

# **Deploy and Manage Linux on Azure (MS-55257)**

**Modality: Virtual Classroom**

**Duration: 4 Days**

## **About this course:**

This instructor-led four days course is intended for MS experts who are interested in deploying and managing an instance of Linux on Azure. You will figure out how to deploy and oversee Linux in Azure conditions in this course. A few subjects include:

Basic Linux System Administration Using containers including Moby and Docker, Azure Agent on Linux and Azure services a study of Ansible, Puppet, Saltstack, Chef, Zabbix, and Nagios monitoring and troubleshooting.

## **Course Objective:**

- Deploy and oversee Linux in an Azure cloud condition.
- 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 the IP address
- Comparing Container Technologies
- Creating and Running Docker Containers
- Orchestrating Containers
- Understanding Deployment Options
- Azure Resource Manager
- Creating Virtual Machine Images
- Azure Virtual Machine Agent
- Azure Virtual Machine Extensions
- Use Chef to generate a cookbook
- Install and configure common dev tools.

## **Audience:**

This course is intended for MS experts who need to learn enough about Linux to deploy and manage it in the Azure cloud. Also, it targets Linux experts who need to get acquainted with Azure and how to deploy and oversee Linux in Azure situations.

## **Prerequisite:**

Prior to attending this course, understudies must have:

- No past involvement in Azure is required - this course is available to Linux experts and MS experts and hence doesn't have explicit prerequisites regarding MS information.
- Significant REQUIREMENT: Prior to the beginning of the class, every learner must have an Azure record set up in the Western US locale.

## 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