Hewlett Packard Enterprise

Developing Microsoft Azure Solutions H0LQ4S (20532)

HPE course number	H0LQ4S
Course length	5 days
Delivery mode	ILT
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This course is intended for students who have experience building vertically scaled applications. Students should also have experience with the Microsoft Azure platform and a basic understanding of the services offered in Azure. This course offers students the opportunity to take an existing Web application and expand its functionality as part of moving it to Azure. The course does not require any existing experience with the ASP.NET platform. This course focuses on the architectural considerations and decisions necessary when building a highly available solution in the cloud. This course also prepares the students for the 70-532: Developing Microsoft Azure solutions certification exam.

Audience

The candidates targeted by this training have basic experience in implementing and monitoring Microsoft Azure solutions. Candidates are also proficient with the development tools, techniques, and approaches used to build application solutions.

Prerequisites

Before attending this course, students must be able to:

- Compare the services available in the Azure platform
- Configure and deploy Web applications
- Create Azure Web Sites using the gallery
- Deploying and monitoring Azure Web Sites
- Create and configure Azure Virtual Machines
- Describe the relationship between Cloud Services and Virtual Machines
- Deploy existing Cloud Service packages
- Create and manage a storage account
- Manage blobs and containers in a storage account
- Create, configure, and connect to a SQL databases instance
- Identify the implications of importing a SQL Standalone database
- Manage users, groups, and subscriptions in an Azure Active Directory instance
- Create a Virtual Network
- Implement a point-to-site network

Why HPE Education Services?

- IDC MarketScape leader 4 years running for IT education and training*
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- Simplified purchase option with HPE Training Credits

*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by HPE, January 2016

Course objectives

After completing this course, students will be able to:

- Review the services available in the Azure platform and the Management Portals used to manage the service instances
- Create a Virtual Machine using the Azure Management Portal and create an image of the VM
- Create an Azure web site and publish an existing ASP.NET Web application to the site
- Create an Azure SQL server and database
- Describe and identify the common practices and patterns for building resilient and scalable Web applications that will be hosted in Azure
- Create an Azure Cloud Service project in Visual Studio 2013 and debug locally
- Create a background process using an Azure worker role
- Create an Azure table storage and manage the table data using the .NET API for Azure storage
- Create Azure files, SMB files share, and store documents
- Create an Azure Storage Queue instance to store requests
- Create an Azure Service Bus Queue instance to store requests
- Create an Azure Service Bus namespace and use the namespace to connect a Cloud Web application to the local WCF service
- Create a Virtual Machine using the existing SQL template and connect this Virtual Machine to the existing application
- Create a test environment using PowerShell and the Azure service management CmdLets
- Integrate ASP.NET identity for the administration portal with Azure Active Directory
- Deploy the Web application projects to Azure

Detailed course outline

Module 1: Overview of the Microsoft Azure platform	This module reviews the services available in the Azure platform and the Management Portals used to manage the service instances.
Module 2: Establishing a development environment using Azure Virtual Machines	This module describes the Virtual Machine hosting options available in Azure. Students will be able to deploy custom workloads to an Azure Virtual Machine, manage the VM and images, and also monitor VMs.
Module 3: Hosting Web applications on the Azure platform	In this module, students will be able to create and host a simple website using Azure Web Sites. Students will learn how to monitor and manage the website using the Management Portal.
Module 4: Storing SQL data in Azure	In this module, students will learn how to use Azure SQL databases to store and retrieve data.
Module 5: Designing Cloud Applications for Resiliency	In this module, students will understand and identify the common practices and patterns for building resilient and scalable Web applications that will be hosted in Azure.
Module 6: Managing Cloud Services in Azure	In this module, students will learn how to use Cloud Service Worker Roles and Web Sites Web Jobs to process data in the background. Students will also be able to use Cloud Service Cache Roles to store data in the cache.
Module 7: Storing NoSQL data in Azure	In this module, students will learn how to store data in Azure table storage.
Module 8: Storing and consuming files from Azure Storage	In this module, students will be able to store and access multimedia files in Azure using Blob storage.
Module 9: Designing a communication strategy using Queues and Service Bus	In this module, students will use Azure Queue storage to queue data for asynchronous processing. Students will also be able to identify the Service Bus offerings and identify which ones to use in appropriate scenarios. Students will be able to use the Azure Service Bus relay to connect on premise services with client applications.
Module 10: Managing infrastructure in Azure	In this module, students will explore the infrastructure components in Azure. Students will be able to describe Virtual Networks and understand the relationship between the VNETs and the different services offered in Azure. Students will also be able to add Cloud Services and Virtual Machines to VNETs. Finally, students will scale multiple instances of services in a VNET.
Module 11: Automating integration with Azure Resources	In this module, students will explore the options for automating their interactions with Azure resources using PowerShell, client libraries or the REST API. Students will also explore the two sets of modules available for PowerShell automation.
Module 12: Securing Azure Web applications	In this module, students will be able to use Azure Active Directory to implement security in a Cloud Web application.
Module 13: Maintaining and monitoring Web solutions in Azure	In this module, students will learn how to deploy Web applications to Azure by using WebDeploy and service packages.
Module 14: Troubleshooting resource access for non-domain member clients	This module explains how to enable students to resolve problems of resource access from computers that are not domain-joined.
Module 15: Troubleshooting applications	This module explains how to troubleshoot application installation issues and problems in the desktop and Windows Store apps.
Module 16: Maintaining Windows® 10	This module explains how to troubleshoot activation issues and performance issues in Windows 10. It also explains how to apply and troubleshoot Windows updates.
Module 17: Recovering data and operating system	This module explains how to use file recovery and troubleshoot deleted files. It also covers how to recover a Windows 10 computer.

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