

KOENIG SOLUTIONS • COURSE OUTLINE

ISTQB Certified Tester Model-Based Testing (CT-MBT) Advanced Level

Learn to apply model-based testing techniques, from modeling and test selection to implementation, execution and deployment evaluation.

5

MODULES

35

TOPICS

COURSE OVERVIEW

This course covers the objectives, motivations and pitfalls of model-based testing, along with its activities, work products and integration into software development lifecycles. It examines MBT modeling, including modeling languages, quality characteristics and good practices for building and reviewing models. It addresses criteria for selecting and generating test cases, and the specifics of implementing, executing and adapting MBT tests. It concludes with evaluating and deploying an MBT approach, including return on investment, cost factors and tool integration.

WHO THIS COURSE IS FOR

Test Analysts

Test Managers

Test Automation Engineers

Requirements Engineers

Software Testers

LEARNING OBJECTIVES

- Explain the objectives, motivations and pitfalls of MBT
- Describe MBT activities and work products in the test process
- Identify approaches for integrating MBT into development lifecycles
- Apply good practices for MBT modeling activities
- Compare languages used for MBT models
- Analyse test selection criteria for test case generation
- Implement and execute MBT test cases
- Assess the deployment and cost factors of an MBT approach

5 Modules, 35 Topics

01

Introduction to Model-Based Testing

OBJECTIVES AND MOTIVATIONS FOR MBT

- Main Motivations for MBT
- Misleading Expectations and Pitfalls of MBT

MBT ACTIVITIES AND WORK PRODUCTS IN THE TEST PROCESS

- MBT Specific Activities
- Essential MBT Work Products (Inputs and Outputs)

INTEGRATING MBT INTO THE SOFTWARE DEVELOPMENT LIFECYCLES

- MBT in Sequential and Iterative Software Development Lifecycles
- Supporting Requirements Engineering

02

MBT Modeling

MBT MODELING

- MBT Modeling Activities
- Focus of MBT Models
- MBT Models Depend on Test Objectives

LANGUAGES FOR MBT MODELS

- Main Categories of Modeling Languages for MBT
- Language Categories Relevant for Different Systems and Project Objectives

GOOD PRACTICES FOR MBT MODELING ACTIVITIES

- Quality Characteristics for MBT Models
- Typical Mistakes and Pitfalls in MBT Model Design
- Linking Requirements and Process Related Information to the MBT Model
- Modeling Guidelines for MBT
- Reuse of Existing System Design or Requirements Models
- Tool Support for Modeling Activities
- Iterative Model Development, Review and Validation

03

Selection Criteria for Test Case Generation Criteria

CLASSIFICATION OF MBT TEST SELECTION CRITERIA

- Test Selection Criteria
- Test Case Selection in Practice
- Examples of Test Selection Criteria
- Examples of Test Selection Criteria

APPLYING TEST SELECTION CRITERIA

- Degree of Automation in Test Generation
- Pros and Cons of Specific Test Selection Criteria
- Good Practices of MBT Test Selection

04

MBT Test Implementation and Execution

SPECIFICS OF MBT TEST IMPLEMENTATION AND EXECUTION

- High-level and Low-level Test Cases in the MBT Context
- Different Kinds of Test Execution
- The Impact of Changes on the MBT Work Products
- Activities of Test Adaptation in MBT

05

Evaluating and Deploying an MBT Approach

EVALUATE AN MBT DEPLOYMENT

- ROI Factors for MBT Introduction
- Organizational Objectives and their Relationship to the Characteristics of the MBT Approach
- Metrics and Key Performance Indicator

MANAGE AND MONITOR THE DEPLOYMENT OF AN MBT APPROACH

- Good Practices when Deploying MBT
- Cost Factors of MBT
- Integration of the MBT Tool

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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