

Monitoring with Datadog

Duration: 4 Days (8hrs/day)

Prerequisites:

- Basic Computer Knowledge

Course Objective: After completing this Datadog course, you can start working on Datadog monitoring with full confidence.

Lab Requirement: Koenig DC and Customer Datadog Account

Module 1 – Introduction

Introduction to Monitoring in SDLC

What is Datadog Monitoring Tool

Key Functionalities of Monitoring Tools

Monitoring Terminologies

Architecture of Datadog

Module 2 – Pricing and Setup

Datadog Pricing

Datadog Setup and Account Creation

Module 3 – Datadog Agent

Datadog Agent Manager

Datadog Agent's Directory Tour

Module 4 – Infrastructure Monitoring - Host

Host Map

Agent, System, NTP Metrics in Host Map

Module 5 – Tags in Datadog

Introduction to Tagging

Unified Service Tagging (Reserved Tags) in Datadog

Filtering, Grouping on Tags

Assigning Tags from datadog.yaml file

Host Map Options

Module 6 – Infrastructure Monitoring - Processes

Process Explorer

Scrubbing Sensitive Data

Create Custom Process Metrics

Module 7 – Infrastructure Monitoring - Containers

Introduction

Docker Setup

Containerized Docker Agent Setup

Container Map and Live Container

Realistic Approach to Run Docker Agent

Environment Variables Translation Rules

Run Docker Agent from Docker Compose File

Module 8 – Metrics and Metric Views in Datadog

What are Metrics?

Why Datadog Agent Aggregates Metric

Count, Rate, Gauge, Set Metric Types

Histogram Metric Type

Distribution Metric Type

Datadog's Summary View for Metrics

Metric Explorer

Module 9 – Custom Metrics – Agent Check

Custom Metrics Fundamentals

Custom Metrics Submission Types

Create Custom Check for COUNT Metric Type

Custom Agent Check Running

Metric Without Limits

Create Custom Check for GAUGE Metric Type

Create Custom Check for RATE Metric Type

Create Custom Check for HISTOGRAM Metric Type

Module 10 – Custom metrics – DogStatsD and Python App

Python Application Code to Instrument

Increment() and decrement() Functions for COUNT Metric Type

Instrument Python App for COUNT Metric Type

Instrument Python App for GAUGE Metric Type

Instrument Python App for HISTOGRAM & DISTRIBUTION

Module 11 – Events

Introduction to Events

Event Log Check to Capture Windows Events

Create Custom Events

Event Explorer

Module 12 – Notebooks

Create Notebook – Add Timeseries Cell

Add Text, Table Cells in Notebook

Notebook Settings

Notebook Templates

Module 13 – Dashboards

Introduction to Dashboards

Timeseries Widget

Find Correlations in Metrics

Query Values, Table, Top List Widgets

Groups, Annotations, Summaries, List, Stream Widgets

Template Variables

Dashboard Settings

Module 14 – Monitors & Alerts

Create Host Monitor

Tag, Template, Conditional Variables

Draft Notification Messages

Draft Renotification Message

EVAL Function

Trigger Monitor and Test Notifications

Manage Monitors View

Downtime

Module 15 – Logs Collection

Introduction to Datadog's Log Management

Configurations Required to Collect Logs from Python App

Python Application to Generate Logs

Containerized Log Collection

Module 16 – Logs Preprocessing – Datadog Log Pipelines

Introduction to Log Pipelines

Create Custom Processor in Pipeline using Grok Parser

Create Custom Pipeline

Standard Attributes

Generate Log Based Metrics

Create Custom Index

Exclusion Filter in an Index

Log Rehydration

Module 17 – Log Explorers

Live Tail View

Group Logs by Fields, Patterns, Transactions

Create Facet in Facet Panel

Create Measure in Facet Panel

Module 18 – Datadog Integrations

Datadog Integration Types

Supported Datadog Integrations with Default Dashboards

Module 19 – Application Performance Monitoring (APM) – Instrument Flask App

Understanding Flask Application

What are Traces and Spans

APM Setup and Configuration

Run App with dtrace Instrumentation

Module 20 – APM – Trace Pipeline

Introduction to Trace Pipeline

Sampling – Agent and Library Level

Trace Metrics

Server Side Components of Trace Pipeline

Ingestion Control – Usage Dashboard

Ingestion Control – Manage Agent and Library Sampling

Ingestion Control – Library Sampling

Ingestion Control – Custom Metrics and Retention Filters

Module 21 – APM Views and Explorers

Live Search

Trace View – Flame Graph, Span List, Dependency Map

Introduction to Service Catalog

Service Catalog – Ownership, Reliability, Performance, Security Views

Service Page

Resource Page

Deployment Tab and Service Map View

Instrument Application for Error Tracking

Error Tracking Page

Connect Traces to Logs

Service Registration

Module 22 – Continuous Profiling

Instrumentation for Profiling

Endpoint Profiling and Code Hotspots

Module 23 – UI Monitoring

Introduction to Real User Monitoring (RUM)

Instrument Application for RUM

Event Types Collected by RUM

Customize and Enrich RUM Data

Session and Replays

View Panel

Dashboards and Generate Custom RUM Metrics

Module 24 – Account Management for Admins

Personal Settings

Organization Settings

SAML Group Mappings

API and Application Keys

Login Methods

Audit Trail

Sensitive Data Scanner

Plan and Usage