Dynatrace Training Plan

Course Overview
This 5-day hands-on training program covers end-to-end Dynatrace capabilities, including architecture, APM, RUM, AI-driven insights, cloud monitoring, and security integrations. Participants will gain proficiency in deploying, configuring, and leveraging Dynatrace for full-stack observability and performance optimization.

Course Objectives
By the end of this course, participants will be able to:

- Deploy and configure Dynatrace components (OneAgent, ActiveGate, Cluster).
- Monitor infrastructure, applications, databases, and cloud environments.
- Utilize DAVIS AI for automated problem detection and root cause analysis.
- Create dashboards, custom alerts, and reports for actionable insights.
- Integrate Dynatrace with third-party tools and APIs.
- Apply best practices for governance, security, and scaling.

Participant Prerequisites

- Basic knowledge of IT infrastructure, networking, and cloud platforms.
- Familiarity with application monitoring concepts.
- Experience with Linux/Windows environments is beneficial.

Target Audience

- IT Operations and DevOps Engineers
- Application and Infrastructure Architects
- SREs and Performance Engineers
- Cloud and Security Professionals

Day-wise Course Outline

Day 1
Introduction, Architecture s Core Components

1. **Dynatrace Overview s Value Proposition**
    - What is Dynatrace?
    - Capabilities overview: APM, Infra, RUM, AI, etc.
    - Monitoring modern apps: microservices, containers, cloud, etc.
2. **Dynatrace Architecture**
    - Key architectural components (OneAgent, ActiveGate, Cluster)
    - Communication flow, data processing

- Deployment Models: SaaS vs. Managed
- High-Level Cluster Architecture
- Cluster sizing, availability, and scaling

3. **Dynatrace Deployment on Azure**
   - Azure-specific considerations
   - Integration with Azure Monitor, AKS
   - Cloud-native monitoring practices
4. **Cluster Management Console**
   - Overview of CMC
   - Node management, licensing
   - Cluster health C updates
5. **ActiveGates**
   - What is an ActiveGate?
   - Use cases: DMZ, cloud integrations, routing
   - Deployment options and scenarios
6. **OneAgents**
   - Deep dive into OneAgent capabilities
   - Supported technologies
   - Installation, auto-updates, and configuration
7. **User Management - Managed**
   - Access management via CMC
   - Role-Based Access Control (RBAC)
   - Federation/SSO integration options
8. **Organizing Your Environment**
   - Entity hierarchy: Hosts, Services, Processes
   - Tagging: auto-tag rules, manual tags
   - Management Zones: scoping access and views

Day 2

Dynatrace UI, Smartscape, s Real User Monitoring (RUM)

G. **Dynatrace UI Fundamentals**
   - Navigating the UI
   - Global search, menus, entity drilldowns
   - Workflow best practices
10. **Smartscape**
    - Real-time topology mapping
    - Horizontal (tier) and vertical (dependency) views
    - Visualizing host-process-service relationships
11. **Traversing Your Stack**
    - Drilldowns from user to code to infrastructure
    - Linking telemetry across layers
12. **Application Performance Monitoring (APM) - Java s .NET**
    - Code-level visibility
    - Method hotspots, CPU profiling
    - Web request tracing C service flow
    - Messaging Queue Monitoring (JMX/Java)

13. **Real User Monitoring (RUM) Overview**
    - JavaScript injection model
    - RUM vs. Synthetic
    - Benefits and visibility scope
14. **RUM – Web Applications**
    - Page performance (Visually complete, TTI)
    - JavaScript errors, 3rd-party content
    - Geo/user/device breakdowns
15. **RUM – User Sessions**
    - Session C action analysis
    - Behavior metrics and conversion tracking
    - Funnel and crash analytics
16. **RUM – Mobile Applications**
    - Mobile agent SDK integration (iOS, Android, tvOS)
    - Crash analysis, gestures, custom actions

Day 3

AI, Database, Synthetic, Cloud s Dashboards

17. **Database Monitoring**
    - DB visibility via OneAgent
    - Top queries, slow transactions
    - DB service overview and tuning
18. **Synthetic Monitoring**
    - HTTP and browser monitors
    - Setting up tests, locations
    - Use cases (availability, SLA)

1G. **URL Monitoring (via Synthetic)**

- Specific endpoints/transaction checks
- Validations, error reporting

20. **DAVIS AI – Foundation**
    - AI engine overview
    - Problem cards, event correlation
    - Root cause analysis automation
21. **DAVIS AI – Advanced Use**
    - Davis Assistant (chat/voice)
    - Custom event rules C thresholds
    - Anomaly detection tuning
22. **Dashboards**
    - Dashboard creation and tiles
    - Custom charts and filters
    - Dashboards for different stakeholders (Ops, Dev, Mgmt)
23. **Cloud Monitoring**
    - Azure integrations
    - Cloud service visibility
    - Tag-based discovery and monitoring

24. Licensing s Consumption

- Dynatrace licensing models (DPS, Host Units, DEM units)
- Licensing strategies and cost control

25. Deployment Status Monitoring

- Tracking deployment of OneAgents, ActiveGates
- Troubleshooting connectivity and deployment failures

Day 4

Advanced Monitoring s Integration

26. Network Monitoring

- Flow analysis and traffic inspection
- Network dependencies and latency insights

27. Log Monitoring Using Dynatrace

- Log ingestion methods (OneAgent, external sources)
- Log processing and analytics
- Log Management Best Practices

28. Log Analytics

- Searching logs, extracting fields
- Building log-based metrics and alerts

2G. Diagnostic Tools

- Memory dumps, CPU sampling
- Thread and heap analysis
- Problem investigation with PurePath

30. Reports s Alerts

- Custom alerts and problem thresholds
- Alerting profiles and routing
- Scheduled and ad hoc reports

31. Autosys Integration s Monitoring

- Use cases for Autosys monitoring
- Job-level visibility and correlation

32. Automation with APIs

- Configuration API overview
- Automating tagging, dashboarding, alerting
- Agent Version upgrade
- Reporting
- Filtering and Querying
- Integrating API with Scripting Language
- Setting Schema

33. Extending Dynatrace

- Custom extensions (SDK)
- Integration with third-party systems (e.g., ServiceNow, Splunk)

Day 5

Settings, AppSec, SLOs s Best Practices

34. Monitoring Settings

- General monitoring configurations
- Network zones, data retention

35. Web s Mobile Settings

- Privacy controls
- Masking, user tracking policies

36. Process Group Settings

- Optimizing PG detection rules
- PG naming and custom metadata

37. Server-side Services Settings

- Custom service detection
- Additional service monitoring

38. DAVIS AI Assistant Deep Dive

- Using Davis Assistant in workflows
- Integrating with chat tools (Slack, MS Teams)

3G. AppSec (Application Security Monitoring)

- Vulnerability detection in runtime
- Security overview dashboard
- DevSecOps use cases

40. SLOs s SLIs

- Defining service-level objectives and indicators
- Setting thresholds and tracking compliance
- Shift-left strategies for performance

41. Best Practices s Wrap-up

- Governance, monitoring strategy
- Scaling Dynatrace in large environments
- Training resources and certifications