Mirantis Cloud Platform MCP100

Learn how to use MCP as a deployment and Lifecycle management tool

Mirantis Cloud Platform course (MCP100) is a 3 day instructor-led training for architects, cloud and system administrators, devops and software engineers, or other IT team members responsible for the deployment, configuration, and maintenance of production-ready OpenStack and Kubernetes. The course is broken up into two sections: lectures and labs.

The lectures provide an overview of Mirantis Cloud Platform (MCP), its high-level architecture and technology stack. The training will guide students through Mirantis Cloud Platform (MCP) concepts, its features and how MCP can be used to deploy, configure and manage cloud environments, software defined networks, software defined storage solutions.

The labs provide hands-on experience with MCP components for bare-metal provisioning, deployment and configuration management, networking, and monitoring. Students will learn how to use OpenStack deployment architectures based on model-driven approach, install and configure additional components such as OpenContrail for OpenStack overlay networking, Ceph as object and block storage for OpenStack, StackLight for OpenStack logging, metering and alerting.

Course Details
- Duration: 3 Days
- Hours: 9:00 a.m. - 5:00 p.m.

Prerequisites
- Strong experience using Linux command line
- Basic OpenStack experience (OpenStack Bootcamp I or equivalent)

Lab Requirements
- Laptop with WiFi Card
- Web browser supporting HTML5
- SSH Client

Target Audience
- Cloud Architects
- Cloud Administrators
- Deployment, DevOps, Software Engineers
- IT team members responsible for the deployment, configuration, and maintenance of OpenStack

Objectives
- Familiarity with Mirantis Cloud Platform (MCP)
- Understanding of the most common OpenStack challenges in production and how MCP solves these challenges
- Understanding of MCP architecture and its technology stack
- Hands-on experience with MCP as a tool to deploy and configure OpenStack

Outline
- Course Introduction
- OpenStack Deployment Architectures
- MCP Overview
- Configuration management with Salt
- MCP deployment architectures
- OpenStack Networking Models
- Cluster Logging, Metering and Alerting
**MODULE 1**

**Theory**
- OpenStack challenges and solutions
- What is Mirantis Cloud Platform
- MCP high level architecture

**Workshops**
- Explore the classroom environment

**MODULE 2**

**Theory**
- MaaS overview, limitations, alternatives, use cases, basic flows
- MaaS architecture
- MaaS installation and configuration

**Workshops**
- Install and configure MaaS
- Bare metal provisioning with MaaS

**MODULE 3**

**Theory**
- Introduction to Salt
- Salt execution module
- Configuration management with state modules

**Workshops**
- Salt CLI, grains, files, pillars, states, formulas

**MODULE 4**

**Theory**
- Model driven architecture
- Re-class and Cookie-cutter
- MCP deployment process
- MCP reference architectures

**Workshops**
- Re-class model
- MCP bootstrapping
- Kubernetes deployment with MCP

**MODULE 5**

**Theory**
- OpenStack Networking
- OpenStack with OpenContrail
- OpenStack with Open vSwitch
- Kubernetes with Calico

**Workshops**
- OpenStack deployment with MCP

**MODULE 6**

**Theory**
- MCP LMA

**Workshops**
- MCP logging, metering, alerting

**MODULE 7**

**Theory**
- OpenStack Block, Object, Image, Ephemeral Storage
- Kubernetes Volumes, Persistent Volumes
- Ceph in MCP
- Decapod

**Workshops**
- Ceph deployment with Decapod