

Tosca Automation Framework

Duration 5 Days (40 Hours)

Module 1: Introduction to Tricentis Tosca and Model-Based Test Automation

1. Overview of Tosca and Tricentis Ecosystem
 2. Benefits of Model-Based Test Automation
 3. Tosca Architecture and Components
 4. Tosca Commander Interface and Navigation
 5. Types of Testing Supported in Tosca
 6. Understanding Tosca's Test Case Lifecycle
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Module 2: Tosca Workspace Setup and Module Management

1. Creating and Managing Workspaces
 2. Common Workspace Settings and Structure
 3. Modules vs. TestCases: Key Concepts
 4. Recording Modules and Scanning Controls
 5. Dynamic and Static Module Handling
 6. Module Reusability and Maintenance Best Practices
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Module 3: Test Case Design and Execution

1. Standard TestStepBlocks and TestSteps
 2. Creating TestCases from Modules
 3. Business Components and Reusability
 4. ActionModes (Input, Verify, Buffer, Constraint)
 5. Test Execution Configurations
 6. Executing Tests via Tosca Execution Lists
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Module 4: Test Data Management and Parameterization

1. Introduction to Tosca Test Data Services (TDS)
 2. TestCase Parameterization Techniques
 3. Data Binding using Excel and External Sources
 4. Using Templates and Instances
 5. Creating and Using TestSheet Structures
 6. Synthetic Test Data Generation Concepts
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Module 5: API Testing with Tosca

1. Introduction to API Testing Concepts
 2. Importing and Managing API Definitions
 3. Creating and Chaining API TestCases
 4. Handling Requests, Responses, and Headers
 5. Validating JSON and XML Structures
 6. API Test Execution and Debugging
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Module 6: Test Case Optimization and Risk-Based Testing

1. Introduction to Test Case Design Techniques
 2. Equivalence Partitioning and Boundary Testing
 3. Risk-Based Testing (RBT) Concepts
 4. Assigning Risk Classes and Weights
 5. TestCase Reduction Using Tosca Optimizer
 6. Prioritization for Regression Testing
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Module 7: Integration with CI/CD and DevOps Tools

1. Tosca CLI and Execution via Command Line
 2. Integrating Tosca with Jenkins and Azure DevOps
 3. Automation Execution in CI/CD Pipelines
 4. Reporting and Dashboard Integration
 5. Git-Based Repository Handling (Tosca Distributed Execution)
 6. Best Practices for Continuous Testing
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Module 8: Troubleshooting, Best Practices, and Real-World Scenarios

1. Common Errors and Debugging in Tosca
2. Log Files and Diagnostics
3. Custom Module Handling and Enhancements
4. Performance Optimization Techniques
5. Real-World Enterprise Use Cases
6. Final Capstone Project and Q&A