

# Microsoft® Official Course



Module 6

Windows Server Roles

**Microsoft®**

# Module Overview

- Role-Based Deployment
- Deploying Role-Specific Servers
- Considerations for Provisioning Roles

# Lesson 1: Role-Based Deployment

- What Is a Server Role?
- What Are Features?
- What Is Server Manager?
- Demonstration: How to Deploy Server Roles and Features

# What Is a Server Role?

- Server roles in Windows Server 2012 describe a server's function

- Active Directory Certificate Services
- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Application Server
- Dynamic Host Configuration Protocol (DHCP) Server
- Domain Name Service (DNS) Server

- Fax Server
- File and Storage Services
- Hyper-V
- Network Policy and Access Services
- Print and Document Services
- Remote Access
- Remote Desktop Services (RDS)
- Volume Activation Services
- Web Server (IIS)
- Windows Deployment Services
- Windows Server Update Services (WSUS)

# What Are Features?

- Role services allow you to control which role functionality is installed and enabled
- Server features:
  - Are components that support the server, such as Windows Server Backup or failover clustering
  - Usually do not provide a service directly to clients on the network
- Features on Demand reduce the *feature payload* to conserve space but require a mounted image to restore

# What Is Server Manager?

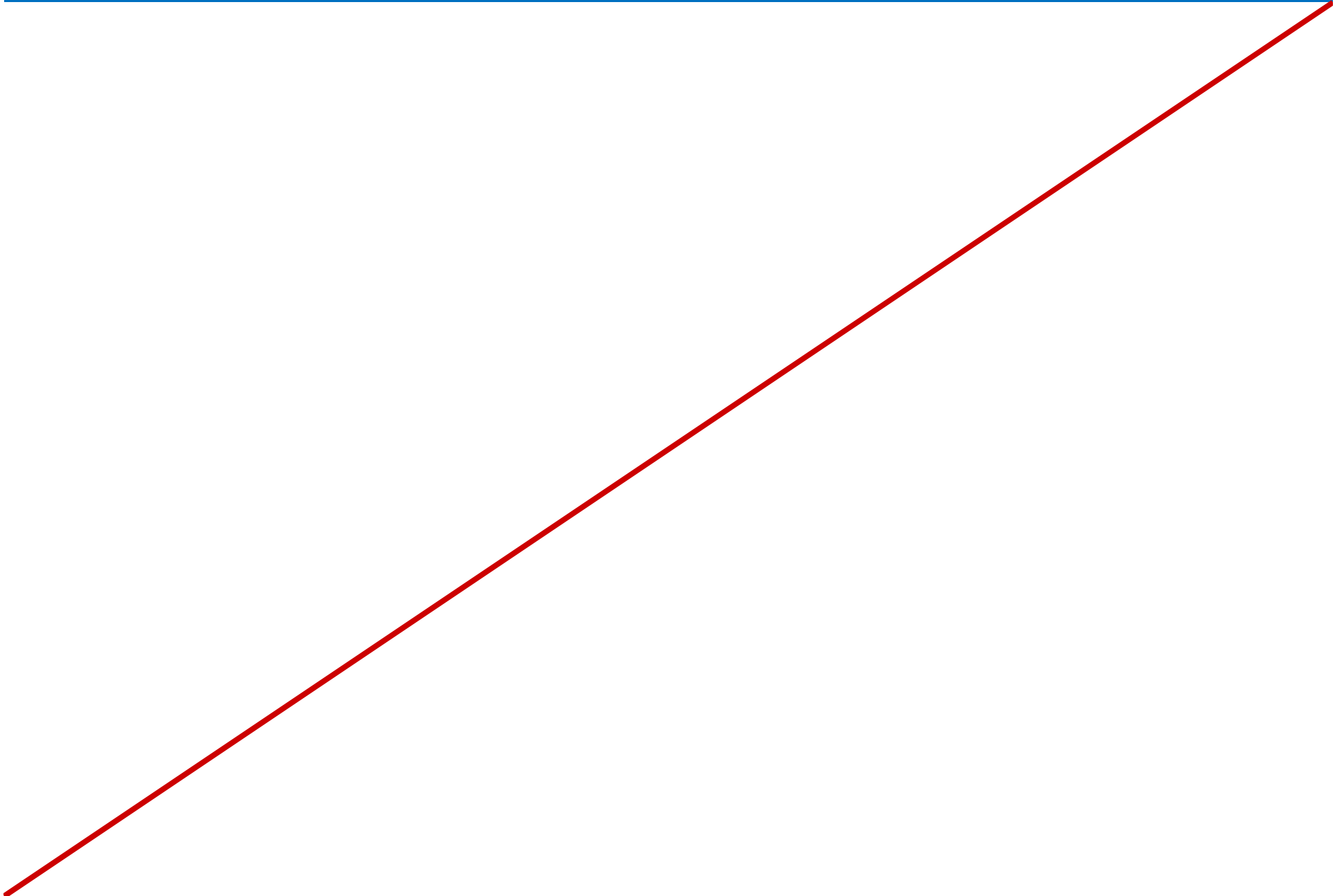
You can use Server Manager to:

- Add and remove roles and features
- Manage multiple servers on the network from one console
- Manage and view server and server group status
- Perform various server management tasks
- Access local management tools, such as networking, firewalls, remote management settings
- Access all available management consoles, such as DNS, DHCP, and Services

# Demonstration: How to Deploy Server Roles and Features

- In this demonstration, you will see how to add Roles and Features to a Windows Server 2012 server

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## Lesson 2: Deploying Role-Specific Servers

- What Are File and Print Servers?
- What Is an Application Server?
- What Is a Web Server?
- What Is a Remote Access Server?
- Remote Server Administration Tools
- Demonstration: Remotely Manage Windows Server 2012 Servers

# What Are File and Print Servers?

- A file server provides the File and Storage Services role
  - 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
- File servers can often be combined with the Print Server role

# What Is an Application Server?

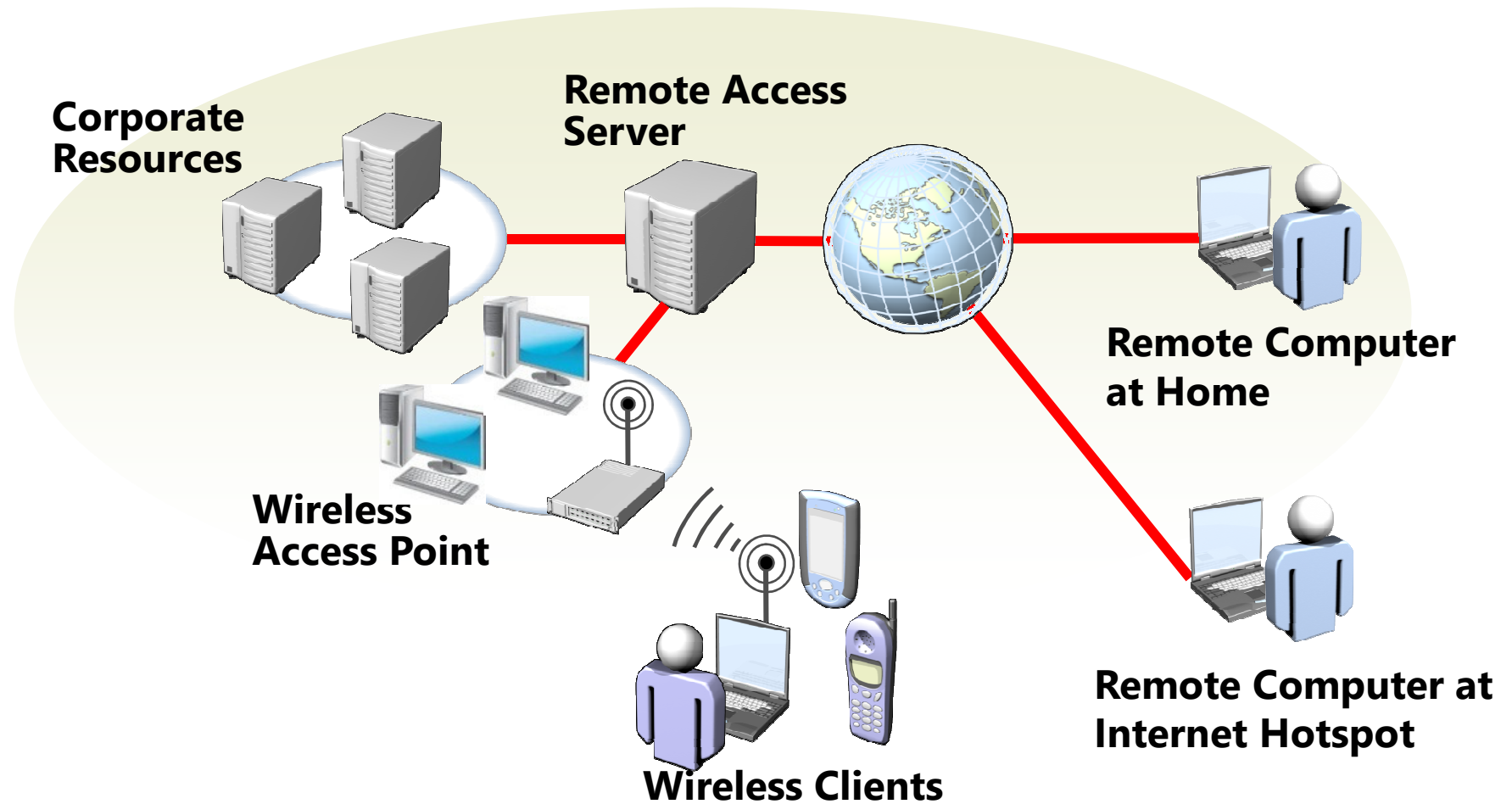
- An application server is a computer that is dedicated to running network-aware application software
- The applications that run on application servers are typically divided into two categories:
  - Client-server applications
  - Web-based applications

# What Is a Web Server?

- A web server is a server computer attached to either the Internet or the corporate intranet, and provides the following content:
  - Static content
  - Web-based applications
  - Streaming content
- When installing the Web Server (IIS) role, you can include the following:
  - Web Server
  - FTP Server
  - Management Tools
  - IIS Hostable Web Core

# What Is a Remote Access Server?

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



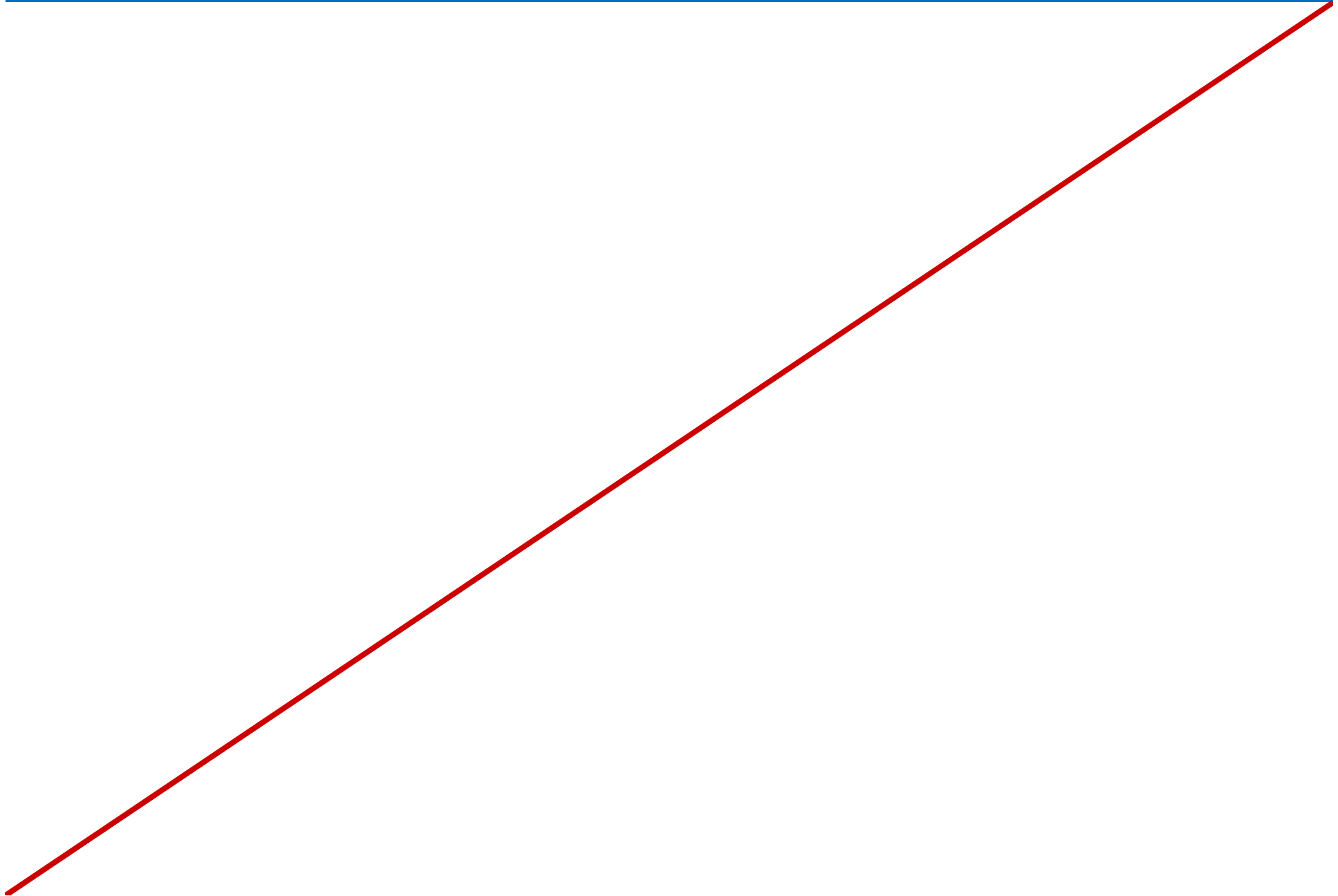
# Remote Server Administration Tools

- Remote Server Administration Tools (RSAT) allow for the remote management of Windows Servers using a windows client.
- Management ability is version specific
  - Only Win 7 client can manage Windows Server 2008 servers
  - Only Win8 client can manager Windows Server 2012 servers

## Demonstration: Remotely Manage Windows Server 2012 Servers

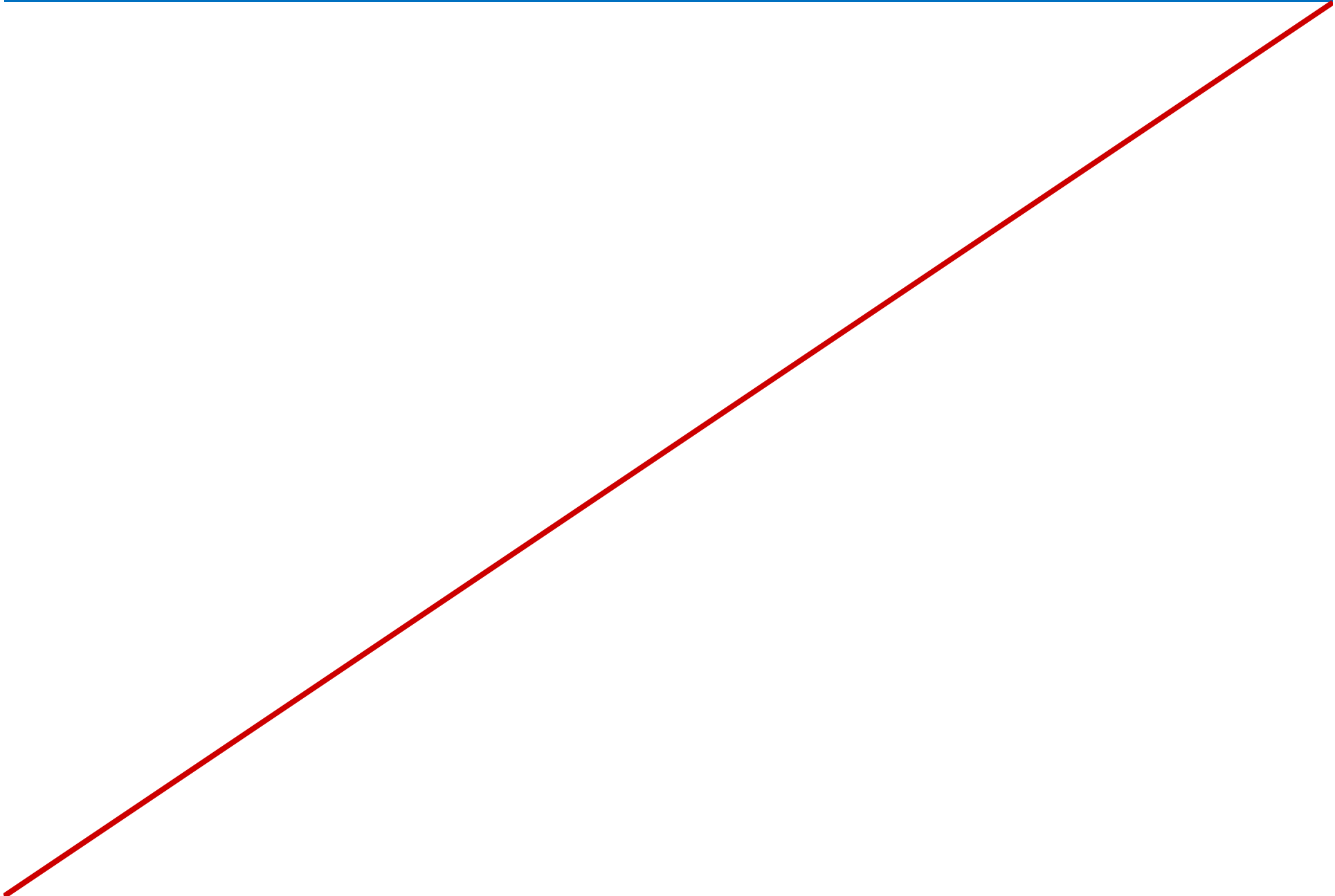
- In this demonstration, you will see how to remotely manage Windows Server 2012 servers using the RSAT for Windows 8

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## Lesson 3: Considerations for Provisioning Roles

- What Is Hyper-V?
- Hyper-V Capabilities
- On-Premise Servers
- What Are Cloud Services

# What Is Hyper-V?

- Hyper-V: a Windows Server 2012 role that allows for creation and provisioning of virtual instances of operating systems and applications
- Requirements:
  - Hardware:
    - x64 processors
    - Virtualization technology supported in CPU
    - Data Execution Prevention (DEP)
  - Resources
    - Available capacity in terms of storage, NICs, CPU, and memory to run multiple operating systems

# Hyper-V Capabilities

- Hyper-V is cornerstone of a range of Microsoft virtualization technologies:
  - Server virtualization
  - Desktop virtualization
  - RDS and VDI
  - Application virtualization
  - User-state virtualization
- Integrated with System Center product suite to allow for scalability and efficiency

# On-Premise Servers

- On-premise servers might be required for:
  - Infrastructure services
  - Shared files and printers
  - Hosted applications
  - Network access
  - App updates and operating system deployments
- Each organization has individual requirements

# What Are Cloud Services

- The provision of services and infrastructure to administrators and end users remotely
- Categories of services available via the cloud
  - Infrastructure as a service
  - Platform as a service
  - Software as a service

# Lab: Implementing Server Roles

- Exercise 1: Determining the Appropriate Roles to Deploy
- Exercise 2: Deploying and Configuring the Determined Server Roles

Logon Information

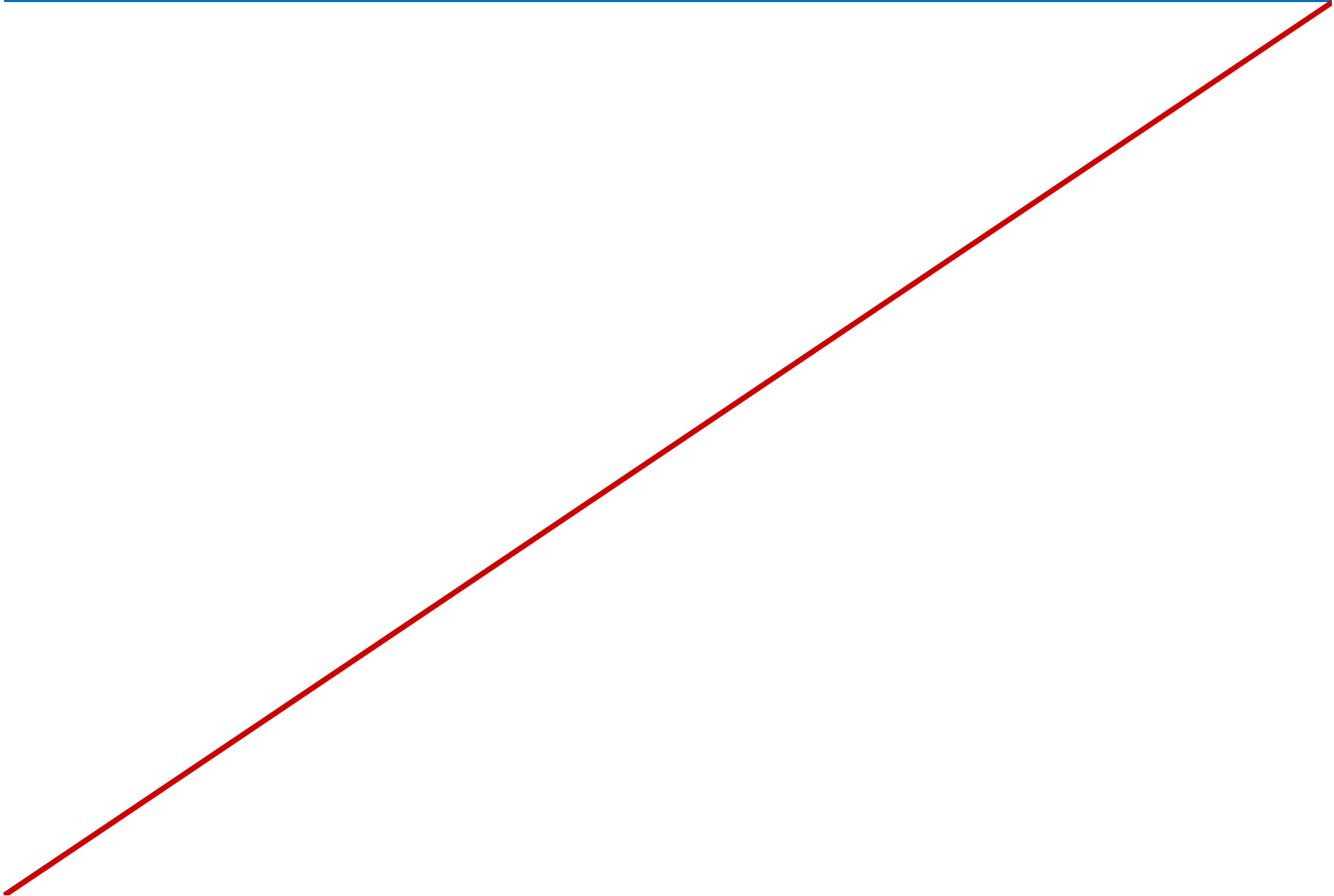
Virtual Machines: 10967A-LON-DC1,  
10967A-LON-SVR3 and 10967A-LON-CL1

User Name: ADATUM\Administrator

Password: Pa\$\$w0rd

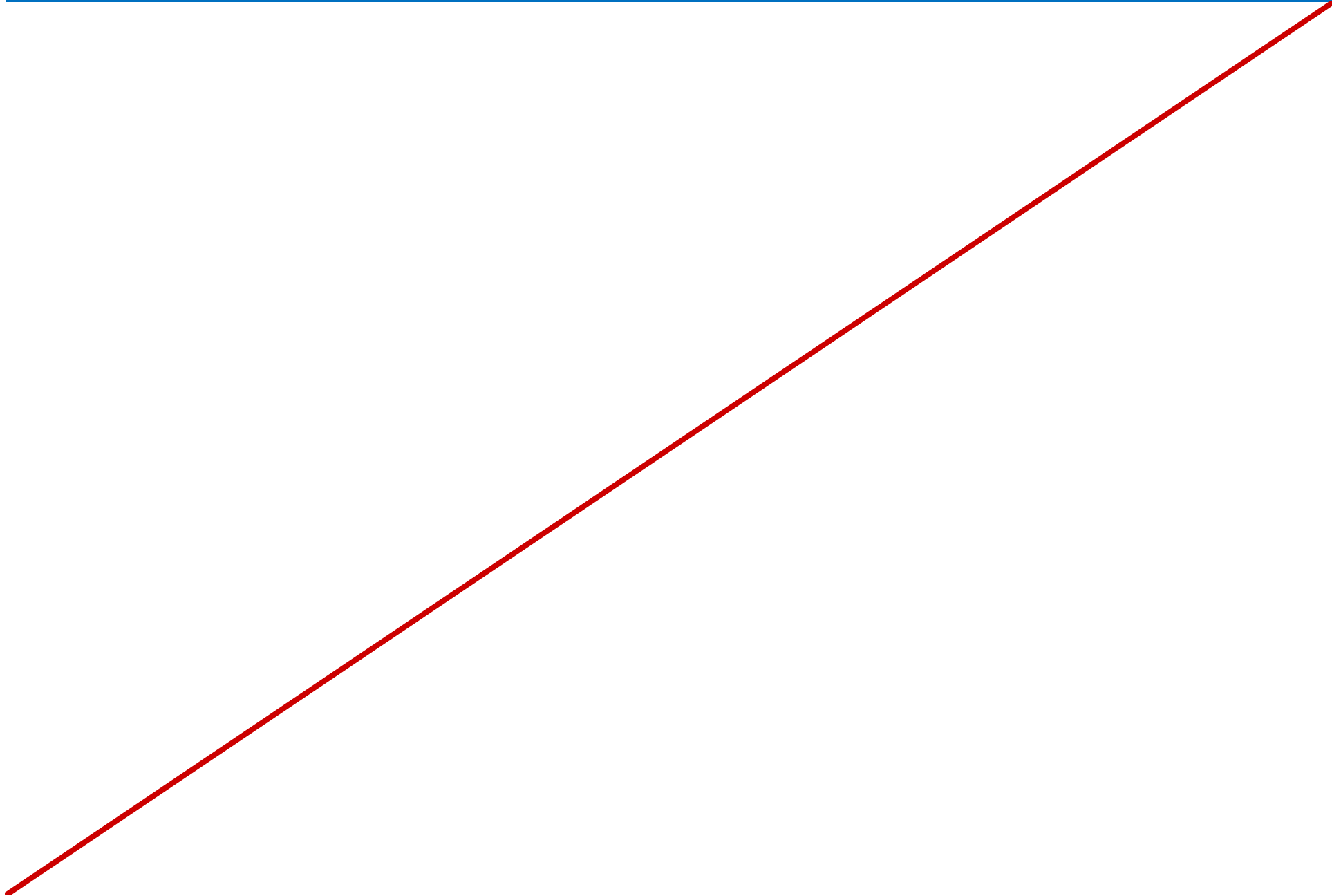
Estimated Time: 90 minutes

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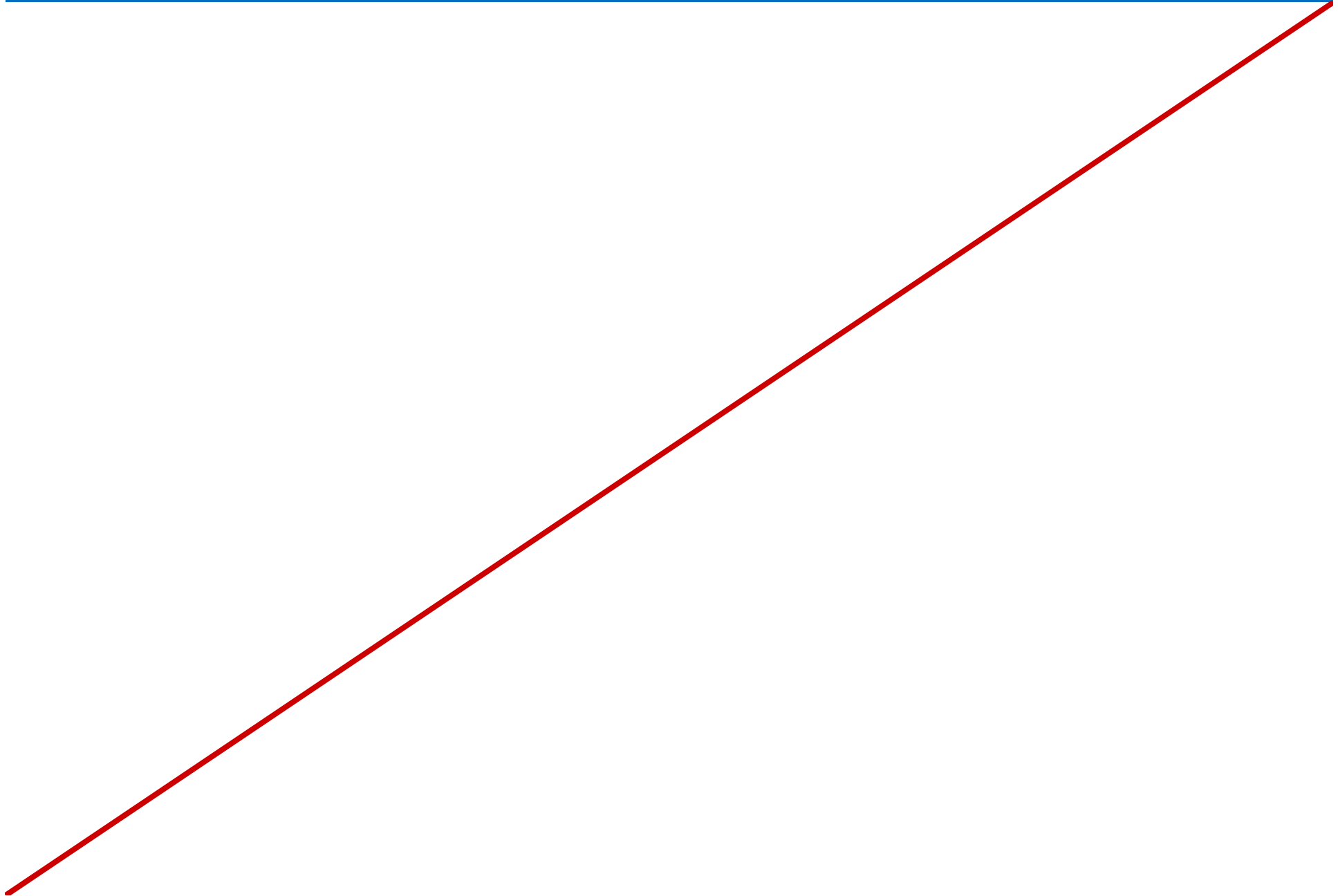




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## Lab Scenario

A. Datum Corporation has deployed client computers to several new R & D branch offices. It has planned to install new server computers at these branches to enable network infrastructure features, to support custom applications, and to enable file and print services to support office productivity applications on the client computers.

Your task is to read the requirements document and determine what server roles are required to support the needs of users at branch offices.

## Lab Review

- When installing the File Services role during the lab, which role services might prove especially useful for a branch office?

# Module Review and Takeaways

- Review Question
- Tools
- Best Practice