



Course 10992 • Microsoft Azure

Integrating On-Premises Core Infrastructure with Microsoft Azure

Length

- 3 days

Audience

- IT professionals who have used on-premises virtualization technologies, including both Hyper-V and VMware platforms, but who want to deploy, configure, and administer services and virtual machines in Azure
- IT professionals who have used Microsoft System Center to manage and orchestrate an on-premises server infrastructure
- Windows and Linux administrators who are looking to evaluate and migrate on-premises workloads and services to the cloud
- IT professionals who need to implement network connectivity between on-premises environments and services that Azure or Microsoft Office 365 hosts
- IT professionals who want to use Azure to increase the resiliency and agility of their on-premises environments.
- DevOps personnel who are considering deploying hybrid solutions that consist of both cloud-based and on-premises components

This 3-day, instructor-led workshop covers a range of components, including Azure Compute, Azure Storage, and network services that customers can benefit from when deploying hybrid solutions. In this context, the term hybrid means integrating infrastructure technologies that customers host in on-premises datacenters with Azure IaaS and PaaS services. This course offers an overview of these services, providing the knowledge necessary to design hybrid solutions properly. It also includes several demonstrations and labs that enable students to develop hands-on skills that are necessary when implementing such solutions.

Workshop Outline

Module 1: Introduction to Microsoft Azure

- Overview of cloud computing and Azure
- Overview of the Azure deployment models
- **Lab:** Use Azure portal, Azure PowerShell, and Microsoft Visual Studio to deploy and manage Azure resources
- Deploying Microsoft Azure VMs by using the Azure portal
- Deploying Azure VMs by using Azure PowerShell
- Creating and deploying an Azure Resource Manager deployment template
- Identify and delete newly deployed resources

What You'll Learn

- Core concepts of Azure
- Primary methods for integrating an on-premises environment with Azure Virtual Machines and Azure Cloud Services
- Azure hybrid networking technologies
- Understand the Azure services that provide data storage, management, and analytics capabilities in hybrid scenarios.
- Explain the use of Azure disaster recovery and business continuity solutions for on-premises environments.
- Explain how to design and implement cross-premises applications.
- Explain Azure monitoring and management solutions that offer hybrid capabilities

Module 2: Integrating with Azure Compute services

- Overview of Azure virtual machines and Azure cloud services
- Migrating workloads to Azure virtual machines by using virtual machine images and disks
- Extending HPC workloads to Azure
- Integrating compute workloads by using containers and Azure Service Fabric
- **Lab:** Uploading an on-premises virtual disk file to Azure
- Preparing for an upload of a virtual disk file to Azure
- Uploading a virtual disk file to Azure
- **Lab:** Moving containers between on-premises Hyper V virtual machines and Azure virtual machines
- Creating a Docker host by using Docker Machine
- Deploying a private Docker Registry in Azure

Module 3: Integrating with Microsoft Azure virtual networks

- Overview of Azure Virtual Network Service
- Extending on-premises networks to Azure
- **Lab:** Implementing a point-to-site VPN by using Azure Resource Manager
- Preparing a Microsoft Azure subscription for implementing a point-to-site VPN
- Completing the point-to-site VPN setup
- Testing a point-to-site VPN from an on-premises virtual machine

Module 4: Integrating with Azure Storage and data services

- Overview of Azure Storage and data services
- Implementing Azure Backup for on-premises workloads
- **Lab:** Implementing the Azure Recovery Services agent-based backups
- Preparing your Microsoft Azure subscription for the implementation
- Configuring a virtual machine for Azure Recovery Services agent-based backups
- Testing the backup of the virtual machine files and folders
- Testing the restore of the virtual machine files and folders

Module 5: Designing and implementing Azure Site Recovery solutions

- Overview of Site Recovery
- Planning for Site Recovery
- Implementing Site Recovery with Azure as the disaster recovery site

- **Lab:** Implementing protection of on-premises Hyper-V virtual machines in Azure by using Site Recovery
- Preparing your Microsoft Azure subscription for implementing Site Recovery
- Preparing your Hyper-V host for the implementation
- Configuring Site Recovery protection of a Hyper-V virtual machine

Module 6: Designing and implementing cross-premises applications

- Overview of cross-premises application capabilities and their design considerations
- Implementing cross-premises solutions for desktop, web, and mobile apps
- **Lab:** Implementing Traffic Manager
- Creating two instances of an organizational website using the Web Apps feature of Azure App Service
- Creating and configuring an Azure Traffic Manager profile
- Testing the distribution of traffic targeting the Azure Traffic Manager profile

Module 7: Integrating operations and application monitoring and management

- Overview of the cross-premises monitoring and management capabilities of Microsoft Azure
- Implementing cross-premises Azure monitoring and management solutions
- **Lab:** Implementing Azure Automation
- Creating and configuring an Operations Management Suite workspace
- Creating and configuring an Azure Automation account
- Configuring an on-premises computer as a Hybrid Runbook Worker
- Running a runbook on a Hybrid Runbook Worker and examining the outcome