



## **BRIEF INTRODUCTION ABOUT TOSCA AUTOMATION TESTING:**

Tosca is a test automation tool that is widely used for continuous testing and quality assurance in software development. It is developed by Tricentis, a leading software testing company. Tricentis Tosca aims to streamline and automate the end-to-end testing process, from test case design and execution to reporting and analysis. Cranesoft Solutions Provides the Best Tosca Automation Testing Training in Bangalore.

## **INTRODUCTION TO TOSCA AUTOMATION TESTING:**

Tricentis Tosca is a software testing tool developed by Tricentis, a leading provider of software testing solutions. Tosca is designed to automate end-to-end testing for various applications, including web, mobile, desktop, and API-based applications. It offers a range of features and capabilities to streamline the testing process and enhance the efficiency of software testing activities. Cranesoft Solutions provides the best Tosca Automation Testing Training in Bangalore.

### **KEY FEATURES AND ASPECTS OF TOSCA AUTOMATION TESTING:**

#### **Model-Based Test Automation:**

Tosca employs a model-based approach to test automation, allowing testers to create and design test cases graphically. This visual modeling simplifies the test creation process.

#### **Scriptless Automation:**

One of Tosca's notable features is its scriptless automation capability. Testers can automate test scenarios without writing extensive scripts, making it easier for those with limited programming knowledge to participate in test automation.

#### **Cross-Browser and Cross-Platform Testing:**

Tosca supports testing across different browsers and platforms, ensuring that applications are compatible with various environments.

**End-to-End Test Automation:**

Tosca covers the entire testing lifecycle, from test case design to execution and reporting. This comprehensive approach helps ensure that testing activities align with the complete software development process.

**API Testing:**

Tosca includes features for testing APIs (Application Programming Interfaces), allowing testers to validate the functionality and performance of APIs.

**Continuous Integration/Continuous Deployment (CI/CD) Integration:**

Tosca integrates with CI/CD tools, facilitating the inclusion of automated tests in continuous integration pipelines.

**Test Data Management:**

Efficient management of test data is crucial for successful test automation. Tosca provides capabilities for creating, manipulating, and maintaining test data.

**Distributed Execution:**

Tosca supports the execution of tests across multiple machines or environments simultaneously, enabling faster test cycles.

**Parallel Execution:**

Parallel test execution is supported, allowing multiple test cases to run simultaneously, improving testing efficiency.

**Reporting and Analytics:**

Tosca generates detailed reports and analytics to provide insights into test results. This helps teams make informed decisions and prioritize testing efforts.

**Continuous Monitoring:**

Continuous monitoring features assist in tracking the health of the automation suite, ensuring that tests remain relevant and effective over time.

**Keyword-Driven Testing:**

Tosca supports keyword-driven testing, allowing users to create modular and reusable test components using keywords that represent actions and verifications.

**Benefits of Using Tosca Automation Testing:**

Accelerated testing cycles.

Increased test coverage.

Reduced maintenance effort.

Collaboration across development, testing, and operations teams.

Scalability for projects of various sizes.

Tosca Automation Testing is suitable for organizations looking to optimize their testing processes, achieve faster and more reliable releases, and ensure high-quality software applications. It's important to note that specific features and capabilities may evolve, so staying updated with the latest documentation and releases from Tricentis is recommended.

## **KEY HIGHLIGHTS:**

Tricentis Tosca is a comprehensive test automation tool known for its model-based and scriptless testing capabilities. Here are key highlights of Tosca Automation Testing:

### **1. Model-Based Test Automation:**

Tosca uses a model-based approach, allowing testers to visually represent and design test cases using graphical models. This simplifies test creation and maintenance.

### **2. Scriptless Automation:**

One of Tosca's standout features is its scriptless automation. Testers can automate test cases without extensive scripting, making it accessible to those with limited programming skills.

### **3. Cross-Browser and Cross-Platform Testing:**

Tosca supports testing across various browsers and platforms, ensuring the application's compatibility in different environments.

### **4. End-to-End Testing:**

Tosca covers the entire testing lifecycle, from test design to execution and reporting. This end-to-end approach ensures comprehensive test coverage.

### **5. API Testing:**

Tosca supports testing of APIs, allowing testers to validate the functionality and performance of Application Programming Interfaces.

### **6. Continuous Integration/Continuous Deployment (CI/CD) Integration:**

Tosca seamlessly integrates with CI/CD tools, enabling automated testing within continuous integration pipelines.

### **7. Test Data Management:**

Tosca provides features for efficient management of test data, including creation, manipulation, and maintenance.

#### **8. Distributed Execution:**

Tosca supports the execution of tests across multiple machines or environments simultaneously, enhancing testing efficiency.

#### **9. Parallel Execution:**

Parallel test execution is supported, allowing multiple test cases to run simultaneously, speeding up test cycles.

### **TRICENTIS TOSCA AUTOMATION TESTING COURSE CURRICULUM:**

#### **Module 1: Introduction to Tosca Automation Testing**

Overview of Tosca and its role in test automation.

Understanding the benefits of using Tosca in the software testing lifecycle.

Introduction to the Tosca workspace and user interface.

#### **Module 2: Basic Concepts in Tosca**

Understanding model-based testing.

Creating test cases using Tosca's model-based approach.

Managing test cases and test data in Tosca.

#### **Module 3: Test Design and Execution**

Designing test cases for different types of applications (web, mobile, desktop).

Executing test cases using Tosca.

Analyzing and interpreting test results.

#### **Module 4: Scriptless Automation in Tosca**

Leveraging scriptless automation capabilities in Tosca.

Creating automated test cases without scripting.

Enhancing test efficiency with scriptless automation.

#### **Module 5: Advanced Tosca Features**

API testing with Tosca.

Cross-browser and cross-platform testing.

Integrating Tosca with CI/CD tools.

#### **Module 6: Test Data Management**

Strategies for effective test data management.

Creating and maintaining test data in Tosca.

Data-driven testing in Tosca.

### **Module 7: Tosca Automation Framework**

Understanding the Tosca Automation Framework.

Best practices for organizing and structuring test automation projects in Tosca.

### **Module 8: Advanced Topics**

Exploring advanced Tosca features and functionalities.

Automation of complex scenarios and use cases.

Handling dynamic elements and data in Tosca.

### **Module 9: Performance and Scalability Testing with Tosca**

Introduction to performance testing in Tosca.

Scaling test automation for large and complex applications.

### **Module 10: Best Practices and Optimization**

Best practices for efficient Tosca test automation.

Optimizing test scripts and scenarios for better performance.

Overcoming common challenges in Tosca Automation.

### **Module 11: Case Studies and Real-world Scenarios**

Analyzing real-world use cases and scenarios.

Applying Tosca Automation to practical testing situations.

### **Module 12: Certification Preparation**

Reviewing key concepts for Tricentis Tosca certification.

Preparing for the Tosca certification exam.

## **CAREER OPPORTUNITIES FOR TOSCA PROFESSIONALS:**

A proficiency in Tricentis Tosca Automation can open up various career opportunities in the field of software testing and quality assurance. As organizations increasingly adopt automation to enhance their testing processes, Tosca Automation skills become valuable. Here are some career opportunities for individuals with Tricentis Tosca Automation expertise:

### **Automation Test Engineer:**

Design and develop automated test scripts using Tricentis Tosca.

Execute automated test cases and analyze results to ensure software quality.

### **Test Automation Architect:**

Architect and design test automation frameworks using Tricentis Tosca.

Provide guidance on best practices and standards for test automation.

**Quality Assurance (QA) Analyst:**

Perform end-to-end testing using Tosca Automation to ensure software meets quality standards.  
Collaborate with development teams to identify and resolve defects.

**Test Lead/Manager:**

Lead and manage a team of test engineers working with Tricentis Tosca.  
Plan, coordinate, and execute automated testing efforts for projects.

**Release Manager:**

Oversee the release process, including testing phases, using Tosca Automation.  
Ensure smooth and reliable software releases.

**DevOps Engineer:**

Integrate Tricentis Tosca into the DevOps pipeline for continuous testing.  
Automate testing processes to support continuous integration and delivery.

**Performance Testing Engineer:**

Use Tosca Automation for performance testing of applications.  
Identify and address performance bottlenecks and issues.

**Test Consultant:**

Provide consultancy services to organizations for implementing and optimizing Tosca Automation.  
Advise on test strategy, best practices, and tool integration.

**Business Analyst (with Automation Focus):**

Analyze business requirements and translate them into automated test scenarios.  
Collaborate with stakeholders to ensure test coverage meets business needs.

**Automation Trainer/Instructor:**

Train and educate teams on the effective use of Tricentis Tosca.  
Develop training materials and courses for automation enthusiasts.

**IT Project Manager:**

Manage testing aspects of IT projects, including automation efforts using Tosca.  
Ensure testing milestones align with project timelines.

**Product Support Specialist:**

Provide support for Tosca users, helping troubleshoot issues and optimize test scripts.  
Collaborate with the Tricentis support team for advanced problem resolution.

**Test Data Analyst:**

Manage and analyze test data for automated test cases in Tosca.  
Ensure the availability of relevant and accurate test data.

**Software Development Engineer in Test (SDET):**

Combine development and testing skills to create automated test frameworks.  
Collaborate with development teams to ensure code quality.

**Specialized Testing Roles:**

Explore specialized testing areas such as security testing, accessibility testing, and usability testing, integrating Tosca Automation into these domains.