Active Directory Fundamentals
What Will We Cover?

• Active Directory concepts
• Domains, trees, forests
• Domain controllers, sites
• Domain Naming Service
• Replication
• Operations masters
Helpful Experience

- Experience with the Windows user interface
- Experience supporting Microsoft networks

Level 200
Agenda

• Logical Concepts of Active Directory
• Physical Concepts of Active Directory
• DNS in 10 Minutes
• Overview of Active Directory Replication
• The role played by Operations Masters
What Is a Directory Service?

A service that helps track and locate objects on a network

Active Directory Management
What Is a Directory Service?

A service that helps track and locate objects on a network

Active Directory Management

- Workstations
- Services
- Files
- Users
Active Directory Domains

CONTOSO.COM
Active Directory Domains

Boundary of Authentication

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Active Directory Domains

Boundary of Authentication

Boundary of Policies

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Active Directory Domains

Boundary of Authentication

Boundary of Policies

Boundary of Replication

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Active Directory Trees

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US.CONTOSO.COM

OHIO.US.CONTOSO.COM
Active Directory Trees

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OHIO.US.CONTOSO.COM

Shared Schema

Configuration

Global Catalog
Transitive Trusts

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UK.CONTOSO.COM
Transitive Trusts

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UK.CONTOSO.COM
Active Directory Forests

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- FABRIKAM.COM
- US.CONTOSO.COM
- UK.FABRIKAM.COM

- Schema
- Configuration
- Global Catalog
demonstration

Reviewing Domains and Trusts
Organizational Units

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Organizational Units

Organized For:
- Administration
- Same Requirements
- Delegation

OU Admin

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Organizational Units

Organized For:
- Administration
- Same Requirements
- Delegation
- Group Policy
- Configuration

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OU Admin
OU Policy
Organizational Units

Organized For:
• Administration
  • Same Requirements
  • Delegation
• Group Policy
  • Configuration
  • Security
Organizational Unit Applications

Sales Department

Marketing Department
Organizational Unit Applications

London

New York
Organizational Unit Applications

Desktops

Printers
demonstration

Using Organizational Units
- Review Organizational Units
- Create New Organizational Units
Agenda

• Logical Concepts of Active Directory
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Domain Controllers

Windows NT 4.0
Domain Controllers

Windows NT 4.0

Windows Server 2003
Active Directory Sites

Site A

WAN Link

Site B
Active Directory Sites

Sites Used To:
• Locate Services
Active Directory Sites

Sites Used To:
• Locate Services
• Optimize Replication
Active Directory Sites

Sites Used To:
- Locate Services
- Optimize Replication
- Define Policies
Sites and Domains
Sites and Domains

US.CONTOSO.COM

CONTOSO.COM

Site A

Site B
Global Catalog

• Spans all domains
• Contains object attributes
• Used for searches
• Exists on domain controllers
demonstration

Using Sites and Global Catalogs

- Create a Site
- Review Global Catalog Settings
- Choose Global Catalog Attributes
Agenda

• Logical Concepts of Active Directory
• Physical Concepts of Active Directory
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Domain Naming System locates network services and resources.

DNS Request Process

- Requested Service
- Site Information

DNS Server

DC
Domain Naming System locates network services and resources.

DNS Request Process

- Requested Service
- Site Information
- IP Addresses
- SVR Records

DNS Server

Cache

DC
Domain Naming System locates network services and resources.

DNS Request Process

- Requested Service
- Site Information
- IP Addresses
- SVR Records

DNS Server

Cache

DC
## DNS Systems and Requirements

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<tr>
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* Required for Active Directory
DNS Migration

- Upgrade to BIND 9.x
- Upgrade to Microsoft DNS
- Delegate to Microsoft DNS
demonstration

Working with DNS

- Review DNS Zones
- Review Host Records and Dynamic Update
Agenda

• Logical Concepts of Active Directory
• Physical Concepts of Active Directory
• DNS in 10 Minutes
• Overview of Active Directory Replication
• The role played by Operations Masters
Replication Scope

Across Forest:
• Schema NC
Replication Scope

Across Forest:
- Schema NC
- Configuration NC
Replication Scope

Across Forest:
• Schema NC
• Configuration NC

Across Domain
• Domain NC
More Replication Scope

Intrasite (Token Ring)
More Replication Scope

Intersite (Compressed)

Intrasite (Token Ring)
demonstration

Working with Replication

- Enable Replication
- Review Replication
Agenda

• Logical Concepts of Active Directory
• Physical Concepts of Active Directory
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• The role played by Operations Masters
Operations Masters

- Performs operation exclusively
- Within designated scope
- Defaults to first domain controller
Operations Master Roles

Forest Roles

- Schema Master
- Domain Master
Operations Master Roles

Forest Roles
- Schema Master
- Domain Master

Domain Roles
- PDC Emulator
- RID Master
- Infrastructure
Session Summary

• Manage and control your network resources more easily with OUs.

• Upgrade to the free Microsoft DNS package for enhanced integration.

• Active Directory replication protects data and optimizes network traffic.
For More Information

Visit TechNet at
www.microsoft.com/technet

Visit the following URL for additional information

www.microsoft.com/technet/ADD-01
or
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## Training Resources

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<td>Jumpstart: Active Directory Fundamentals</td>
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