

## 20740: Installation, Storage, and Compute with Windows Server 2016

- **Formato do curso:** Presencial e Live Training
- **Localidade:** Lisboa
- **Data:** 27 Set. 2021 a 01 Out. 2021
- **Preço:** 1720€
- **Horário:** Laboral - das 9h00 às 17h00
- **Nível:** Iniciado
- **Duração:** 35 horas

Este curso permite aos formandos adquirir conhecimentos na instalação configuração do Windows Server 2016. Implementação e gestão de storage, high availability e disaster recovery. Este curso é o primeiro de uma serie de três cursos.

**The 70-740 certification exam retires on January 31, 2021**

### Destinatários

- Profissionais IT que desejam seguir uma carreira em sistemas Microsoft;
- Administradores de sistemas Microsoft;
- Administradores de sistemas que desejam migrar para tecnologias Microsoft;

### Pré-requisitos

- Fundamentos de Redes de Computador: TCP/IP, UDP e DNS;
- Fundamentos de Microsoft Active Directory Domain Services;
- Fundamentos de hardware de servidor;
- Fundamentos de boas práticas em segurança;
- Utilização de sistemas operativos cliente em ambiente empresarial.

### Objectivos

- Preparação e instalação do Windows Server 2016, Nano Server e Server Core
- Planificação de uma estratégia de Server Upgrade e Migration Strategy

- Descrição e gestão de soluções storage, partition table formats, discos basic e dynamic, file systems, virtual hard disks e drive hardware;
  - Soluções de armazenamento empresarial;
  - Implementação e gestão de Storage Spaces e Data Deduplication;
  - Instalação e configuração Microsoft Hyper-V;
  - Implementação, instalação e configuração de Hyper-V containers;
  - Soluções de high availability e disaster recovery;
  - Implementação, instalação e configuração failover cluster;
  - Implementação, instalação e configuração de failover cluster failover clustering para Hyper-V virtual machines;
  - Implementação, instalação e configuração de Network Load Balancing (NLB)
  - Criação e gestão de implementação e instalação de imagens;
  - Gestão, monitorização e manutenção de instalação de virtual machine.
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## Programa

**Installing, upgrading, and migrating servers and workloads** This module explains how to prepare and install Nano Server and Server Core. This module also explains how to upgrade and migrate server roles and workloads. Finally, this module explains how to choose an activation model based on your environment characteristics. After completing this module, students will be able to:

- Choose the appropriate version of the Windows Server operating system, and describe the installation options and new features of Windows Server 2016.
- Prepare and install Nano Server and Server Core.
- Consider whether an upgrade or migration is the best approach, and use tools to help determine upgrade or migration suitability.
- Migrate server roles and workloads within a domain and across domains or forests.
- Choose an activation model based on your environment characteristics.

**Configuring local storage** This module explains how to manage disks and volumes in Windows Server 2016. After completing this module, students will be able to:

- Manage disks in Windows Server 2016.
- Manage volumes in Windows Server 2016.

**Implementing enterprise storage solutions** This module describes the direct-attached storage (DAS), network-attached storage (NAS), and storage area networks (SANs). It also helps you understand Microsoft Internet Storage Name Service (iSNS) Server, data center bridging, and Multipath I/O (MPIO). Additionally, this module also compares Fibre Channel, Internet Small Computer System Interface (iSCSI), and Fibre Channel Over Ethernet (FCoE), and describes how to configure sharing in Windows Server 2016. After completing this module, students will be able to:

- Describe DAS, NAS, and SANs, and the usage scenarios for each topology.
- Compare Fibre Channel, FCoE, an iSCSI target and initiator. Describe iSNS, MPIO, data center bridging, and Windows Storage Server 2016 (two versions—Workgroup and Standard).

- Configure server message block (SMB) and network file system (NFS) shares by using Server Manager and Windows PowerShell.

**Implementing Storage Spaces and Data Deduplication** This module explains how to implement and manage Storage Spaces. This module also explains how to implement Data Deduplication. After completing this module, students will be able to:

- Implement Storage Spaces as an enterprise storage solution.
- Manage Storage Spaces by using Server Manager and Windows PowerShell.
- Implement Data Deduplication.

**Installing and configuring Hyper-V and virtual machines** This module provides an overview of Hyper-V. This module also explains how to configure, manage, and install Hyper-V. After completing this module, students will be able to:

- Describe Hyper-V and virtualization.
- Prepare to install the Hyper-V role.
- Configure storage on Hyper-V host servers.
- Configure networking on Hyper-V host servers.
- Configure Hyper-V virtual machines.
- Move virtual machines from one host to another host, using PowerShell Direct to manage a virtual machine, and manage miscellaneous virtual machine settings.

**Deploying and managing Windows Server and Hyper-V containers** This module provides an overview of containers in Windows Server 2016. It also explains how to deploy, install, configure, and manage containers in Windows Server 2016. After completing this module, students will be able to:

- Explain the purpose of Windows Server and Hyper-V containers.
- Deploy and manage Windows Server and Hyper-V containers.
- Install, configure, and manage containers.

**Overview of high availability and disaster recovery** This module provides an overview of high availability, business continuity, and disaster recovery. It further explains how to plan high availability and disaster recovery solutions. Additionally, in this module you will know how to back up and restore the Windows Server 2016 operating system and data by using Windows Server Backup. Finally, you will learn about Windows Server 2016 high availability with failover clustering. After completing this module, students will be able to:

- Describe high availability, business continuity, and disaster recovery.
- Plan for high availability and disaster recovery solutions with Hyper-V virtual machines.
- Back up and restore Hyper-V hosts, virtual machines, Active Directory Domain Services (AD DS), and file and web servers by using Windows Server Backup.
- Describe Windows Server 2016 high availability with failover clustering.

**Implementing and managing failover clustering** This module explains how to plan, create, configure, maintain, and troubleshoot a failover cluster. This module also explains how to implement site high availability with stretch clustering. After completing this module, students will be able to:

- Describe the requirements and infrastructure considerations for a failover cluster.

- Create and configure a new failover cluster.
- Monitor and maintain failover clusters.
- Troubleshoot failover clusters by using various tools such as Performance Monitor, Event Viewer, and Windows PowerShell.
- Configure and implement a stretch cluster.

**Implementing failover clustering for Hyper-V virtual machines** This module describes integrating Hyper-V virtual machines in a clustered environment. It also explains how to implement and maintain Hyper-V virtual machines on failover clusters. Additionally, this module also explains how to configure network health protection. After completing this module, students will be able to:

- Explain the integration of Hyper-V in Windows Server 2016 with failover clustering.
- Implement and maintain Hyper-V virtual machines on failover clusters.
- Describe and configure network health protection.

**Implementing Network Load Balancing** This module provides an overview of NLB clusters. It also explains how to plan and configure an NLB cluster implementation. After completing this module, students will be able to:

- Describe NLB and how it works.
- Configure an NLB cluster.
- Describe the considerations for implementing NLB.

**Creating and managing deployment images** This module provides an introduction to deployment images. It also explains how to create and manage deployment images by using the Microsoft Deployment Toolkit (MDT). Additionally, it explains how to evaluate an organization's requirements for server virtualization. After completing this module, students will be able to:

- Explain the purpose of deployment images and the tools that you use to deploy and maintain them.
- Implement and manage deployment images by using MDT.
- Evaluate their organization's requirements for server virtualization.

**Managing, monitoring, and maintaining virtual machine installations** This module provides an overview on WSUS and explains the deployment options. It explains how to update management process with WSUS and also how to use Performance Monitor. Additionally, this module also provides an overview of PowerShell Desired State Configuration (DSC) and Windows Server 2016 monitoring tools. Finally, this module describes how to use Performance Monitor and monitor Event Logs. After completing this module, students will be able to:

- Describe the purpose of Windows Server Update Services (WSUS) and the requirements to implement WSUS.
- Manage the update process with WSUS.
- Describe the purpose and benefits of PowerShell DSC.
- Describe the monitoring tools available in Windows Server 2016.
- Describe how to use Performance Monitor.
- Describe how to manage event logs.