Update - 13 December 2019

Note: All the content was reviewed and if necessary updated. We recommend you browse through every slide and Skillpipe topic to ensure you are prepared to teach the course.

Walkthroughs

- All the walkthroughs were tested to ensure MCTs can use the steps for a demonstration or a student lab. The walkthroughs are in a GitHub repository.

Mod/Lesson	Walkthrough	Comment
M02/L03	Create a virtual machine	
M02/L03	Deploy an Azure Container Instance	
M02/L03	Create a virtual network	
M02/L03	Create blob storage	
M02/L03	Create a SQL database	
M02/L04	Implement IoT Hub	
M02/L04	Implement Azure functions	
M02/L04	Create a Web App	New
M02/L05	Create a virtual machine with a template.	New
M02/L05	Create a virtual machine with PowerShell	Reworked to use single commands rather than a script. Added a task to review Advisor Recommendations.
M02/L05	Create a virtual machine with the Azure CLI	Reworked to use the CLI locally and in the Cloud Shell. Added a task to review Advisor Recommendations.
M02/L05	Install IIS webserver on a VM with the CLI	Removed.
M02/L05	Save an Advisor recommendations report	Removed. Merged into other walk-throughs.
M03/L02	Implement an Azure Firewall	Removed. Too difficult.
M03/L02	Secure network traffic	New simpler tasks.
M03/L04	Implement Azure Security Center	Removed.
M03/L04	Implement Azure Key Vault	
M03/L05	Create an Azure Policy	
M03/L05	Manage resources with RBAC	
M03/L05	Manage resource locks	
M03/L06	Implement tagging	
M03/L06	Use Azure Monitor	Removed. Merged into other walkthroughs.
M03/L07	Use Azure Trust Center	
M04/L02	Manage Subscriptions and Management groups	Removed.

M04/L03	Use the Azure Pricing Calculator	
M04/L03	Use the Azure Total Cost of Ownership Calculator	
M04/L04	Open a Support Request	
M04/L05	Calculate composite SLA	
M04/L06	Access Azure Preview features	

- Added Tasks to the walkthroughs so it is easier to read and understand. Updated the slides.

Walkthrough - Create a virtual machine

Create a virtual machine in the Azure Portal, connect to the virtual machine, install the web server role and test.

1. Create the virtual machine.
2. Connect to the virtual machine.
3. Install the web server role and test.

All Modules

All content was reviewed and updated.

- Ensured a 1:1 mapping between the Skillpipe topics and the Instructor slides. This may have required a Skillpipe topic to be broken into two parts. For example, *Compute Services* was broken into two topics *Virtual Machines* and *Containers*.
- Removed all video content and associated slides.
- Changed to more inclusive language by removing terms like *see.*
- Embedded hyperlinks in the student content and removed hyperlinks from the PowerPoint decks.
- Changed to sentence-case for topic and slide headings.
- Updated the module review questions.
- Removed the module review questions from the slide deck, and instead put a placeholder slide.
- Updated Preview features that were mentioned in the content.
- Removed PPT Notes that repeated content already in Skillpipe. Retained Azure Documentation links so the Instructor has a quick reference.
- Ensured the product icons were correct and up to date.
- Changed table designs to a blue format. For example,

	Schema	Data relationships	Examples
Structured data	Adheres to a schema, with the same data fields or properties	Storable in relational database tables, with rows and columns	Sensor data and financial data
Semi-structured data	Has an ad hoc schema with less organized fields and properties	Non-relational or NoSQL data, not storable in tables, rows and column	Books, blogs, and HTML documents
Unstructured data	Has no designated schema or data structure	Non-relational or blob data, with no restrictions on kinds of data blobs contain	PDFs, JPGs, JSON objects, and videos

Module 0

New slides

Added slides for Welcome, Instructor introduction, Student introduction, Facilities, and Microsoft Learning Azure Pass (Optional).

Module 1

Lesson 01, Cloud Computing (new)

Added a topic to introduce Cloud Computing.

Lesson 02, Key concepts

Removed a paragraph which is now part of the Cloud Computing topic.

~~What is cloud computing?~~

~~Cloud computing is the delivery of computing services—servers, storage, databases, networking, software, analytics, intelligence and more—over the internet (the cloud), enabling faster innovation, flexible resources, and economies of scale. You typically pay only for cloud services you use, helping lower your operating costs, run your infrastructure more efficiently, and scale as your business needs change.~~

Lesson 04, Shared Responsibility Model (new)

Moved the Management Responsibilities topic to the beginning of this lesson. Renamed the topic Shared Responsibility Model.
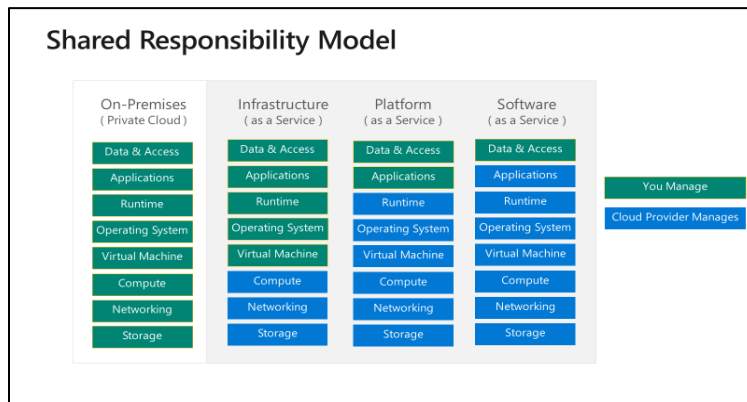
Module 2

Lesson 02, Regions

Reworked this topic with more updated information and split out the Region Pairs (new topic) information.

Lesson 02, Regions – continued (new)

Changed the topic to *Region Pairs*.

Lesson 02, Availability Options (new)

Added a topic on Availability Options to introduce the coming slides.

Lesson 02, Availability Sets
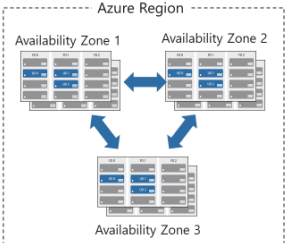
Moved this topic before the Availability Zones topic.

Lesson 02, Availability Zones

Reworked the topic to draw a stronger connection between Availability Sets and Availability Zones.
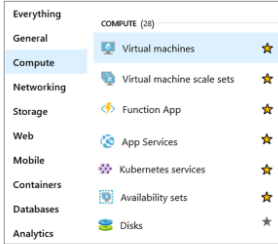
Lesson 03, Azure Compute Service (new)

Changed this topic to provide a more generic overview of compute services.

Lesson 03, Azure compute services -Virtual machine services

Changed the Functions bullet to "Performs compute actions based on an event." Changed the name of the topic to Virtual machine services.

Lesson 03, Azure compute services – Container services

Created a separate topic for Container services. Changed, "…unlike virtual machines, they do not include an operating system" to "…unlike virtual machines, you do not **manage** the operating system."

Lesson 03, Azure Network Services

Changed the descriptions on the slide and in the student content. Removed references to the OSI model which is outside the scope of this Fundamentals course.

Lesson 03, Azure Storage Services

This is now two topics: Azure data categories and Azure data services.

Lesson 03, Azure data categories

Changed the table format and reworked the content.

Azure data categories

	Schema	Data relationships	Examples
Structured data	Adheres to a schema, with the same data fields or properties.	Storable in relational database tables, with rows and columns.	Sensor data and financial data.
Semi-structured data	Has an ad hoc schema with less organized fields and properties.	Non-relational or NoSQL data, not storable in tables, rows and column.	Books, blogs, JSON, HTML documents.
Unstructured data	Has no designated schema or data structure.	Non-relational or blob data, with no restrictions on the kinds of data blobs contain.	PDFs, JPGs, videos.

Lesson 03, Azure storage services

Changed the student content to match the slide.

Lesson 04, Azure management tools.
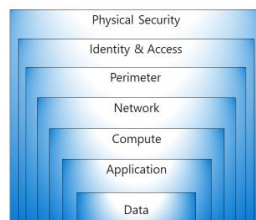
Reworked this topic to include Azure mobile app.

Module 3

Lesson 03, Defense in depth (new)

Added a Defense in depth topic at the start of this lesson so you can introduce security concepts.

Defense in depth

· A layered approach to securing computer systems.
· Provides multiple levels of protection.
· Attacks against one layer are isolated from subsequent layers.

Physical Security
Identity & Access
Perimeter
Network
Compute
Application
Data

Lesson 03, Shared Security (new)

Added a Shared Security topic as the second slide in the lesson.

Lesson 03, Azure Active Directory

Added a bullet for device management.

Lesson 05, Policies

Renamed this topic Implementing Policy. Reworked the topic to focus on the implementation process, not just the policy definition.

Lesson 05, Initiatives

Renamed the topic Policy Initiatives and reworked the content.
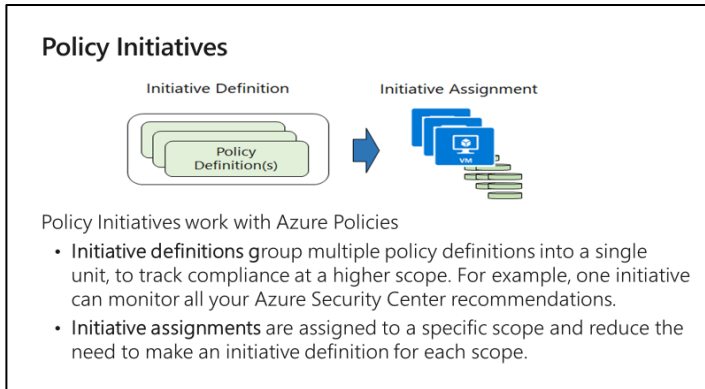
Lesson 05, Locks

Renamed the topic Resource locks and added a screenshot to the student materials.

Lesson 05, Azure Germany Services

Deleted the topic Azure Germany which is deprecated and no longer adding customers.

Module 4

Lesson 02, Subscriptions Uses and Options

Removed this small topic and combined the content with the Azure Subscriptions topic.
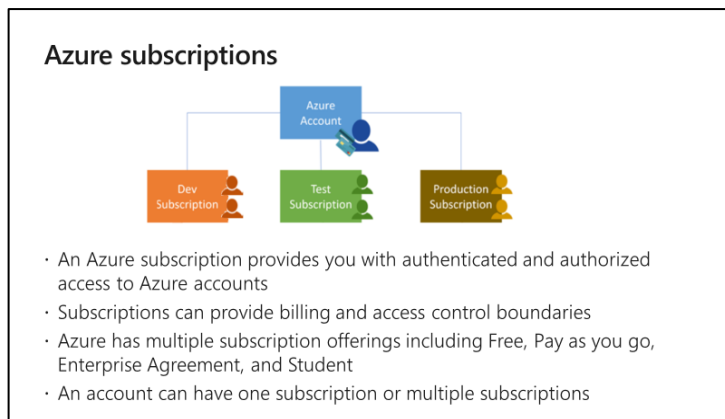
Lesson 02, Management Groups

Consolidated with the previous Object Hierarchy topic.

Lesson 03, Azure Free Account

The terms and conditions of the Azure Free Account have changed. Updated the topic to reflect the latest offering.

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Lesson 04, Support Plan Options

Reworked the slide to add a summary table.

Lesson 04, Knowledge Center

Changed the graphic for the topic.

Lesson 05, SLAs for products and services

Reworked the topic to include SLA downtime estimates.

Lesson 05, Composite SLA

Reworked the slide.

Composite SLAs

· If the App Service has a 99.95% SLA, and the Azure SQL Database has a 99.99% SLA, what is the composite SLA for your application?

Web app   SQL Database

Composite SLA

.9995 * .9999
= 99.94%

99.95 %   99.99 %
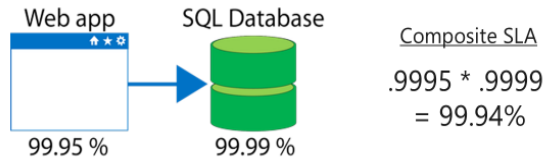
· Notice the composite SLA is lower than the individual SLAs
· Improve the SLA by creating independent fallback paths

Lesson 05, Application SLAs

Reworked the topic to better align with the exam objective.

Application SLAs

· Customers should determine what SLA is needed for their application
· Know your workload requirements and usage patterns
· Design for resiliency and availability
· Establish availability metrics — mean time to recovery (MTTR) and mean time between failures (MTBF)
· Establish recovery metrics — recovery time objective and recovery point objective (RPO)
· Implement resiliency strategies
· Build in availability requirements

Update – September 2019

- Module 2 • AZ-900T01 Microsoft Azure Fundamentals-02.pptx – slide 20 - Azure network services. Text updated to correctly explain listed services.

Update - June 2019

Global Change – New walk-throughs

- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\04-Walkthrough-Create a Virtual machine using Azure Portal
- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\07-Walkthrough-Create a virtual network via the Azure Portal
- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\08-Walkthrough-Deploy Azure Container Instances (ACI) in Azure Portal

- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\12-Walkthrough-Create Blob storage
- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\15-Walkthrough-Create a SQL database
- Mod 2 >M02-Core Azure Services\L04-Azure Solutions\03-Walkthrough-Add IoT device to Azure IoT Hub
- Mod 2 >M02-Core Azure Services\L04-Azure Solutions\10-Walkthrough-Run serverless code with Azure Functions in Azure portal
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\04-Walkthrough-Working with the Azure CLI
- 05-Walkthrough-Create VMs from a script with Azure PowerShell
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\06-Walkthrough-Install IIS webserver on a VM with Azure Cloud Shell
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\09-Walkthrough-Save a recommendations report with Azure Advisor
- Mod 3-Security, Privacy, Compliance and Trust\L02-Securing network connectivity in Azure\03-Walkthrough-Implement an Azure Firewall using Azure Portal
- Mod 4-Azure Pricing and Support\L03-Planning and Managing costs\09-Walkthrough-Download an Azure Pricing Calculator estimate
- Mod 4-Azure Pricing and Support\L03-Planning and Managing costs\11-Walkthrough-Download an Azure TCO Calculator cost comparison report

Additional Recorded Demos added to Mod 2 and Mod 4.

- Mod 2 >M02-Core Azure Services\L03-Core Azure Services and Products\ 05DemoDeploy Azure Container Instances (ACI) in Azure Portal
- Mod 2 >M02-Core Azure Services\L04-Azure Solutions\03-Demo-Add IoT device to Azure IoT Hub
- Mod 2 >M02-Core Azure Services\L04-Azure Solutions\11-Demo-Run serverless code with Azure Functions in Azure portal
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\05-Demo-Create VMs from a script with Azure PowerShell
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\07-Demo-Install IIS webserver on a VM with Azure Cloud Shell.md
- Mod 2 >M02-Core Azure Services\L05-Azure Management Tools\10-Demo-Save a recommendations report with Azure Advisor
- Mod 4-Azure Pricing and Support\L03-Planning and Managing costs\09DemoGenerate an Azure Pricing Calculator estimate
- Mod 4-Azure Pricing and Support\L03-Planning and Managing costs\12DemoGenerate an Azure TCO Calculator cost comparison report

Other changes

- Module 3 - L06-Monitoring and Reporting in Azure - Additional topic added on Tags
- Module 4 - L02-Azure Subscriptions - Additional topic added on Object Hierarchy

Update - May 2019

Global Change – Change across all modules

- Graphics have been updated in course content and also in ppts. This includes new graphics, changes to in resolution, reformatting and updates for accessibility color contrasts. This affects all modules.
- Walkthrough steps have been added to PPT instructor notes.

Update - Jan 2019

Global Change – Change across all modules

All video files have been updated to remove an avatar that was present in them. This affects all video files in all modules.

Module 2

Five Walkthrough topics have been added at the locations below. These are to provide optional step-by-step hands on tasks for students to follow or complete.

Lesson 03-Core Azure Services and Products.

- 04-Walkthrough-Create a Virtual machine using Azure Portal.md
- 07-Walkthrough-Create a virtual network via the Azure Portal.md
- 10-Walkthrough-Create Blob storage.md
- 14-Walkthrough-Create a SQL db.md

Lesson 05-Azure Management Tools

- 04-Walkthrough-Working with the Azure CLI