Elastic Certified Observability Engineer

# Day 1: Uptime and Metrics

## Learning Objectives

Understand the importance of uptime monitoring in observability

Configure and run Heartbeat for uptime monitoring

Collect and analyze metrics using Elastic Agent and Kibana

Curriculum

Introduction to Elastic Stack (ES, Kibana, Beats)

Understanding Uptime Monitoring

Heartbeat installation and configuration

ICMP, TCP, and HTTP checks with Heartbeat

Uptime app in Kibana

Elastic Agent installation and configuration

Metric collection with Elastic Agent

Metric visualization and analysis in Kibana

# Day 2: Logging and APM

## Learning Objectives:

Understand the role of logging in observability

Collect and analyze logs using Elastic Agent and Kibana

Understand Application Performance Monitoring (APM)

Collect and analyze APM data using Elastic APM

Curriculum

Introduction to logging and its importance

Elastic Agent for log collection

Log shipping and indexing

Log analysis with Kibana

Introduction to APM

APM agent installation and configuration

APM data collection and visualization

Real User Monitoring (RUM)

# Day 3: Structuring and Processing Data

## Learning Objectives:

Understand the importance of data structuring and processing

Use Ingest Node pipelines to preprocess data

Use various processors for data enrichment and transformation

Curriculum

Introduction to data preprocessing

Ingest Node pipelines overview

Common processors (append, convert, date, dissect, dot expander, geoip, grok, fail, json, remove, rename, set, split)

Creating and configuring Ingest Node pipelines

Using Ingest Node pipelines with different data sources

# Day 4: Working with Observability Data

## Learning Objectives:

Understand anomaly detection and machine learning in observability

Use predefined machine learning jobs for anomaly detection

Create custom machine learning jobs

Manage index lifecycle and create alerts

Create informative dashboards

Curriculum

Introduction to anomaly detection and machine learning

Using predefined machine learning jobs

Creating custom machine learning jobs

Index Lifecycle Management (ILM)

Creating alerts in Kibana

Dashboarding with Kibana

Additional Considerations:

Incorporate real-world examples and use cases to enhance learning.

Provide opportunities for students to ask questions and engage in discussions.

Offer additional resources for further learning and exploration.

Consider using a mix of lecture, demonstrations, and hands-on activities.

Evaluate student progress through assessments and quizzes.