Microsoft® Official Course

Module 1

Deploying and Managing Windows Server 2012

Microsoft®

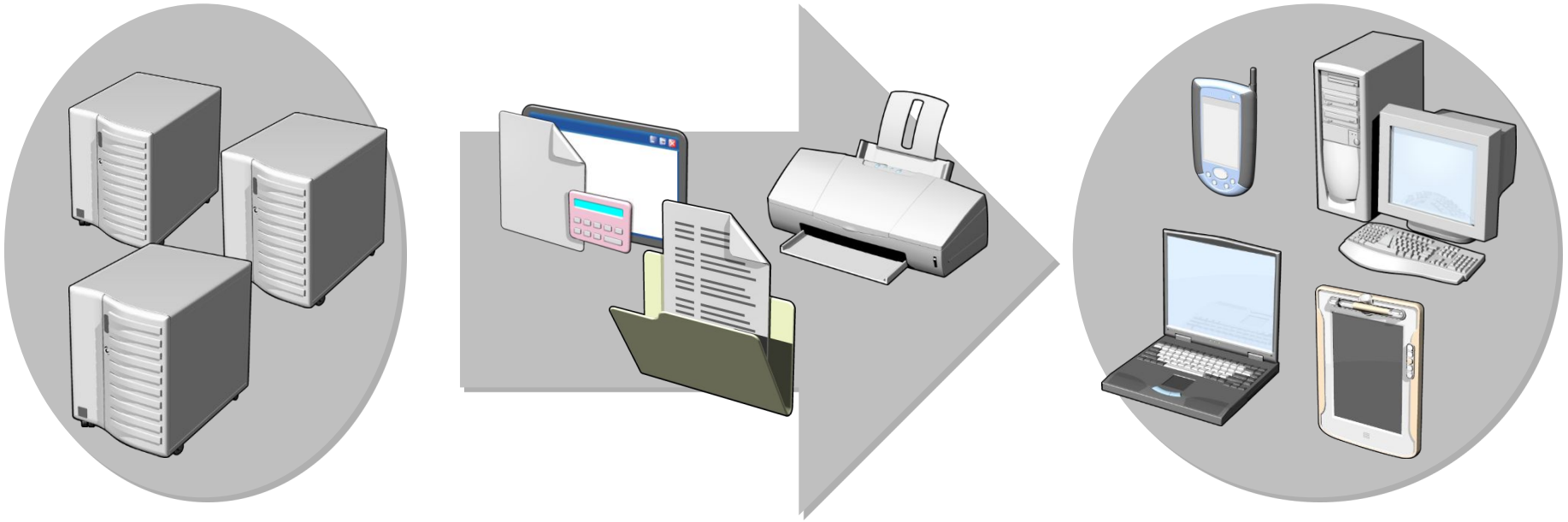
Module Overview

- Windows Server 2012 Overview
  Overview of Windows Server 2012 Management
  Installing Windows Server 2012
  Post-Installation Configuration of Windows Server 2012
  Introduction to Windows PowerShell

Lesson 1: Windows Server 2012 Overview

- On-Premises Servers
- What Is Cloud Computing?
- Windows Server 2012 Editions
- What Is Server Core?
- Windows Server 2012 Roles
- What Are the Windows Server 2012 Features?

On-Premises Servers



Servers

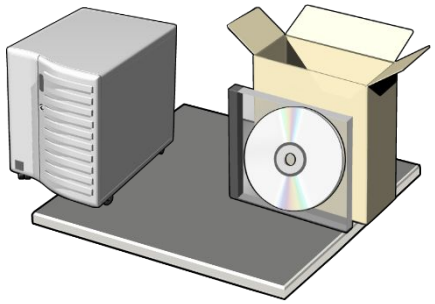
Resources provided to clients

Clients

What Is Cloud Computing?

Types of cloud services:

- IaaS
- PaaS
- SaaS



Public clouds have multiple tenants

Private clouds have a single tenant, which:

- Is usually on-premises
- Is highly automated
- Uses System Center 2012 to provide automation and self-service
- Requires minimal direct configuration once set up

Windows Server 2012 Editions

Windows Server 2012 editions:

- Windows Server 2012 Standard operating system
- Windows Server 2012 Datacenter operating system
- Windows Server 2012 Foundation operating system
- Windows Server 2012 Essentials operating system
- Microsoft Hyper-V Server 2012
- Windows Storage Server 2012 Workgroup operating system
- Windows Storage Server 2012 Standard operating system
- Windows MultiPoint Server 2012 Standard operating system
- Windows MultiPoint Server 2012 Premium operating system

What Is Server Core?

Server Core

- Is a more secure, less resource-intensive installation option
- Can be converted to the full version of Windows Server 2012
- Is the default installation option for Windows Server 2012
- Is managed locally using sconfig.cmd
- If you enable remote management, you will rarely need to log on locally

Windows Server 2012 Roles

Functions

- Web Server
- Domain Controller
- Certificate Server

Roles

- Are made up of role services components that provide additional functionality associated with the role
- In Server Manager 2012, console servers with a similar role are grouped together
- Role deployment also includes the configuration of dependencies

What Are the Windows Server 2012 Features?

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

Keep in mind the following points:

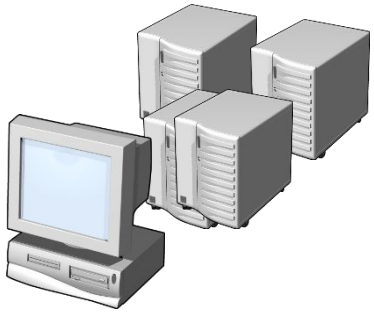
- Roles can have features as dependencies
- Features on Demand are features that need to be installed using a mounted image as a source

Lesson 2: Overview of Windows Server 2012 Management

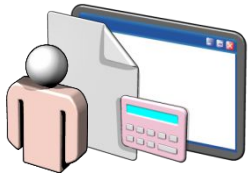
- What Is Server Manager?
- Administrative Tools and Remote Server Administration Tools
- Demonstration: Using Server Manager
- Configuring Services
- Configuring Windows Remote Management

What Is Server Manager?

You can use Server Manager to:



- Manage multiple servers on a network from one console



- Add roles and features
- Launch Windows PowerShell sessions

- View events

- Perform server configuration tasks

Administrative Tools and Remote Server Administration Tools

Administrative tools:

- Active Directory Administrative Center
- Active Directory Users and Computers
- DNS console
- Event Viewer
- Group Policy Management Console
- IIS Manager
- Performance Monitor
- Resource Monitor
- Task Scheduler

Demonstration: Using Server Manager

In this demonstration, you will see how to:

- Sign in to Windows Server 2012 and view the Windows Server 2012 desktop
- Add a feature by Using the Add Roles and Features Wizard
- View role-related events
- Run the Best Practice Analyzer for a role
- List the tools available from Server Manager
- Restart Windows Server 2012

Configuring Windows Remote Management

When deciding to use Remote Management, consider the following:

- You are more likely to manage a server remotely than by locally logging on
- With WinRM, you can use consoles, command-line utilities, or Windows PowerShell to perform remote management tasks
- With Remote Desktop, you can log on to a server locally or from across the network

Lesson 3: Installing Windows Server 2012

- Installation Methods
  Installation Types
  Hardware Requirements for Windows Server 2012
  Installing Windows Server 2012

Installation Methods

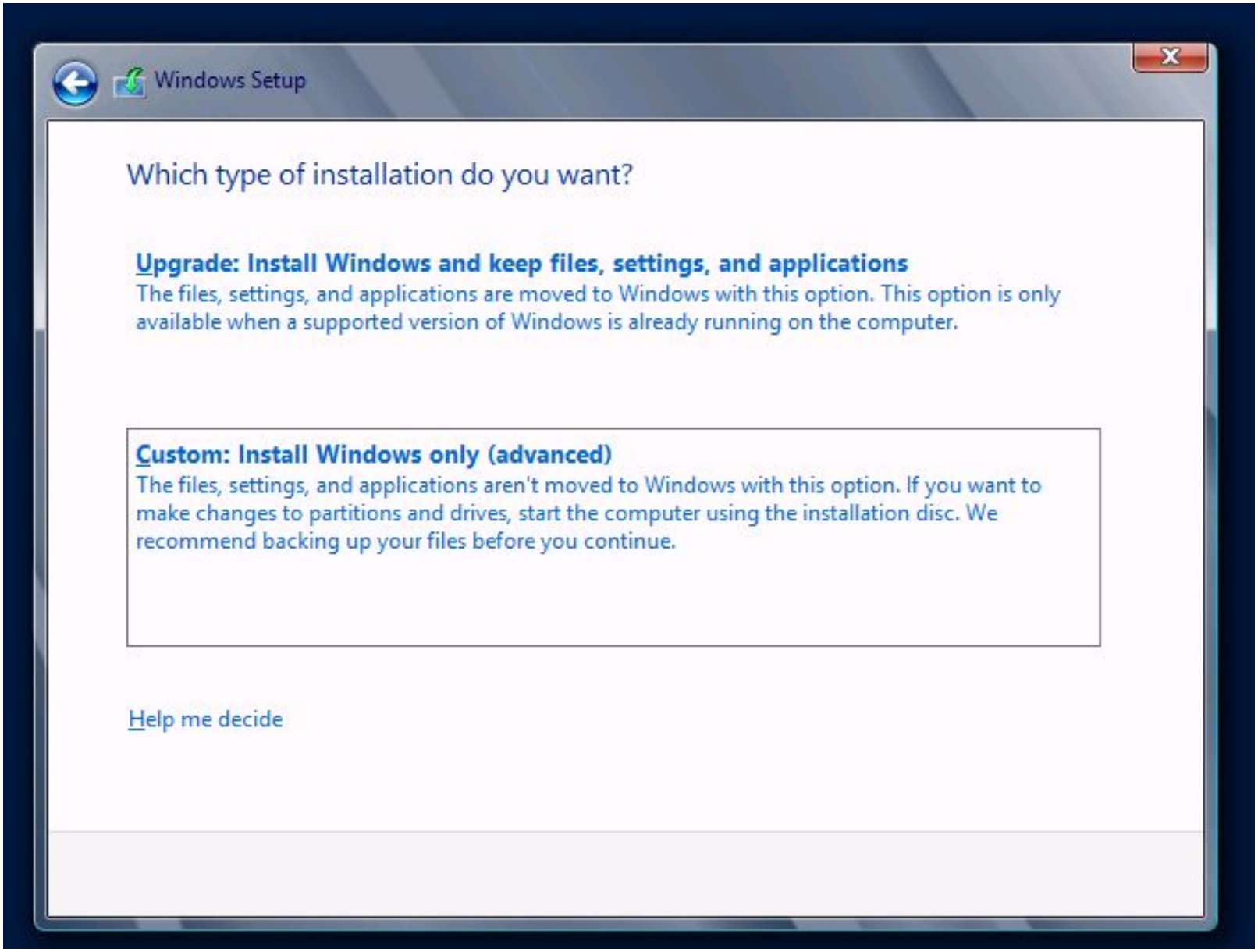
Windows Server 2012 deployment method options include:

Optical disk

Windows DS

USB media

Installation Types



Hardware Requirements for Windows Server 2012

Windows Server 2012 has the following minimum hardware requirements:

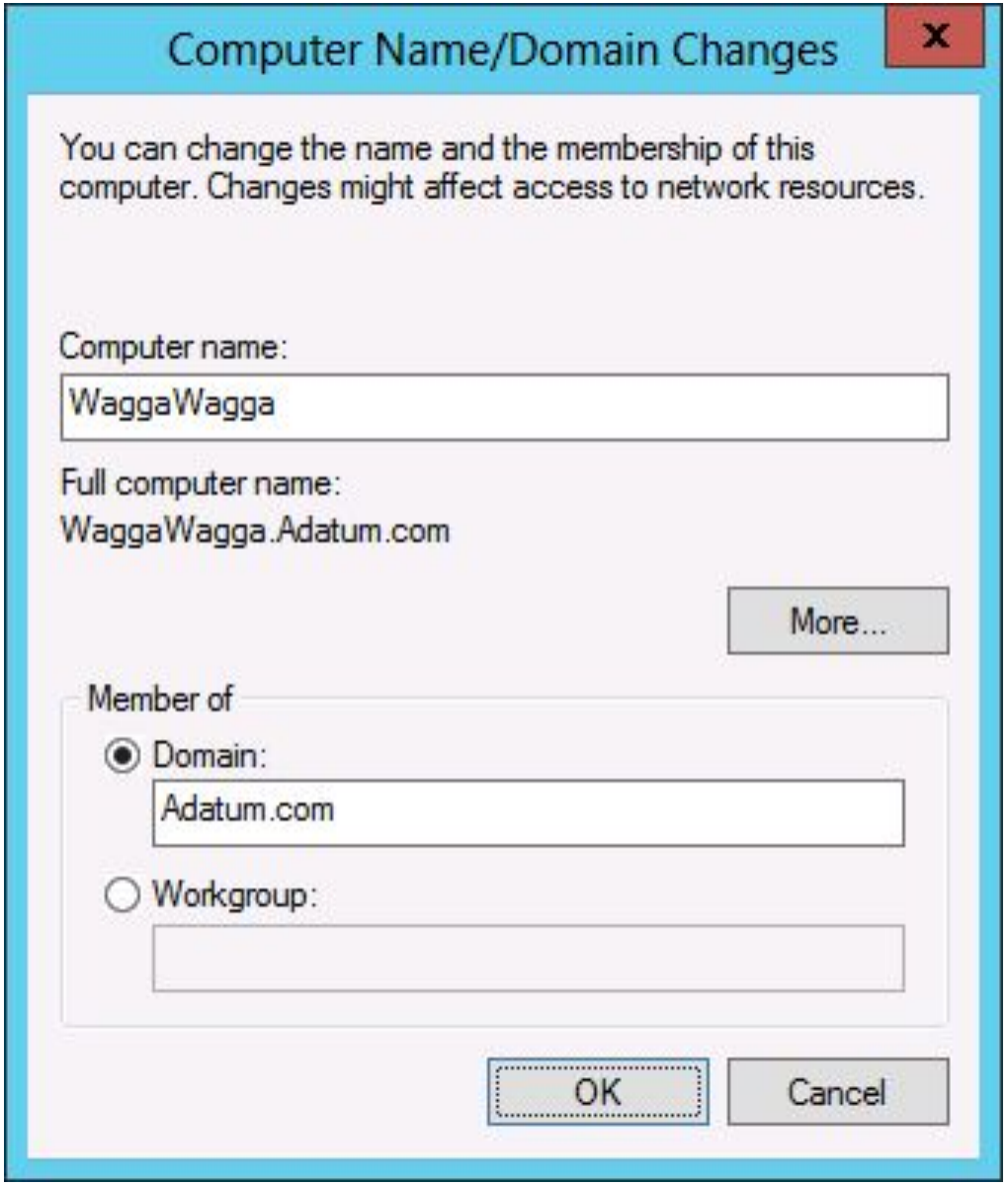
- Processor architecture x86-64
- Processor speed 1.4 GHz
- Memory (RAM) 512 MB
- Hard disk drive space 32 GB
  - More hard disk drive space is needed if the server has more than 16 GB of RAM

Installing Windows Server 2012

How to Join a Domain

Information necessary for a domain join:

- Domain name
- Account with permission to join computer to domain

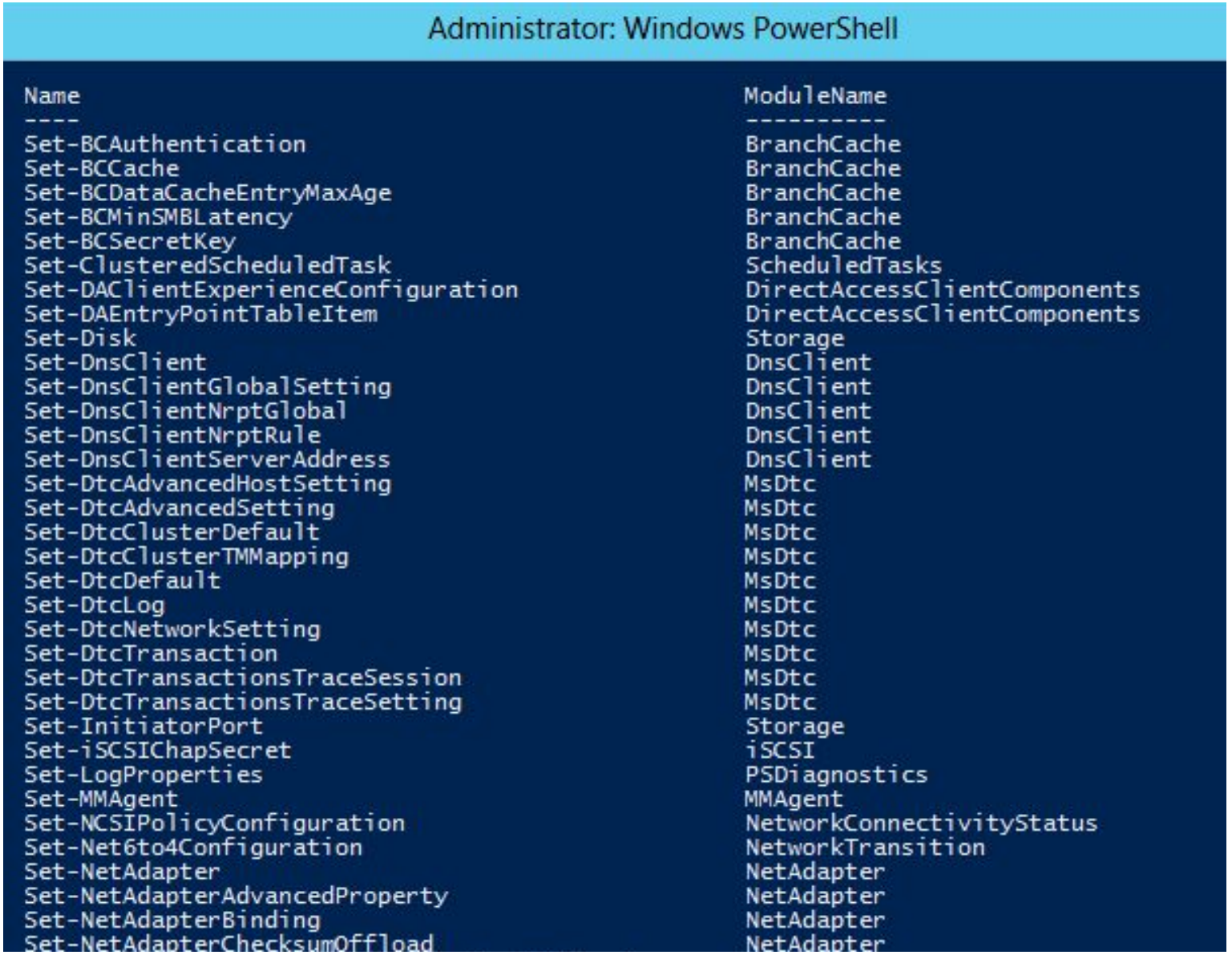


Configuring a Server Core Installation

Lesson 5: Introduction to Windows PowerShell

- What Is Windows PowerShell?
  Windows PowerShell Cmdlet Syntax
  Common Cmdlets for Server Administration
  What Is Windows PowerShell ISE?
  Demonstration: Using Windows PowerShell
  Demonstration: Using Windows PowerShell ISE

What Is Windows PowerShell?

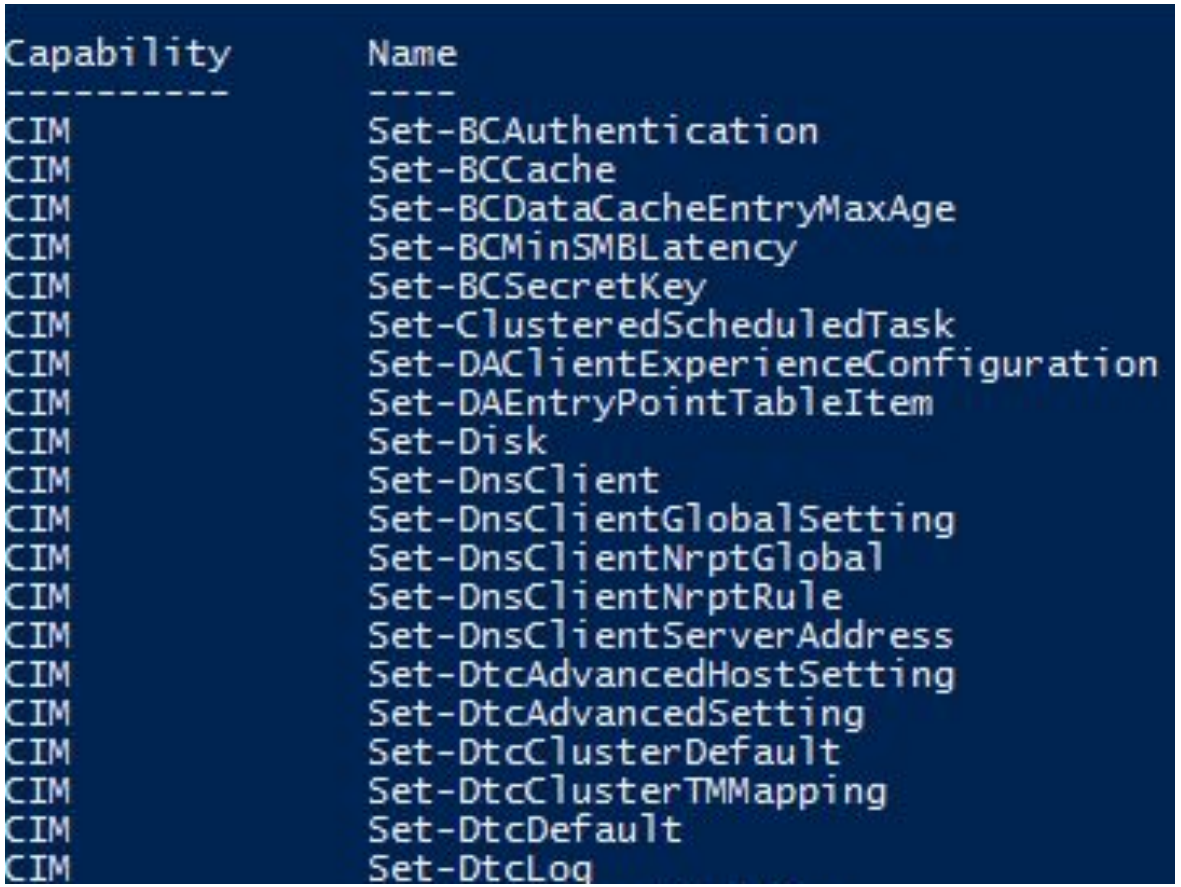



```
Name                                               ModuleName
----                                               ----------
Set-BCAuthentication                               BranchCache
Set-BCCache                                        BranchCache
Set-BCDataCacheEntryMaxAge                         BranchCache
Set-BCMinSMBLatency                                BranchCache
Set-BCSecretKey                                    BranchCache
Set-ClusteredScheduledTask                         ScheduledTasks
Set-DAClientExperienceConfiguration                DirectAccessClientComponents
Set-DAEntryPointTableItem                          DirectAccessClientComponents
Set-Disk                                           Storage
Set-DnsClient                                      DnsClient
Set-DnsClientGlobalSetting                         DnsClient
Set-DnsClientNrptGlobal                            DnsClient
Set-DnsClientNrptRule                              DnsClient
Set-DnsClientServerAddress                         DnsClient
Set-DtcAdvancedHostSetting                         MsDtc
Set-DtcAdvancedSetting                             MsDtc
Set-DtcClusterDefault                              MsDtc
Set-DtcClusterTMMapping                            MsDtc
Set-DtcDefault                                     MsDtc
Set-DtcLog                                         MsDtc
Set-DtcNetworkSetting                              MsDtc
Set-DtcTransaction                                 MsDtc
Set-DtcTransactionsTraceSession                    MsDtc
Set-DtcTransactionsTraceSetting                    MsDtc
Set-InitiatorPort                                  Storage
Set-iSCSIChapSecret                                iSCSI
Set-LogProperties                                  PSDiagnostics
Set-MMAgent                                        MMAgent
Set-NCSIPolicyConfiguration                        NetworkConnectivityStatus
Set-Net6to4Configuration                           NetworkTransition
Set-NetAdapter                                     NetAdapter
Set-NetAdapterAdvancedProperty                     NetAdapter
Set-NetAdapterBinding                              NetAdapter
Set-NetAdapterChecksumOffload                      NetAdapter
```

Windows PowerShell Cmdlet Syntax

Windows PowerShell Cmdlet Syntax:

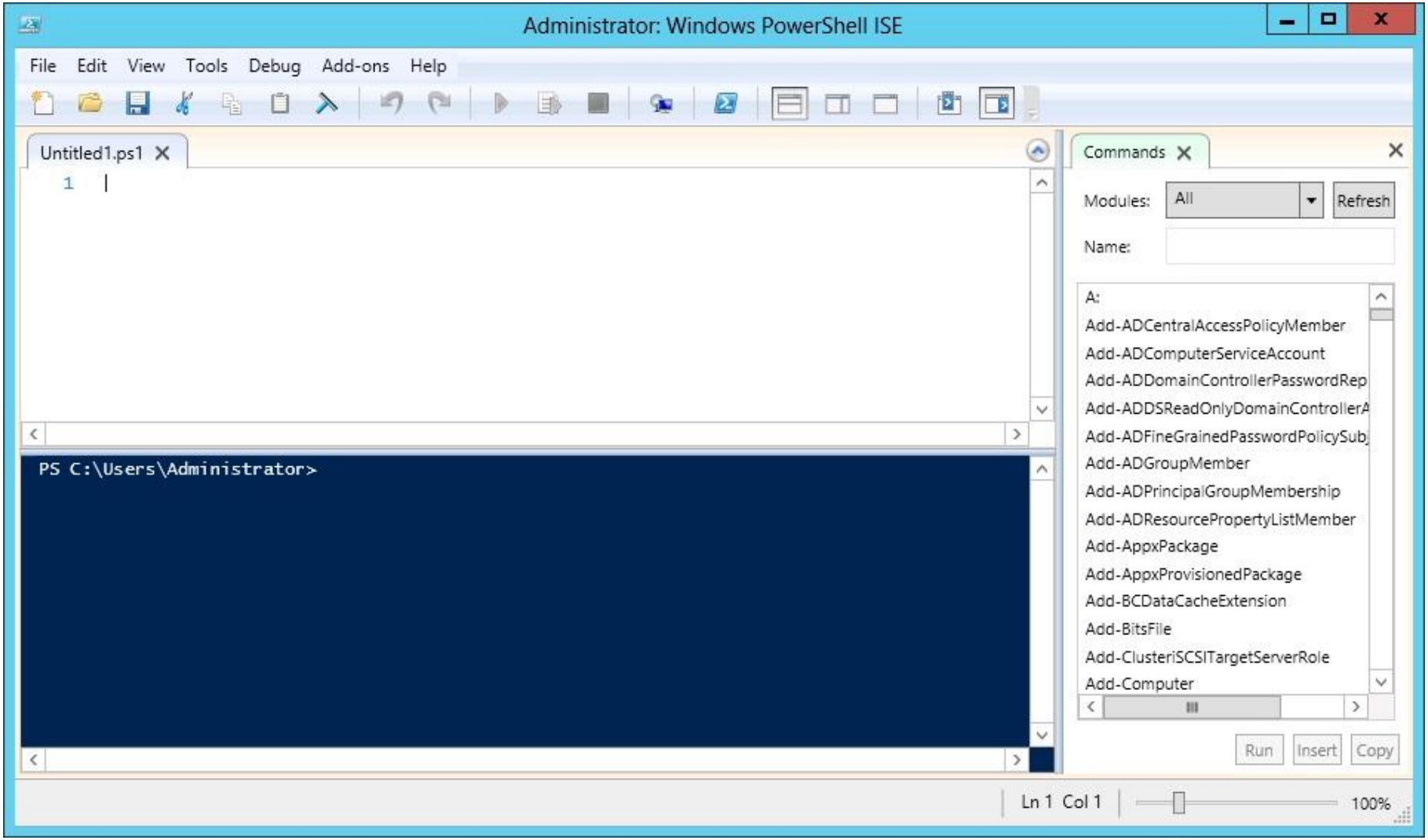
- Get-Help -Noun *NounName*
- Get-Help -Verb *VerbName*
- Help *CmdltName*
- Get-Command



Common Cmdlets for Server Administration

- Service Cmdlets
  - Use the Service noun
- Event Log Cmdlets
  - Use the Eventlog noun
- Process Cmdlets
  - Use the Process noun
- ServerManager module
  - Allows the WindowsFeature noun

What Is Windows PowerShell ISE?



Demonstration: Using Windows PowerShell

- In this demonstration, you will see how to use Windows PowerShell to display the running services and processes on a server

Demonstration: Using Windows PowerShell ISE

In this demonstration, you will see how to:

- Use Windows PowerShell ISE to import the ServerManager module
- View the cmdlets made available in the ServerManager module
- Use the Get-WindowsFeature cmdlet from Windows PowerShell ISE

Lab: Deploying and Managing Windows Server 2012

- Exercise 1: Deploying Windows Server 2012
  Exercise 2: Configuring Windows Server 2012 Server Core
  Exercise 3: Managing Servers
  Exercise 4: Using Windows PowerShell to Manage Servers

Logon Information
Virtual machines NAME :DC1

User name **Administrator**
Password **Yemen2017**