

Program: MCA & IBCA

Course Code: MCAS9250

Course Name: N/w Mgt. & System Adm.

Semester: Vth & IX

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Directory Services

Active Directory – Domain Model

- Three main types
 - Domain
 - Tree
 - Forest

The logo of Galgotias University is a stylized, circular emblem. It features a central blue swoosh that curves upwards and to the right, set against a background of yellow and orange swooshes that curve downwards and to the right. The entire emblem is enclosed within a larger, semi-transparent red circular shape.

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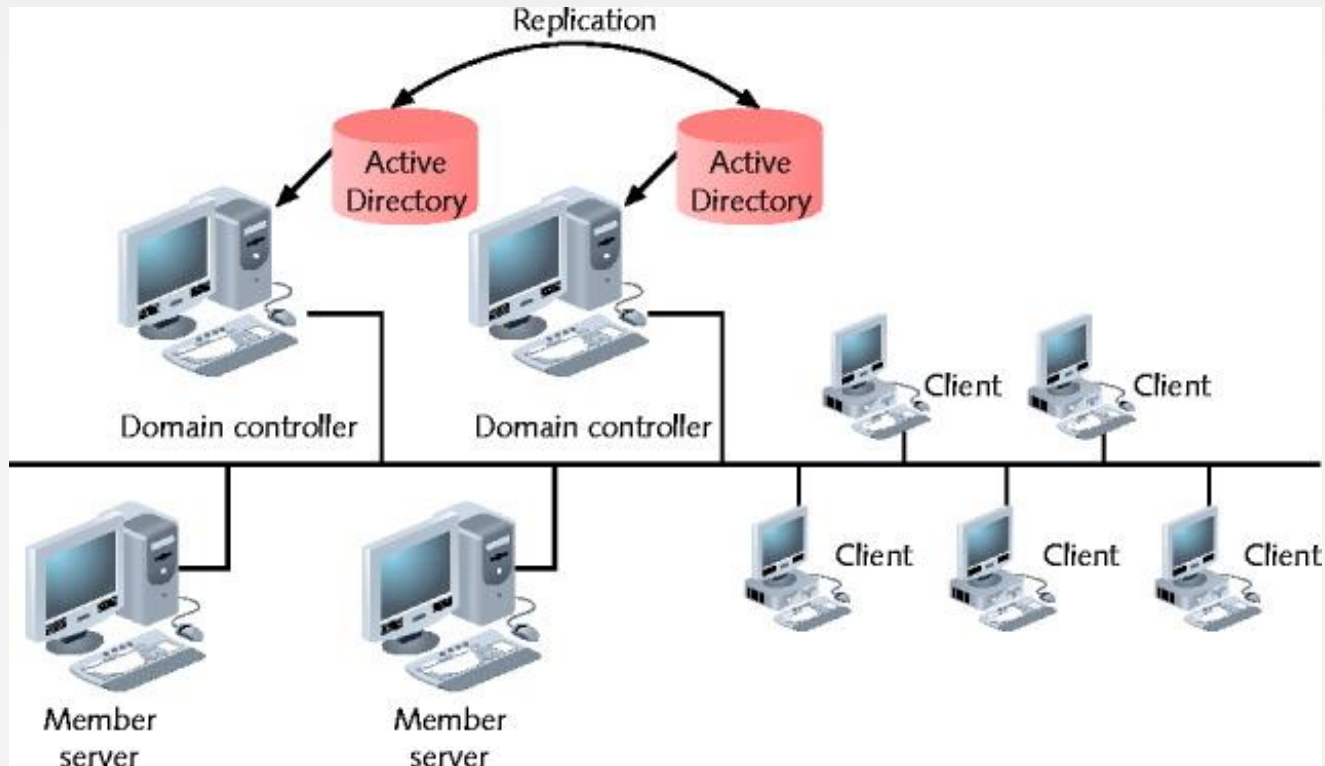
Domains

- Client/server network with a shared database
- Domain - Group of users, servers, and other resources
 - Share centralized account and security information in a database
- Active Directory
 - Contains domain database with objects and attributes and schema
 - Makes it easier to organize and manage resources and security

Active Directory - Domains

- Domain not confined by geographical boundaries
- Domain controller servers
 - Contains directory information about objects in a domain
- Member servers
 - Do not store directory information, can't be used to authenticate users
- Replication
 - Process of copying directory data to multiple domain controllers

Domains



Domain model on a Windows Server 2008 network

Active Directory

- Objects fall into two broad categories:
 - resources (e.g., printers)
 - security principals (user or computer accounts and groups).
 - Security principals are assigned unique security identifiers (SIDs)
 - This is where access rights are given
 - Users must have unique names – flat database

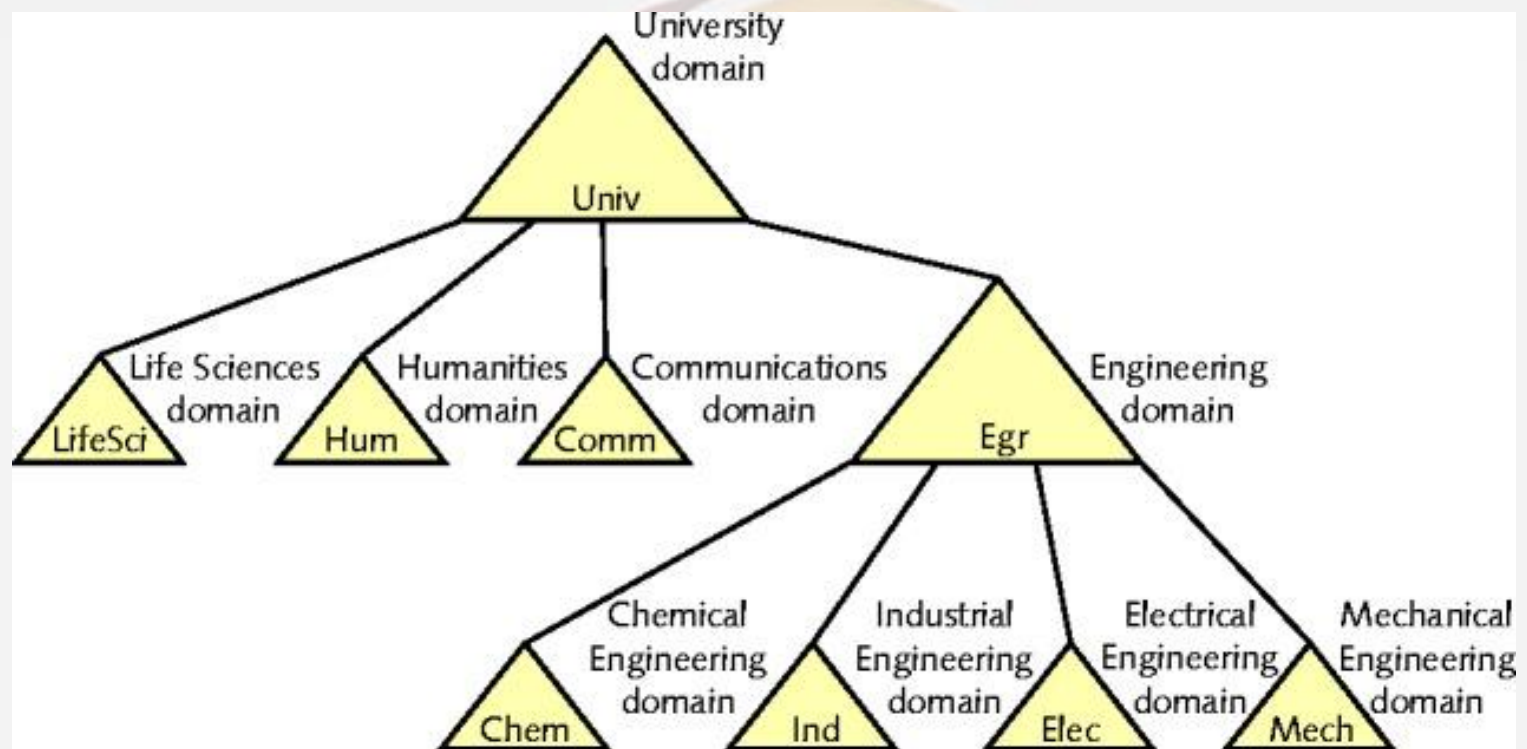
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OUs (Organizational Units)

- Hold multiple objects having similar characteristics
 - Can be nested
 - Can contain other OUs or objects
- Provides simpler, more flexible administration
 - Apply policies to OU
 - Do not function as containers
 - Use users or groups for access permissions

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Domains



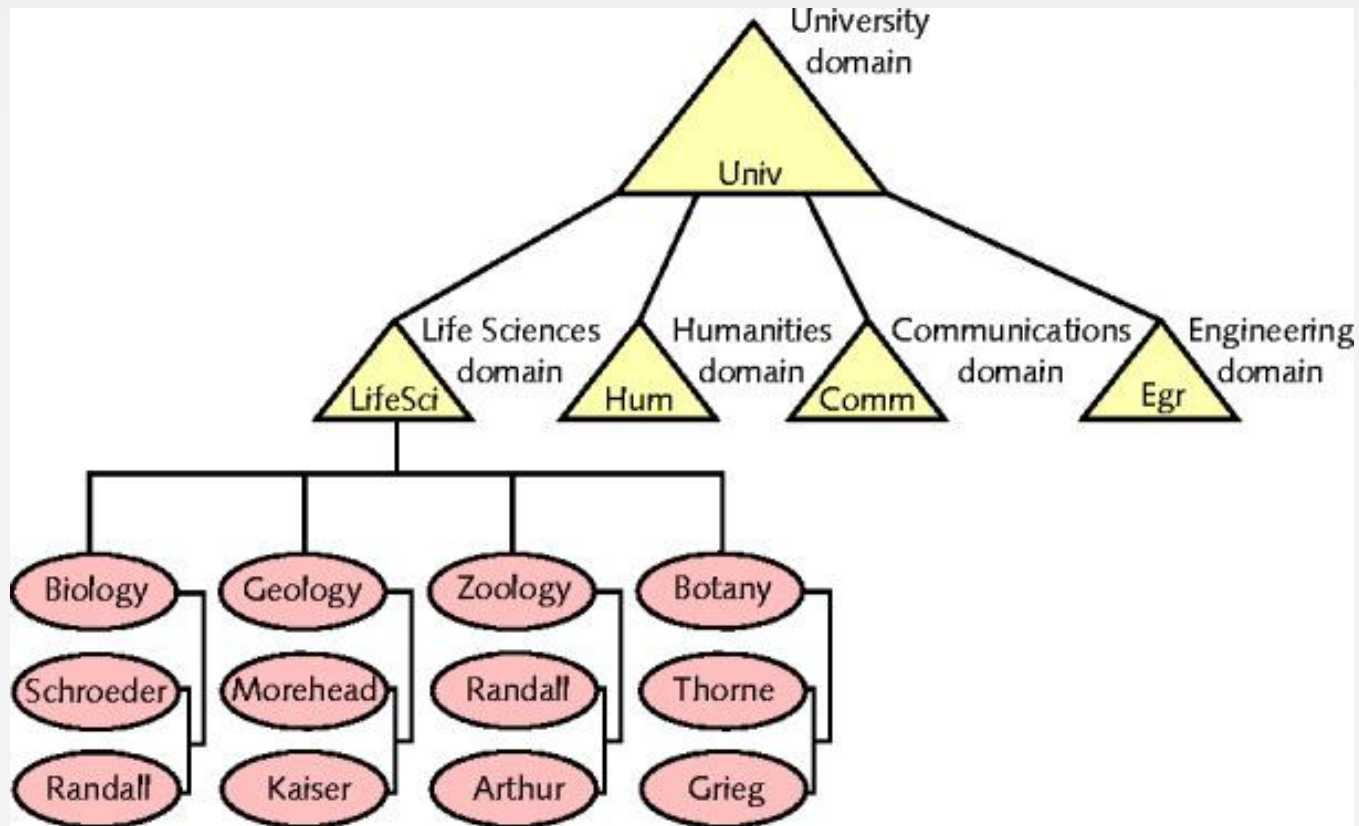
Multiple domains in one organization

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Trees and Forests

- Directory structure above domains
 - Large organizations use multiple domains
- Domain tree
 - Organizes multiple domains hierarchically
- Root domain
 - Active Directory tree base
- Child domains
 - Branch off from root domain

Trees and Forests



A tree with multiple domains and OUs

Trees and Forests

- Forest

A collection of one or more domain trees

Trees share common schema

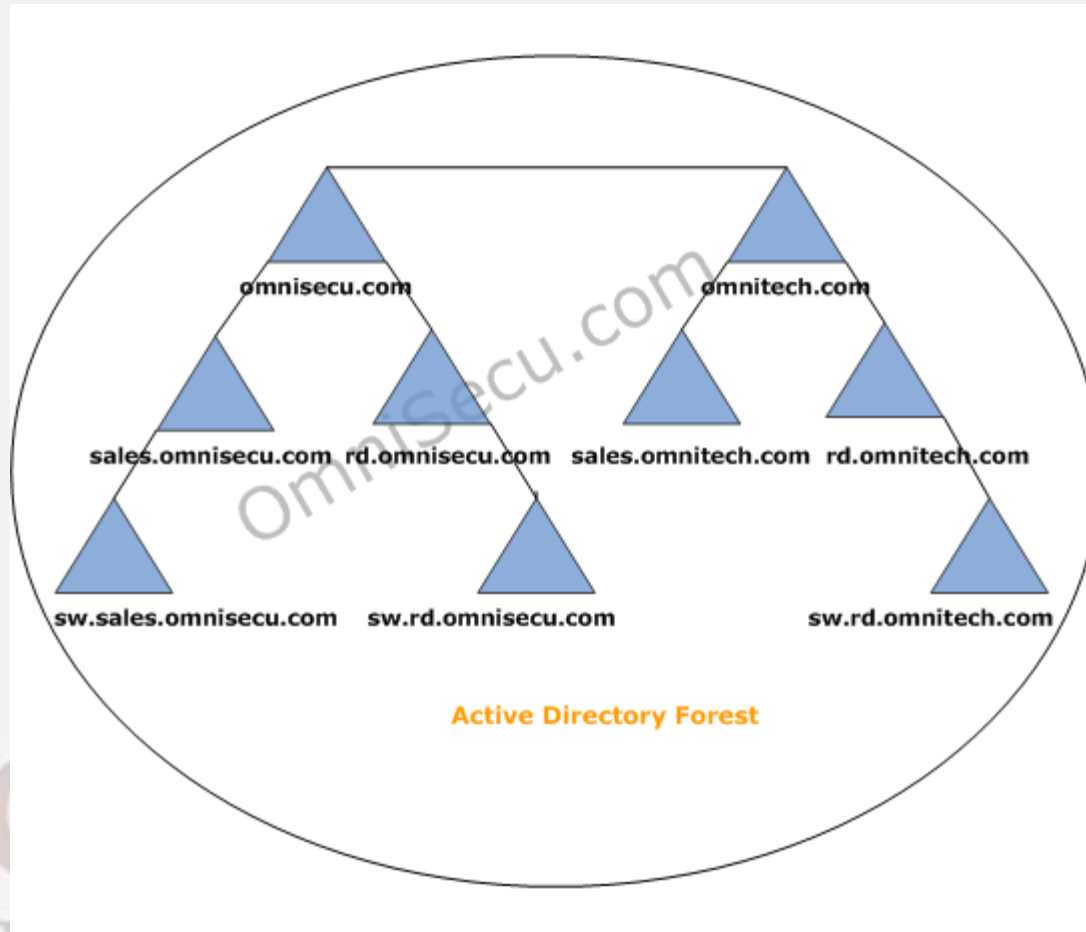
- Domains within a forest can communicate

- Domains within same tree

Share common Active Directory database

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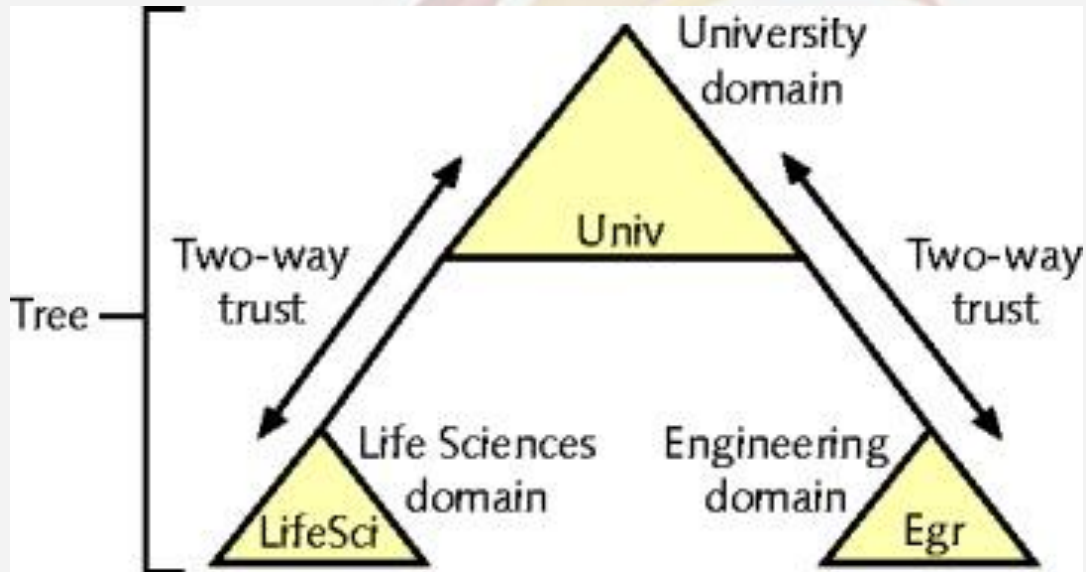
Two Tree - Forest



Trust Relationships

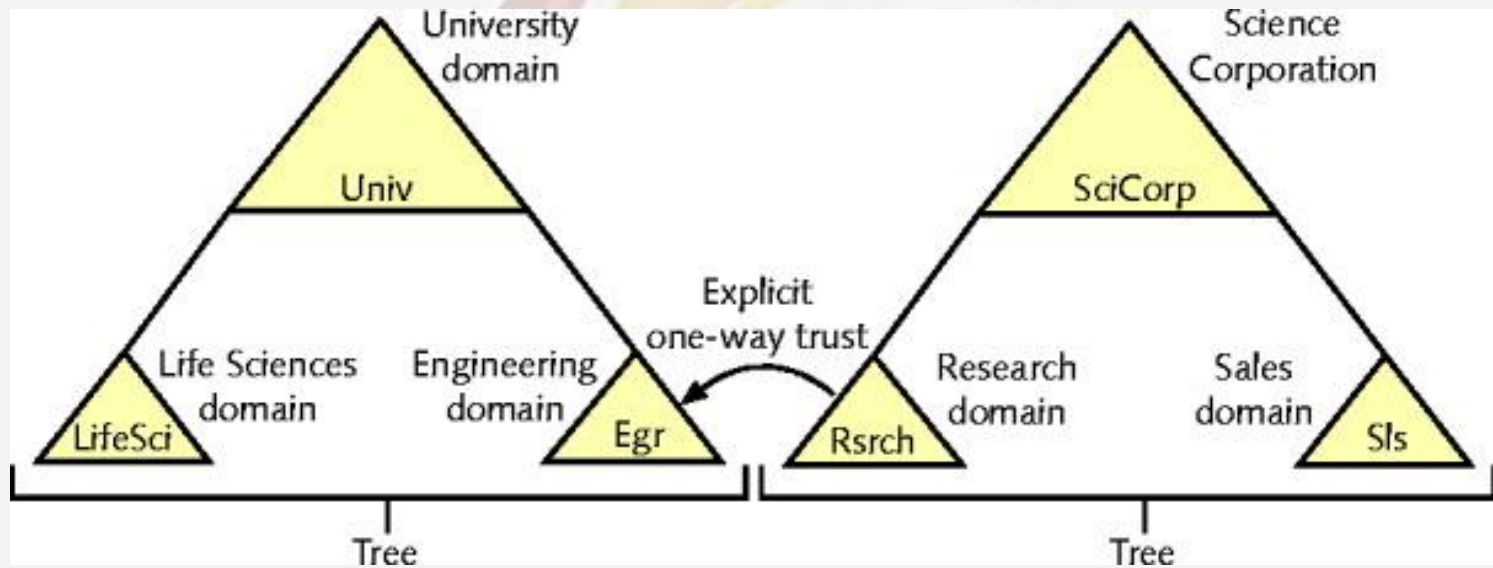
- Relationship between two domains
 - One domain allows another domain to authenticate its users
- Active Directory supports two trust relationship types – allows users to authenticate
 - Two-way transitive trusts
 - Explicit one-way trusts

Trust Relationships



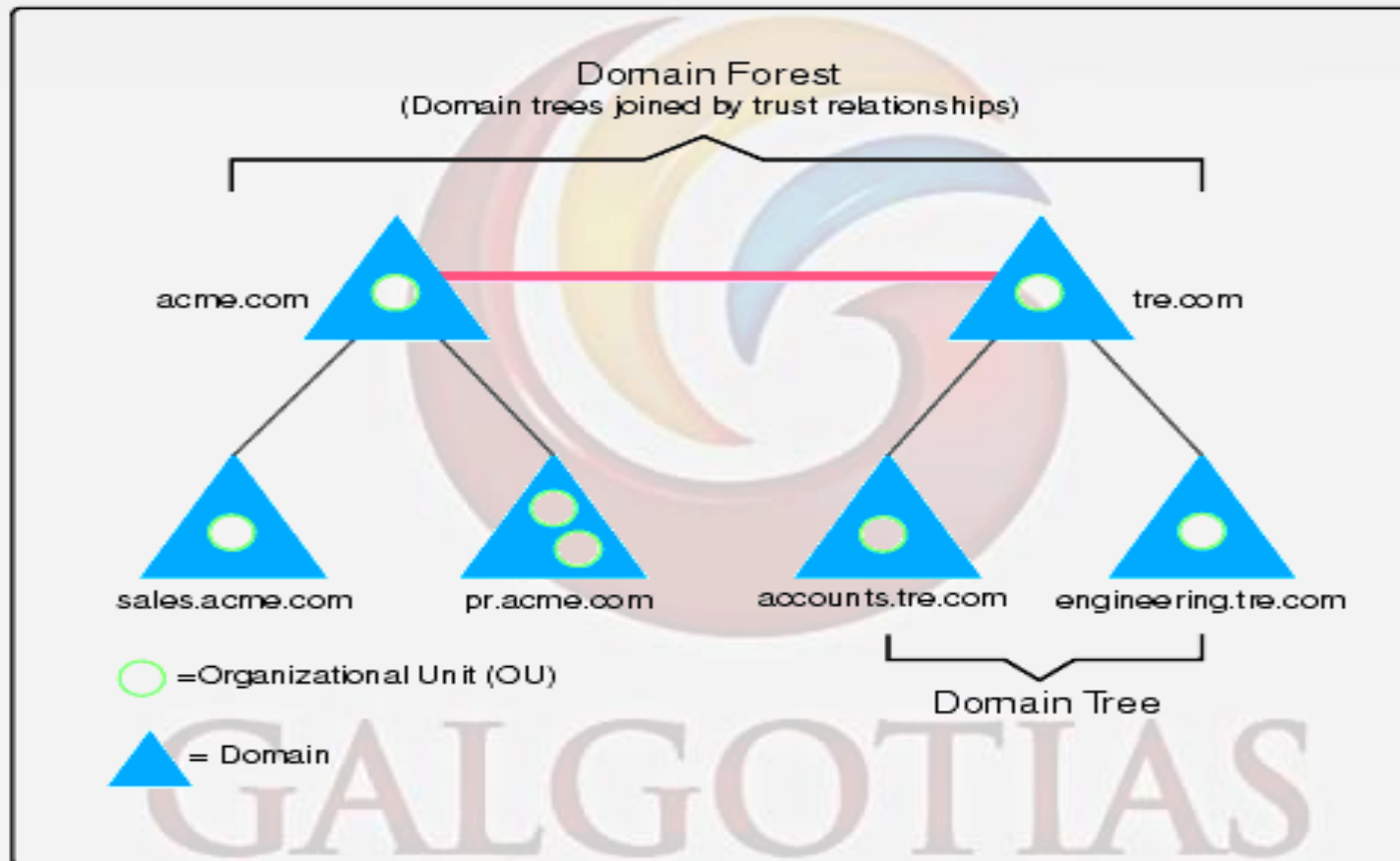
Two-way trusts between domains in a tree

Trust Relationships



Explicit one-way trust between domains in different trees

Trust Relationships



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Summary

- Domains
- Forests
- Trees
- AD Objects
- Trust

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Thank You