

# 2016 IBM Systems Engineering Open Labs

*Target to better LEARNING*

*(NO COST - not a substitute for full training courses)*

## Choose from one or more of these Self-Paced, Hands-On Labs:

1. DMT 3722 - Learn to Use Rational Publishing Engine to Create Custom Reports from Rational DOORS Next Generation
  2. Publish Your Rational DOORS Requirements with RPE
  3. DE 5312 - Continuous Engineering with SSE Platform
  4. Rational DOORS Next Generation with SSE v5 (Jazz/RM 5.0)
  5. Rational DOORS Next Generation with SSE v6 (Jazz/RM 6.0) with Configuration Management
  6. Take Control of your requirements with Configuration Mgmt
  7. Rational Collaborative Requirements Definition with DOORS
  8. Functional Requirements Analysis modeling with Rhapsody
  9. OMG SysML™ with IBM Rational Rhapsody and IBM Jazz™
  10. Verification and Validation with Rational Quality Manager
- Labs are self-paced with workbooks
  - SMEs will be present to answer any questions
  - Registration: Please send an email to [enrico.mancin@it.ibm.com](mailto:enrico.mancin@it.ibm.com)

# Save the Date!

**Morning session: 08:30–13:00**  
**Afternoon session: 13:30- 18:00**

**Rome April 5**  
IBM Client Center  
Roma Torrino  
Via Sciangai 53

**Milan April 7**  
IBM Client Center  
Segrate (Milano)  
Circonvallazione Idroscalo





**DMT 3722 - Learn to Use Rational Publishing Engine to Create Custom Reports from Rational DOORS Next Generation (Duration: 2 – 3 hours)**

Publishing Engine automates document generation from Rational solutions and select third-party tools. You can use Rational Publishing Engine to automate the generation of documents for ad hoc use, formal reviews, contractual obligations or regulatory compliance. Built-in capabilities extract data from a range of data sources to help reduce manual work and risk of errors. Rational Publishing Engine provides:

- Documents and reports-generate high-quality documents with flexible formatting as well as composite reports containing data from multiple sources.
- Outputs-support multiple output formats and concurrent document generation to multiple target formats from a single template.
- Templates-include predefined templates and provide a graphical template editing environment for custom report design.
- Data sources-extract data from a single source or combine data from multiple sources.

**Agenda**

- ✓ Logging on
- ✓ Verify Jazz team server availability
- ✓ Logging on Rational DOORS Next Generation
- ✓ Report template creation
- ✓ Include report template into DNG

**Products**

- ✓ Publishing Engine
- ✓ DOORS Next Generation



**DMT 3722 - Learn to Use Rational Publishing Engine to Create Custom Reports from Rational DOORS Next Generation (Duration: 2 – 3 hours)**

Publishing Engine automates document generation from Rational solutions and select third-party tools. You can use Rational Publishing Engine to automate the generation of documents for ad hoc use, formal reviews, contractual obligations or regulatory compliance. Built-in capabilities extract data from a range of data sources to help reduce manual work and risk of errors. Rational Publishing Engine provides:

- Documents and reports-generate high-quality documents with flexible formatting as well as composite reports containing data from multiple sources.
- Outputs-support multiple output formats and concurrent document generation to multiple target formats from a single template.
- Templates-include predefined templates and provide a graphical template editing environment for custom report design.
- Data sources-extract data from a single source or combine data from multiple sources.

**Agenda**

- ✓ Logging on
- ✓ Verify Jazz team server availability
- ✓ Logging on Rational DOORS Next Generation
- ✓ Report template creation
- ✓ Include report template into DNG

**Products**

- ✓ Publishing Engine
- ✓ DOORS Next Generation



**Publish Your Rational DOORS Requirements with RPE (Duration: 2 – 3 hours)**

This is your opportunity to learn about Rational Publishing Engine (RPE) and take it for a hands-on test drive. The objective of this Workshop is to demonstrate how RPE helps your projects meet business goals, satisfy customer needs, and address applicable regulations and standards, to help customers achieve greater value and performance from their global investments in software.

RPE can be used to generate documents with data from different sources (System Architect, DOORS, Focal Point, Rhapsody, and the Jazz family tools) and to different output formats like Word, PDF, HTML and XSL-FO. The lab exercises are designed to give the student an introduction to the RPE application using data from a Rational DOORS project.

This Workshop consists of three lab exercises. The student is to follow the related lab workbook at your own pace. The work book instructs the student how to perform various tasks within RPE with the intention of the student becoming more familiar with RPE’s functions and capabilities using Rational DOORS data. The student is encouraged to ask questions and get assistance whenever necessary.

**Agenda**

- ✓ Lab 1 - Document Generation from the DOORS Client
- ✓ Lab 2 – Modify a Document Specification
- ✓ Lab 3 – Add Traceability Matrix to Requirements Document Template

**Rational Products**

- ✓ Rational DOORS
- ✓ Rational Publishing Engine



**DE-5312 Continuous Engineering with the Rational Solution for Systems and Software Engineering (Duration: 2 – 3 hours)**

This workshop demonstrates how the IBM ® Rational Systems and Software Engineering solution can help companies reduce the time, cost, and risk of developing profitable products and systems. Participants in this lab will get hands on experience with the Requirements Management, Quality Management and Project Planning and Management applications of the IBM® Jazz™ platform.

Over the course of the lab, users will explore how the Jazz platform supports the product development lifecycle, decreasing cost and time to market by:

- Managing Requirements across the entire lifecycle and disciplines, from stakeholder requirements to system, software and hardware requirements, through to test.
- Enabling distributed teams to collaborate and communicate throughout the development lifecycle.
- Enabling projects to be managed effectively by providing visibility into project health status and team workloads.
- Automating traceability and auditability by managing artifacts and their inter-relationships across the lifecycle, empowering teams to deliver more value by removing manual tasks.

**Agenda**

- ✓ Lab 1 – Lifecycle Traceability across the V Cycle
- ✓ Lab 2 – Modules Views and Test Plans
- ✓ Lab 3 – Reconciling Requirement Changes and Suspect Links

**Products**

- ✓ DOORS Next Generation
- ✓ Rational Quality Manager
- ✓ Rational Team Concert



**Rational DOORS Next Generation “hands on” workbook for SSE image v5 (Jazz/RM 5.0)**  
**(Duration: 3 – 4 hours)**

The objective of this lab is to demonstrate through an interactive, hands-on experience, the power of collaboration and visual techniques for requirements definition and management enabled by DOORS Next Generation. It is designed to capture, trace, analyze and manage requirements while maintaining compliance with industry standards and regulations. Built using IBM Jazz™ technology on the team server, Rational DOORS Next Generation provides a single platform for global team collaboration and support for managing requirements more effectively, sharing common administration of users, servers and projects. DOORS Next Generation provides:

- Enhanced collaborative environment for requirements management in support of engineering practices and project collaboration for complex and embedded systems; interoperability between versions of IBM Rational DOORS.
- Advanced web support for rich text formatting, diagrams and graphics for capturing and managing requirements.
- Integrated requirements management tools to help drive better design, development and testing during the software engineering lifecycle.

**Agenda**

**Products**

- ✓ Lab 1 – RM Fundamentals with a Web Client
- ✓ Lab 2 – Dealing with Changes to Requirements
- ✓ Lab 3 – Importing and Reporting

✓ DOORS Next Generation



**Rational DOORS Next Generation “hands on” workbook for SSE image v6 (Jazz/RM6.0)**  
**(Duration: 3 – 4 hours)**

This workshop demonstrates how the IBM® Continuous Engineering solution can help companies reduce the time, cost, and risk of developing profitable products and systems. Participants of this LAB will get hands on experience with the Requirements Management application of the IBM® Jazz™ platform.

Over the course of this Lab, users will explore how integrated IBM tools support the product development lifecycle, decreasing cost and time to market by:

- Managing Requirements across the entire lifecycle and disciplines, from stakeholder requirements to system, software and hardware requirements, through to test.
- Enabling distributed teams to collaborate and communicate throughout the development lifecycle
- Enabling projects to be managed effectively, by providing accurate visibility into project health status and team workloads.
- Automating traceability and auditability by managing artifacts and their inter-relationships across the lifecycle, empowering teams to deliver more value by removing manual tasks.

**Agenda**

**Products**

- ✓ Lab 4 – Reporting and Dashboard Widgets
- ✓ Lab 5 – Configuration Management of requirements
- ✓ Lab 6 – Extension Exercises

✓ DOORS Next Generation



**Take control of your requirements projects with DOORS NEXT GENERATION and Configuration Management (Jazz/RM 6.0) (Duration: 2 – 3 hours)**

Learn how to use configuration management in the Requirements Management (RM) application to manage streams, baselines, and change sets, to compare configurations, and to perform other configuration management tasks.

In the labs that follow you will perform the following tasks:

1. Create a baseline, in the requirements management stream, to represent and preserve the starting state of the project.
2. Make changes within the requirements stream, representing ongoing development efforts
3. Compare the current stream of development to a baseline in order to assess what changed since the baselined.
4. Create a new stream of development (a variant) from a baseline.
5. In the variant stream, make related changes within a change set, and deliver the change set to the stream.
6. Share your change set from the variant stream to the original stream.

<b>Agenda</b>	<b>Products</b>
---------------	-----------------

- ✓ Lab 1 – Work with streams and baselines
- ✓ Lab 2 – Create a stream from a baseline
- ✓ Lab 3 – Control change with change sets
- ✓ Lab 4 – Deliver the changes from one stream into a different stream

✓ DOORS Next Generation





**Rational Collaborative Requirements Definition with DOORS (Duration: 3 – 4 hours)**

Rational DOORS is a leading requirements management tool that makes it easy to capture, trace, analyze, and manage changes to information. Control of requirements is key to reducing costs, increasing efficiency, and improving the quality of your products.

Using the Rational DOORS family of products, you can optimize requirements communication, collaboration, and verification throughout your organization and across your supply chain.

Rational DOORS makes it easy for everyone in your organization and beyond to participate in and contribute to the requirements management process. This workshop will provide attendees with the opportunity to learn from IBM professionals and use DOORS and DOORS Web Access (DWA) hands-on in a Systems Engineering based example scenario.

**Agenda**

- ✓ Lab 1 – Import User Requirements from existing documents
- ✓ Lab 2 – Create System Requirements and Traceability
- ✓ Lab 3 – Analyze Requirements
- ✓ Lab 4 – Verification of Requirements
- ✓ Lab 5 – Review Requirements, Baseline and Sign-off
- ✓ Lab 6 – Manage Changing Requirements and Impact Analysis

**Rational Products**

- ✓ Rational DOORS
- ✓ Rational DOORS Web Access



## Functional Requirements Analysis using Modeling with Rhapsody (Duration: 3 – 4 hours)

Requirements definition is a critical part of the development life-cycle. Getting those requirements right is key to insure that systems satisfy the stakeholder needs and are delivered on time and within budget. At the same time, systems are increasingly getting more complex, which puts an additional burden on requirements and system engineers. No longer can requirements definition be done using traditional "textual" methods. This workshop presents a practical, step by step approach to getting requirements right the first time, using a model based approach. By visualizing requirements, engineers have a better understanding of intended behavior. A model based requirements approach brings consistency and semantic meaning behind the pictures enabling validation of the requirements to avoid uncovering costly specification errors and omissions later in the development lifecycle.

### Agenda

- ✓ Lab 1 - Importing and linking DOORS requirements to Rhapsody models
- ✓ Lab 2 - Use case modeling
- ✓ Lab 3 - Activity Modeling
- ✓ Lab 4 - Interaction Modeling
- ✓ Lab 5 - Behavior Modeling
- ✓ Lab 6 - Model verification/execution

### Rational Products

- ✓ Rational Rhapsody
- ✓ Rational DOORS



**OMG SysML™ with IBM Rational Rhapsody and IBM Jazz™ (Duration: 2 – 3 hours)**

The focus is model-based systems engineering (MBSE) using standards-based support for the OMG Systems Modeling Language™ (OMG SysML).

The Architect for Systems Engineers Edition of IBM Rational Rhapsody is used. Optional labs show how Rhapsody works in combination with IBM Rational Design Manager 5.0.

Later labs also show Open Services for Lifecycle Collaboration (OSLC) links can be made with Requirements Management (RM) tools. This approach is contrasted with the conventional approach of using the Rhapsody Gateway to synchronize requirements with a Rhapsody project.

Agenda	Products
--------	----------

- ✓ Lab 1 – Explore the HSUV SysML Model
- ✓ Lab 2 – Requirements, Tables, Matrices, and Metrics
- ✓ Lab 3 – More on SysML Blocks, Ports and Parts (Optional)
- ✓ Lab 4 – Create a Rhapsody DM Project Area
- ✓ Lab 5 – Modifying a Project on the Design Manager Server
- ✓ Lab 6 – Create a Lifecycle Project that Includes Jazz/RM
- ✓ Lab 7 – Linking Modeling Elements to Jazz/RM

- ✓ Rhapsody Architect for Systems Engineers
- ✓ Rational Design Manager 5.0
- ✓ DOORS Next Generation



**Rational Quality Manager (Duration: 3 – 4 hours)**

IBM® Rational® Quality Manager is a web-based, centralized test management hub for business-driven software quality. It is an environment for software decision makers and quality professionals who seek a collaborative and customizable solution for test planning, workflow control, tracking and metrics reporting. Designed with distributed teams in mind, the web interface allows team collaboration regardless of location, providing real time project status and communication to all team members.

This workshop dives into the Quality Professional role in the Rational Collaborative Lifecycle Management (CLM) solution powered by Jazz. Experience how IBM Rational Quality Manager may be used to perform quality management activities such as test planning, test authoring, test execution and test reporting - including test progress and coverage analysis. Explore Rational Quality Manager's role in CLM by linking test assets to Rational Requirements Composer requirements and Rational Team Concert development work items delivering traceability across your software development process.

**Agenda**

- ✓ Lab 1 - Test Management
- ✓ Lab 2 - Test Planning
- ✓ Lab 3 - Test Construction
- ✓ Lab 4 - Test Execution
- ✓ Lab 5 - Test Reporting

**Rational Products**

- ✓ Rational Quality Manager
- ✓ Rational Functional Tester (optional)
- ✓ Rational Requirements Composer and Team Concert (limited)