Microsoft

Guten Morgen!

AZ-801

Configuring Windows Server Hybrid Advanced Services

6 Windows Server Upgrade und Migrate

AZ-801 Course Outline

1 Windows Server Security on Prem
2 Windows Server Security Cloud
3 Failover Cluster
4 Disaster Recovery on Prem
5 Disaster Recovery Cloud
6 Windows Server Upgrade and Migrate
7 Migrate Windows Server to Cloud
8 Windows Server Monitoring
9 Monitoring in the Cloud

LP4

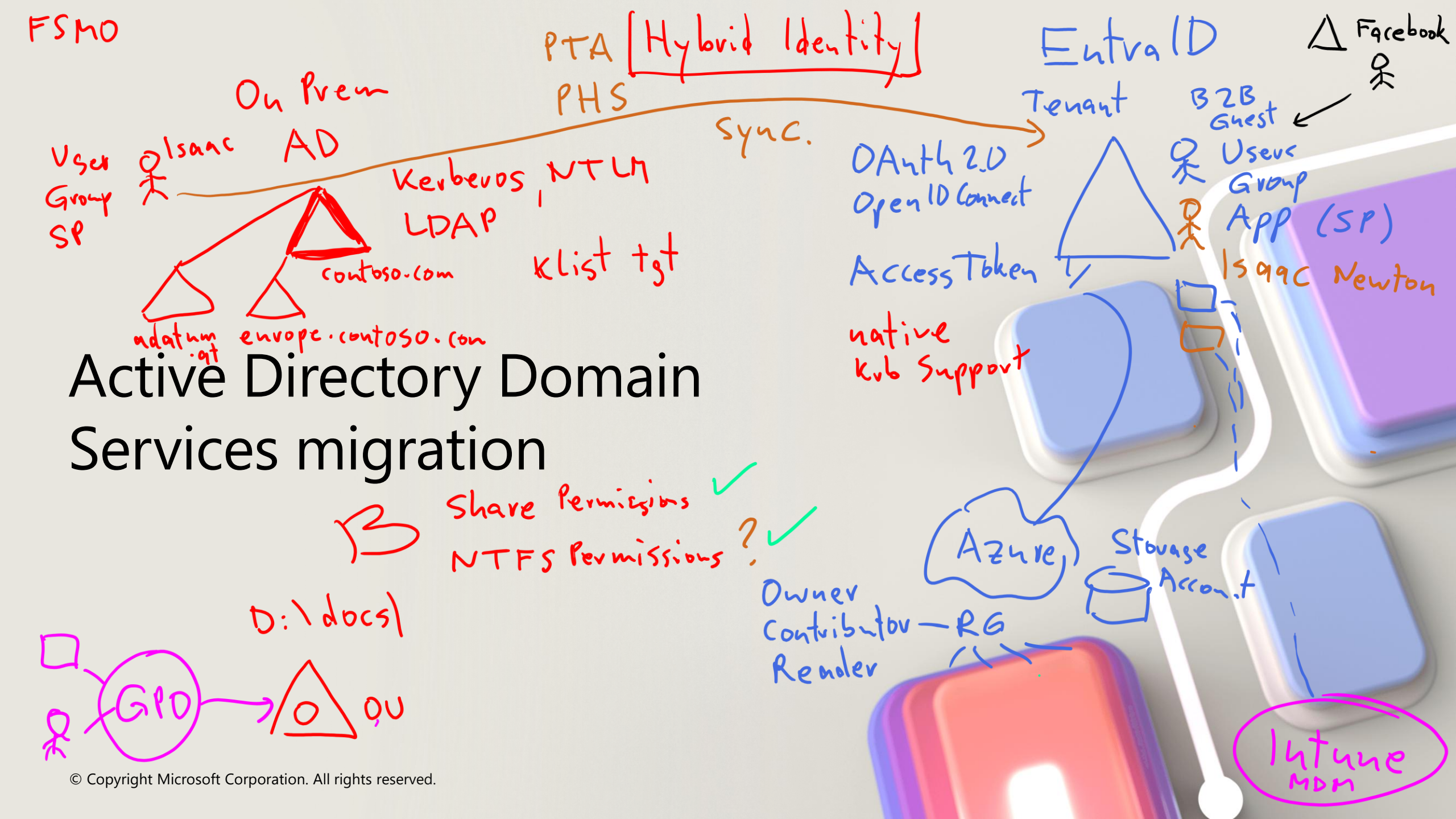
LP5

Lab 6

Lab 7 2h

Migrate Servers and Workloads in on-premises and Hybrid Environments *(Upgrade and migrate in Windows Server)*

- Active Directory Domain Services migration
- Migrate file server workloads using Storage Migration Service
- Migrate Windows Server roles
- Lab 06 – Upgrade and migrate in Windows Server



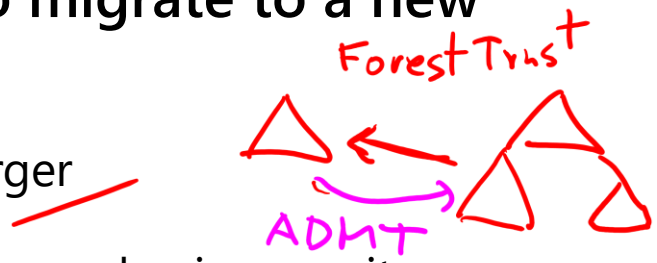
Active Directory Domain Services migration

Examine Upgrade vs. Migration

Migration to a new AD DS forest:

- Is typically driven by a need to restructure AD DS
- Is more complex than upgrading an existing AD DS forest

Common reasons to migrate to a new AD DS forest:



- An acquisition or merger
- Divesture of a company or business unit
- Need to rename the AD forest or domain
- AD DS compromised by a security event
- Aging AD DS forest that requires rationalization due to build-up of legacy configuration alterations

"Should we upgrade our existing forest or should we migrate to a new forest?"

Upgrade a Previous Version of Active Directory Domain Services to Windows Server 2022

2025

Transfer
DC FSMO old → DC FSMO new

1. Add new member servers running Windows Server 2022

Lab 06

2. Prepare the forests and domains

X Seize new

3. Promote member servers to domain controllers

dcpromo → .ps1

4. Transfer FSMO roles from existing domain controllers

- Naming Master
- Schema Master LDAP
- RID Master SID = Domain - 500 RID
- PDC Emulator Time - 1001
- Infrastructure

5. Demote all domain controllers running prior versions of Windows Server

6. Upgrade the domain and forest functional level

Migrate to Active Directory Domain Services in Windows Server 2022 from a Previous Version

Plan carefully before you migrate to a new AD DS forest:

- Select new names
- Plan organizational unit (OU) structure
- Plan Group Policies GPO
- Identify objects to migrate
- Identify apps that will be migrated

When you're ready to migrate:

- Create the new AD DS forest by adding new domain controllers running Windows Server 2022
- Configure a forest trust
- Disable SID filtering on the forest trust to use sIDHistory
- Migrate passwords along with the user accounts

Explore the Active Directory Migration Tool

You can use ADMT when consolidating domains within a forest or when migrating to a new AD DS forest.

ADMT can perform the following functions:

- Migrate user accounts
- Migrate service accounts
- Migrate groups
- Migrate computer accounts
- Translate security for local profiles

To move objects between AD DS forests and domains, Microsoft provides the Active Directory Migration Tool

Explore the Active Directory Migration Tool

ADMT installs on:

- A member server with Desktop Experience
- In the target AD DS forest

Before installing ADMT, you must install Microsoft SQL Server to hold migration information.

Migration accounts:

- Are user accounts in the source
- Target forests with enough permissions to perform migration tasks
- Can be members of Domain Admins in the source and target forests

Consider creating accounts with only the necessary delegated permissions for specific tasks.

Security translation:

- Allows a migrated user to retain access to the same profile on the local computer as the source user

ADMT was developed to work with Windows, and hasn't been updated to work with Window 8 or Windows 10. Profile translation might not work properly.

Migrate file server workloads using Storage Migration Service

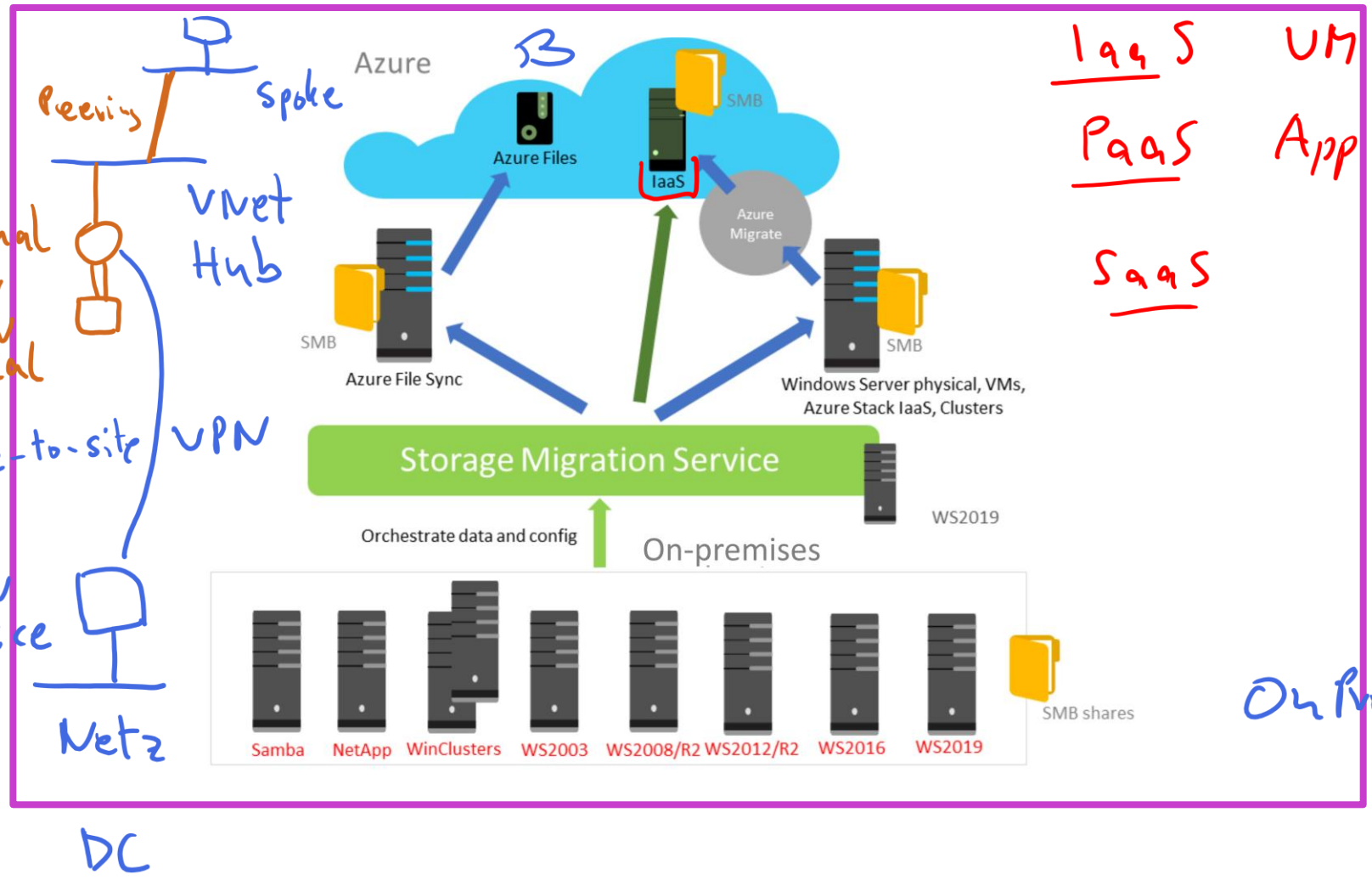
Storage Migration Service Overview and Usage Scenarios

Benefit of Storage Migration Service:

It can assign the identity of the source server to the target server, including the server name and the server IP addresses

The general process for using Storage Migration Service:

- Inventory source servers
- Transfer data
- Cut over identities



Storage Migration Requirements

Orchestrator server

- Requirements for an orchestrator server are:
- Running Windows Server 2019 or newer
- Installed with 2 CPU cores and 2 GB of memory

Source servers:

- Can be running Windows Server 2003 or newer versions
- Can also be running Linux (Samba)

Destination servers

- Running Windows Server 2012 R2 or newer
- Installed with 2 CPU cores and 2 GB of memory

Security

On source and destination servers, the following firewall rules must be enabled:

- File and Printer Sharing (SMB-In)
- Netlogon Service (NP-In)
- Windows Management Instrumentation (DCOM-In)
- Windows Management Instrumentation (WMI-In)

Migrate a Server with Storage Migration

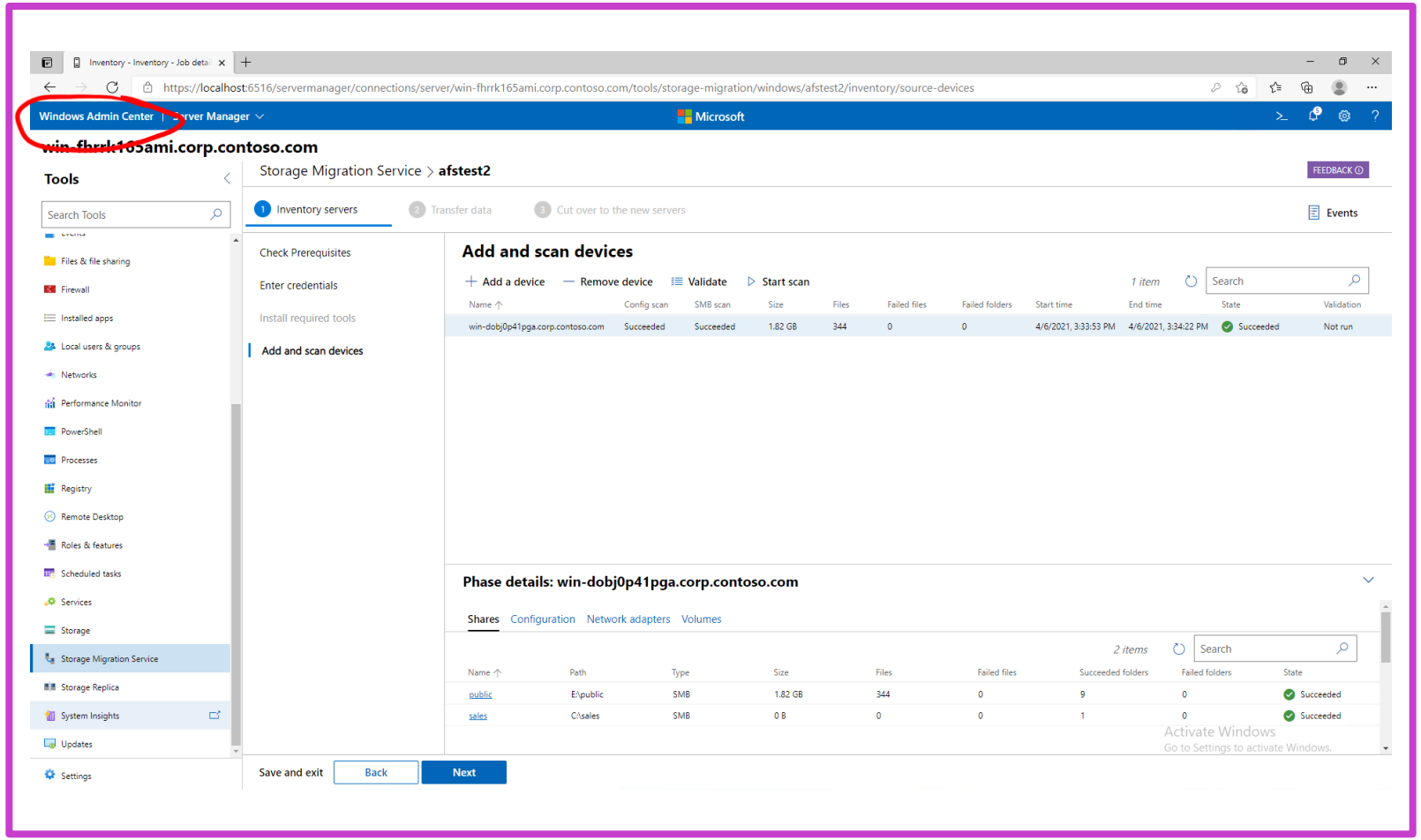
Lab 6 — AD, DC New — Storage mig

Inventory source servers

- Add the servers to be inventoried and start a scan

The scan of the source servers identifies:

- Shares
- Server configuration
- Network adapter configuration
- Volumes

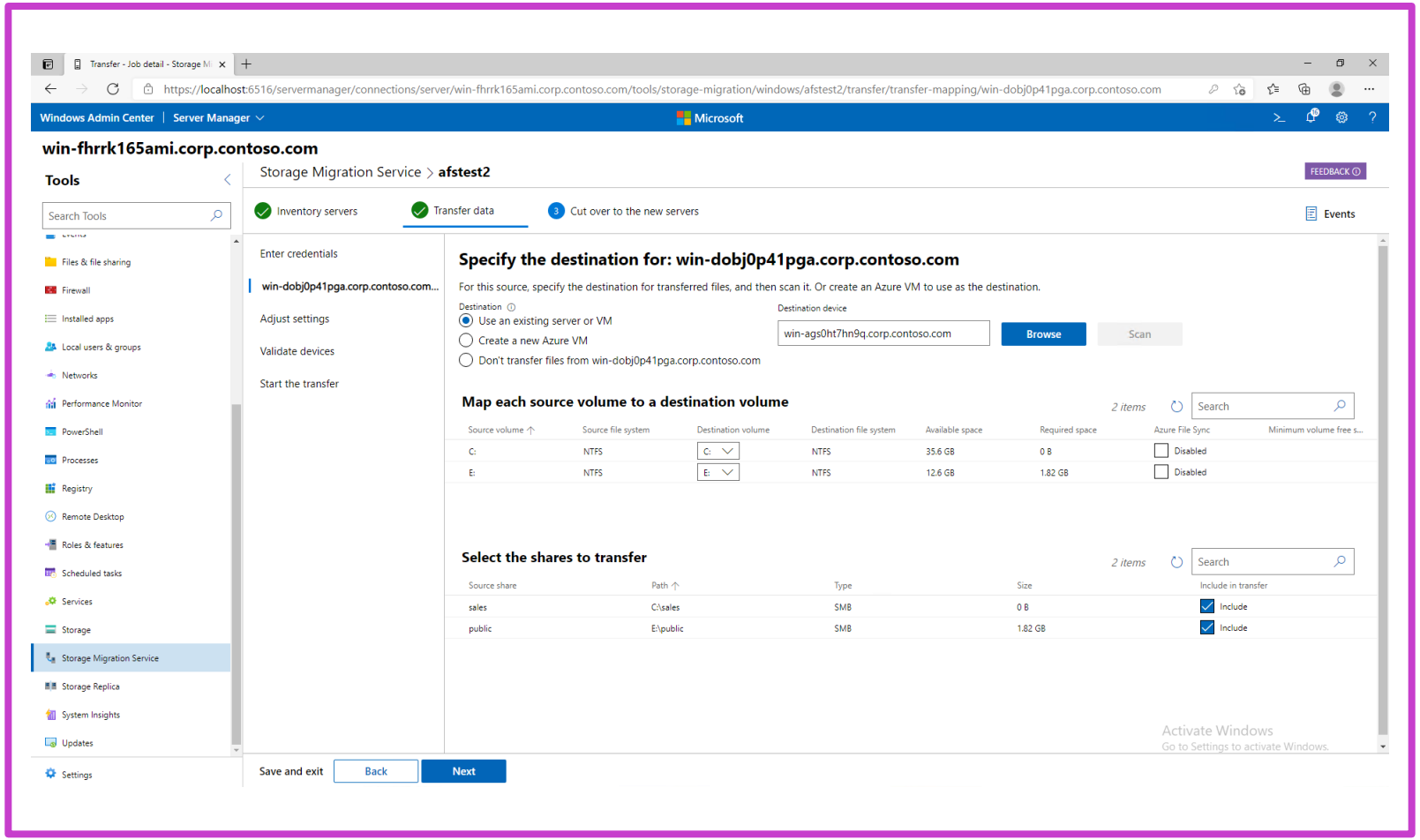


Migrate a Server with Storage Migration

Migrate data

To transfer data, you must:

- Enter credentials that have administrative permissions on the destination server
- Map source volumes to the volumes on the destination servers
- Identify which shares you want to migrate
- Choose to migrate local users and groups from source servers to the destination server



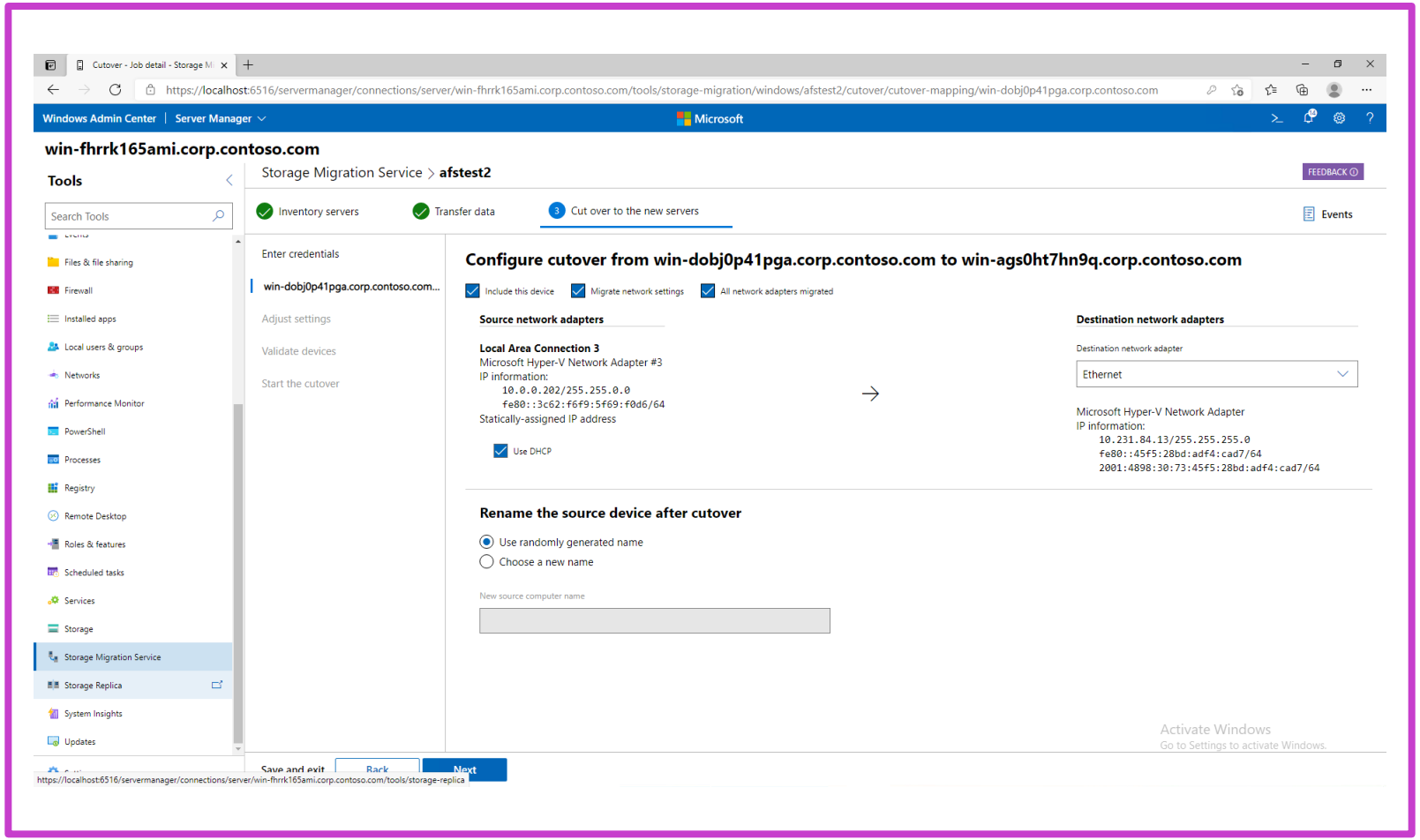
Migrate a Server with Storage Migration

Cut over to the destination server

Moves the identity information from the source server to the destination server.

When you perform the cutover, you must specify:

- Which adapter on the destination server will be configured with the source IP addresses
- The IP address to assign to the source server
- The name to assign to the source server



Evaluate Storage Migration Considerations

Consider the following:

- Locked files aren't migrated
- You can't migrate the identity of domain controllers
- Windows system files won't move to the PreExistingData folder on the destination server
- Server consolidation isn't supported
- Previous file versions aren't migrated

To optimize performance:

- Use Windows Server 2019 or newer with the Storage Migration Service Proxy service installed as the destination
- Increase the number of threads used by Storage Migration Service Proxy might increase performance
- Add processor cores and memory
- Create multiple jobs
- Use high-performance networking
- Use high-performance storage

Migrate Windows Server Roles

Describe the Windows Server Migration Tools

Definition of Windows Server Migration Tools:

- Windows Server Migration Tools are a set of Windows PowerShell cmdlets that migrate configuration information and data from a source server to a destination server.

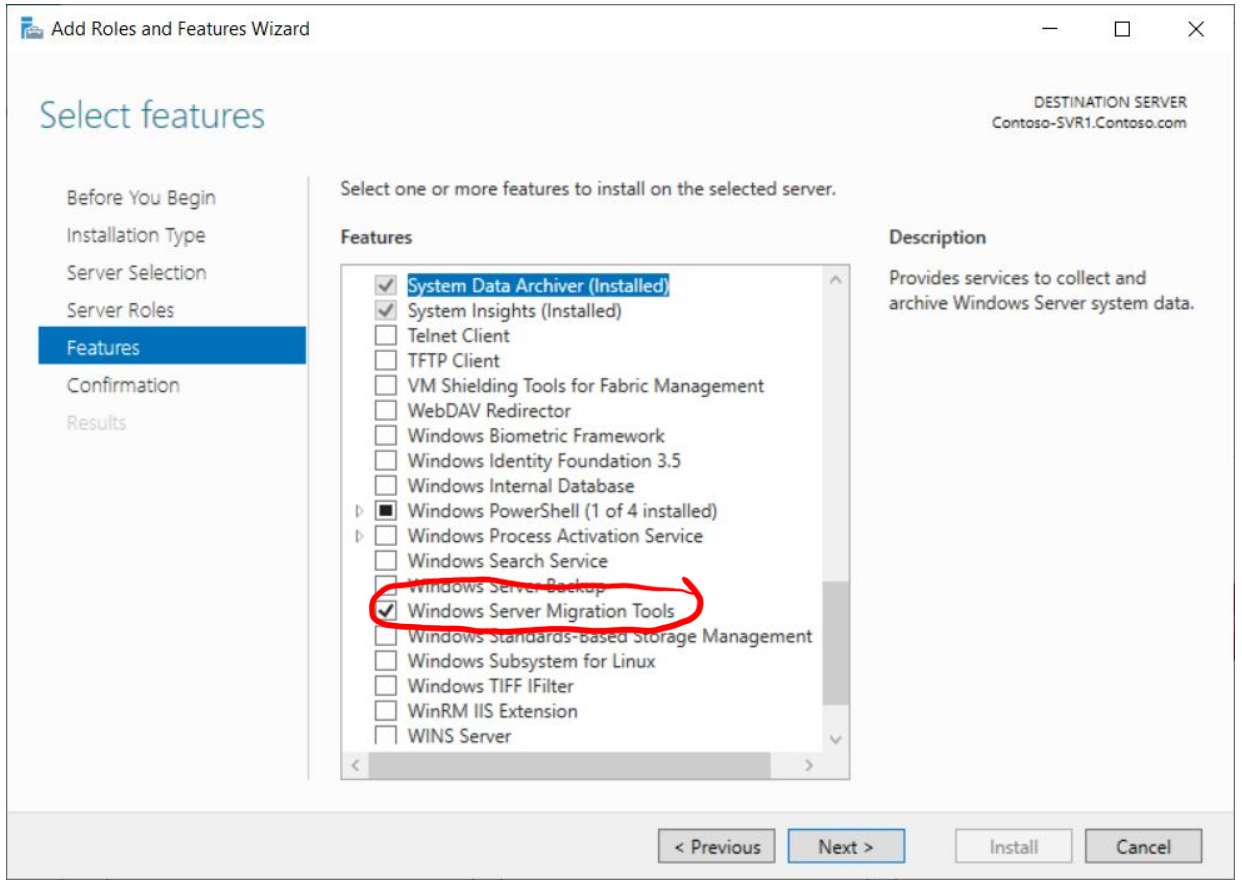
Roles and features that you can migrate include:

- Active Directory Certificate Services
- DHCP
- DNS
- Network Policy Server
- Remote Access
- IP configuration
- Local users and groups

Install the Migration Tools

Install and prepare the migration tools:

- Install the tools on destination servers as part of Windows Server setup
- Create a deployment folder containing a copy of the tools on the destination server
- Copy the deployment folder from destination server to source server
- Register Windows Server Migration Tools on the source server by using the **SmigDeploy.exe** tool included in the deployment folder



Install the Migration Tools

Prepare the source computer:

If the source computer is running Windows Server 2016 or earlier, you must create a deployment folder with installation files for the source server.

To create a deployment folder:

- Run SmigDeploy.exe from the destination server.
- When you run SmigDeploy.exe, you must specify the:
  - Architecture of the source server
  - Operating system of the source server
  - Path to store the deployment folder

Perform the migration:

Use one of the following methods:

- Run Windows Server Migration Tools as an administrator from Start
- Load the Windows Server Migration Tools snap-in into an elevated Windows PowerShell session
- On source computers running earlier versions of Windows Server, run Windows Server Migration Tools under the Windows PowerShell folder

Migrate Roles using the Migration Tools

The Windows Server Migration Tools cmdlets:

- Get-SmigServerFeature
- Export-SmigServerSetting
- Import-SmigServerSetting
- Send-SmigServerData
- Receive-SmigServerData

Export settings:

- Run the **Get-SmigServerFeature** cmdlet to verify which feature settings can be exported
- Provides the feature names and IDs that you must specify during the export

Import settings

- Run the **Get-SmigServerFeature** cmdlet to verify which feature settings can be imported
- Use this information to verify that the necessary Windows features install on the destination server

Lab 06: Upgrade and migrate in Windows Server

Lab 06 – Upgrade and Migrate in Windows Server

Lab scenario

Contoso is exploring the hybrid model for its infrastructure services that would facilitate migration of its on-premises Windows servers to Azure VMs. To assist with this initiative, and you were tasked with evaluating the process of deploying AD DS domain controllers in Azure VMs. Your intention is to identify differences between the manual process currently used for on-premises deployments and the deployment methods available in Azure. In addition, you want to test and document the Storage Migration Services functionality to validate its usage for migrations of on-premises file servers.

Objectives

- Deploy AD DS domain controllers in Azure
- Migrate file servers by using Storage Migration Service

End of presentation