Purpose

This document is for Microsoft Certified Trainers preparing to teach the AZ-104 Microsoft Azure Administrator course. This course is designed for students who are planning to take the associated certification exam, or students who are performing Azure administrator tasks in their day-to-day job.

Azure Administrator Role Definition

Both the certification exam and the courseware are based on the Azure Administrator role.

- The Azure Administrator implements, manages, and monitors identity, governance, storage, compute, and virtual networks in a cloud environment.

- The Azure Administrator will provision, size, monitor, and adjust resources as appropriate.

Remember there are other roles, such as DevOps and Solutions Architect.

Audience

This course is for Azure Administrators. Azure Administrators manage the cloud services that span storage, networking, and compute cloud capabilities, with a deep understanding of each service across the full IT lifecycle. They take end-user requests for new cloud applications and make recommendations on services to use for optimal performance and scale, as well as provision, size, monitor and adjust as appropriate. This role requires communicating and coordinating with vendors. Azure Administrators use the Azure Portal and as they become more proficient, they use PowerShell and the Command Line Interface.

Prerequisites

Successful Azure Administrators start this role with experience on operating systems, virtualization, cloud infrastructure, storage structures, and networking. This knowledge includes:

- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks.

- Understanding of network configuration, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies.

- Understanding of Active Directory concepts, including users, groups, role-based accessed control.

- Understanding of resilience and disaster recovery, including backup and restore operations.

Certification Exam

Certification exams measure your ability to accomplish certain technical tasks for a job role. The study areas are based on the Job Task Analysis that was conducted for the role in December 2019.

Each study area has a percentage indicating the relative weight of the area on the exam. The higher the percentage, the more questions you are likely to see in that area.

Study Area	Percentage
Manage Azure identities and governance	15-20%
Implement and manage storage	15-20%
Deploy and manage Azure compute resources	20-25%
Configure and manage virtual networking	25-30%
Monitor and backup resources	10-15%

Candidates should have a minimum of six months of hands-on experience administering Azure. Candidates should have a strong understanding of core Azure services, Azure workloads, security, and governance. Candidates for this exam should have experience in using PowerShell, the Command Line Interface, Azure Portal, and ARM templates.

✔ For more information, on the skills measured in the exam, please visit the AZ-104 Microsoft Azure Administrator certification page.

✔ A Study Guide, AZ-104T00A-ENU-StudyGuide, is provided in the MCT Download Center.

Preparing to Teach

In the next sections we will cover the main course components and how they can used in class. There is a lot of flexibility in how you use this content to create the best learning experience for your students.

Content

The content for your course is organized into Modules, Lessons, and Topics. There are 11 modules.

✔ This is a suggested order. Always ensure you are covering the content most applicable to your audience.
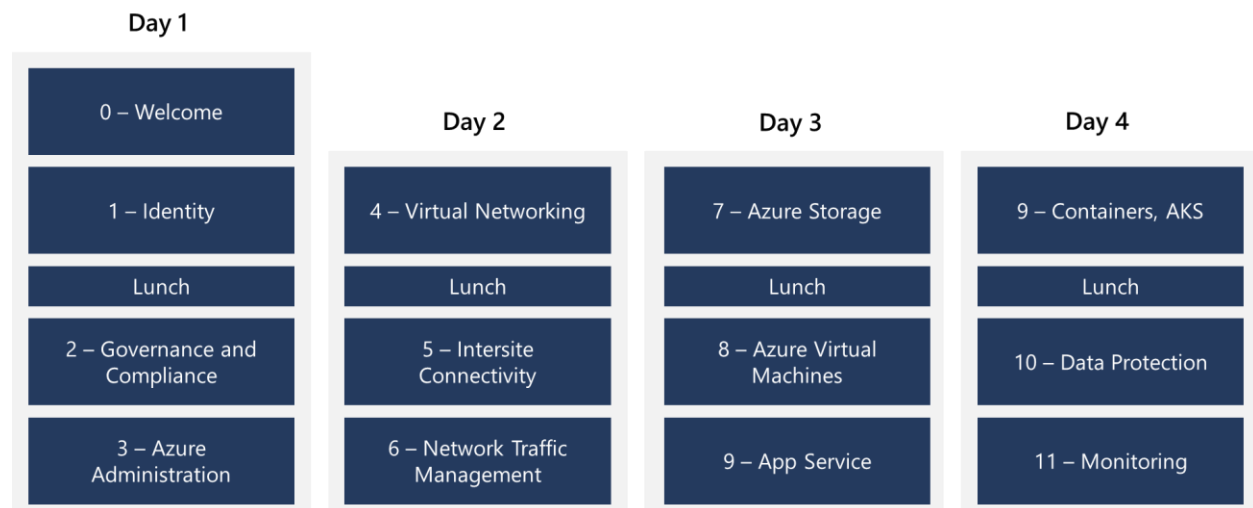
Module 01 – Administer Identity

Module 02 – Administer Governance and Compliance

Module 03 – Administer Azure Resources

Module 04 – Administer Virtual Networking

Module 05 – Administer Intersite Connectivity

Module 06 – Administer Network Traffic Management

Module 07 – Administer Azure Storage

Module 08 – Administer Virtual Machines

Module 09 – Administer Serverless Computing

Module 10 – Administer Data Protection

Module 11 – Administer Monitoring

✔️ There is a Change Log, AZ-104T00A-ENU-ChangeLog, that provides detailed information on how this course has changed over time. The Change Log is updated for each course release.

✔️ A Course Outline, AZ-104T00A-ENU-CourseOutline, is provided in the MCT LDC.

Timing

Module 00 has a slide with a proposed schedule. You should adjust this schedule to your classroom situation.

Day 1

0 – Welcome
1 – Identity
Lunch
2 – Governance and Compliance
3 – Azure Administration

Day 2

4 – Virtual Networking
Lunch
5 – Intersite Connectivity
6 – Network Traffic Management

Day 3

7 – Azure Storage
Lunch
8 – Azure Virtual Machines
9 – App Service

Day 4

9 – Containers, AKS
Lunch
10 – Data Protection
11 – Monitoring

Labs

Labs are provided for each module. The lab instructions are in the AZ-104 Microsoft Learning GitHub repository. Supplemental files, like scripts and templates, are also provided.

To complete the labs, you will need:

- An internet connection to the Azure portal.

- An Azure subscription.

✔️ Hosted lab machines may be available for an additional charge.

✔️ If you have lab feedback, create an Issue on the lab GitHub repository.

PowerPoint Slides

Each module has a PowerPoint deck. Each course topic has a PowerPoint slide. Module overview and lesson overview slides are included so you can introduce the content to your students.

✔️ The Lesson Overview slide includes (in the Notes) the certification topics that are covered.

Azure Subscriptions

To complete the labs and any additional demonstration exercises in this course, students will need an Azure Subscription. The current recommended way to give students access to Azure is by requesting Microsoft Learning Azure Passes.

You can request Microsoft Learning Azure Passes for yourself and your students. Ensure that you request these passes at least two weeks before the class starts. After receiving the passes each student will need to activate their pass.

✔️ The Azure pass effectively functions in the same way as the publicly available Microsoft Azure Trial Subscription. This means there are limitations on what you can do with the pass.

Portal, Cloud Shell, PowerShell, and the CLI

The lab instructions are written to use the Cloud Shell. The Cloud Shell automatically connects to Azure and provides access to PowerShell and the CLI.

If you would rather have students use PowerShell or the CLI locally, you can use these links.

- Install Azure PowerShell on Windows with PowerShellGet

- Install Azure CLI on Windows

✔️ Module 03, Azure Administration, has an excellent overview of common Azure Administrator tools including Azure portal, Azure PowerShell, Cloud Shell, Azure CLI, and ARM templates. There are demonstrations that you can use to ensure your students are ready for the labs.

Demonstrations

This course has numerous demonstrations. Take the time to work through each one and decide which to use. Some of the demonstrations are simple show and tell walk-throughs of the Azure portal; others require scripting skills. Consider having the students do the demonstrations themselves, or walk-through as a group. You might also consider using the demonstration instead of the slides. Lastly, consider the overlap with the formal labs and make the best use of your time.

✔️ All the demonstrations are in a document, AZ-104T00A-ENU-Demonstrations, in the MCT DLC.

Group Discussions

Included throughout the content are questions designed to help students reflect on what they have learned or emphasize some important point. When you see a Note, you have a chance to interact with your students and engage them in discussion. For example,

   Note: Has your organization implemented users and groups?

Knowledge Check Questions

Review questions are provided throughout the course to check the student's knowledge. You can use these review questions in several ways:

- Have the student's pre-test before the course starts and then at the end to see what they have learned.
- As a group, go through the questions before moving on to another section.
- Sprinkle the questions into the content as you cover the related material.

✔️ Note these questions are not at the level of the certification exam. You may wish to supplement with questions of your own choosing.

Additionally, this course provides an interactive way to use Microsoft Forms for the knowledge check questions. Microsoft Forms is free and easy to use. If you aren't familiar with the product, short support videos are available. Review question quizzes have already been created for you, simply:

1. Select each of the following URLs, and then **Duplicate it**. This will create a personal copy of the quiz, which you can edit. For example, you could add a company logo to the top.
2. **Share** the quizzes with the **anyone with the link can respond** option. This means sign-in to complete the quiz is not required.
3. Provide the shared URLs to your students and use the **Responses** tab to review the answers.

Quiz templates

- [Module 01, Identity](#)
- [Module 02, Governance and Compliance](#)
- [Module 03, Azure Administration](#)
- [Module 04, Virtual Networking](#)
- [Module 05, Intersite Connectivity](#)
- [Module 06, Network Traffic Management](#)
- [Module 07, Azure Storage](#)
- [Module 08, Azure Virtual Machines](#)
- [Module 09, Serverless Computing](#)
- [Module 10, Data Protection](#)
- [Module 11, Monitoring](#)

✔️ As a best practice it is recommended you create a new quiz and delete the old quiz each class. This will keep the response URLs from being circulated and responses continuing to come in after class.

Microsoft Learn - Additional Study Resources

At the end of each module is a slide with applicable Microsoft Learn modules. These modules can be used as additional study opportunities.

References

There are a lot of resources to help you and the student learn about Azure. We recommend you bookmark these pages. The list is included in the Welcome section of the student materials.

- [AZ-104 Prerequisites for Azure administrators (Learn)](#)
- [AZ-104: Manage identities and governance in Azure - Learn | Microsoft Docs](#)
- [AZ-104: Implement and manage storage in Azure - Learn | Microsoft Docs](#)
- [AZ-104: Configure and manage virtual networks for Azure administrators - Learn | Microsoft Docs](#)
- [AZ-104: Deploy and manage Azure compute resources - Learn | Microsoft Docs](#)
- [AZ-104: Monitor and back up Azure resources - Learn | Microsoft Docs](#)
- [Azure Documentation](#) . Stay informed on the latest products, tools, and features. Get information on pricing, partners, support, and solutions.
- [Azure forums](#) . The Azure forums are very active. You can search the threads for a specific area of interest. You can also browse categories like Azure Storage, Pricing and Billing, Azure Virtual Machines, and Azure Migrate.

- [Microsoft Learning Community Blog](#) . Get the latest information about the certification tests and exam study groups.
- [Microsoft Azure Blog](#) . Keep current on what's happening in Azure, including what's now in preview, generally available, news & updates, and more.

Connect with Others

- [MCT Central](#). Your one stop for all things MCT. Stay up to date with the latest MCT news, learn about upcoming events, find job opportunities, or connect with other MCTs around the world. You can also ask questions and discuss a variety of topics including courseware and certification with Microsoft and other MCTs through the MCT Central Forums.

- [MOC Courseware Support](#). If there are problems with a course or you need to log a support ticket, contact the Official Support channel for MOC courses. This channel is monitored by support agents and is the quickest way to log your course support issue.

Feedback

In this course we have provided a framework for you to work with. Take time to prepare and think about the value that only an instructor can bring to training. We hope to partner with you to provide an exceptional student experience and we welcome your feedback.

Happy learning!
Azure Administrator Courseware Development Team