

MICROSOFT OFFICIAL COURSE

## Module 2

# Windows Server Roles

## Module Overview

- Role-Based Deployment
- Deploying Role-Specific Servers

# Lesson 1: Role-Based Deployment

- What Is a Server Role?
- What Are Role Services?
- What Are Features?
- Overview of Server Manager

# What Is a Server Role?

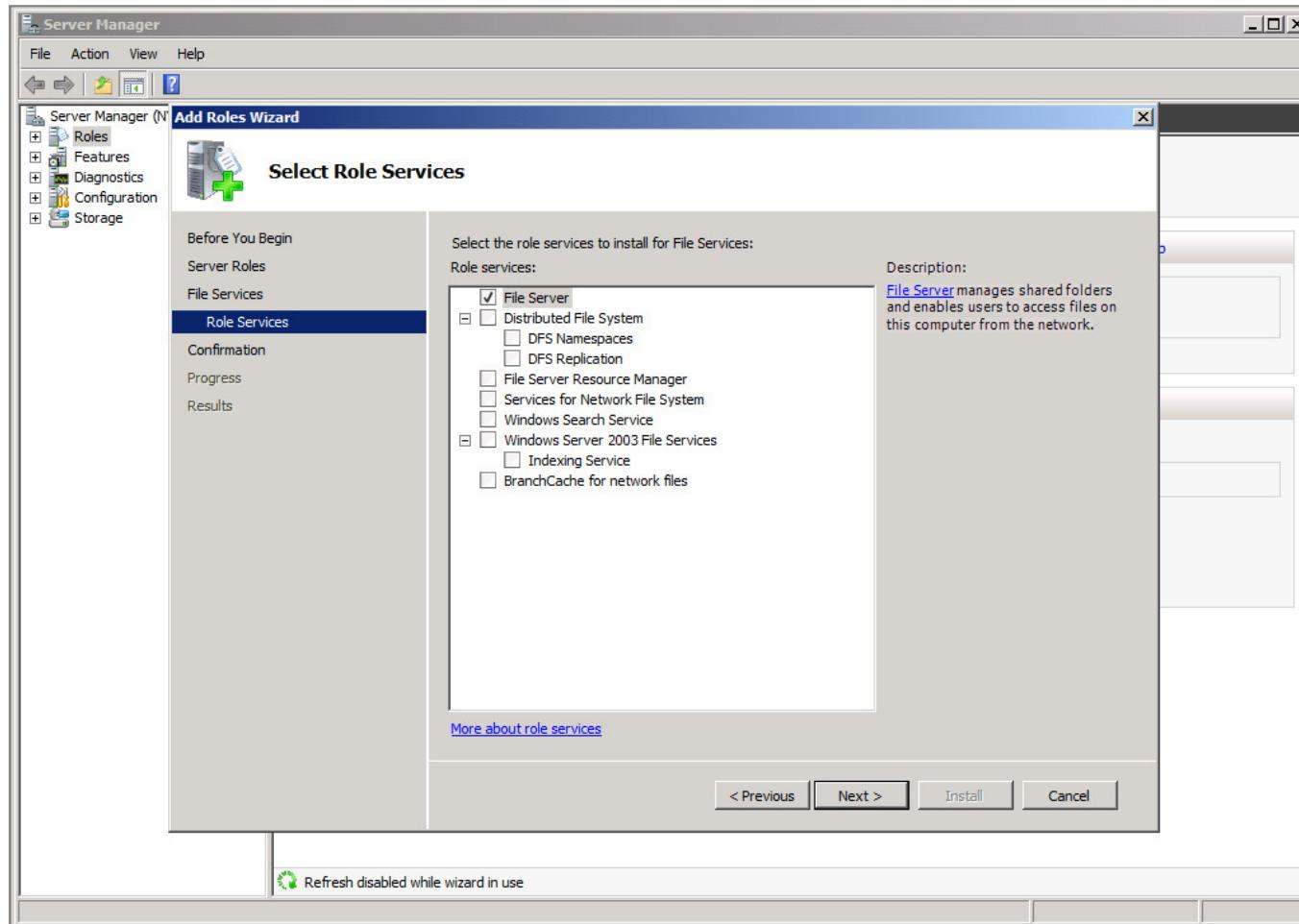
**Server roles in Windows Server 2008 R2 describe a server's primary function**

## Server roles:

- **Active Directory Certificate Services**
- **Active Directory Domain Services**
- **Active Directory Federation Services**
- **Active Directory Lightweight Directory Services**
- **Active Directory Rights Management Services**
- **Application Server**
- **DHCP Server**
- **DNS Server**
- **Fax Server**
- **File Services**
- **Hyper-V**
- **Network Policy and Access Services**
- **Print and Document Services**
- **Remote Desktop Services**
- **Web Server (IIS)**
- **Windows Deployment Services**
- **Windows Server Update Services**

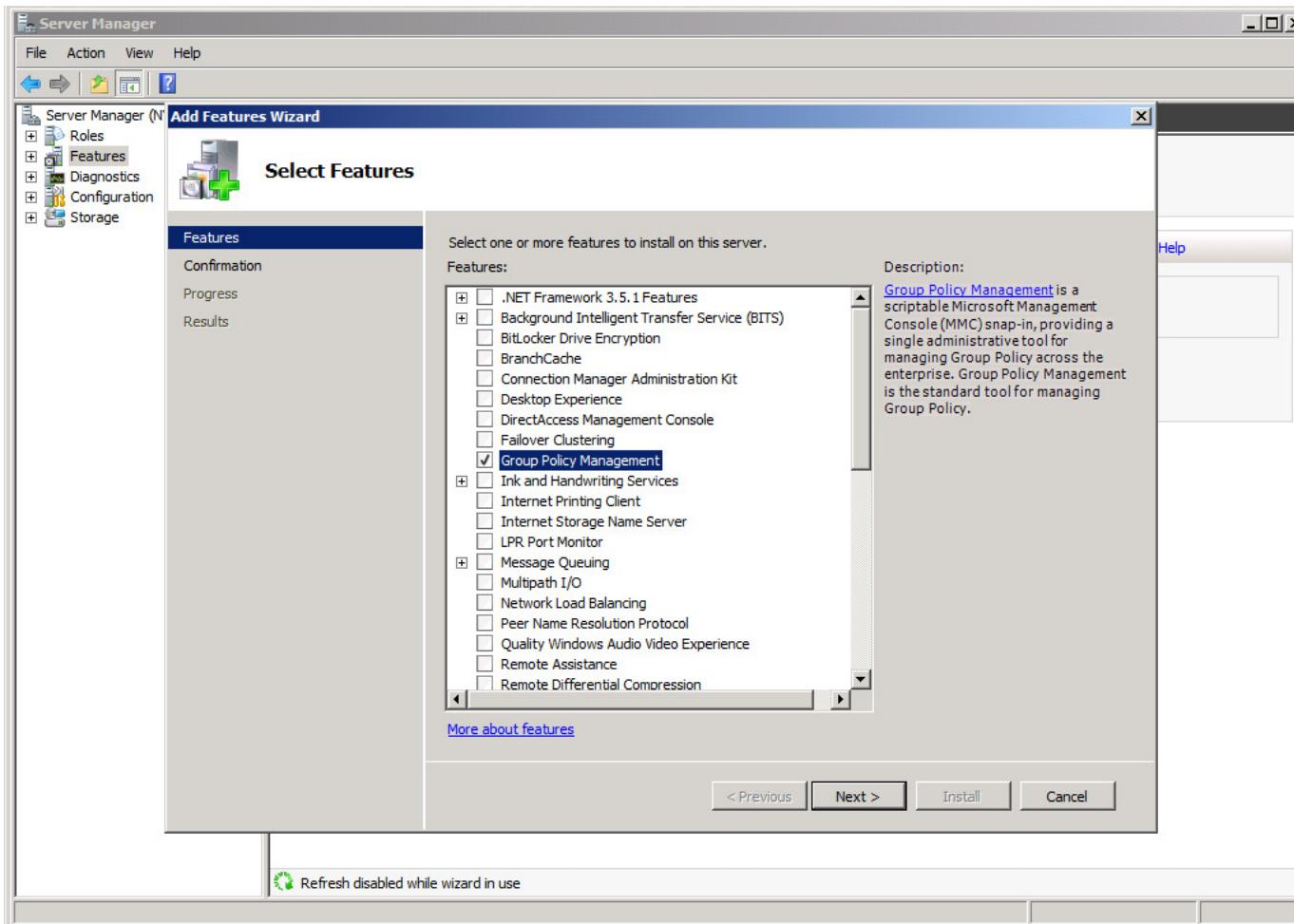
# What Are Role Services?

**Role services allow you to control which role functionality is installed and enabled**

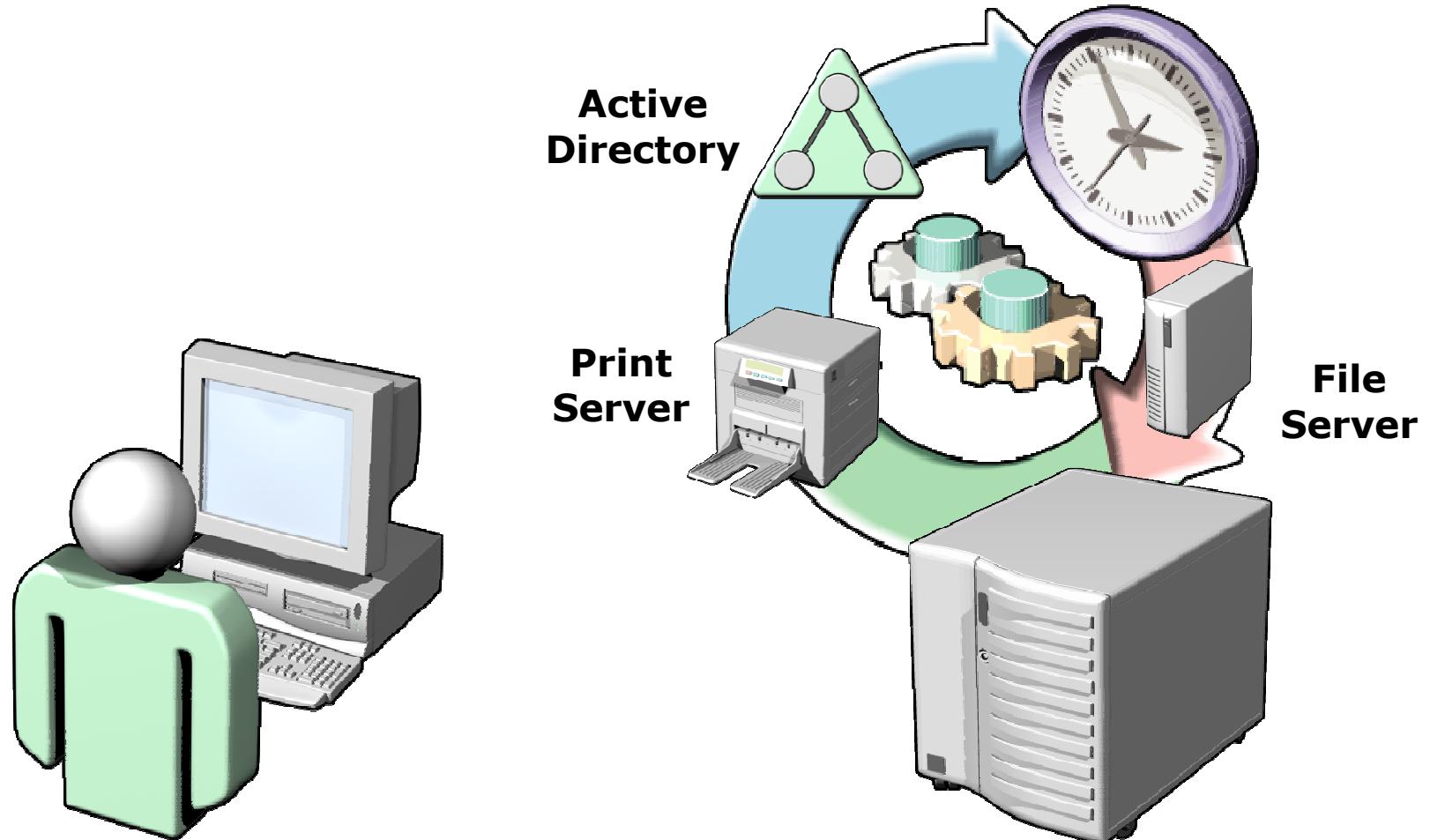


# What Are Features?

**Server features provide auxiliary or supporting functions to servers**



# Overview of Server Manager



## Demonstration: How to Manage Roles and Features

- In this demonstration, you will see how to add roles and features to a server

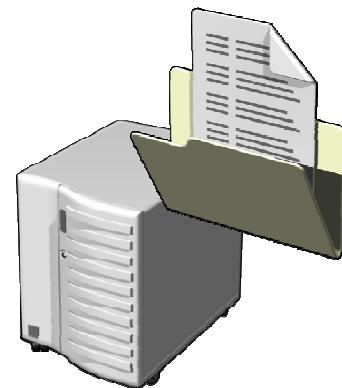
## Lesson 2: Deploying Role-Specific Servers

- What Is a File Server?
- What Is a Domain Controller?
- What Is an Application Server?
- What Is a Web Server?
- What Is a Remote Access Server?

# What Is a File Server?

**A file server:**

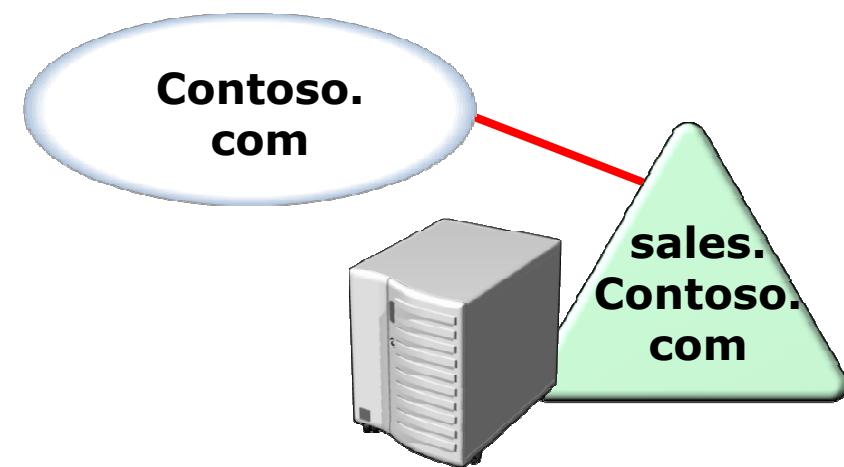
- **Provides storage for users' files**
- **Shares the folders that contain users' files**
- **Ensures appropriate levels of access to users' files through security settings**
- **Provides backup and restore mechanisms**



# What Is a Domain Controller?

**A domain controller:**

- **Holds a copy of AD DS**
- **Responds to requests for Active Directory information**
- **Authenticates users to the network**
- **Is located by querying DNS**



# What Is an Application Server?

**An application server is a computer that is dedicated to running network-aware application software**

**The applications that run on application servers are typically divided into two categories:**

- **Traditional applications**
- **Web-based applications**

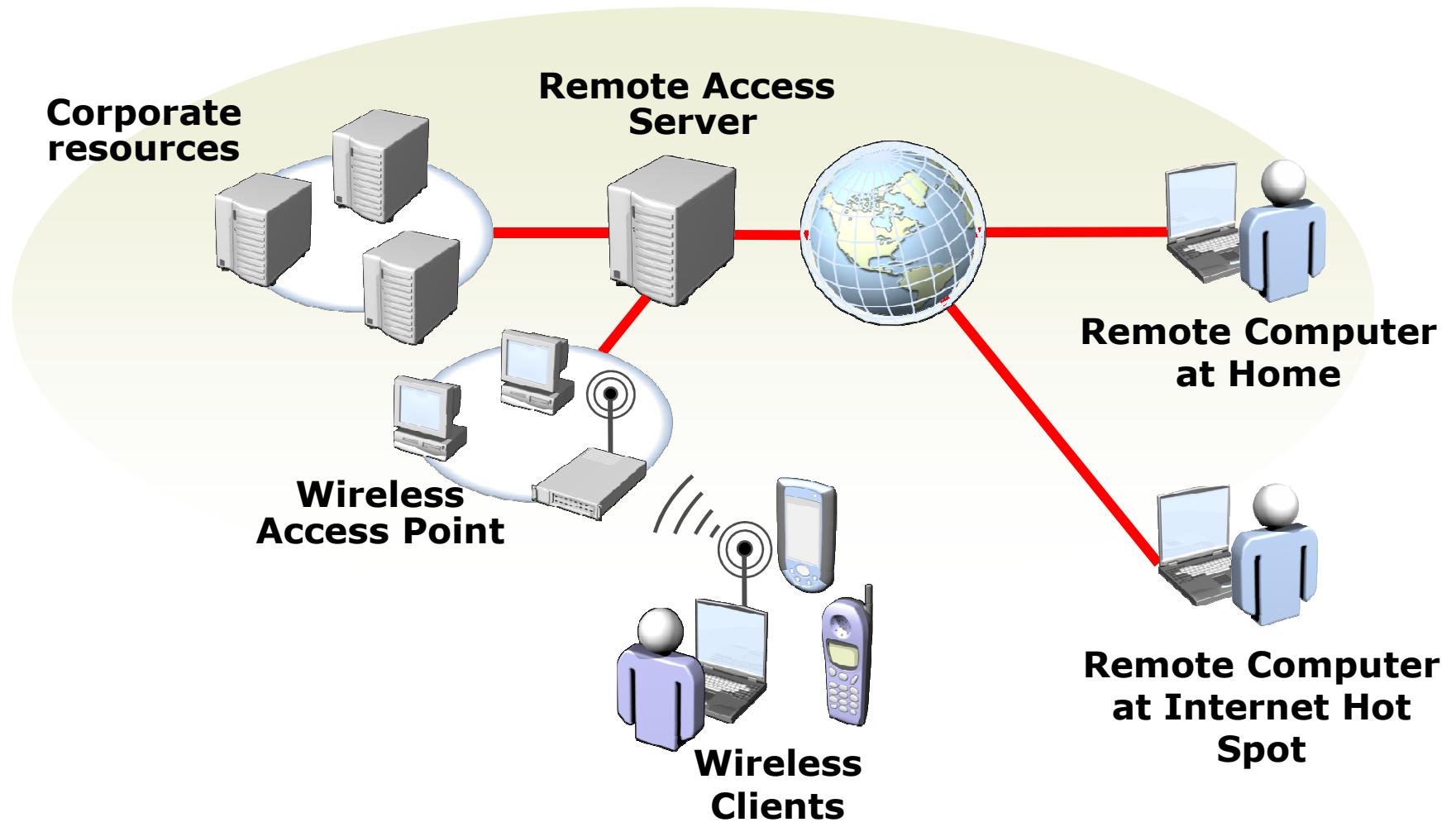
# What Is a Web Server?

**A Web server is a server computer attached to either the Internet or the corporate intranet providing content:**

- **Static Content**
- **Web-based applications**
- **Streaming Content**

# What Is a Remote Access Server?

**Remote access is access to corporate resources from outside the corporate network**



# DHCP Service

**DHCP reduces the complexity and amount of administrative work by using automatic TCP/IP configuration**

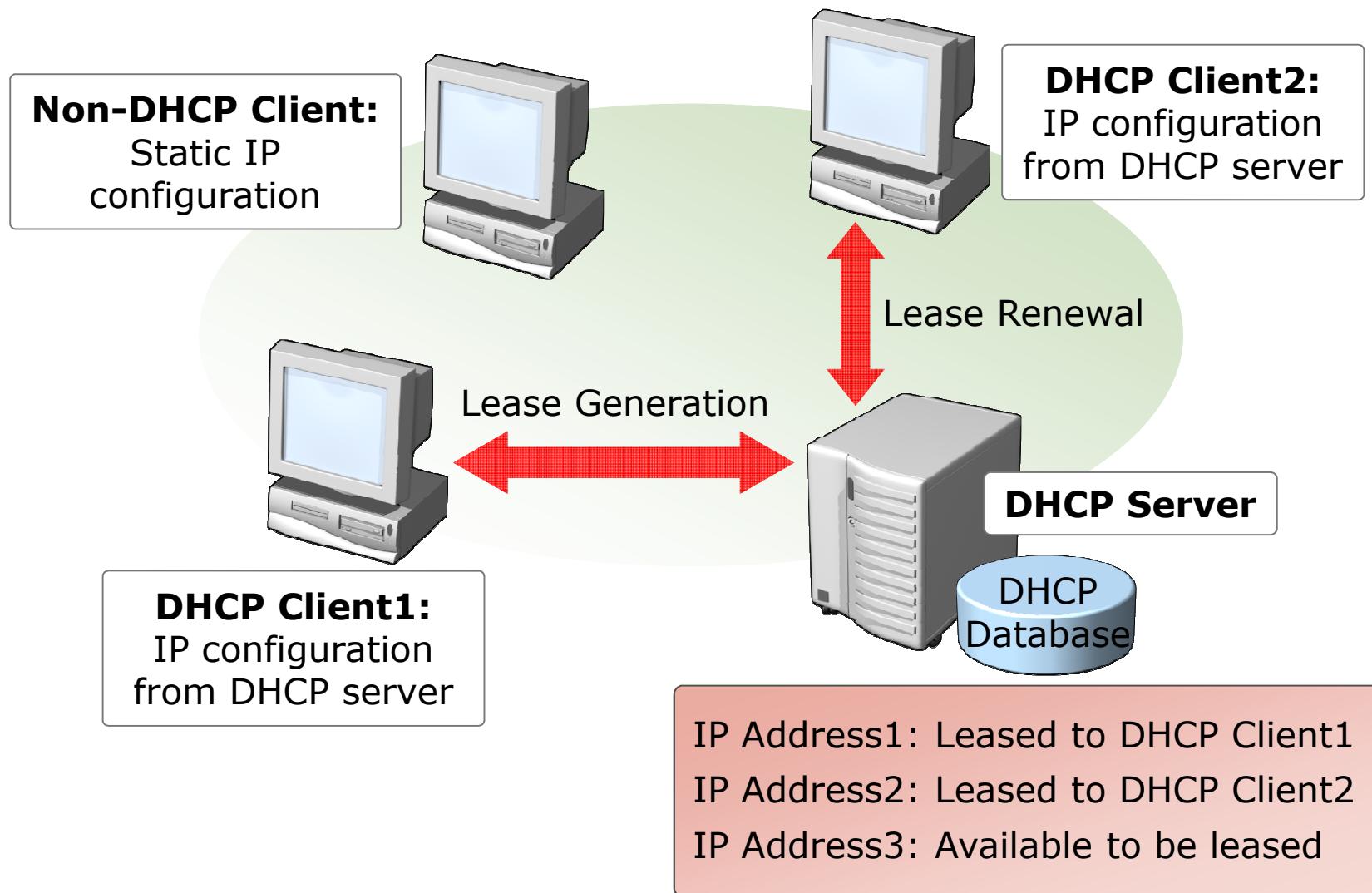
## Manual TCP/IP Configuration

- IP addresses are entered manually
- IP address could be entered incorrectly
- Communication and network issues can result
- Frequent computer moves increase administrative effort

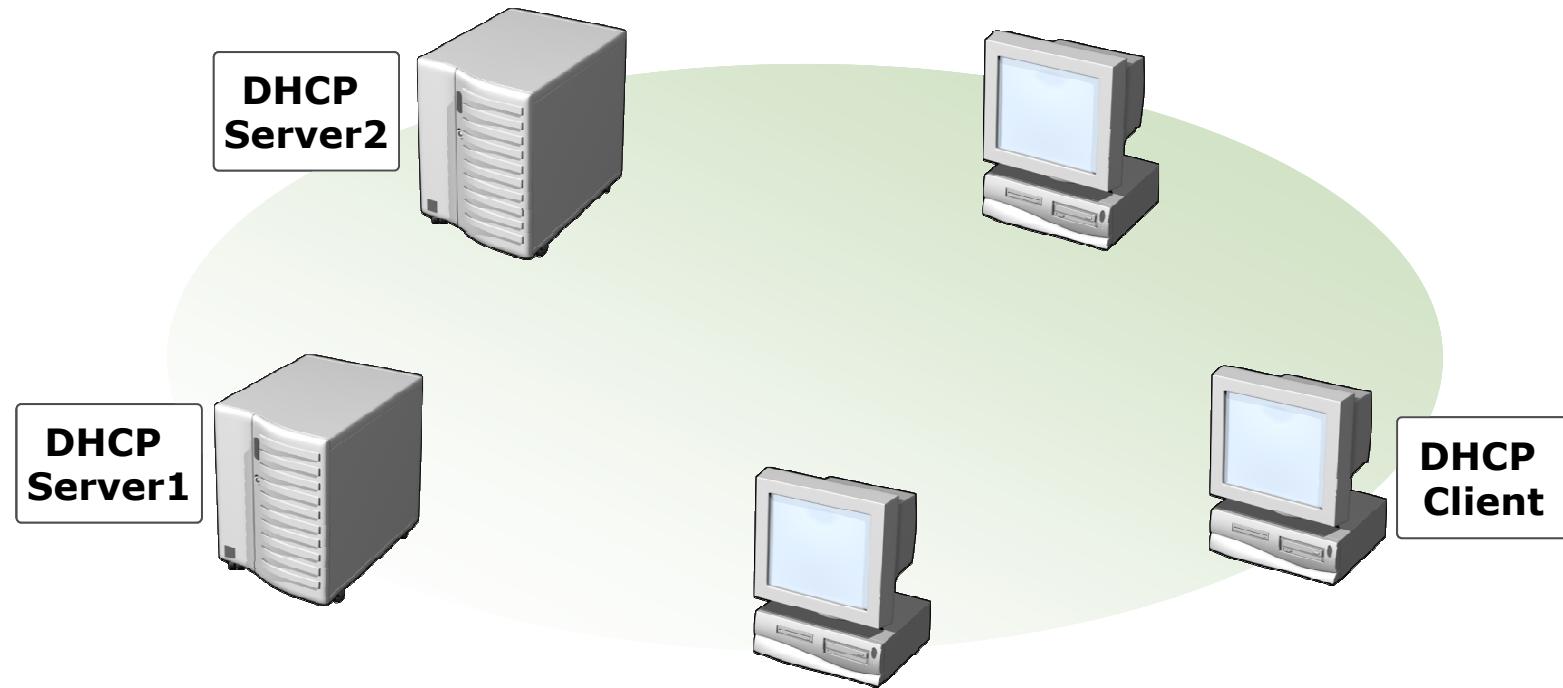
## Automatic TCP/IP Configuration

- IP addresses are supplied automatically
- Correct configuration information is ensured
- Client configuration is updated automatically
- A common source of network problems is eliminated

# How DHCP Allocates IP Addresses



# How DHCP Lease Generation Works



1 **DHCP client broadcasts a DHCPDISCOVER packet**

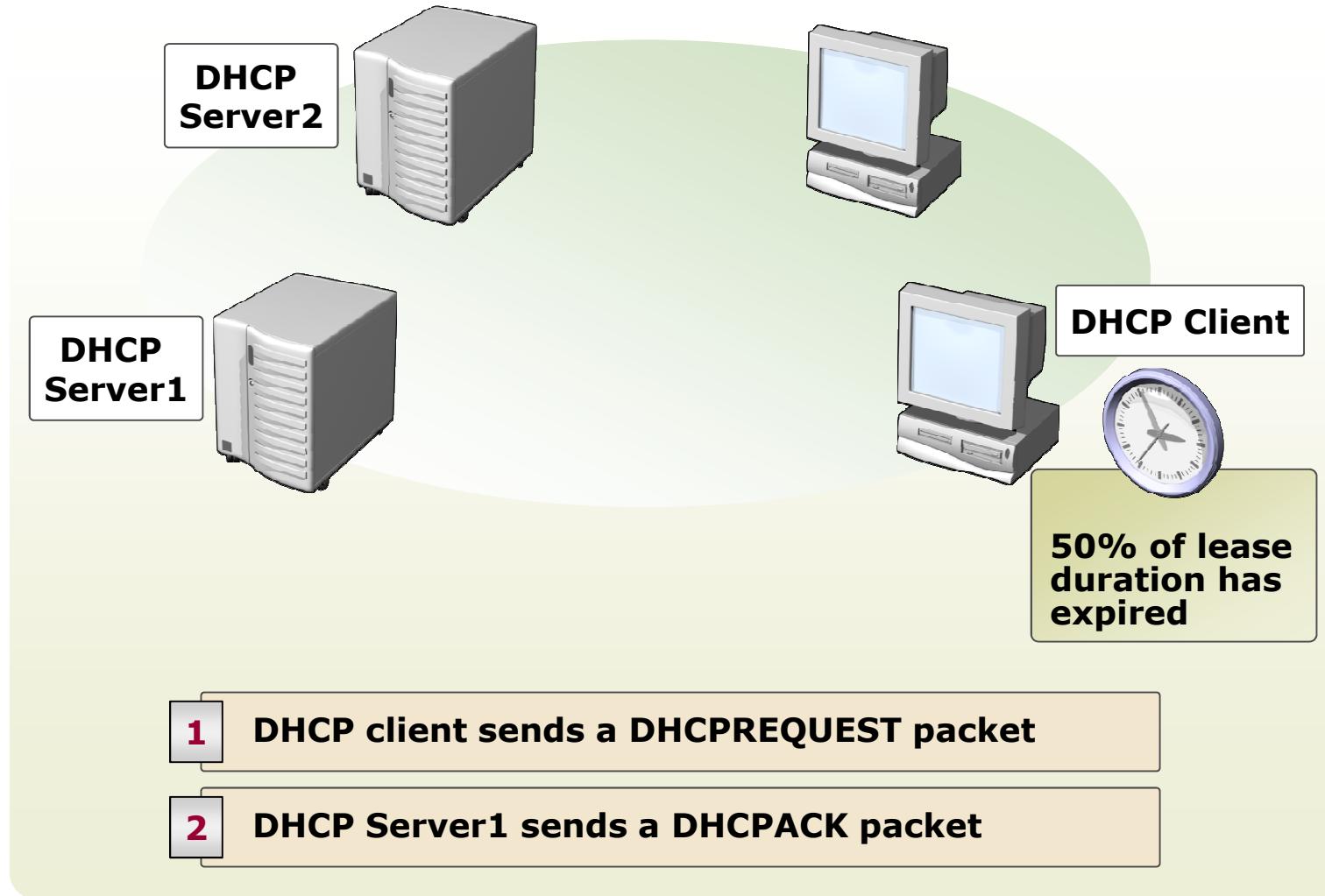
2 **DHCP servers broadcast a DHCPOFFER packet**

3 **DHCP client broadcasts a DHCPREQUEST packet**

4 **DHCP Server1 broadcasts a DHCPACK packet**



# How DHCP Lease Renewal Works

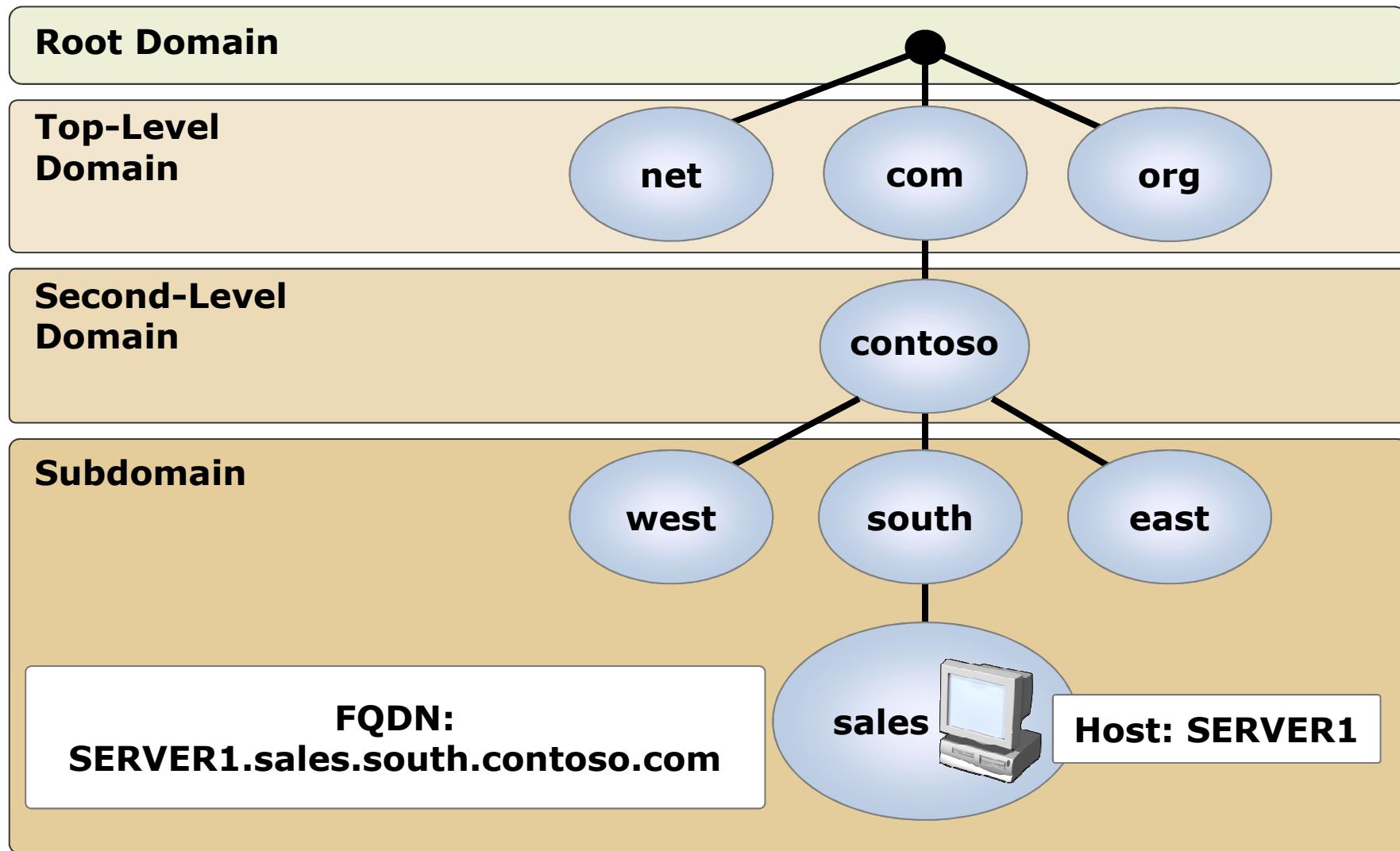


# Domain Name System Role

***Domain Name System is a hierarchical distributed database***

- **DNS is the foundation of the Internet naming scheme**
- **DNS supports accessing resources by using alphanumeric names**
- **DNS was created to support the Internet's growing number of hosts**

# Overview of the DNS Namespace



## Module Review and Takeaways

- Review Questions
- Tools
- Best Practices