

Designing and Installing Windows 2019 Active Directory Domain Services

DESIGNING AND DEPLOYING AN ACTIVE DIRECTORY
FOREST



Mike Brown

SENIOR CLOUD INSTRUCTOR

@mgbleeds



Summary



Course overview

Course prerequisites

What is Active Directory domain services?

Active Directory domain services design

Demonstrate Active Directory domain service deployment

- Create a new Active Directory forest
- Add additional domain controllers to our new forest



Course Overview



Why Is This Course for Me?

Microsoft Active Directory Domain Services is one of the most popular directory services in use today

Microsoft Active Directory Domain Services can scale from a small startup to a global organization

Because of this flexibility design and deployment is complex

Correct design decisions lead to a robust, scalable directory service



During This Course

Design and deploy a new Active Directory domain services forest

Verify that your new forest has deployed successfully

Extend your forest to include additional domain controllers and additional locations

Integrate your new forest with an existing Active Directory forest deployment



Course Prerequisites

Understand how to install the Windows server operating system

Understand how to install roles and features

A basic knowledge of Microsoft PowerShell

A basic knowledge of DNS and networking



Company.pri

Already have an Active Directory domain services forest.

Replacing with a new forest based on Windows Server 2019

In preparation new servers named DC and DC2 have been installed

As an employee of Company.pri your job is to design and deploy the new Active Directory domain service forest



What Is Microsoft Active Directory Domain Services?



Microsoft Active Directory Domain Services

Authentication and authorization

Centralized management of users, computers, applications and services

Domain services designs

Single domain, multi-domain tree, multi-tree forest

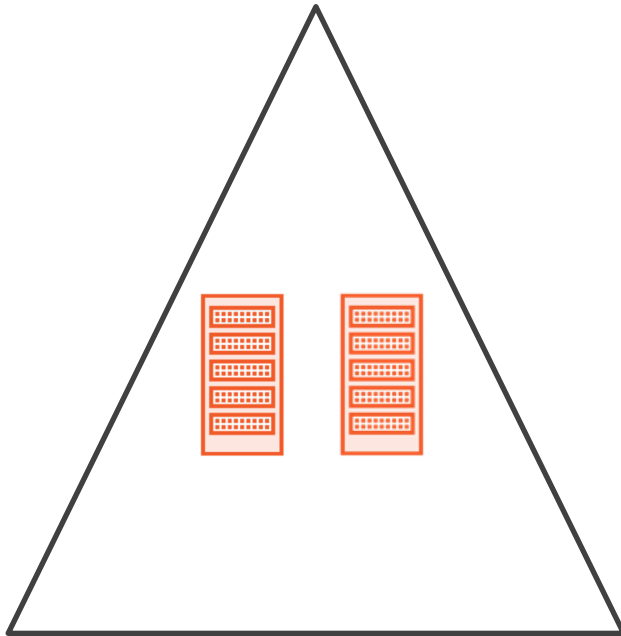
Domain controllers

Servers that host the domain database

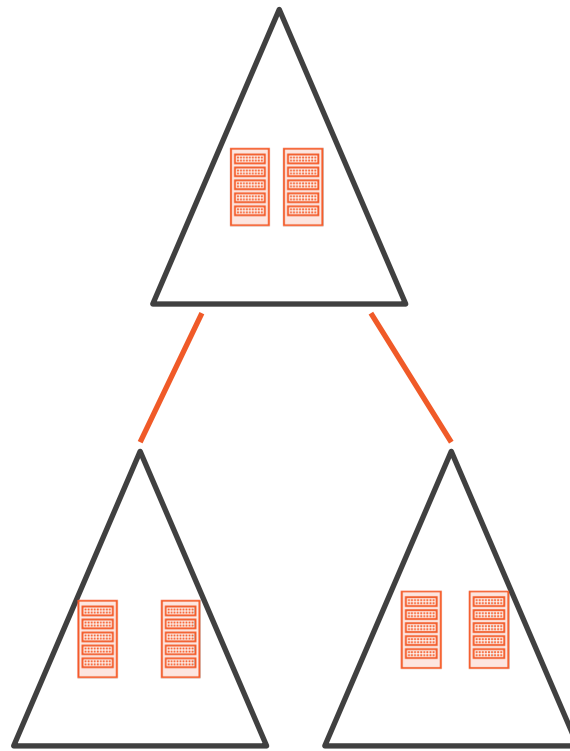


Domain Services Design

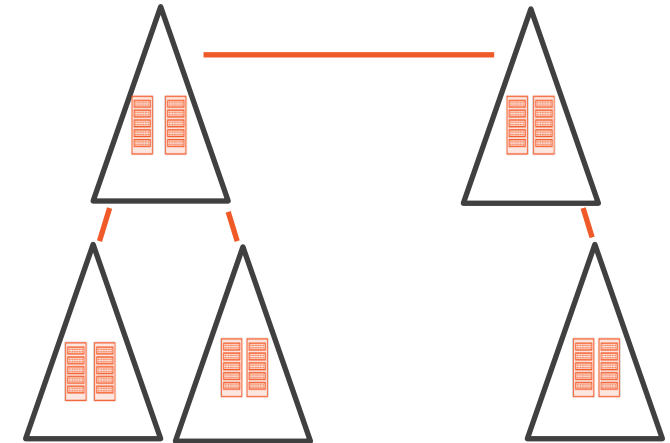
Domain
Company.pri



Tree
Company.pri



Forest
Company.pri



Domain Terminology

Forest root domain

Parent and child domains

Domain names

- Multi level
- Root e.g. company.pri
- Child e.g. child1.company.pri
- DNS required for name resolution



Which Design Should I Use

**Use Single domain trees
where possible**

**Use multi domain trees for
administration separation and
replication control**

Avoid using multi tree forests

Consider multi forest designs



Tools Used to Deploy Active Directory Domain Services

Graphical tools

Server manager for local deployment or Windows admin center for remote deployments

PowerShell

PowerShell can be used to automate a deployment, deploy locally or remotely



Windows Server Core

Smaller disk footprint

Only install the server roles you need

Smaller attack surface

Fewer roles and their dependencies means there less to attack

No desktop

Can be managed locally, should be managed remotely



Summary



You have learned what Active Directory Domain Services is

You have learned how to deploy a new Active Directory forest

You have learned how to add additional domain controllers to an existing forest

You have learned that a server core installation is recommended

In our next module

- Verify and troubleshoot domain controller deployments
- Work with Active Directory Domain Services roles

