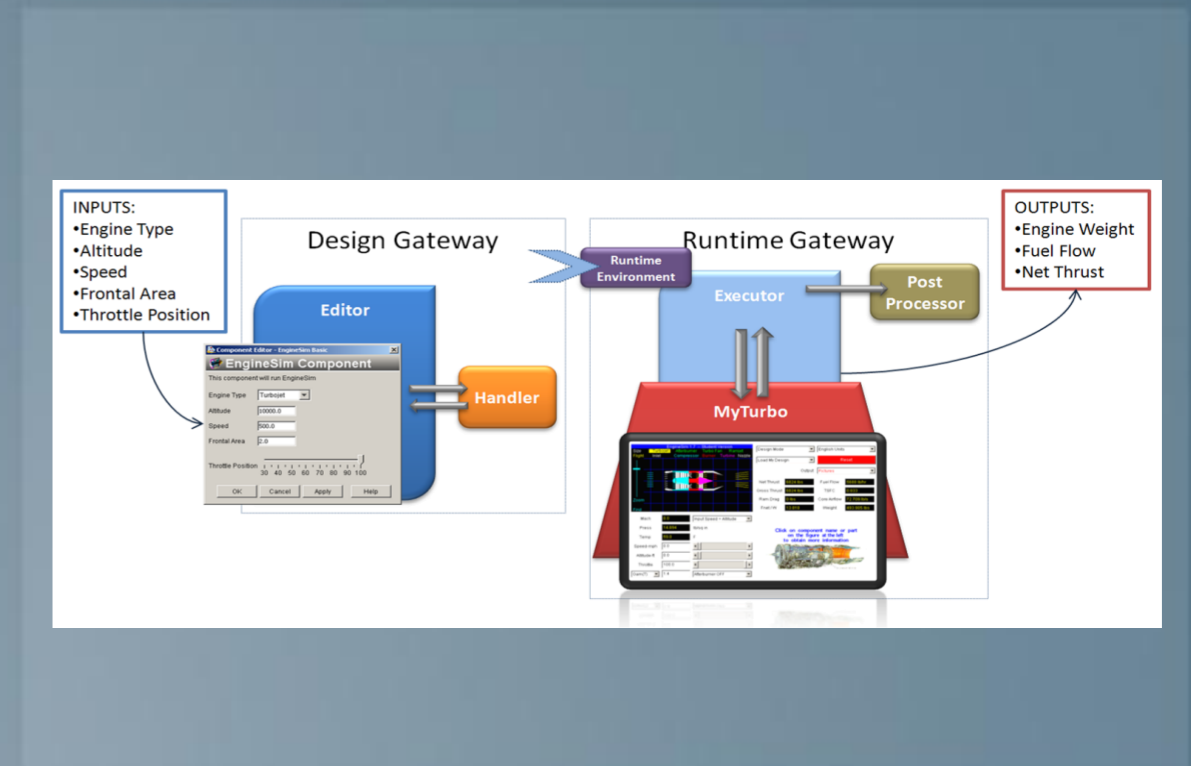


Isight Component Development

5.9



About this Course

Course objectives

Upon completion of this course you will be able to:

- ▶ Understand component requirements
- ▶ Develop component packages for Isight

Targeted audience

Simulation Analysts

Prerequisites

This course is recommended for engineers with experience using Isight



2 days

Day 1

- ▶ Lecture 1 Introduction
- ▶ Workshop 0 Workshop Preliminaries
- ▶ Lecture 2 Basic Component Anatomy
- ▶ Workshop 1 Building a GUI
- ▶ Workshop 2 Executing External Source Code
- ▶ Lecture 3 Building and Testing Components
- ▶ Workshop 3 Generating a Component Descriptor
- ▶ Workshop 4 Building and Publishing Components
- ▶ Workshop 5 Deploy and Test

Day 2

- ▶ Lecture 4 Advanced Component Anatomy
- ▶ Workshop 6 Implementing a Component Handler
- ▶ Workshop 7 Implementing a Component Postprocessor
- ▶ Workshop 8 Using Arrays, Aggregates and Units
- ▶ Workshop 9 Using File Parameters

- ▶ Lecture 5 Integration Methods

- ▶ Workshop 10 Using the OS Command Plug-in
- ▶ Workshop 11 Using Native Code

- ▶ Lecture 6 Optimizer Plug-in Development

- ▶ Workshop 12 Building an Optimization Technique Plug-in

Additional Material

Appendix 1

Isight Developer and Debugger for Eclipse

Join the Community!

How can you maximize the robust technology of Abaqus FEA and Isight?

Connect with peers to share knowledge and get technical insights



 SIMULIA

Let the SIMULIA Learning Community be *Your* Portal to 21st Century Innovation

Discover new ways to explore how to leverage realistic simulation to drive product innovation. Join the thousands of Abaqus and Isight users who are already gaining valuable knowledge from the SIMULIA Learning Community.

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Revision Status

Lecture 1	11/14	Updated for Isight 5.9
Lecture 2	11/14	Updated for Isight 5.9
Lecture 3	11/14	Updated for Isight 5.9
Lecture 4	11/14	Updated for Isight 5.9
Lecture 5	11/14	Updated for Isight 5.9
Lecture 6	11/14	Updated for Isight 5.9
Appendix 1	11/14	New for Isight 5.9
Workshop 1	11/14	Updated for Isight 5.9
Workshop 2	11/14	Updated for Isight 5.9
Workshop 3	11/14	Updated for Isight 5.9
Workshop 4	11/14	Updated for Isight 5.9
Workshop 5	11/14	Updated for Isight 5.9
Workshop 6	11/14	Updated for Isight 5.9
Workshop 7	11/14	Updated for Isight 5.9
Workshop 8	11/14	Updated for Isight 5.9
Workshop 9	11/14	Updated for Isight 5.9
Workshop 10	11/14	Updated for Isight 5.9
Workshop 11	11/14	Updated for Isight 5.9
Workshop 12	11/14	Updated for Isight 5.9

Lesson 1: Introduction

Lesson content:

- ▶ What is an Isight Component ?
- ▶ Isight Component APIs
- ▶ Tools for Developing Isight Components
- ▶ Introduction to the Isight SDK tool
- ▶ Introduction to Eclipse
- ▶ Workshop Preliminaries



30 minutes

Lesson 2: Basic Component Anatomy

Lesson content:

- ▶ EngineSim Component Specifications
- ▶ Component Editor
- ▶ Component Executor
- ▶ Logging
- ▶ Component Descriptor
- ▶ Workshop 1: Building a GUI
- ▶ Workshop 2: Executing External Source Code



2.5 hours

Lesson 3: Building and Testing Components

Lesson content:

- ▶ Auto-building Components and Publishing
- ▶ Testing Components
- ▶ Debugging Components
- ▶ Workshop 3: Generating a Component Descriptor
- ▶ Workshop 4: Building and Publishing Components
- ▶ Workshop 5: Deploy and Test



3.5 hours

Lesson 4: Advanced Component Anatomy

Lesson content:

- ▶ Handlers
- ▶ Postprocessors
- ▶ Arrays
- ▶ Units
- ▶ Adding and Accessing Component Resources
- ▶ File Parameters
- ▶ Workshop 6: Implementing a Component Handler
- ▶ Workshop 7: Implementing a Component Postprocessor
- ▶ Workshop 8: Using Arrays, Aggregates and Units
- ▶ Workshop 9: Using File Parameters



3 hours

Lesson 5: Integration Methods

Lesson content:

- ▶ Integration Methods
- ▶ The OSCommand Plug-in
- ▶ Calling Code via JNI
- ▶ Workshop 10: Using the OS Command Plug-in
- ▶ Workshop 11: Using Native Code



1.5 hours

Lesson 6: Optimizer Plug-in Development

Lesson content:

- ▶ Required Files
- ▶ SDK Generator – Optimization Technique
- ▶ Template For Java Wrapper Class
- ▶ Java Wrapper Class For Technique
- ▶ Creating XML Descriptor
- ▶ Assembling Plug-in JAR File
- ▶ Workshop 12: Building an Optimization Technique Plug-in



2 hours

Appendix 1: Isight Developer and Debugger for Eclipse

Appendix content:

- ▶ About Isight Developer
- ▶ Installing Isight Developer (Part 1)
- ▶ Installing Isight Developer (Part 2)
- ▶ Creating a New Project
- ▶ Limitations
- ▶ Debugger Setup in Eclipse (Part 1)
- ▶ Debugger Setup in Eclipse (Part 2)
- ▶ Debugger Setup in Eclipse (Part 3)



1 hour