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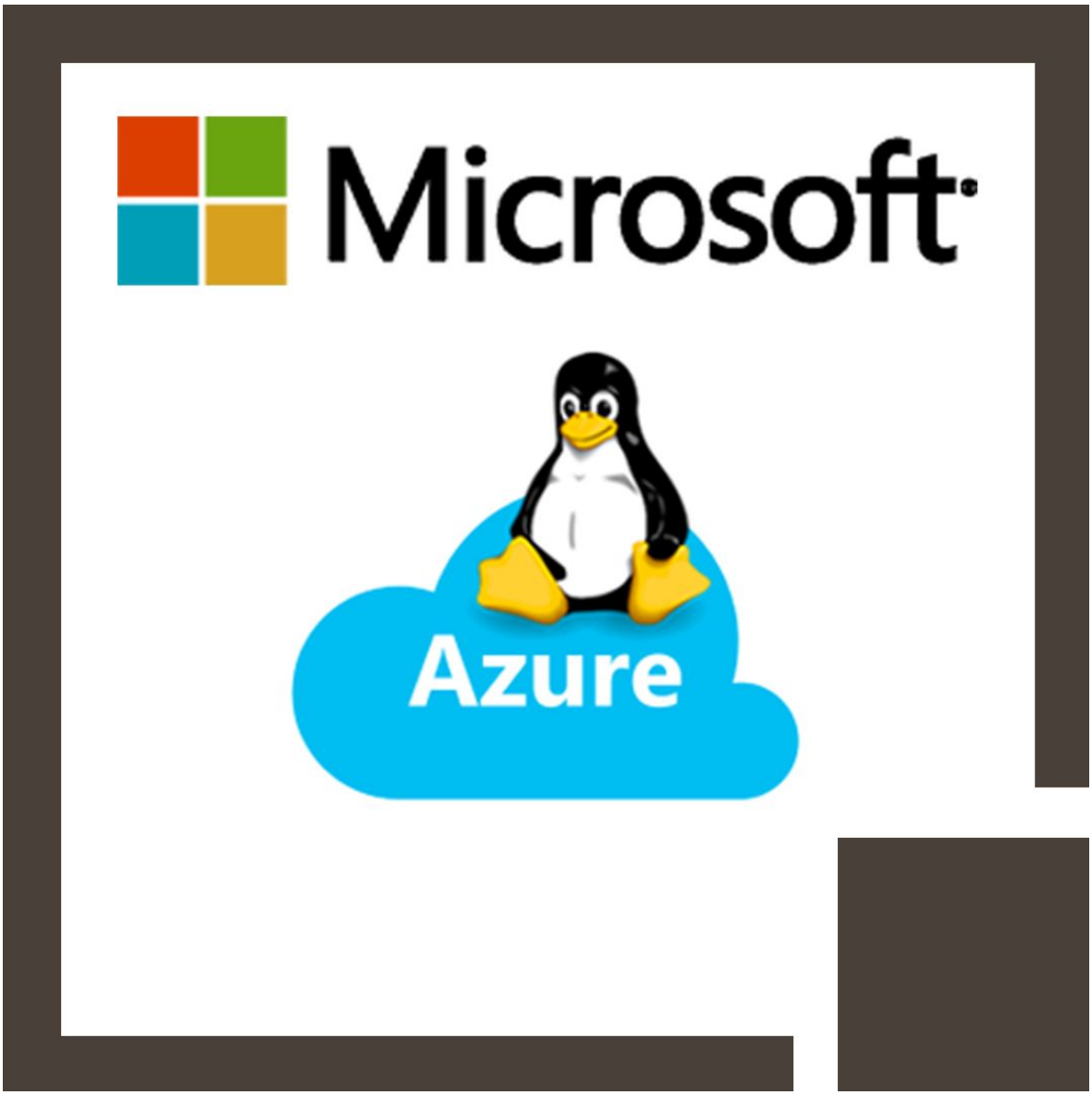
Learning Style: Virtual Classroom

Technology: Microsoft

Difficulty: Intermediate

Course Duration: 4 Days

Deploy and Manage Linux on Azure (MS-55257)



About this course:

This four-day instructor-led course is intended for Microsoft professionals who are interested in deploying and managing an instance of Linux on Azure. In this course you will learn how to deploy and manage Linux in Azure environments. Some topics covered include:
Essential Linux System Administration Using containers including Docker and Moby, Azure Agent on Linux and Azure services A survey of Puppet, Ansible, CHef, Saltstack, Nagios, Zabbix Troubleshooting and monitoring.

Course Objective:

After completing this course, students will be able to:

- Deploy and manage Linux in an Azure cloud environment

Audience:

This course is designed for Microsoft professionals who want to learn enough about Linux to manage and deploy it in Azure cloud. It also targets Linux professionals who want to get familiar with Azure and how to deploy and manage Linux in Azure environments.

Prerequisite:

Before attending this course, students must have:

- No previous experience with Azure is required - this course is accessible to Linux professionals as well as Microsoft professionals and therefore does not have specific requirements regarding Microsoft knowledge.
- IMPORTANT REQUIREMENT: Prior to start of the class each student must have an Azure account set up in the Western US region.

Course Outline:

Module 1: Getting started with Azure

This module explains what Azure is, how to open an account and deploy your first Linux instance.

Lessons

- Getting started with Azure
- Linux Virtual Machines
- Linux & Open-Source Fundamentals

- Working With Shells
- Users, Groups and Permissions
- Sudo
- Software Management
- Git
- Storage
- Networking
- Systemd
- Logging
- AD Integration
- Securing Linux with MAC

Lab: Module 1 Labs

- Deploy an Ubuntu VM and install Azure client
- Create an Azure Linux instance from the Cloud Shell
- Install an SSH client
- Create users and groups
- Sudo, users and permissions
- Adding storage
- Networking and checking IP address
- Installing vsftpd
- Logging
- Active Directory integration
- Configure MAC on your system

After completing this module, students will be able to:

- Deploy a Virtual Machine and create an Azure Linux instance on it
- Understand the fundamentals of Linux and Open Source Software
- Understand and put into use the tools needed to run the Azure instance efficiently and securely

Module 2: Containers

This module explains where containers come from, why they are useful, what components make up container technologies, and how different container technologies compare to each other.

Lessons

- Why Containers
- Container Components
- Comparing Container Technologies
- Creating and Running Docker Containers
- Orchestrating Containers
- Docker Compose
- Docker Machine

- Docker VM-Extension
- Azure Container Services
- Working with Docker on Azure

Lab: Module 2 Labs

- Install docker files

After completing this module, students will be able to:

- Install and work with Docker on Azure

Module 3: Deploy Linux on Azure

This module explores the many ways to deploy Linux on Azure.

Lessons

- Understanding Deployment Options
- Azure Resource Manager
- Creating Virtual Machine Images
- Azure Virtual Machine Agent
- Azure Virtual Machine Extensions
- Azure Virtual Machine Extensions Using Docker Machine

Lab: Module 3 Labs

- Use ARM to deploy to VM
- Verify the Azure VM Agent is running

After completing this module, students will be able to:

- Use tools to build Virtual Machines in Azure

Module 4: Automation & Orchestration

This module explains what "Dev Ops" is and become familiar with the tools used to automate development processes.

Lessons

- DevOps and Automation
- Cloud-init
- Ansible
- Salt
- Puppet

- Chef

Lab: Module 4 Labs

- Use Chef to generate a cookbook

After completing this module, students will be able to:

- Install and configure common dev tools.

Module 5: Monitoring and Troubleshooting

This module explains how to monitor your Azure instance and troubleshoot issues.

Lessons

- Monitor and Troubleshoot - popular methods

After completing this module, students will be able to:

- Access the trouble shooting section through Azure portal and diagnose / solve issues on the affected VM

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