Dynatrace Training Plan

Course Overview
This 4-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 & Core Components

1. **Dynatrace Overview & 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. **OneAgents**
   - Deep dive into OneAgent capabilities
   - Installation and configuration

4. **User Management – Managed**
   - Access management via CMC
   - Role-Based Access Control (RBAC)

5. **Organizing Your Environment**
   - Entity hierarchy: Hosts, Services, Processes
   - Tagging: auto-tag rules, manual tags
   - Management Zones: scoping access and views

6. **Dynatrace UI Fundamentals**
   - Navigating the UI
   - Global search, menus, entity drilldowns
   - Workflow best practices

7. **Smartscape**
   - Real-time topology mapping
   - Horizontal (tier) and vertical (dependency) views
   - Visualizing host-process-service relationships

8. **Traversing Your Stack**
   - Drilldowns from user to code to infrastructure
   - Linking telemetry across layers

Day – 2

9. **Application Performance Monitoring (APM)**
   - Code-level visibility
   - Method hotspots, CPU profiling
   - Web request tracing C service flow
   - Messaging Queue Monitoring (JMX/Java)

10. **Real User Monitoring (RUM) Overview**
    - JavaScript injection model
    - RUM vs. Synthetic
    - Benefits and visibility scope

11. RUM – Web Applications
- Page performance (Visually complete, TTI)
- JavaScript errors, 3rd-party content
- Geo/user/device breakdowns

12. RUM – User Sessions
- Session C action analysis
- Behavior metrics and conversion tracking
- Funnel and crash analytics

13. Database Monitoring
- DB visibility via OneAgent
- Top queries, slow transactions
- DB service overview and tuning

14. Synthetic Monitoring
- HTTP and browser monitors
- Setting up tests, locations
- Use cases (availability, SLA)

15. URL Monitoring (via Synthetic)
- Specific endpoints/transaction checks
- Validations, error reporting

Day - 3

16. DAVIS AI
- AI engine overview
- Problem cards, event correlation
- Root cause analysis automation

17. Dashboards
- Dashboard creation and tiles
- Custom charts and filters
- Dashboards for different stakeholders (Ops, Dev, Mgmt)

18. Cloud Monitoring
- Azure integrations
- Cloud service visibility
- Tag-based discovery and monitoring

19. Deployment Status Monitoring
- Tracking deployment of OneAgents, ActiveGates
- Troubleshooting connectivity and deployment failures

20. Network Monitoring
- Flow analysis and traffic inspection
- Network dependencies and latency insights

21. Log Monitoring Using Dynatrace
- Log ingestion methods (OneAgent, external sources)
- Log processing and analytics
- Log Management Best Practices

22. Log Analytics
- Searching logs, extracting fields
- Building log-based metrics and alerts
- Deployment Status Monitoring

23. Diagnostic Tools
- Memory dumps, CPU sampling
- Thread and heap analysis
- Problem investigation with PurePath

Day – 4

24. Reports s Alerts
- Custom alerts and problem thresholds
- Alerting profiles and routing
- Scheduled and ad hoc reports

25. Autosys Integration s Monitoring
- Use cases for Autosys monitoring
- Job-level visibility and correlation

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

27. Monitoring Settings
- General monitoring configurations
- Network zones, data retention

28. Process Group Settings
- Optimizing PG detection rules
- PG naming and custom metadata

29. AppSec (Application Security Monitoring)
- Vulnerability detection in runtime
- Security overview dashboard
- DevSecOps use cases

30. SLOs s SLIs
- Defining service-level objectives and indicators
- Setting thresholds and tracking compliance
- Shift-left strategies for performance

31. Best Practices s Wrap-up
- Governance, monitoring strategy
- Scaling Dynatrace in large environments
- Training resources and certifications