Dynatrace 5-Day Training Program

Day 1 – Foundations & Instrumentation

Introduction to Dynatrace

- Overview of Dynatrace Platform
- Navigating the Dynatrace Dashboard
- Core components: OneAgent, ActiveGate, Cluster Nodes

Agentful Approaches

- Oneagent Installation
- Setting up the data ingestion
- Manual token creation & on the go token creation
- Configuration files

Day 2 – Troubleshooting & Diagnostics

Performance Monitoring & Analysis

- Monitoring applications (Java & .Net Based)
- APM monitoring
- Smartscape
- Containers Monitoring

User Experience

- User experience monitoring (RUM + Synthetic)
- Integrating cloud services (AWS, Azure, GCP) for observability
- Four Golden Signals in Dynatrace (Latency, Traffic, Errors, Saturation)

Troubleshooting & Root Cause Analysis

- Davis AI root cause detection
- Identifying service degradation (amber/red status)
- High CPU Utilization: utilization vs load vs saturation
- Analyzing CPU hotspots in Kubernetes workloads
- Traffic spike simulation and monitoring real-time impact

Day 3 – Infrastructure & Log Management

Memory Diagnosis

- Heap memory, GC, and leaks in JVM/.NET
- Using heap dumps and memory analysis tools
- OutOfMemory case handling

Response Time & Latency

- Identifying slow web requests, REST calls, microservices
- Service Flow for tracing across distributed systems
- PurePath tracing and visualization
- Throughput, error rates, response time analysis

Database Diagnosis

- Monitoring DB metrics: queries, CPU, locks
- Diagnosing PostgreSQL/MySQL performance issues
- PurePath analysis for DB queries
- Optimization recommendations from Dynatrace

Disk & Network Performance

- Disk bottlenecks (I/O wait, queue length)
- Diagnosing disk and network issues with Dynatrace
- PurePath for tracing disk/network transactions

Day 4 – Advanced Analytics & Governance

Log Management

- Log data ingestion methods (agent, API, pipelines)
- Processing, correlation, and indexing of logs
- Introduction to DQL (Dynatrace Query Language) and DPL (Pipeline Language)
- Writing log queries for troubleshooting and analytics

DQL & Advanced Analytics

- Correlation of RUM, APM, and Infrastructure metrics
- Multidimensional analysis using DQL
- Troubleshooting frontend issues with Synthetic monitoring

Tagging & Metadata

- Manual vs Automatic Tagging strategies
- Metadata enrichment for better filtering & reporting
- Management zones for environment separation (good-to-have governance)

Dashboards & Best Practices

- Building role-based dashboards (SRE, DevOps, Business teams)

- Advanced visualization and widget usage
- Dashboard optimization for performance and clarity
- Leveraging Dynatrace AI insights in dashboards

Day 5 – Real-World Use Cases & Case Studies

Monitoring Best Practices

- Isolation of performance issues across app & infra layers
- API monitoring, memory profiling, CPU hotspots
- Thread analysis for microservices performance tuning

Integration & Automation

- CI/CD pipeline integration
- JMeter, Jenkins, GitHub Actions use cases
- ServiceNow, Splunk, and Terraform integrations

Rule Creation

- Creating rules to segregate data from JMeter test runs
- CI/CD pipeline observability integration
- Automation of tagging and alerting rules

Real-World Case Studies

- Application performance optimization with Dynatrace
- Cloud migration observability case study
- CI/CD pipeline observability with Dynatrace rules
- SRE Golden Signals dashboard case study