Anypoint Platform Operations: Runtime Fabric Appliance

Summary
Anypoint Runtime Fabric is a container service that automates and orchestrates the deployment of Mule runtimes across Amazon Web Service (AWS), Microsoft Azure, and on-premises data centers that can be managed through a single MuleSoft-hosted control plane. Runtime Fabric is available as a package that is installable on an existing Kubernetes environment that is operated and managed by the customer, or as an appliance that includes Docker and Kubernetes. This course is for all operations personnel, developers, and architects who want to get hands-on experience installing, configuring, managing, and monitoring customer-hosted Mule runtimes and applications using the Runtime Fabric appliance.

Note: This course uses the Runtime Fabric appliance on AWS and includes content on how to install and configure the Runtime Fabric appliance. If you are planning to use Runtime Fabric on self-managed Kubernetes, you should not take this course. You should take a new course that uses Runtime Fabric on self-managed Kubernetes (EKS or AKS) that is under development and will be available in Q1 2021.

Duration
2 days (in-person or online)

Objectives
At the end of this course, students should be able to:

• Describe the features, benefits, and architecture of Runtime Fabric.
• Install and configure the Runtime Fabric appliance.
• Deploy Mule applications to Runtime Fabric.
• Scale Runtime Fabric deployments for performance and high availability.
• Use Anypoint Runtime Manager and to manage, monitor, and analyze Mule applications.
• Use OpsCenter and Anypoint Monitoring for dashboarding and monitoring.

Audience
Operations personnel, developers, and architects who want to get hands-on experience installing, configuring, and using the Runtime Fabric appliance
Prerequisites

- A knowledge of system administration and server commands
- A basic understanding of data formats such as XML, CSV, and JSON
- A basic knowledge of working on Linux systems
- A basic understanding of remote connection mechanisms such as SSL and SSH
- (Optional, but useful) A basic understanding of containerization concepts and technologies

Setup requirements

- A computer with at least 2GB available RAM and 500MB available storage
- Unrestricted internet access to port 80 (with > 5Mbps download and > 2Mbps upload)
- An SSH client
- Terraform
- OpenSSL
- OpenJDK 8
- Apache JMeter

Get a detailed setup document here.

Outline

Module 1: Introducing Runtime Fabric

- Describe the development lifecycle of Mule applications
- Describe and navigate Anypoint Runtime Fabric
- Distinguish between Runtime Fabric operating models
- Distinguish between Anypoint Platform deployment options
- List features and limitations of Runtime Fabric
- Explain relevant concepts and underlying technologies

Module 2: Installing Runtime Fabric

- Explain relevant concepts and underlying technologies
- Install Runtime Fabric to a provisioned AWS environment
- Remotely access the Runtime Fabric environment
Module 3: Enabling inbound traffic
• Explain relevant concepts
• List Runtime Fabric security requirements
• Configure Runtime Fabric for inbound traffic

Module 4: Deploying applications
• Explain relevant concepts and underlying technologies
• List deployment options
• Deploy and undeploy applications
• Update and redeploy applications with zero downtime

Module 5: Configuring Runtime Fabric
• Explain relevant concepts and underlying technologies
• Install a license to Runtime Fabric
• Enable alerting
• Use OpsCenter for monitoring and management

Module 6: Scaling for high availability and performance
• Explain relevant concepts and underlying technologies
• Distinguish between horizontal and vertical scaling
• Scale application runtime environments for high availability
• Scale application runtime environments for performance

Module 7: Logging and monitoring
• Identify logging options for Mule applications and Runtime Fabric
• Set up audit logging
• Retrieve, view, and filter applications logs
• Set up log forwarding to a logging server
• Monitor Runtime Fabric using OpsCenter

Module 8: Securing Runtime Fabric and Mule applications
• Describe security options in Anypoint Platform
• Secure applications and data
• Secure access to OpsCenter