

Planning, Architecting, and Implementing Test Automation



- Develop an integrated test automation plan and architecture specifically for your organization
- Explore proven steps for assessing your current test automation state and defining a future test automation roadmap and architecture
- Get access to templates and examples you can use to draft your own test automation plan
- Leave with a draft plan and architecture that you can begin to implement

To automate our tests, we often use several tools that have been developed or acquired over time, often with little attention paid to an overall plan or architecture and no consideration for how to integrate those tools. As a result, productivity suffers and frustrations increase.

In this hands-on course, the consultant/instructor shares his experiences from multiple organizations creating an integrated test automation plan and developing a test automation architecture. With a focus on both the good (engaging the technical architecture team) and the bad (too much isolation between test automators and test designers) this course is well-suited for both large and small enterprises, enabling you to communicate the real challenges and potential benefits to your stakeholders.

While several test automation frameworks will be presented and discussed, this course focuses on helping you assess your current automation state, identify gaps, and develop an automation plan and integrated tool architecture. The consultant/instructor provides you with templates and resources to help you get started on your journey toward developing a more comprehensive strategy, plan, and integrated tool architecture. The goal is for you to be able to draft a plan specific to your organization so that as you take this course, you're getting real work done in parallel with your learning.

Learn the approaches that ensure your current test tools—and new test tools you acquire or develop—will work well with existing testing and application lifecycle software. Explore approaches qualitatively and quantitatively measuring the value of automation.

At the end of this course you will have had the opportunity to:

- Document the current state of test automation in your organization
- Define a custom test automation plan and architecture to fit your situation
- Create an initial implementation plan
- Identify initial key measures
- Develop a metrics dashboard for tracking the value of test automation
- Lay out a future strategy and roadmap to get there

Consulting

Consulting services with our expert test consultant can be included with this course to help you customize your plan and architecture to fit your organization situation.

Who Should Attend

This course assumes you have a foundational understanding of testing and the purpose of automation. This course will be beneficial to anyone who is accountable for assessing, planning, designing, and implementing an integrated set of technology (testing infrastructure) that supports development, testing, and deployment. The content is appropriate for test automation engineering roles, test manager roles, test lead roles, test architect roles, as well as developer roles.

Course Outline

Course Overview

- Course summary
- Getting real work done on your plan while learning
- Instructor Introduction

Course Context

- Automation beginnings
- Software as a series of imperfect translations

The Compelling Business Needs for Automation

- Automation the next opportunity
- Islands of Automation
- Getting products to market more quickly, at the right costs and quality

Automation Challenges and Requirements

- Automation Challenges
- Test Automation Key Requirements

Foundational material for your automation plan

- Templates
- Questions
- Examples
- Virtual Consulting included with this course

Automation plan vision and strategy

- Vision, Strategy, Approach Example
- Defining your end in mind
- Deciding where to start
- Engaging Others

Conducting a current state tools inventory

- Assessing your current state - tools and processes
- Tools inventory example and template
- Radar Chart as a means of presenting current state information

Consider the best automation approach

- Waterfall vs. agile cycles of work
- Aligning tools with your methodologies
- Strategies for Automating
- The Test Automation Pyramid

Developing your test automation architecture

- Blocks of automation capabilities
- Islands of Automation
- Integrated Tools Architecture Template
- Integrated Tools Architecture Examples

Test automation architecture examples

- Examples of different test automation architectures and frameworks
- Selenium
- Key Test Automation Architecture Characteristics

Acceptance test-driven and behavior-driven testing overview

- Test automation approaches
- FitNesse
- Cucumber
- Gherkin script overview
- Tool workflow

Considerations for what to automate and when

- Categories of tests that might be automated
- We have many tool choices
- Key points in Test Tool Architecture Planning

Piloting and Implementing automation

- Selecting and evaluating tools and rolling them out
- Selling Automation - qualitative questions
- Selling Automation - quantitative questions

Measuring automation benefits

- Measures in technical terms
- Measures in business terms
- Measures of testing vs. measures of test automation

Lessons Learned and Wrap-Up

- Advice on things to do and not to do
- A few keys to success
- Course Summary