

MCP Operations Bootcamp **MCPOps**

Two-day Introduction to MCP and using Infrastructure as Code to operate your cloud (OpenStack)

The Mirantis Cloud Platform Operations (MCPOps) course is a 2 day instructor-led training for cloud and system administrators, devops and software engineers, and IT team members responsible for operating with Mirantis Cloud Platform.

The course is broken up into two sections: **lectures** and **labs**.

The **lectures** provide a high level overview of MCP and its components. Students will learn about Model Driven Architecture, managing infrastructure code, and in-depth knowledge on operating MCP with its Stacklight, SaltStack, ReClass, and DriveTrain components.

The **labs** provide a hands-on experience with a pre-deployed all-in-one Mirantis Cloud Platform. Students will learn how to navigate various user interface components, perform updates using the CI/CD Pipeline and SaltStack, monitor the infrastructure using Grafana / Prometheus, and ends with a comprehensive practice to tie in all the skills you have acquired.

Course Details

- Duration: 2 Days
- Hours: 9:00 a.m. - 5:00 p.m.

Prerequisites

- Strong experience using Linux command line
- Strong understanding of virtualization technologies (i.e. Hypervisors, virtual networks)
- OpenStack Bootcamp I (OS100) or similar relevant experience

Target Audience

- Intended for architects, cloud system administrators, devops, and software engineers responsible for operating production-ready Mirantis Cloud Platform. This course requires a strong proficiency in Linux command line and OpenStack I (OS100) or equivalent experience is recommended

Lab Requirements

- Laptop with WiFi connectivity
- Web browser supporting HTML5
- SSH client

Objectives

As a result of attending this course, Students should be able to understand and practice the following:

- Mirantis Cloud Platform (MCP) Architecture
- In-depth knowledge of using Salt and ReClass in MCP
- Infrastructure as Code & Code-review process
- Operate CI/CD pipeline via DriveTrain
- Familiarity with utilizing Stacklight components

MODULE 1

MCP OVERVIEW

Theory

- MCP Architecture
- Infrastructure as Code concepts
- MCP Component packaging and repositories
- MCP Support information

Workshops

- Classroom Environment
- Overview of environment setup

MODULE 2

CONFIGURATION
MANAGEMENT
WITH SALTSTACK

Theory

- SaltStack architecture
- Use salt modules
- Salt States operations

Workshops

- Salt components (Pillars, states, state tree, formulas)
- Salt and Reclass in MCP
- Command line interface
- Introduction to Jinja

MODULE 3

MCP MODEL DRIVEN
ARCHITECTURE

Theory

- Introduction to Reclass
- Reclass Model Interpolation (model -> Salt Pillars)
- Mirantis model designer & Cookiecutter
- Navigating Reclass model structure

Workshops

- Reclass Model Management
- Reclass Model
- Structure SaltStack and Reclass
- Introduction to MCP Model
- Reclass Model to Pillars Interpolation
- Service management using Salt

MODULE 4

DRIVETRAIN

Theory

- Core components overview
- DriveTrain workflow
- Introduction to Git, Gerrit & Jenkins
- Jenkins as orchestrator

Workshops

- DriveTrain Operations
- Setting up Git & Gerrit
- Understanding pipelines in-depth
- OpenStack configuration using Reclass models & Pipeline

MODULE 5

STACKLIGHT
LMA

Theory

- Architecture overview
- Prometheus, Alerta, Telegraf, & FluentD overview
- Stacklight LMA Data collection process
- Long term reporting, adding new metrics, configurations

Workshops

- Stacklight LMA
- Telegraf Configurations
- Grafana user interface
- Prometheus UI, PromQL

MODULE 6

COMPREHENSIVE
PRACTICE

Theory

- Comprehensive Practice

Workshops

- Various operations tasks on your own without detailed steps Instructor-led answers