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Mirantis Cloud Platform **MCP100**

Three-day course on MCP components focused on deployment of infrastructure and cloud components such as OpenStack and Kubernetes

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 Altering

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Course Syllabus

Lecture, Demos and Group Exercises

MODULE 1

MCP overview

Theory

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

Workshops

- Explore the classroomenvironment

MODULE 2

MaaS overview

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

Configuration management with Salt

Theory

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

Workshops

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

MODULE 4

MCP deployment model

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

MCP networking

Theory

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

Workshops

- OpenStack deployment with MCP

MODULE 6

MCP logging, metering, alerting

Theory

- MCP LMA

Workshops

- MCP logging, metering, alerting

MODULE 7

MCP storage

Theory

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

Workshops

- Ceph deployment with Decapod

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