

# **Proxmox VE**

# **Course Description:**

Proxmox Virtual Environment (Proxmox VE; short PVE) is an open-source server virtualization management platform. It is a Debian-based Linux distribution with a modified Ubuntu LTS kernel and allows deployment and management of virtual machines and containers. Proxmox VE includes a web console and command-line tools, and provides a REST API for third-party tools. Two types of virtualization are supported: container-based with LXC (starting from version 4.0 replacing OpenVZ used in version up to 3.4, included), and full virtualization with KVM.It comes with a bare-metal installer and includes a web-based management interface.

#### **Modes of Trainings Available:**

Online Training Class Room Training Regular Classes Available Weekend Classes Available

## Course Outline

#### Introduction

- What is Proxmox?
- Proxmox main advantages and features

# Installation and setting up Proxmox a: Installation

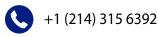
- How to install on Debian 10 and from official ISO.
- Proxmox file systems: ZFS vs MDRAID.
- Upgrade from the previous version to 6.0.

#### b: WEB GUI Interface

General datacenter options General node options

## c: Network configuration and bridging

SSL certificate







#### d: Storage networking

How to work with any storage via Directory storage type

# **Working with Guests**

#### a: Creating a Virtual Machine

- Options and settings
- Guest Agent

#### b: Creating a Container

- Options and settings
- Guest Agent
- Templates and Clones

#### c: Backup and Restore

- Options and settings
- Guest Agent
- Templates and Clones

#### c: Backup and Restore

- Snapshots
- Archives
- Zsync

#### **Firewall**

#### a: Built-in Firewall overview

- Understanding of Groups and Rules
- IPAliases and IPSets

### b: Alternative CSF/LFD firewall configuration

Pros and Cons

### User management

- Groups & User management
- Add Group
- User
- Access management regarding VMs/Containers
- Understanding of Pools & User roles





# Clustering

# a: Understanding Cluster

- HA Cluster
- Quorum understanding
- Proxmox cluster file system
- Creating 3 nodes cluster
- HA Cluster setting up for VM
- Live migration of VMs between nodes in the cluster

#### Command line tools

• Useful command-line tools to Manage config files

