's country. Used for license assignment.
userPrincipalName	х			This UPN is the login ID for the user. Most often the same as [mail] value.

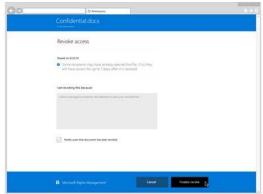


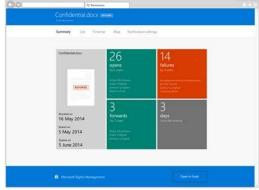




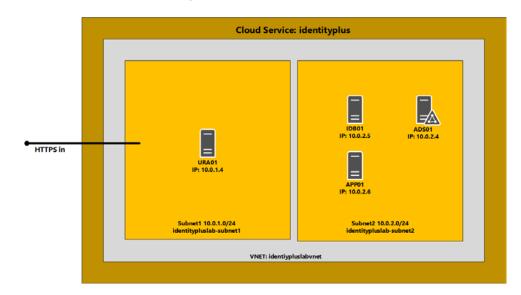


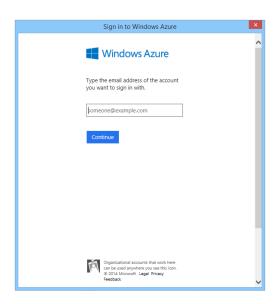


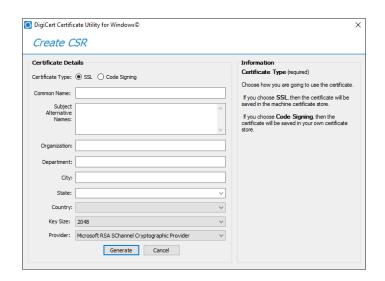


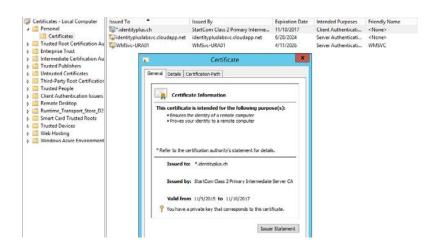


## **Chapter 9: Building Cloud from Common Identities**

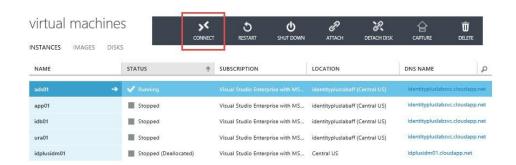


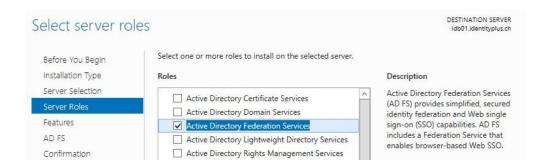




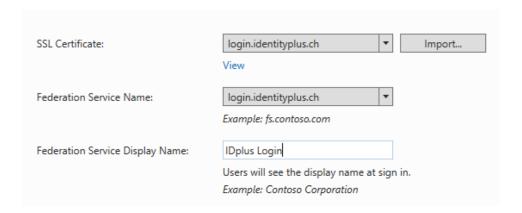


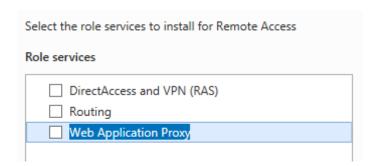


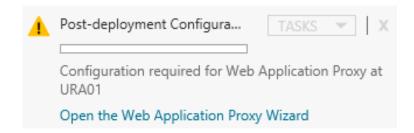


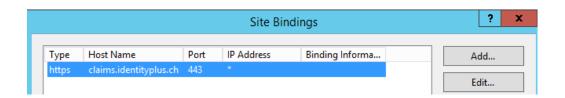












Token-Signing CertificateType :

IsPrimary StoreLocation

: True : CurrentUser

StoreName Thumbprint : My : 9B578A4742B7E3354B2D9B741D7666D4723E05C6

Import data about the relying party published online or on a local network

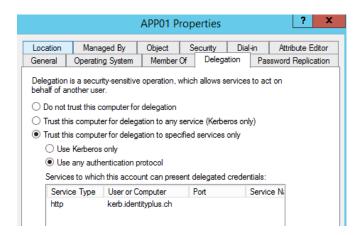
Use this option to import the necessary data and certificates from a relying party organization that publishes its federation metadata online or on a local network.

Federation metadata address (host name or URL):

https://claims.identityplus.ch

Example: fs.contoso.com or https://www.contoso.com/app

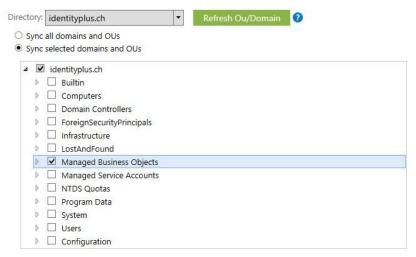


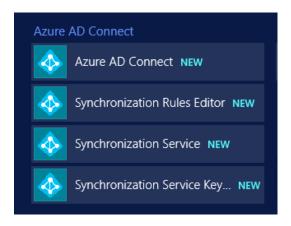


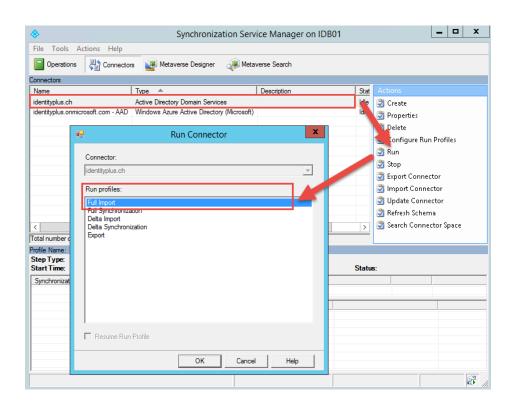
Re	elying Party Trusts			
	Display Name	Enabled	Туре	Identifier
	Device Registration Service	Yes	WS-T	um:ms-drs:login.identityplus.ch
	Claims Demo Web Site	Yes	WS-T	https://claims.identityplus.ch/
	Microsoft Office 365 Identity Platform	Yes	WS-T	https://login.microsoftonline.com/ext

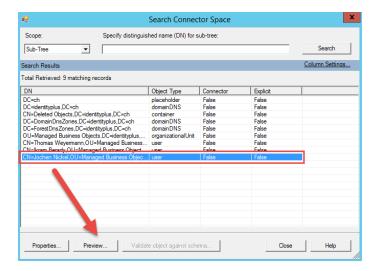


### Domain and OU filtering

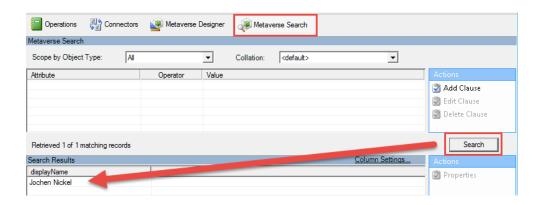


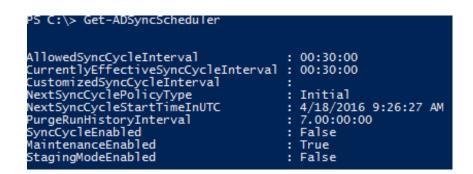


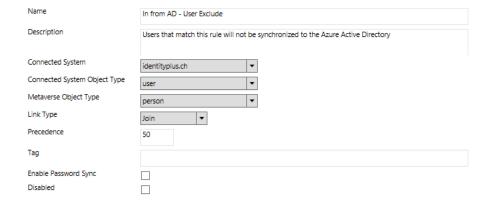




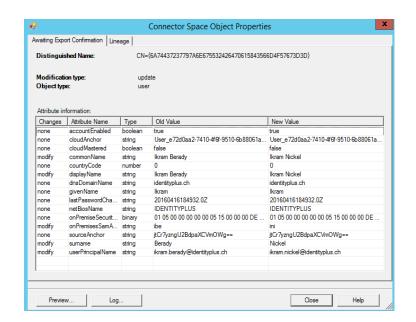
export flow mode: full					
Sync Rule	Data Source	Mapping Type	Data Source Attribute	Initial Value	Final Value
Out to AAD - User Join	account Enabled	Direct	account Enabled	true	(Unchanged)
Out to AAD - User Join	cn	Direct	commonName	Jochen Nickel	(Unchanged)
Out to AAD - User Join	domainFQDN	Direct	dnsDomainName	identityplus.ch	(Unchanged)
Out to AAD - User Join	pwdLastSet	Direct	lastPasswordChangeTi	20160416184931	(Unchanged)
Out to AAD - User Join	domain Net Bios	Direct	netBiosName	IDENTITYPLUS	(Unchanged)
Out to AAD - User Join	accountName	Direct	on Premises Sam Accoun	jni	(Unchanged)
Out to AAD - User Join	objectSid	Direct	on Premise Security Identi	01 05 00 00 00 0	(Unchanged)
Out to AAD - User Join	"CN={" & ConvertToUT	Expression	dn		CN={425A53
Out to AAD - User Join	IIF(IsPresent([cloudSour	Expression	sourceAnchor	BZS4PDARtU+L	(Unchanged)
Out to AAD - User Identity	displayName	Direct	displayName	Jochen Nickel	(Unchanged)
Out to AAD - User Identity	givenName	Direct	givenName	Jochen	(Unchanged
Out to AAD - User Identity	sn	Direct	sumame	Nickel	(Unchanged
Out to AAD - User Identity	userPrincipalName	Direct	userPrincipalName	jochen.nickel@id	(Unchanged
Out to AAD - User Exchan	IIF(IsNullOrEmpty([count	Expression	countryCode	0	(Unchanged







Attribute information:				
Changes	Attribute Name	Туре	Value	
none	cn	string	Ikram Nickel	
none	countryCode	number	0	
none	givenName	string	lkram	
none	objectGUID	binary	8E D0 AB EF 2C E7 81 4D 81 76 96 97 09 59 8E 5A	
none	objectSid	binary	01 05 00 00 00 00 00 05 15 00 00 00 DE B8 EA C4 30 010 21 53 A3 DE 69 72 38 08 00	
none	pwdLastSet	number	131053061723980085	
none	sAMAccountName	string	ini	
none	sn	string	Nickel	
none	userAccountControl	number	512	
none	userPrincipalName	string	ikram.nickel@identityplus.ch	



PS C:\Users\jochen.nickel> Connect-MsolService PS C:\Users\jochen.nickel> Get-MsolAccountSku				
AccountSkuId	ActiveUnits	WarningUnits	ConsumedUnits	
identityplus:AAD_PREMIUM identityplus:RMSBASIC	100	0	4	
identityplus:RIGHTSMANAGEMENT_ADHOC identityplus:ENTERPRISEPACK	50000 25	0	0 2	
identityplus:INTUNE_A	100	Ō	1	

## licensing azure ad premium

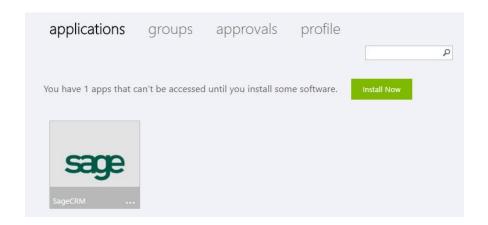
MEMBERS OWNERS PROPERTIES CONFIGURE SELF SERVICE ACTIVITY

NAME	USER NAME
Ikram Nickel	ikram.nickel@identityplus.ch
Jochen Nickel	jochen.nickel@identityplus.ch
Thomas Weyermann	thomas.weyermann@identityplus.ch

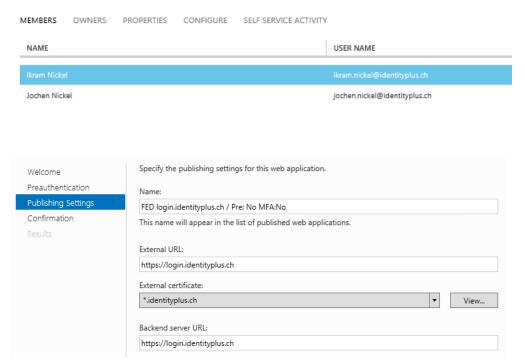
### licensing office 365 e3 plan

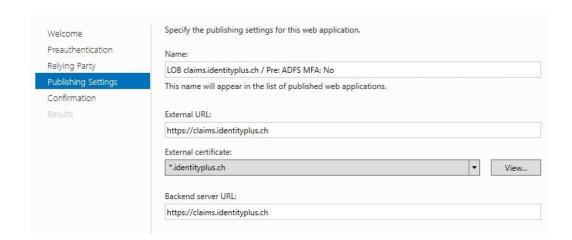
MEMBERS OWNERS PROPERTIES CONFIGURE SELF SERVICE ACTIVITY

NAME	USER NAME
lkram Nickel	ikram.nickel@identityplus.ch
Jochen Nickel	jochen.nickel@identityplus.ch
Thomas Weyermann	thomas.weyermann@identityplus.ch

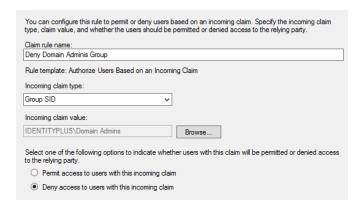


### self-service social media applications





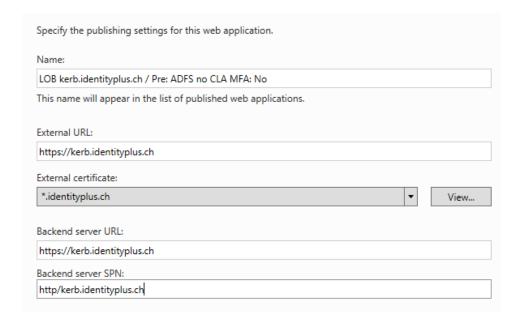




#### An error occurred

You are not authorized to access this site. Click here to sign out and sign in again or contact your administrator for permissions.

Error details



Multi-valued String Editor	x
Attribute: servicePrincipalName	
Value to add:	
	Add
Values:	
HOST/URA01 HOST/ura01-identityplus.ch HTTP/URA01 HTTP/Ura01 identityplus.ch Restricted/bibHost/ura01 identityplus.ch TERMSRV/URA01 TERMSRV/URA01 TERMSRV/ura01 identityplus.ch WSMAN/ura01 identityplus.ch	Remove

General	Operatin	g System	Member Of	Delegation	Password Replication	
Delegation is a security-sensitive operation, which allows services to act on behalf of another user.						
O Do no	trust this c	omputer for	delegation			
_ ,		<del>-</del>		vice (Kerberos on d services only	ıly)	
Use Kerberos only						
Use any authentication protocol						
Services to which this account can present delegated credentials:						
Ser	rice Type	User or Co	mputer	Port	Service Ni	
http		kerb.identi	typlus.ch			



You successfully signed in with Kerberos

### verification options (learn more)

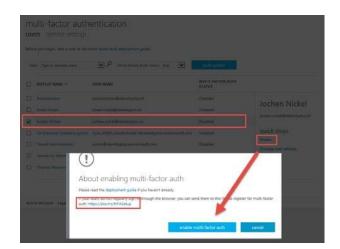
Methods available to users:

- ☑ Call to phone
- ✓ Text message to phone
- ✓ Notification through mobile app
- ✓ Verification code from mobile app

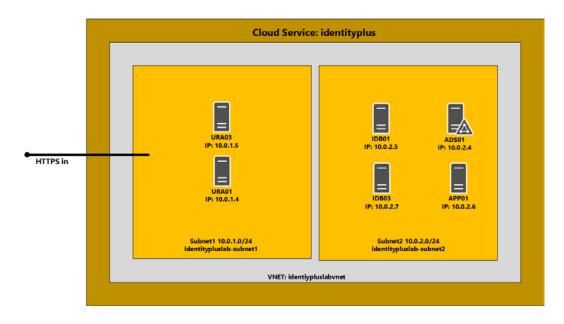
### remember multi-factor authentication (learn more)

☑ Allow users to remember multi-factor authentication on devices they trust

Days before a device must re-authenticate (1-60): 1



# **Chapter 10: Implementing Access Control Mechanisms**





3389

60450

Remote Desktop

TCP

#### ADD ENDPOINT

### Add an endpoint to a virtual machine

Traffic coming to this endpoint will be sent to the virtual machine.

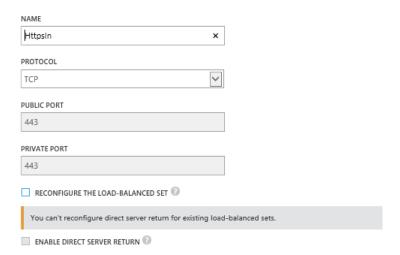
ADD A STAND-ALONE ENDPOINT

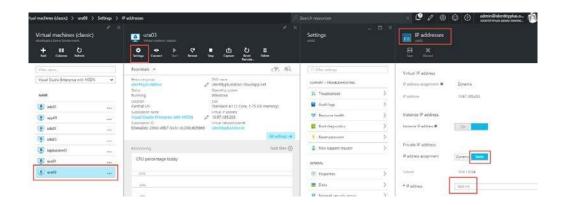
ADD AN ENDPOINT TO AN EXISTING LOAD-BALANCED SET

IdentityPlusWebFarm

ADD ENDPOINT

### Specify the details of the endpoint

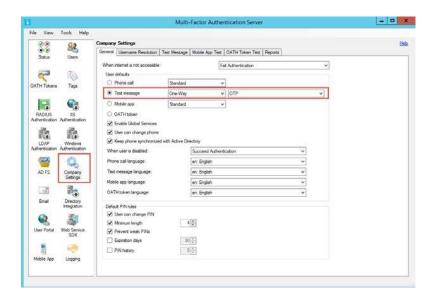


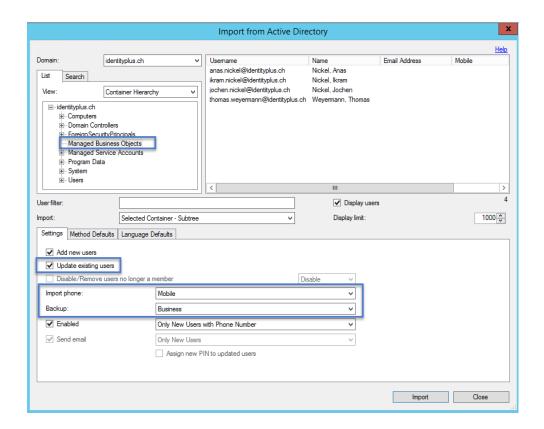


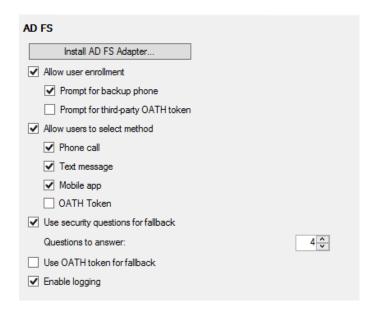


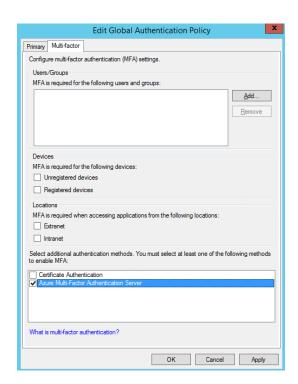


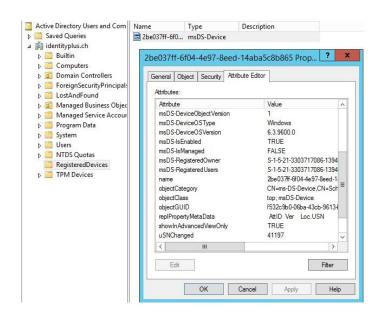


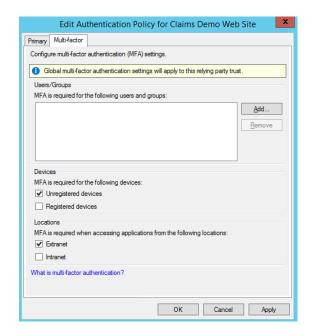


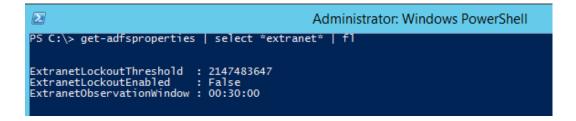










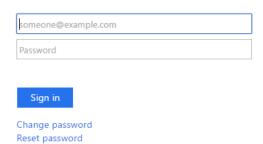


### IDplus Login

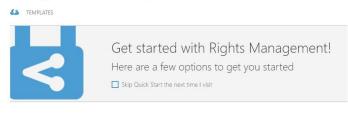


### IDplus Login

Sign in with your organizational account



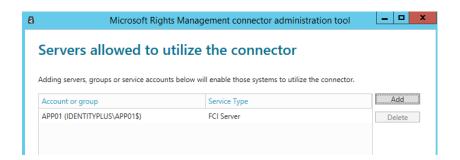
### identityplus demo environment

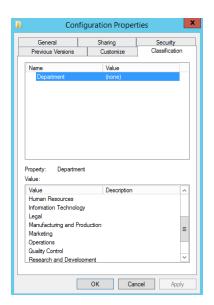


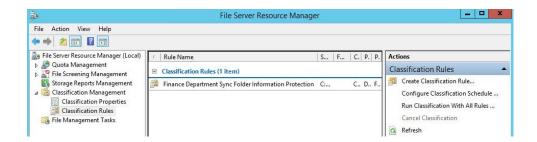


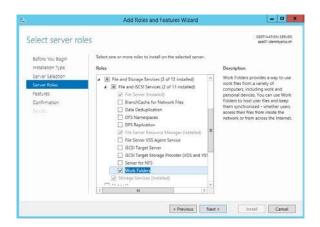


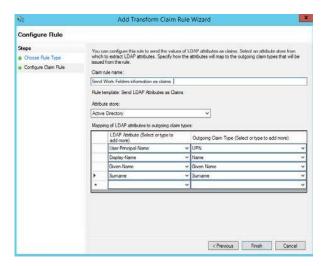


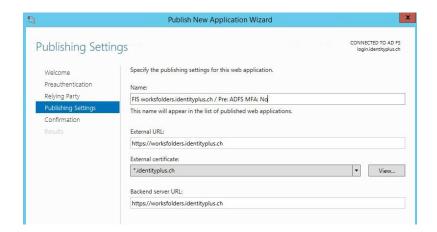


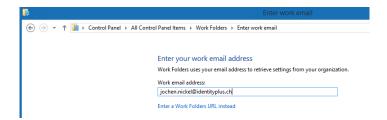












#### Security policies

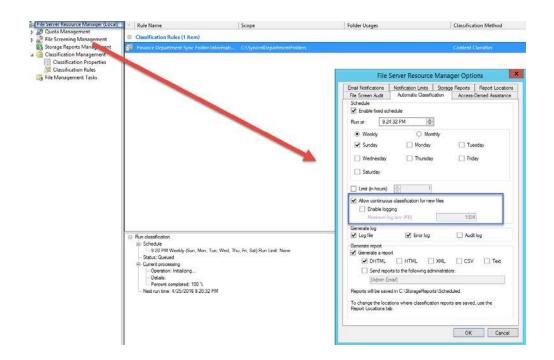
To help protect your work files, your organization can make the following changes to your PC at any time:

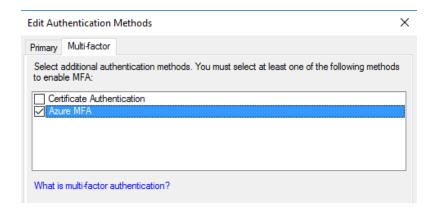
- · Encrypt Work Folders
- Require a password to sign in to your PC, and automatically lock your screen
- Erase all files in Work Folders, for example if you lose this PC

Additionally, files stored in Work Folders are subject to your organization's data policies.

✓ I accept these policies on my PC

# his PC ▶ Work Folders Name Date modified Type Size \$\frac{1}{24,04,2016 23:01}\$ Microsoft Word D... 183 KB



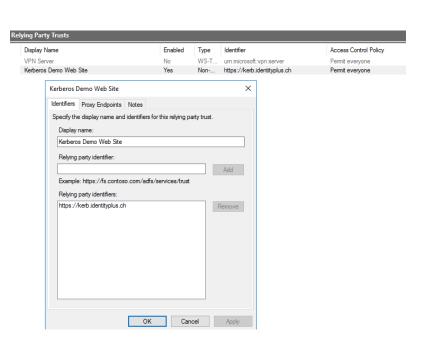








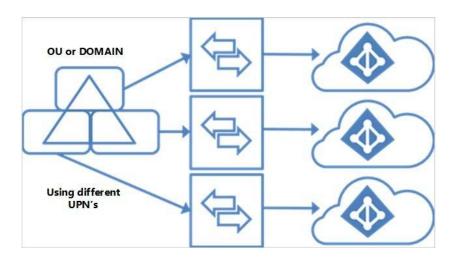


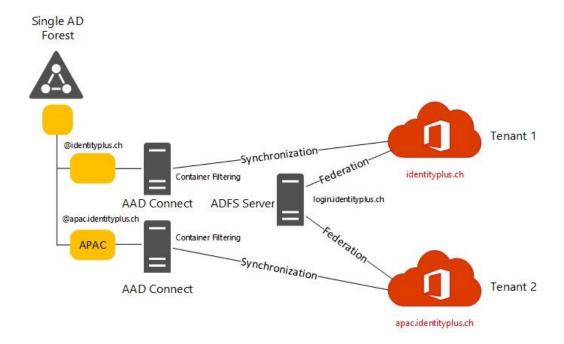


Rule Editor X

Permit		
everyone  users from specific network from specific group from devices with specific trust level with specific claims in the request and require multi-factor authentication		
Except		
from specific network from specific groups from devices with specific trust level with specific claims in the request		
Permit users from IDENTITYPLUSISales Applications group and require multi-factor authentication except from 84.75.23.101 network and from devices with authenticated trust levi		
	ОК	Cancel

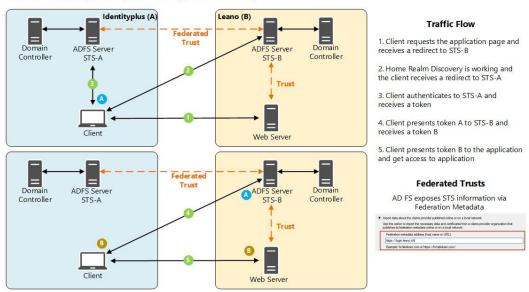
## **Chapter 11: Managing Transition Scenarios with Special Scenarios**

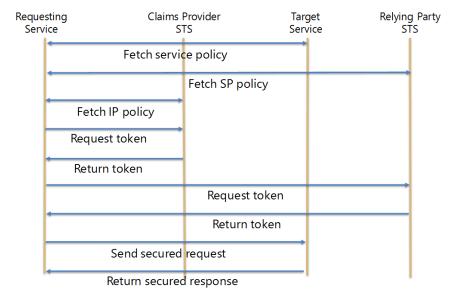


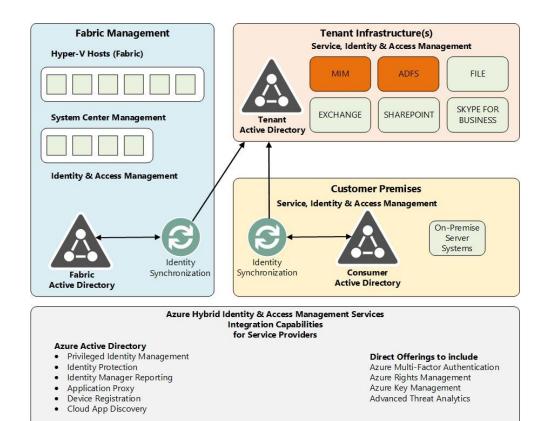


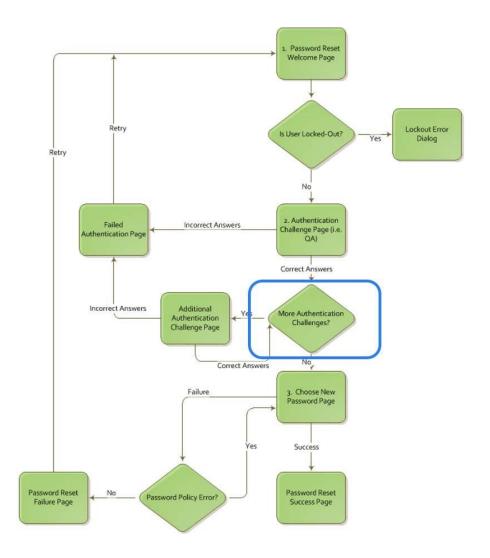
#### Business-to-Business (B2B) scenario

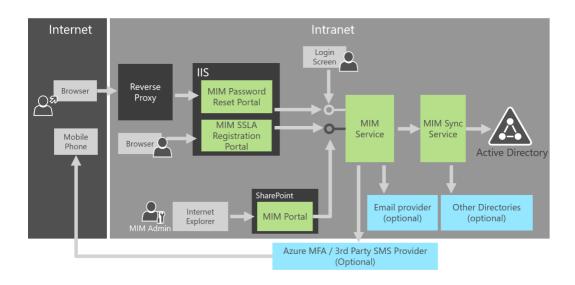
User from Identityplus (A) accessing claims-aware applications on Leano (B)





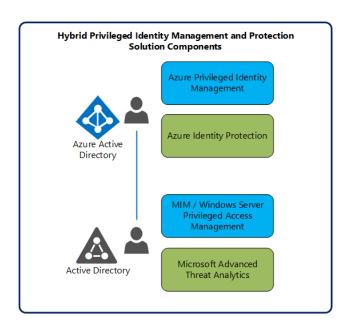






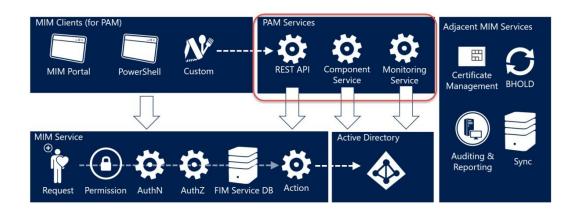
### **Chapter 12: Advanced Considerations for Complex Scenarios**

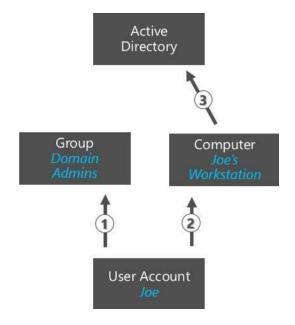


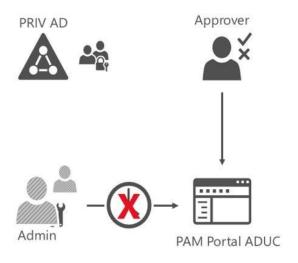


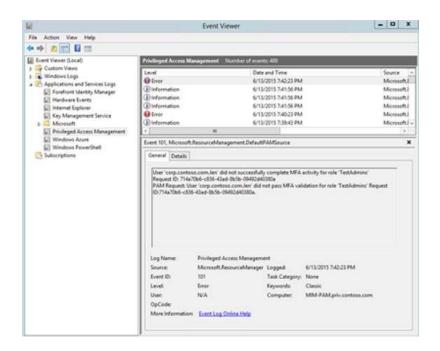


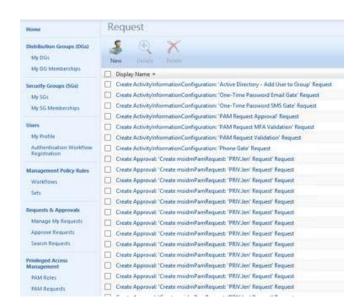


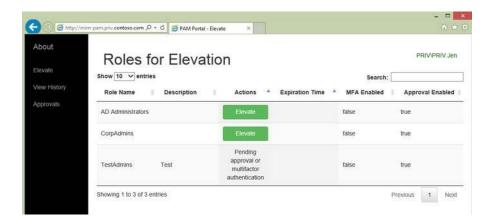


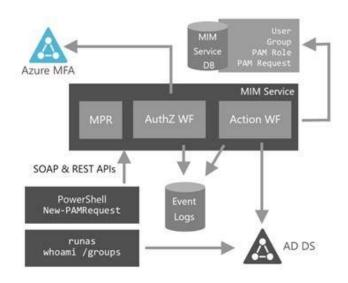


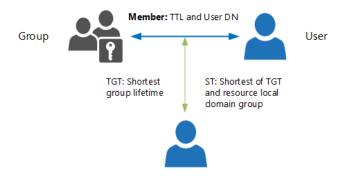


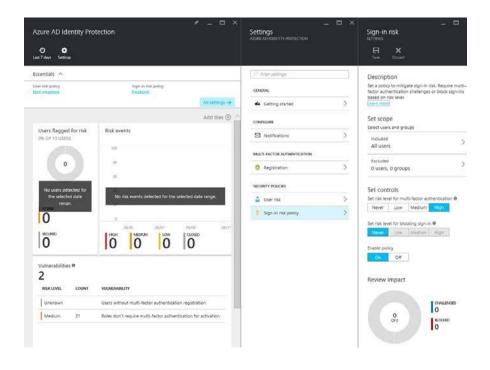






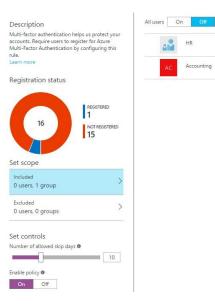


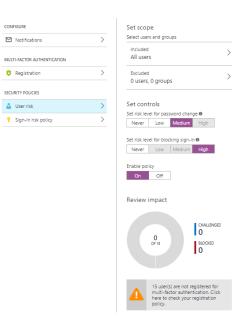


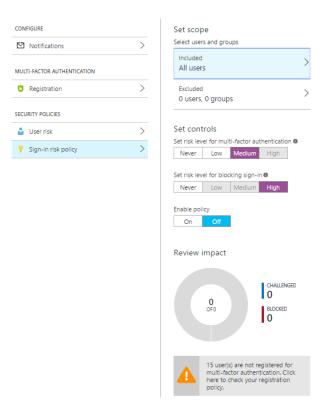


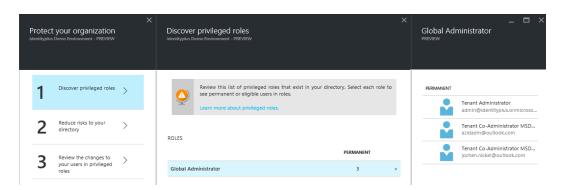
#### MULTI-FACTOR AUTHENTICATION

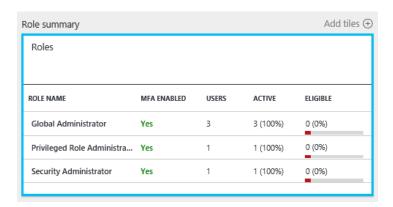




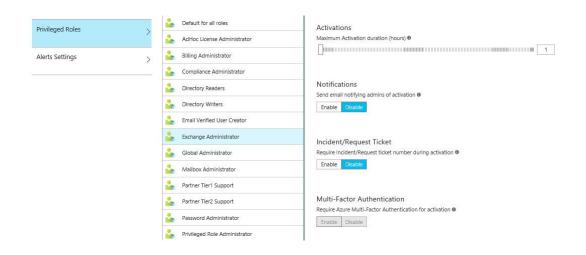


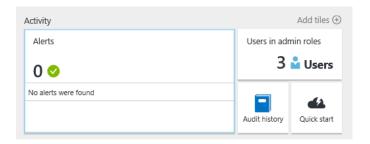


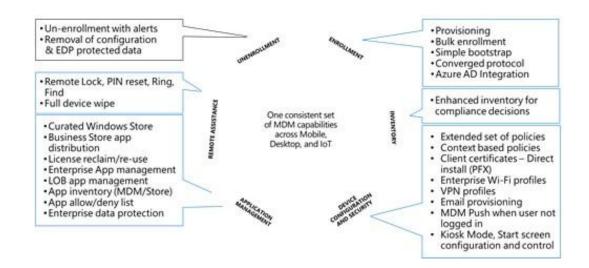


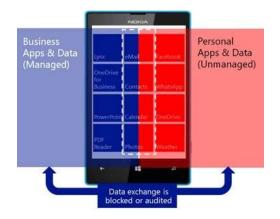


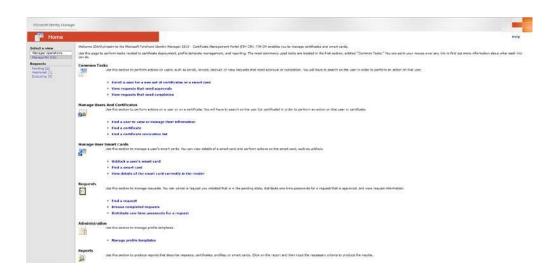
Office 365 Admin Role	Role In Exchange Online	Role In SharePoint Online	Role In Skype For Business
global admin	<ul><li>Exchange Online admin</li><li>Company admin</li></ul>	SharePoint Online admin	Skype for Business admin
billing administrator	N/A	N/A	N/A
password administrator	Help Desk admin	N/A	Skype for Business Online admin
service administrator	N/A	N/A	N/A
user management administrator	N/A	N/A	Skype for Business Online admin
Exchange administrator	Exchange Online admin	N/A	N/A
SharePoint administrator	N/A	SharePoint Online admin	N/A
Skype for Business administrator	N/A	N/A	Skype for Business Online admin

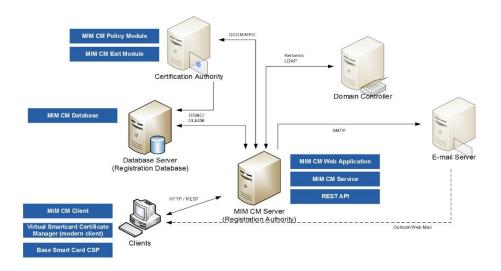














# **Chapter 13: Delivering Multi-Forest Hybrid Architectures**

## **Chapter 14: Installing and Configuring the Enhanced Identity Infrastructure**

# **Chapter 15: Installing and Configuring Information Protection Features**

<sup>2</sup>.AdministraterWindows\pustsell

S.C:\Windows\system32> Add-AadrmRoleBasedAdministrator -EmailAddress jochen.nickel@idam.ch
jochen.nickel@idam.ch was added to the list of administrators for the Rights Management service.
PS.C:\Windows\system32> Get-AadrmRoleBasedAdministrator ObjectId Role se4583c3-9571-4651-a59b-25b0d5e24a47 Jochen Nickel smtp:jochen.nickel5265@idamcloud.onmicrosoft.com GlobalAdministrator

### Administrator: Windows PowerShell

PS C:\WINDOWS\system32> Get-AadrmRoleBasedAdministrator | fl

ObjectId : 5e4583c3-9571-4651-a59b-25b0d5e24a47
DisplayName : Jochen Nickel
EmailAddress : smtp:jochen.nickel5265@idamcloud.onmicrosoft.com
Role : GlobalAdministrator

Administrator: Windows PowerShell

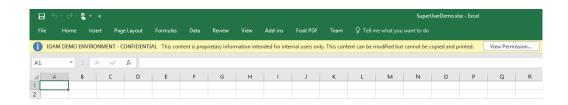
PS C:\WINDOWS\system32> Get-AadrmSuperUser \adrm\_S-1-5-21-3123384963-3601710319-2843089171-1118@b934de73-2597-4922-9a7b-c97c5d6d4c7a.rms.eu.aadrm.com PS C:\WINDOWS\system32>

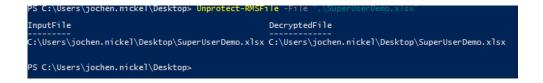
```
2010-05-27112:19:10 administration. on Gettemplatetyle -templatel diff:SS41-9801-6640-3rcf-1559see009abb Pessed Begin Template*rope Template*20 - diff:SS41-9801-6640-3rcf-1559see009abb Pessed Begin Template*rope Template*.

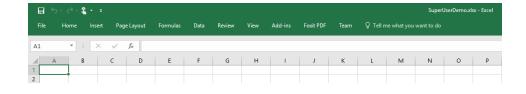
Manual Status Description:
303 - 3 data Deep Environment - Human Resources Confidential Status = Published Right:Definitions:

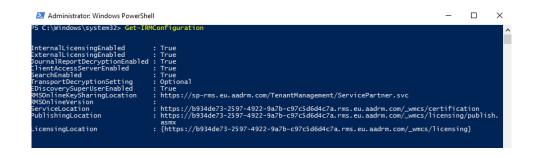
HumanResources@idam.ch - VIIN, EXTEACT, REP.Y, REP.YALI, PRINT, 083H006E ContentSpirateIndust = 12/1080 AR ContentSpirateIndustrial Environment = 12/1080 AR ContentSpirateIndustrial E
```

```
PS C:\Users\jochen.nickel\Desktop> Protect-RMSFile -TemplateID 61d62ec9-fe90-40d7-ae18-8617b7e8585c -file ".\SuperUserDe
do.k.1SX
InputFile EncryptedFile C:\Users\jochen.nickel\Desktop\SuperUserDemo.xlsx C:\Users\jochen.nickel\Desktop\SuperUserDemo.xlsx
PS C:\Users\jochen.nickel\Desktop>
```

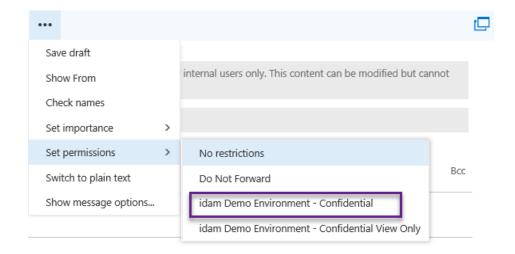




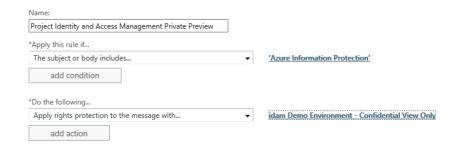






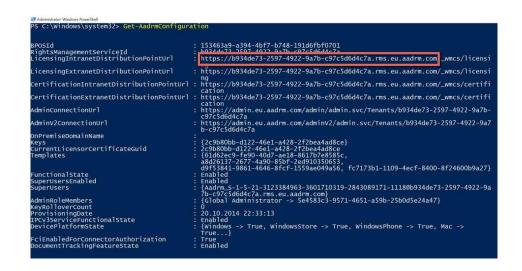


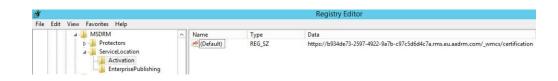
### new rule

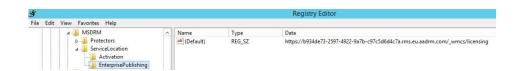


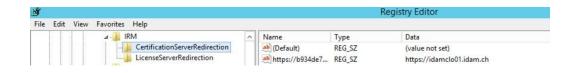






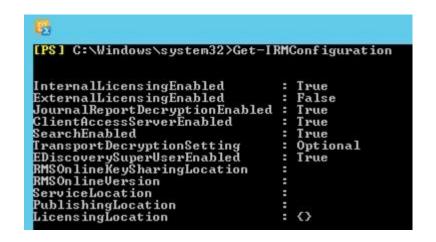




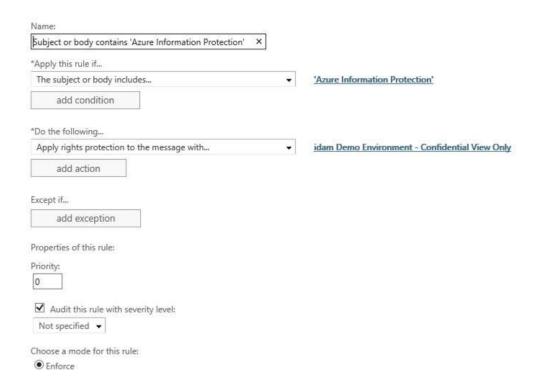




```
GlobalAddressListEnabled : True
OrganizationEnabled : True
ExplicitLogonEnabled : True
OWALightEnabled : True
IRMEnabled : True
ContactsEnabled : True
JournalEnabled : True
JournalEnabled : True
MotesEnabled : True
RemindersAndNotificationsEnabled : True
PremiumClientEnabled : True
```



# Subject or body contains 'Azure Information Protection'



## Exchange admin center

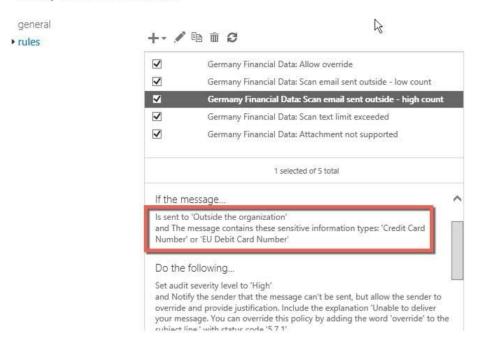


# DLP policy from template

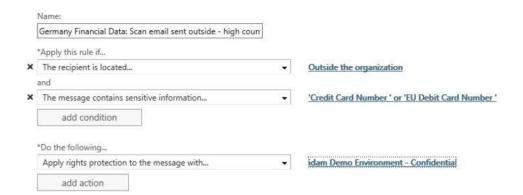
Name:		
Identify German Financial Data		
Description:		
*Choose a template:		
France Data Protection Act		
France Financial Data	^	Germany Financial Data 15.0.3.0
France Personally Identifiable Informa	ation (PII) Data	Helps detect the presence of information commonly
Germany Financial Data		considered to be financial data in Germany like EU d
Germany Personally Identifiable Infor	mation (PII) Data	ebit card numbers. Use of this policy does not ensur e compliance with any regulation. After your testing
Israel Financial Data		is complete, make the necessary configuration chan
Israel Personally Identifiable Informat	ion (PII) Data	ges in Exchange so the transmission of information of omplies with your organization's policies. Examples i
Israel Protection of Privacy	5.5	nclude configuring TLS with known business partner
Japan Financial Data		s or adding more restrictive transport rule actions, s uch as adding rights protection to messages that co
Japan Personally Identifiable Informa	tion (PII) Data	ntain this type of data.
Identify German Fir	nancial Data	
rules	Identify German Financial Data	
	identity definant Financial Data	
	Description:	
		bers. Use of this policy does not ensure
	Choose the state of this DLP policy:	
	<ul><li>Enabled</li></ul>	
	○ Disabled	
		N. DIR C
	Choose a mode for the requirements in t  • Enforce	this DLP policy:
	Test DLP policy with Policy Tips	
	Test DLP policy without Policy Tips	

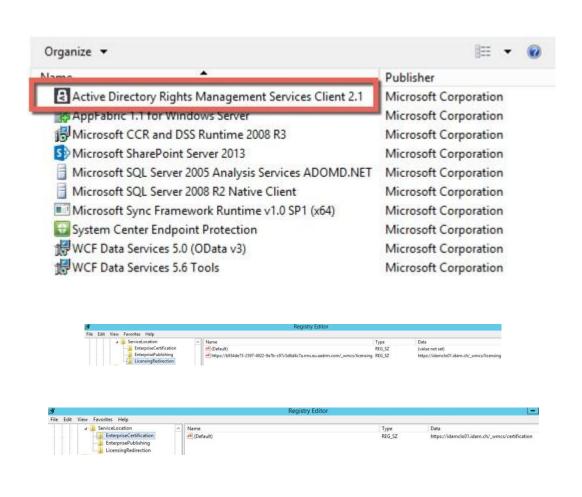
Data Loss Prevention (DLP) is a premium feature that requires an Enterprise Client Access License (CAL). Learn more

# Identify German Financial Data



Germany Financial Data: Scan email sent outside - high count





Type REG\_SZ



# Information Rights Management

# Information Rights Management IRM helps protect sensitive files from being misused or distributed without permission once they have been downloaded from this server. Specify the location of Windows Rights Management Services (RMS): Do not use IRM on this server Use the default RMS server specified in Active Directory Use this RMS server: https://idamclo1.idam.ch X Check this box in multi-tenant configurations to allow tenants to configure tenant level IRM settings.

## Information Rights Management (IRM)

Set IRM capabilities to SharePoint for your organization (requires Office 365 IRM service)

Use the IRM service specified in your configuration
 Do not use IRM for this tenant

O Do not use IRM for this tenar

We successfully refreshed your settings.

# idam demo environment



# active directory



# Add a new rights policy template



idam demo environment - human resources confidential



USER AND GROUP RIGHTS

# Assign custom rights



## name and description

7

LANGUAGE

NAME

DESCRIPTION

German - Germany

idam Demo Environment - Human Resources Con

English - United States

idam Demo Environment - Human Resources Con

Select language

V

NAME

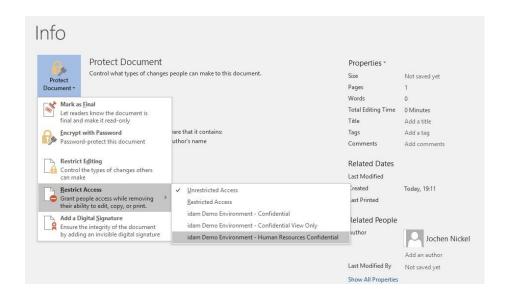
DESCRIPTION

DESCRIPTION

content expiration		
Content never expires		
Content expiration (date)	2016-09-27	
$\bigcirc$ After the content is protected, content expires after the specified number of days		
offline access		9
Content is available only with an Internet connection		
Ocontent is always available		
Number of days the content is available without an Internet connection		

# idam demo environment - human resources confidential





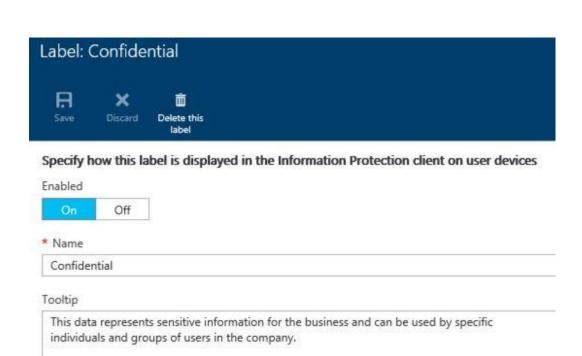
# external sharing - confidential content



```
PS C:\windows\system32> Get-AadrmTemplateProperty -TemplateId fc7173b1-1109-4ecf-8400-8f24600b9a27 -RightsDefinitions | fl
Key : RightsDefinitions
value : {marketing@idam.ch -> VIEW, EXPORT, engineering@identityplus.ch -> VIEW, DOCEDIT}
```







# Set RMS protection for documents and emails containing this label

idea Danie Frainceau CasEdeatia

Color

Orange

Select RMS template

idam Demo Environment - Confidential

# Set visual marking (such as header or footer)

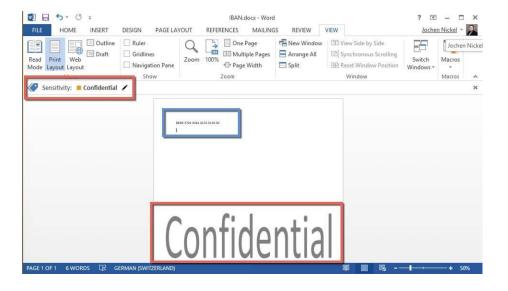
Documents with this label have a header Documents with this label have a footer Off \* Text Document sensitivity: Confidential \* Font size 10 Color Black Alignment Center Right Documents with this label have a watermark Off \* Text Confidential

### Configure conditions for automatically applying this label

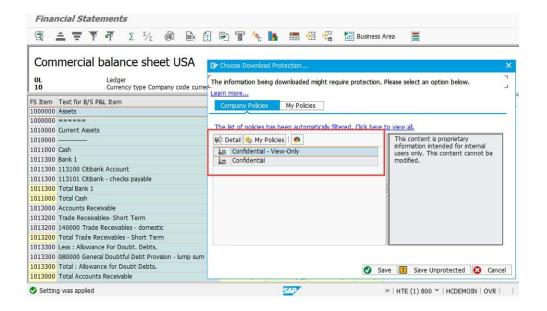
If any of these conditions are met, this label is applied

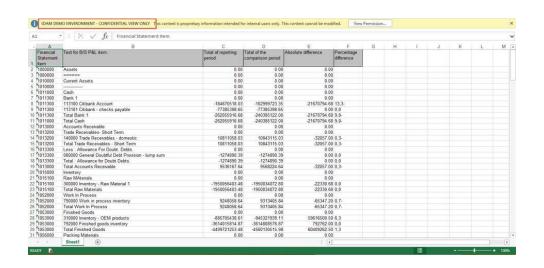
It is recommended to label this file as Confidential

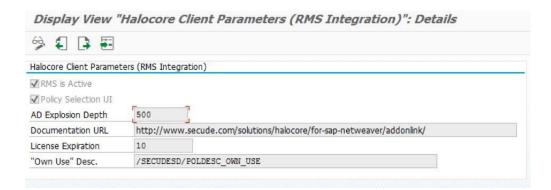
# International Banking Account Number (IBAN) + Add a new condition Select how this label is applied: automatically or recommended to user Automatic Recommended Add policy tip describing to users the reason for applying this label

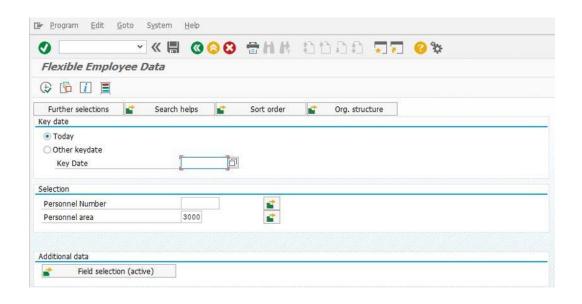


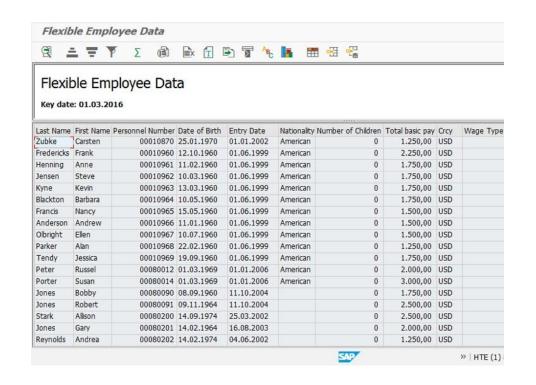


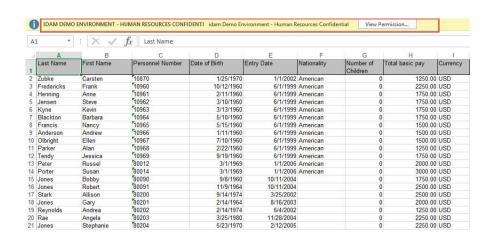












### Simulate Policy Derivation M Y . I E Domain Sensitivity Policy Match ENG CONF Confidential - View-Only 00 Confidential - View-Only ENG INTERNAL 00 PUBLIC Confidential - View-Only ENG 00 Confidential ENG SECRET OAO FIN CONF Confidential - View-Only 00 Confidential - View-Only FIN INTERNAL 00 FIN PUBLIC Confidential - View-Only 00 FIN SECRET Confidential 040 GP CONF Confidential - View-Only 00 GP Confidential - View-Only INTERNAL 00 GP PUBLIC Confidential - View-Only 00 GP Confidential SECRET 040 **HCM** CONF Confidential - Human Resources 040 **HCM** INTERNAL Confidential - Human Resources 040 HCM PUBLIC Confidential - Human Resources 040 Confidential - Human Resources **HCM** SECRET 040 LOG CONF Confidential - View-Only 00 LOG INTERNAL Confidential - View-Only 00 LOG PUBLIC Confidential - View-Only 00 LOG SECRET Confidential 040 SLS CONF Confidential - View-Only 00 SLS INTERNAL Confidential - View-Only 00 SLS PUBLIC Confidential - View-Only 00 SLS SECRET Confidential 040

**Chapter 16: Choosing the Right Technology, Methods, and Future Trends**