Dynatrace Training - Day 2 Notes

# 9. Dynatrace UI Fundamentals

Navigating the UI:  
- The Dynatrace UI is web-based and highly intuitive.  
- The left-hand navigation panel provides access to core views like Hosts, Services, Applications, Smartscape, and Problems.

Global Search, Menus, Entity Drilldowns:  
- Use the global search bar to quickly find hosts, services, or applications.  
- Clicking on any entity leads to a detailed overview with tabs for metrics, logs, traces, and dependencies.  
- Menu options include Settings, Dashboards, and Custom Charts.

Workflow Best Practices:  
- Start from Problems or Smartscape to drill into issues.  
- Use entity relationships to investigate service dependencies.  
- Pin key dashboards for quick access to relevant views.

# 10. Smartscape

Real-Time Topology Mapping:  
- Smartscape is Dynatrace’s dynamic visualization of the IT environment.  
- Automatically discovers and maps entities: Hosts, Processes, Services, and Applications.

Horizontal & Vertical Views:  
- Horizontal view shows layers: Infrastructure → Services → Applications.  
- Vertical view shows dependencies between components.

Visualizing Host-Process-Service Relationships:  
- Hovering over an element highlights its upstream/downstream dependencies.  
- Helps understand the impact and flow of traffic through the system.

# 11. Traversing Your Stack

Drilldowns from User to Code to Infrastructure:  
- Begin with a user session or synthetic monitor.  
- Follow the transaction path using PurePath to trace service calls.  
- Drill into the host or process involved in the transaction.

Linking Telemetry Across Layers:  
- Dynatrace links logs, metrics, and traces for full observability.  
- Easily correlate anomalies across front-end and back-end.  
- Helps pinpoint the root cause quickly using Davis AI.

# 12. Application Performance Monitoring (APM) – Java & .NET

Code-Level Visibility:  
- Dynatrace captures detailed trace data with method-level granularity.  
- Supports frameworks like Spring, ASP.NET, Hibernate, etc.

Method Hotspots & CPU Profiling:  
- Identify methods with the highest execution time or CPU usage.  
- Lightweight profiling can be enabled for live environments.

Web Request Tracing & Service Flow:  
- Visualizes end-to-end request flow across services.  
- Helps identify slow service calls, retry storms, or database delays.

Messaging Queue Monitoring (JMX/Java):  
- Captures queue size, consumer lag, and throughput using JMX.  
- Supports Kafka, RabbitMQ, ActiveMQ, and other brokers.

# 13. Real User Monitoring (RUM) Overview

JavaScript Injection Model:  
- Dynatrace automatically injects a JavaScript tag into monitored web applications.  
- Enables collection of client-side performance data.

RUM vs. Synthetic:  
- RUM shows real user behavior; synthetic is scripted and scheduled.  
- RUM is continuous; synthetic is proactive.

Benefits and Visibility Scope:  
- Measures user experience with KPIs like visually complete and TTI.  
- Tracks device, browser, geographic data.  
- Detects JavaScript errors and slow third-party resources.

# 14. RUM – Web Applications

Page Performance Metrics:  
- Key metrics: Visually Complete, Time to Interactive (TTI), Load Time.  
- Measured per page, per user, and per location.

JavaScript Errors & 3rd-Party Content:  
- Captures JS errors with stack traces.  
- Identifies performance issues from third-party services (ads, CDN).

Geo/User/Device Breakdowns:  
- Filters available for location, browser, device type.  
- Enables segmentation and targeted optimization.

# 15. RUM – User Sessions

Session & Action Analysis:  
- Tracks all user actions: clicks, scrolls, form submissions.  
- Sessions can be viewed chronologically or by impact.

Behavior Metrics & Conversion Tracking:  
- Funnel analysis helps visualize drop-offs.  
- Conversion goals can be defined for performance optimization.

Funnel and Crash Analytics:  
- Shows where users abandon due to slowness or errors.  
- Crash reports include stack trace and session context.

# 16. RUM – Mobile Applications

Mobile Agent SDK Integration (iOS, Android, tvOS):  
- SDKs can be embedded into mobile apps.  
- Supports iOS (Swift/Obj-C), Android (Java/Kotlin), tvOS.

Crash Analysis, Gestures, Custom Actions:  
- Detects crashes with logs and device info.  
- Tracks taps, swipes, and other gestures.  
- Allows custom tagging of events (e.g., purchase complete).