



## Cross Product Reporting for Improved Collaborative Lifecycle Management

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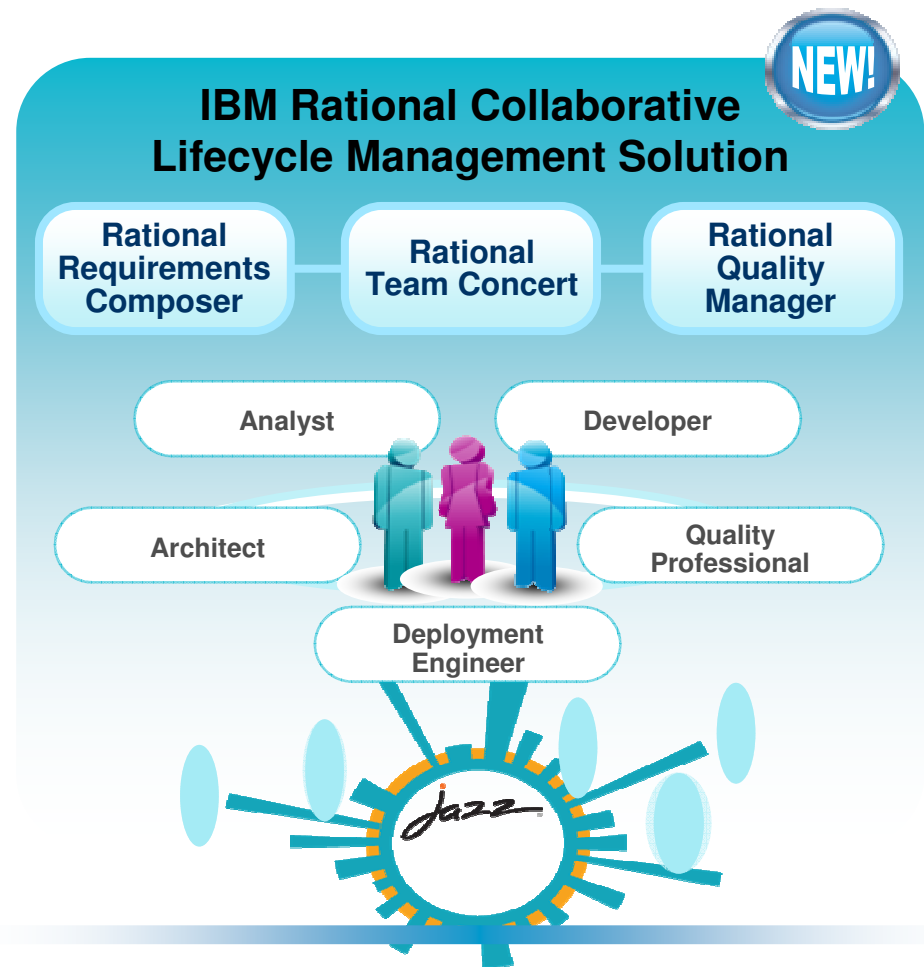
## Topics

- **Overview - Collaborative Lifecycle Management**
- **Reporting Needs**
- **CLM Reporting Architecture**
- **Cognos Overview**
- **The CLM Data Model**
- **Cognos report authoring tooling**
  - ▶ Query Studio
  - ▶ Report Studio

# IBM Rational Collaborative Lifecycle Management Solution

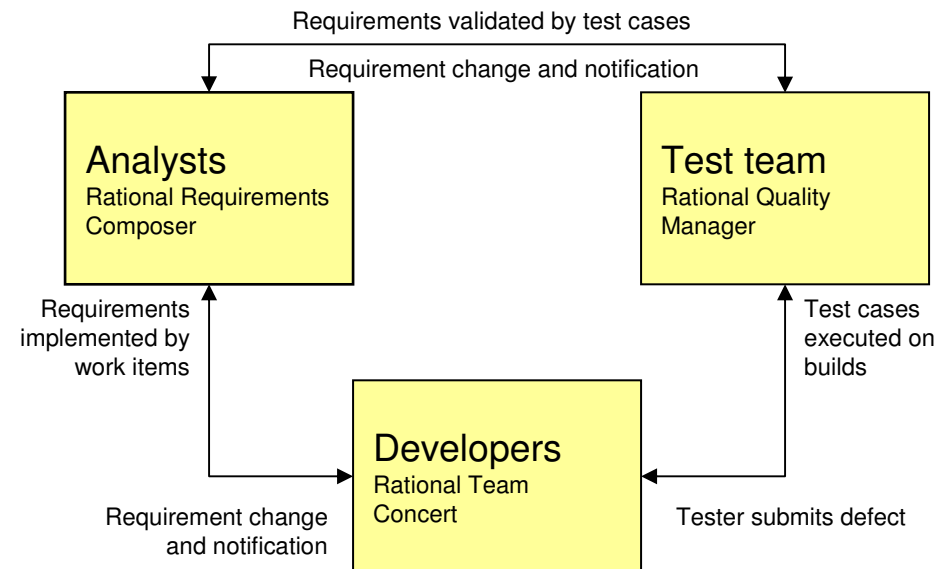
*Improve productivity with an integrated ALM solution*

- **Optimize your team through support of the 5 ALM Imperatives**
  - Real-time planning
  - Lifecycle traceability
  - In-context collaboration
  - **Development Intelligence**
  - Continuous Improvement
- **Get up and running quickly**
- **Extend as your needs evolve**
- **Support heterogeneous development across multiple platforms and technologies**



## Collaborative Lifecycle Management

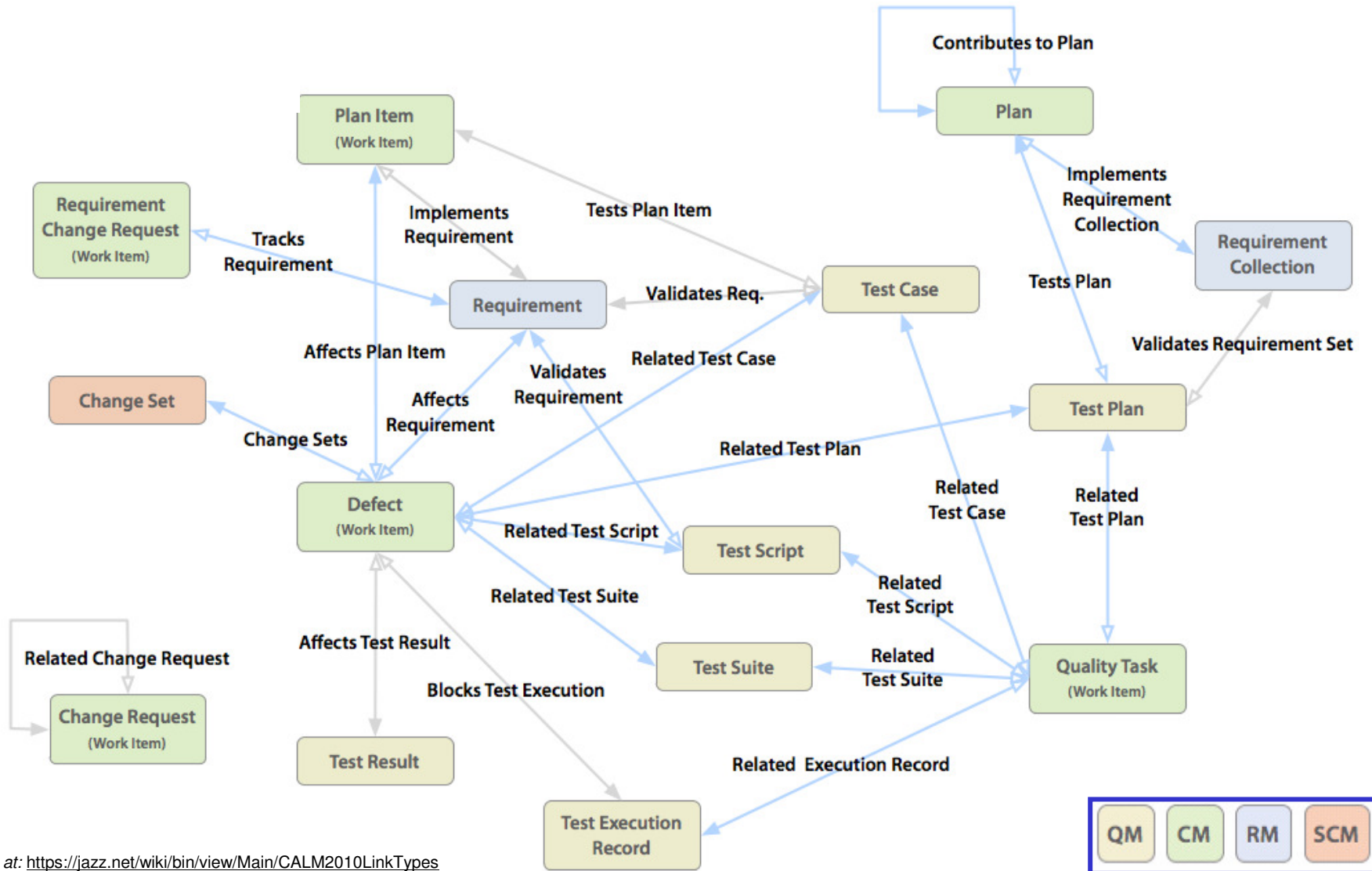
- Collaborative Lifecycle Management (CLM) provides integrations across Jazz-based products to connect the work of analysts with development and test teams
- Cross-product links support traceability, web-like navigation, review, commenting, and status tracking across project repositories
- CLM integrations build on the Jazz™ Foundation to provide a common approach to artifact linking, dashboards, security, and user interface frameworks



Learn more at

[http://publib.boulder.ibm.com/infocenter/clmhelp/v3r0m1/index.jsp?topic=/com.ibm.help.common.jazz.calm.doc/topics/c\\_calm\\_common.html](http://publib.boulder.ibm.com/infocenter/clmhelp/v3r0m1/index.jsp?topic=/com.ibm.help.common.jazz.calm.doc/topics/c_calm_common.html)

# CLM Link Types



Learn more at: <https://jazz.net/wiki/bin/view/Main/CALM2010LinkTypes>

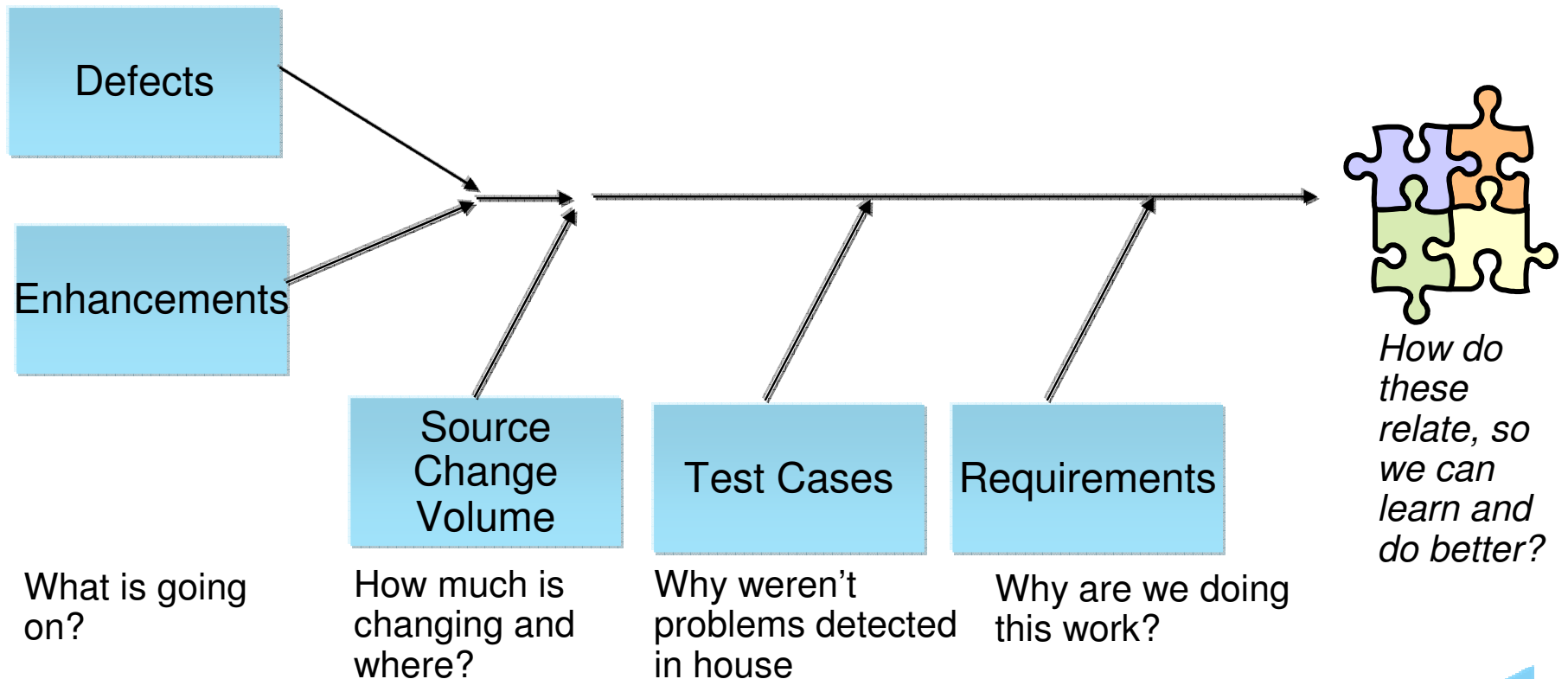


## Reporting Needs

- Strong reporting capabilities aid successful management
  - ▶ All relevant data must be reportable
  - ▶ Custom report definition must be supported
  - ▶ Report delivery must enable timely action
- Development organizations use multiple tools
  - ▶ Tools may be acquired from multiple sources
    - Rational, other vendors, in-house
  - ▶ Tools may be geographically distributed
  - ▶ Reports must span these tools
  - ▶ Managing traceability is a key aspect of Collaborative Lifecycle Management (CLM)
- Standardization of reporting technology reduces the total cost of ownership
  - ▶ Reduced server administration costs
  - ▶ Reduced user training costs

## Goals: Address Issues Like This

- Why are we getting so many defects from customers in one specific area? What is going on? Why weren't defects caught in-house? How should our process change so we can do better?



## Some example CLM traceability reporting needs

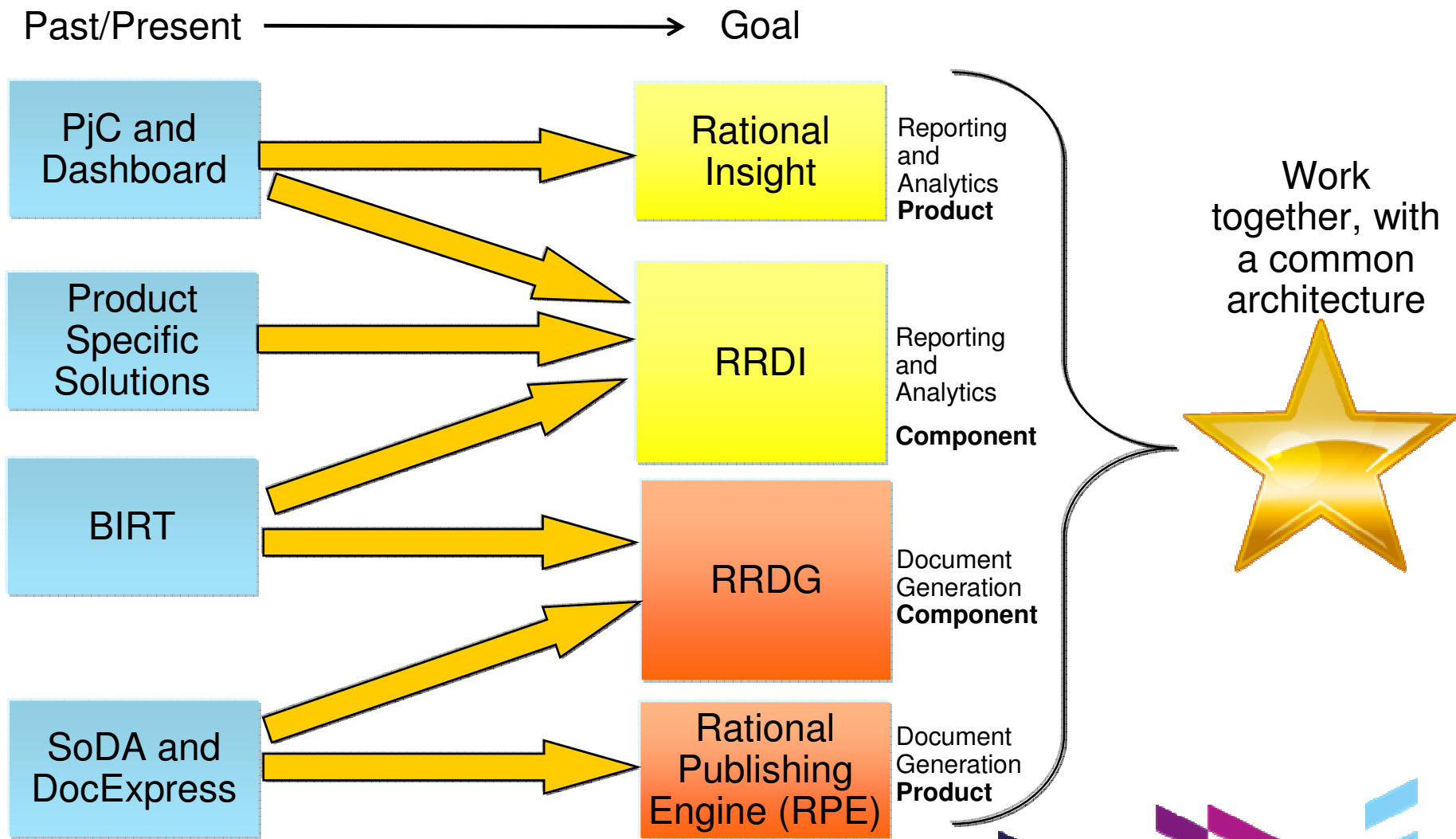
- **As a development manager,**
  - ▶ I need to know if all planned features have corresponding requirements.  
I'll investigate any features that don't implement any requirement.
- **As a quality manager,**
  - ▶ I need to know if all requirements planned for this release have corresponding test cases.  
I'll add tasks to develop test cases for requirements that don't have any.
- **As a tester,**
  - ▶ I need to know which failed test execution results should be resolved by the latest build.  
I'll retry the test case to verify the fix.
- **As a project manager,**
  - ▶ I need to know which requirements have been verified by successful test execution results.  
I'll use this information to assess progress against the cost and schedule.



## Some Reporting Terminology

- *Reporting* is a general term that has several related aspects
- *Query* refers to retrieving information that satisfies certain criteria and presenting it in a simple format
  - ▶ A query builder is used to create the retrieval criteria
  - ▶ The result is normally displayed as a simple list or table
  - ▶ e.g. Rational Team Concert has an integrated Work Item query builder
- *Development Intelligence* refers to the application of Business Intelligence techniques to development data
  - ▶ Report authoring tools are used to define the output presentation
  - ▶ The result often contains charts, graphs, tables, cross-tabs, gauges, dashboards, etc.
  - ▶ e.g. IBM Cognos BI and Rational Insight support development intelligence
- *Document Generation* refers to the automatic creation of documents from development data based on templates
  - ▶ The documents are often deliverables, e.g. a Requirements Specification
  - ▶ The output is normally Word or PDF
  - ▶ e.g. Rational Publishing Engine supports document generation

# Rational Reporting Evolution



## Rational common reporting component strategy

- Rational is transforming technology from Rational Insight and Rational Publishing Engine into a standard set of common reporting components that can be embedded in any Rational product
  - ▶ Rational Reporting for Development Intelligence (RRDI)
    - Includes common data warehouse technology from Rational Insight and IBM Cognos BI
  - ▶ Rational Reporting for Document Generation (RRDG)
    - Includes document templating technology from Rational Publishing Engine
- Rational Insight and Rational Publishing Engine will continue as stand-alone products
  - ▶ They will be built on RRDI and RRDG
  - ▶ They will continue to support more open environments

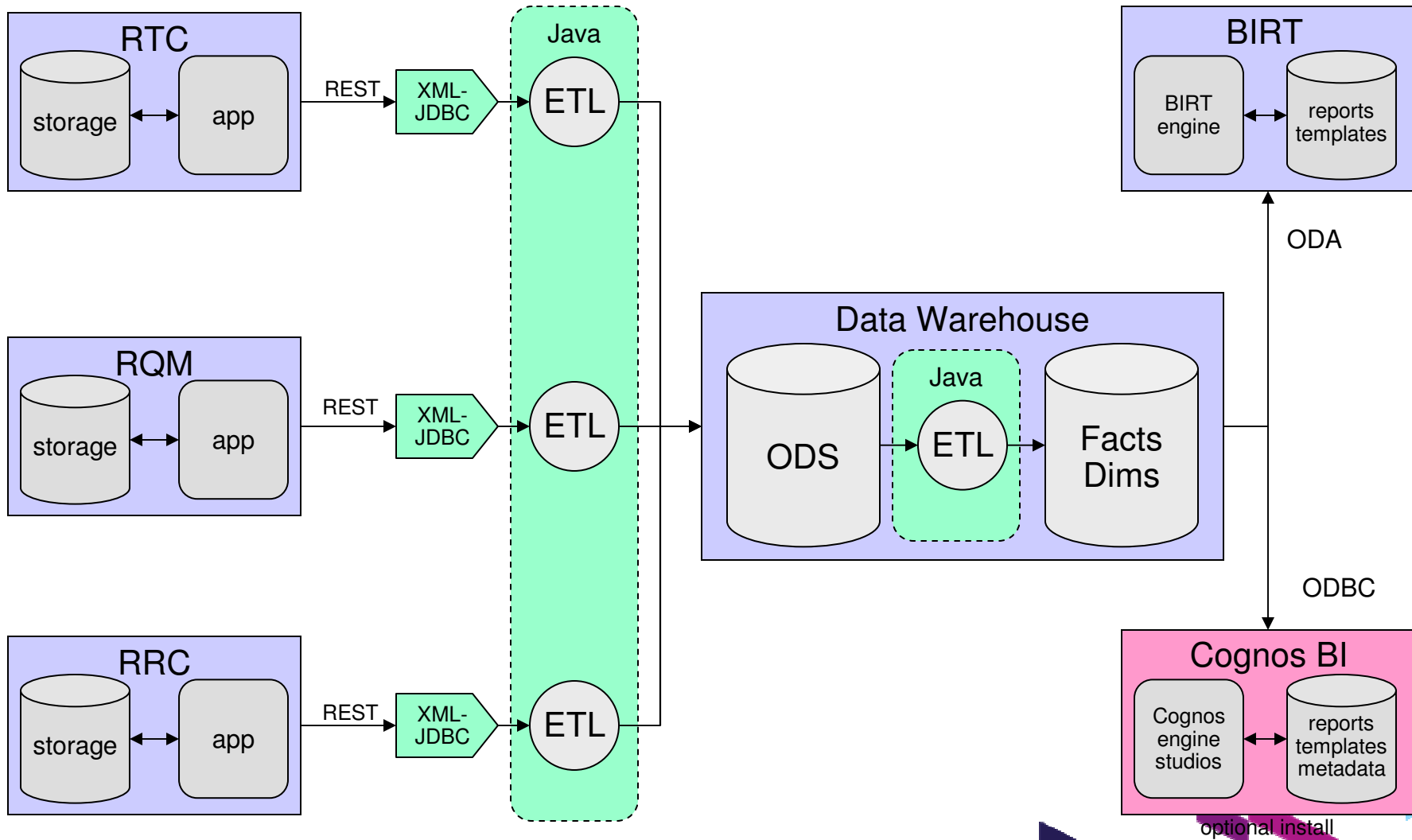
## CLM 2011 Reporting

- Common Data Warehouse (DW)
- Out-of-the-box development intelligence reports (BIRT)
- Out-of-the-box document-style reports (RRDG) for RRC
  - ▶ <https://jazz.net/wiki/bin/view/Main/RRC3RRDGReports>
- (Optional) Custom reporting with Rational Reporting for Development Intelligence (RRDI)
  - ▶ Cognos-based authoring
  - ▶ Viewing experience integrated into the CLM Web UI
- (Optional) Custom document generation with standalone RPE purchase

## Consumability features of CLM 2011 reporting

- The core installation package has all reporting components except the Cognos BI server
  - ▶ Data services and ETLs are integrated into point products
  - ▶ Predefined BIRT and RRDG reports are provided out-of-the-box
  - ▶ Reporting is configured using the JTS setup wizard
  - ▶ Packaged Apache Derby can be used as the common data warehouse for evaluation purposes, or for small teams (BIRT only)
- The optional installation package has the Cognos BI server and tools (RRDI)
  - ▶ Predefined Cognos reports provided out-of-the-box
  - ▶ Report authoring tools provided for custom reports
  - ▶ Must use a supported commercial database (DB2, Oracle, SQL Server)
- CLM 2011 reporting is a closed configuration to simplify administration and support
  - ▶ Upgrade to Rational Insight or Rational Publishing Engine for more function and flexibility

# CLM 2011 data warehouse reporting



## CLM 2011 out-of-the box reports

- CLM 2011 includes a large set of out-of-the-box reports
  - ▶ Some present data from individual products (RTC, RQM, RRC)
  - ▶ Some combine data across products (e.g. traceability reports)
- See Help topic *Using available reports and templates*
  - ▶ [http://jazz.net/help-dev/clm/topic/com.ibm.rational.rr.usage.doc/topics/t\\_using\\_sample\\_reports\\_templates.html](http://jazz.net/help-dev/clm/topic/com.ibm.rational.rr.usage.doc/topics/t_using_sample_reports_templates.html)
- See Jazz Team wiki topic *Out-of-the-box Reports*
  - ▶ <https://jazz.net/wiki/bin/view/Main/CALMReportingOOTBReports>

# Reporting Space

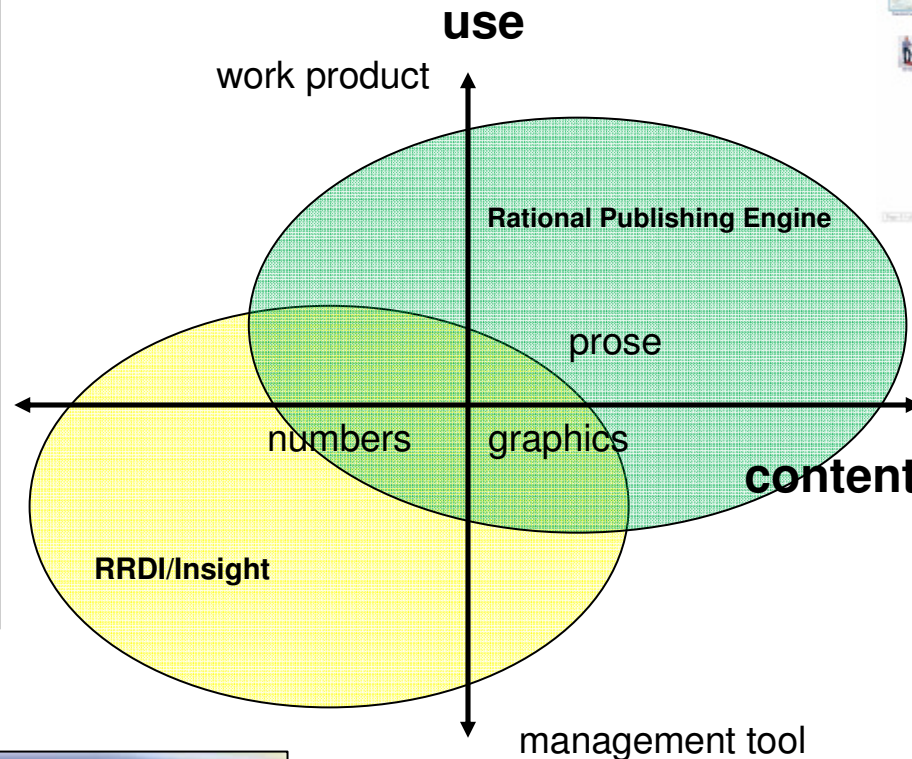
## Development Intelligence

### Why:

- To view, monitor, and answer questions status and trend.
- Enables deeper analytics to discover root causes and determine corrective actions

### How:

- Interactive web based reports, charts, graphs often showing aggregated and/or calculated results
- Progressive disclosure via alerts, drill-down, and drill-thru



## Documentation

### Why:

- To demonstrate compliance, communicate across contractual boundaries, support offline review of development data, and communicate development data with the extended team

### How:

- Typically in highly stylized and formatted documents.



# Capability Map in CLM 2011

	Viewing Reports			Authoring New Reports (or customizing existing reports)		
	RTC	RQM	RRC	RTC	RQM	RRC
<b>Development Intelligence Style Reports (BIRT)</b>	Within RTC	Within RQM	Not available	Use BIRT Report Designer <sup>4</sup>	Not supported	Not available
<b>Development Intelligence Style Reports (RRDI)<sup>1</sup></b>	Within RTC	Within RQM	Within Rational Reporting Server	Within Rational Reporting Server	Within Rational Reporting Server	Within Rational Reporting Server
<b>Document Style Reports (RRDG)<sup>2</sup></b>	Use Standalone RPE <sup>3</sup>	Use Standalone RPE <sup>3</sup>	Within RRC	Use Standalone RPE <sup>3</sup>	Use Standalone RPE <sup>3</sup>	Use Standalone RPE <sup>3</sup>

■ Capabilities available within CLM application UI

1. Rational Reporting for Development Intelligence (RRDI)
2. Rational Reporting for Document Generation (RRDG)
3. Current limitation: requires RPE (Rational Publishing Engine) License
4. BIRT Report Designer is not supplied with CLM 2011. We recommend the install and use of RRDI for customizing DI reports

**Reporting on data beyond these three CLM products requires separate installation and licensing of Insight and/or RPE**

## The Data Warehouse

- Based on schema from Rational Insight
- Includes artifacts from RM, QM and CCM domains
- Operational Data Store (ODS) stores copies of a subset of operational data from repository
- Star stores pre-computed metrics (facts and dimensions) which include aggregated, historical data drawn from the ODS

## The CLM Data Model

- Built using the Cognos Framework Manager tool (not included with RRD1)
- Provides access to:
  - ▶ All metrics and dimension data: star schemas
  - ▶ Operational Data Store: detail data in Relational tables
- Model is shown in authoring tools to be used during report construction
- The model is intended to cover Rational's product space
  - ▶ Not all fields in the model can be populated by CLM products.
- Provides a "user friendly" view of the data for report authors

# The CLM Data Model: Finding information in RRD1

- Useful Sources of information
  - <https://jazz.net/wiki/bin/view/Main/CALMReportingDataModelDetails>

Note: fields that are omitted from the FM Model column are those that are irrelevant to the CLM element in question

UI Element	REST API Resource	REST API Property	DB Table	DB Field	FM Model Table	FM Model Field	Description
<b>Project Area</b>	projectArea		PROJECT		Project		
	projectArea	itemId	PROJECT	EXTERNAL_KEY2	Project	External Key2	The UUID representing the item in storage. This is technically an internal detail, and resources should mostly be referred to by their uni
	projectArea	uniqueId	PROJECT	EXTERNAL_ID	Project	External ID	An MD5 hash of the URI for this element.
	projectArea	name	PROJECT	NAME	Project	Name	The human-readable name of the project area (e.g. "My Project")
	projectArea	archived	PROJECT	ISSOFTDELETED	Project	Is Deleted	A boolean indicating whether or not the resource is "archived". Archived resources are typically hidden from the UI and filtered out of que
	projectArea	modified	PROJECT	REC_DATETIME	Project	Last Updated	The timestamp of the last modification date of this resource
	projectArea	teamMembers					A list of members of this project
	projectArea	teamAreaHierarchy					A list of records reflecting the team area hierarchy for this project area
	projectArea	developmentLines					A list of development lines for this project area
	projectArea	projectDevelopmentLine					The main development line for this project area
	projectArea	href	PROJECT	URL	Project	URL	
	projectArea		PROJECT	PROJECT_CLASS_ID		Classification ID	
<b>Team Area</b>	teamArea		TEAM		Team		
	teamArea	itemId	TEAM	EXTERNAL_KEY2	Team	External Key2	The UUID representing the item in storage. This is technically an internal detail, and resources should mostly be referred to by their uni
	teamArea	uniqueId					An MD5 hash of the URI for this element.
	teamArea	name	TEAM	NAME	Team	Name	The human-readable name of the team area (e.g. "My Team")
	teamArea	archived	TEAM	ISSOFTDELETED	Team	Is Deleted	A boolean indicating whether or not the resource is "archived". Archived resources are typically hidden from the UI and filtered out of que
	teamArea	modified	TEAM	REC_DATETIME	Team	Last Updated	The timestamp of the last modification date of this resource
	teamArea	projectAreaName	PROJECT	NAME	Team	Project Name	
<b>Contributor</b>	contributor		RESOURCE		Resource		
	contributor	itemId	RESOURCE	EXTERNAL_KEY2	Resource	External Key2	The UUID representing the item in storage. This is technically an internal detail, and resources should mostly be referred to by their uni
	contributor	uniqueId	RESOURCE	EXTERNAL_ID	Resource	External ID	An MD5 hash of the URI for this element.
	contributor	modified	RESOURCE	REC_DATETIME	Resource	Last Updated	The timestamp of the last modification date of this resource
	contributor	archived	RESOURCE	ISSOFTDELETED	Resource	Is Deleted	A boolean indicating whether or not the resource is "archived". Archived resources are typically hidden from the UI and filtered out of que
	contributor	name	RESOURCE	FULL_NAME	Resource	Full Name	The human-readable name of the contributor (e.g. "James Moody")
	contributor	emailAddress	RESOURCE	REFERENCE_ID	Resource	Name	The email address of the contributor
	contributor	userId	RESOURCE	NAME	Resource	Name	The userid of the contributor, unique in this application (e.g. "jmoody")
	contributor	href	RESOURCE	URL	Resource	URL	
<b>Iteration</b>	iteration		ITERATION		Iteration		
	iteration	itemId	ITERATION	EXTERNAL_KEY2	Iteration	External Key2	The UUID representing the item in storage. This is technically an internal detail, and resources should mostly be referred to by their uni
	iteration	uniqueId					An MD5 hash of the URI for this element.
	iteration	modified	ITERATION	REC_DATETIME	Iteration	Last Updated	The timestamp of the last modification date of this resource
	iteration	archived	ITERATION	ISSOFTDELETED	Iteration	Is Deleted	A boolean indicating whether or not the resource is "archived". Archived resources are typically hidden from the UI and filtered out of que
	iteration	name	ITERATION	NAME	Iteration	Name	The human-readable name of this iteration (e.g. "M1")
	iteration	id	ITERATION	EXTERNAL_ID	Iteration	External ID	The identifier of this iteration (e.g. "3.0M1")
	iteration	startDate	ITERATION	START_DATE	Iteration	Expected Start Date	The start date of this iteration
	iteration	endDate	ITERATION	END_DATE	Iteration	Expected End Date	The end date of this iteration
	iteration	parent					The parent iteration of this iteration, if any
	iteration	children					The immediate child iterations of this iteration, if any
	iteration	developmentLines					The development line in which this iteration appears
	iteration	hasDeliverable					Whether or not this iteration is marked as having deliverables associated with it
	iteration	projectAreaItemId	ITERATION	PROJECT_ID	Iteration	Project ID	
	iteration	href	ITERATION	URL	Iteration	URL	
<b>Workspace/Stream</b>	workspace		FILE_STREAM		File Stream		
	workspace	itemId	FILE_STREAM	EXTERNAL_KEY2	File Stream	External Key2	The UUID representing the item in storage. This is technically an internal detail, and resources should mostly be referred to by their uni
	workspace	uniqueId					An MD5 hash of the URI for this element.
	workspace	modified	FILE_STREAM	REC_DATETIME	File Stream	Last Updated	The timestamp of the last modification date of this resource
	workspace	archived	FILE_STREAM	ISSOFTDELETED	File Stream	Is Deleted	A boolean indicating whether or not the resource is "archived". Archived resources are typically hidden from the UI and filtered out of que
	workspace	name	FILE_STREAM	NAME	File Stream	Name	The name of the workspace or stream
	workspace	stream					True if this is a stream, false if this is a workspace
	workspace	description					A description of the workspace or stream
	workspace	collectData					Whether or not ETL data collection is configured for this stream

## Reportable REST data services

- Reportable REST Data Services hide details of proprietary point product APIs
- Supports Web scale distribution using HTTP GET requests
- Provides XML representations of the data
- Defines query strings for data filtering to improve performance
  - ▶ Field selection
  - ▶ Conditional tests
  - ▶ “Modified Since” parameter for delta ETLs
- Clients are:
  - ▶ Rational Insight XML ODBC driver for live reporting and ETL
  - ▶ Rational Publishing Engine for live document generation
- Pain points:
  - ▶ Live reporting performance depends on the design of the Data Service
  - ▶ In general, only simple live reports perform well

## Common data warehouse

- Data from point products is copied into a common data warehouse using Extract-Transform-Load (ETL) processes
  - ▶ Cognos Data Manager (DM)
  - ▶ Jazz Foundation Java ETL Framework
- Data warehouse contains:
  - ▶ an Operational Data Store (ODS) and
  - ▶ a set of Datamarts (aka Fact Tables)
- This enables:
  - ▶ complex point product reports,
  - ▶ cross-product reports, and
  - ▶ analytical reports (OLAP)
- Clients are:
  - ▶ IBM Cognos BI
  - ▶ Eclipse BIRT
- Pain points:
  - ▶ Data warehouse configuration and customization is complex and requires skills
  - ▶ ETL execution time may be significant, which limits report currency

## RRDI Installation

RRDI is a separate install offering from JTS

### 1. Install JTS

- ▶ Create common Data Warehouse
- ▶ Configure Reporting
- ▶ Specify “OAuth” Key and Secret for server authentication

### 2. Install RRDI

- Available as a download from [jazz.net](http://jazz.net)
- No additional licensing or cost
- ▶ Standard Install Manager offering
- ▶ Only option is installing Cognos examples, everything else is installed by default
- ▶ Some required manual steps are required
- ▶ Automated more of the process from the “Common Reporting” shipped with RQM V2.0 and 2.0.1.

### 3. Perform post install configuration

# Select Install Options

**Install Packages**  
Select the features to install.

Install Prerequisite Licenses Location **Features** Summary

**Features**

- IBM Rational Reporting for Development Intelligence 1.0.2.RC2
  - Rational Report Server
    - Content Store Database
    - Cognos Samples for Rational Report Server

**Required, cannot unselect** (points to Rational Report Server)

**Installs Cognos Samples** (points to Cognos Samples for Rational Report Server)

Show dependencies  
 - Selected by Installation Manager because of dependencies

Expand All Collapse All Restore Default

**Details**  
**IBM Rational Reporting for Development Intelligence 1.0.2.RC2 (Internal Version 1.0.2000.RCR102-I20110418\_2100)**  
 You can use IBM Rational Reporting for Development Intelligence to create reports, manage reports, and warehouse data across participating products. With a common reporting solution, teams can establish consistent practices for managing data, producing reports, and communicating status.

**Disk Space Information**

	Volume	Required	Temporary	Total	Available
Shared Resources Area	C:	135.87 MB	922.08 MB	1.03 GB	154.10 GB
Installation Directory	C:	3.15 GB		3.15 GB	154.10 GB

< Back Next > Install Cancel



# Configure OAuth Authentication

**Install Packages**  
✖ The OAuth Key Value is not valid.

Install Prerequisite Licenses Location Features Summary

**Common Configurations**  
User authentication  
Content store configuration  
Application server

**Common Configurations**  
User authentication

**Configure IBM Rational Reporting User Authentication**

Enter the URL of the Jazz Server, the fully qualified domain name of the report server, the OAuth Key Value and OAuth Secret. The OAuth key value and secret entered here must match the Jazz Server's values. These are used by the Jazz Server to authenticate the Rational Report Server. If the values do not match, then this authentication will fail and reporting will not operate.

This installation cannot proceed without these values. For more information about where to obtain this information, see the [Configure OAuth properties](#) Help topic or ask your JFS administrator for the appropriate information.

This information will be used to configure the user authentication mechanism on the report server. It will be stored in the file "C:\Program Files\IBM\RRDI\cognos\configuration\jazzns\_config.xml". The OAuth key value and secret will automatically be encrypted when the Rational Report Server starts. While the information will be encrypted, it is also very important to restrict access to this file to administrators or root users only.

Jazz server URL:

Fully Qualified Domain Name or IP address of the Rational Report Server:

OAuth Consumer Key:

OAuth Consumer Secret:

Key and Secret values must match values in JTS

< Back Next > Install Cancel

# Configure Cognos Content Store Database

### Install Packages

❌ Complete all the fields.

Install
Prerequisite
Licenses
Location
Features
Summary

- Common Configurations
  - User authentication
  - Content store configuration
  - Application server

#### Common Configurations

Content store configuration

The report server requires a database called a content store in order to function. Please provide the information requested below: select the method of installation, your database server type, and information about the database server. Note that automatic mode requires a local database client and the database must not already exist - it will be created during installation.

**Database server information**

Installation mode:

Database type:

**DB2-specific information**

Database application location:

DB2 administrator account:

DB2 administrator password:

Warning: The password is stored in a format that is difficult, but not impossible, for an intruder to read.

DB2 access port:

Use a default directory to store the databases.  
The database container locations must be writable by the database administrator.

**Content Store information**

Database name:

Database container location:

Can also manually create the database

Also supports Oracle and SQL Server

# Configure WebSphere

**Install Packages**

✖ CRRRI0005E: Port 9080 is in use. Stop the service running on port 9080 or specify a different port.

Install > Prerequisite > Licenses > Location > **Features** > Summary

- Common Configurations
  - ✓ User authentication
  - ✓ Content store configuration
  - ✚ Application server

### Common Configurations

Application server

#### Application server

Select the type of server installation you want to use for Rational Reporting.

**WebSphere Application Server 7.0 (new installation)**

This option creates a new installation of WebSphere Application Server on the machine and automatically configures the report server.

#### Server Configuration

Port:

Enable administrative security?

Admin user:

Admin password:

Confirm password:

**Can also install into an existing WAS**

## Post Install Configuration

- Some manual steps required on Linux
- Adjust OAuth Key/Secret if necessary
- Collaboration with JTS (security certificates for Internet Explorer 8)
- Download and import Cognos report archives
  - ▶ Data Models
  - ▶ “Out of the Box” reports for each product
- Set up the Rational Style
- Configure Cognos data source and Signon (if necessary)
- Live Reporting setup for RQM

## Cognos Overview

- Industry leading reporting and analytics product suite acquired by IBM
- Powers *Rational Reporting for Development Intelligence* and *Rational Insight*
- Totally web based
  - ▶ Report Server
  - ▶ Report Authoring
  - ▶ Dashboard creation and display
- Data Abstraction to simplify report authoring
  - ▶ Report authors do not need to know the database schema
  - ▶ No SQL in reports
  - ▶ Isolates reports from database schema changes
- Many advanced reporting features built in
- Many add on products available
  - ▶ OLAP Analysis and data cubes
  - ▶ Metrics / scorecarding tools
  - ▶ Microsoft integration
  - ▶ Mobile access
- And much more!

## The CLM Data Model

- Provides a “user friendly” view of the data for report authors
- Built using the Cognos Framework Manager tool (not included with RRDI)
- Provides access to:
  - ▶ All metrics and dimension data: star schemas
  - ▶ Operational Data Store: detail data in Relational tables
- Model is shown in authoring tools to be used during report construction
- The model is intended to cover Rational’s product space
  - ▶ Not all fields in the model can be populated by CLM products.

## The CLM Data Model

### *Areas Covered by the data model*

- Change Management
  - ▶ RTC work items
- Configuration Management
  - ▶ Activities, Build Metrics
- Project Management
  - ▶ Resources, Risk, Time Management
- Quality Management
  - ▶ Test cases, jobs, Execution Results
- Requirement Management
  - ▶ Requirement Metrics, relationship with Test Cases/Plans
- Operational Data Store
  - ▶ Detail data for each area, generally used for tabular reports. Includes cross product linkages

## Cognos Report Authoring Tooling

- Query Studio
  - ▶ Used for quick, informal reports
  - ▶ Intended to be generally usable with little training
  - ▶ Provides “ad hoc” query capability
  - ▶ Construct with Drag/Drop
  - ▶ Tabular reports: sorting, grouping, filtering, etc
  - ▶ Convert to chart: multiple chart types
  - ▶ Save report for later use or to open in Report Studio



# Query Studio Example

**Rational Report Server**  
IBM Cognos 8 BI Query Studio - New

**Menu**  
Insert Data  
Edit Data  
Change Layout  
Run Report  
Manage File

**Request Arrivals by Status**  
Request Status: Descending order; Project: Ascending order

Request Status	Project	Arrival
Open	DP&A PMC	18
	Jazz Collaborative ALM	657
	Jazz Collaborative ALM	2
	Jazz Foundation	6,984
	Jazz Foundation	8
	Jazz Support (Private)	241
	Jazz TP (private)	17
	PMC (Private)	437
	Rational AMC	7
	Rational Customer Flexibility Program	54
	Rational Team Concert	12,288
	Rational Team Concert	19
	Rational Team Concert Client for Visual Studio (Private)	62
RTC CRM (Private)	24	
<b>Open</b>		<b>24</b>
InProgress	Jazz Collaborative ALM	153
	Jazz Foundation	211
	Jazz Support (Private)	197
	PMC (Private)	31
	Rational Customer Flexibility Program	3
Rational Team Concert	290	

## Report Studio

- Tool used to develop professional reports
- Generally used by Report Authors
- Very extensive web based report authoring capabilities

# Report Studio

The screenshot displays the IBM Report Studio interface. On the left is the 'Insertable Objects' tree, listing various request metrics and properties. Below it is the 'Properties' window for a 'Combination Chart', showing settings for Conditional, Data, and General aspects. The main workspace shows a report design with sections for 'Defect Arrival Rate', 'Parameters', 'Number of Defects', and 'About This Report'. The 'Number of Defects' section contains a line chart with data points and a legend for severity levels.

**Insertable Objects:**

- Request Creation Metrics
  - Actual Duration
  - Arrival
  - Planned Duration
  - Story Points
  - REQDT\_METRIC\_ID
  - Last Updated
- Category
- Classification
- Component
- Customer Priority
- Creation Date
- Iteration
- Project
- Project (by Portfolio)
- Release
- Request Priority
- Request Severity
- Request Severity Members

**Properties - Combination Chart:**

<b>Conditional</b>	
Conditional Styles	
Style Variable	
Render Variable	
No Data Contents	No
<b>Data</b>	
Drill-Through Definitions	(Collection)
Query	Defect
Master Detail Relationships	
Suppression	
<b>General</b>	
Chart Orientation	Vertical
Depth	0
Visual Angle	45
Pagination	

**Report Design:**

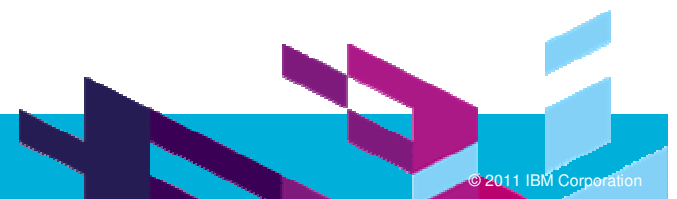
- Defect Arrival Rate** (Section Header)
- Parameters:**
  - Program: [Dropdown]
  - Project: [Dropdown]
- Number of Defects** (Chart):
  - Default measure (y-axis): <Defect Arrival> Number of Defects
  - Series: <#Severity#> Severity
  - Categories (x-axis): <Arrival Date> Arrival Date
- About This Report** (Text):
 

This report shows the frequency of new defect submissions over time, broken down by Severity. General upwards earlier in the project and then should start sloping downwards as the project nears completion. T lines should show this trend or the project is not stabilizing.

# QUESTIONS



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