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# Diagnosing Eclipse configurations using Rational® Diagnostic Tool for Eclipse

## *Module 3: Using Rational Diagnostic Tool for Eclipse to diagnose Eclipse 3.2*

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Now that you have a foundation for both Eclipse and OSGi technology, this module will cover using the **Rational Diagnostic Tool for Eclipse**.

## Course agenda

- Module 1: Understanding Eclipse
- Module 2: Understanding Equinox and OSGI bundles
- **Module 3: Using the Rational Diagnostic Tool for Eclipse 3.2**



This module is the third in a series to help you understand using the Rational Diagnostic Tool for Eclipse 3.2.

## Diagnosing Eclipse 3.2

- Verifies and compares the configuration of an Eclipse Instance
- Is currently available from the IBM Support Assistant version 3.1
- Enables you to:
  - ▶ Determine missing feature dependencies and bundles load issues
  - ▶ Compare two Eclipse instances
  - ▶ View basic Eclipse configuration and settings
  - ▶ Workspaces used by this Eclipse configuration instance



The IBM Rational Diagnostic Tool for Eclipse 3.2 version 1.0 verifies and compares the configuration of an Eclipse instance and is currently available from the IBM Support Assistant Version 3.1.

The Rational Diagnostic Tool for Eclipse helps you:

- 1) Easily determine missing feature dependencies and bundles load issues. For example, a bundle may not load for a variety of reasons. Traditionally, in order to find out the cause, you had to diagnose the Eclipse configuration from within the application while it is running. Rational Diagnostic Tool for Eclipse allows you to view bundle resolution errors without starting the Eclipse instance thus preserving the state of the Eclipse instance
- 2) Compare quickly two Eclipse instances, catching that slight variations between the two; where potentially, one instance is successful with a Rational product and the other is not. Comparing two or more Eclipse instances can be difficult. Slight differences in bundle versions can cause abnormal behavior. In Eclipse, you can view what is installed by going to *help->Software Updates-> Manager configuration*. In order to compare two Eclipse instances you would have to open the two Eclipse instances and compare by eye. File comparison tools do not understand how to interpret Eclipse bundles so Rational Diagnostic Tool for Eclipse creates an easy-to-read report on the differences between two or more Eclipse instances.
- 3) View basic Eclipse configuration and settings. Rational Diagnostic Tool for Eclipse provides one view of multiple settings; settings that you previously had to search through the file system to find.
- And 4) Where exactly are the workspaces used by this Eclipse configuration instance? You can use "[dash]-configuration" or "[dash]-data" when running Eclipse to set custom configuration and workspace locations. Rational Diagnostic Tool for Eclipse can search for unknown configurations and the workspaces they reference.

## The path taken to analyze Eclipse

- Rational Diagnostic Tool for Eclipse searches for Eclipse configurations
- Reads the OSGi state
- Analyzes the update configuration to find the locations of the equinox launcher
- Reads the features and plug-in properties



It is important to understand the path Rational Diagnostic Tool for Eclipse takes to analyze Eclipse. First, Rational Diagnostic Tool for Eclipse searches for Eclipse configurations. Second, it reads the OSGi state. Third, it analyzes the update configuration to find the locations of the Equinox launcher, and finally the Rational Diagnostic Tool for Eclipse reads the features and plug-in properties.

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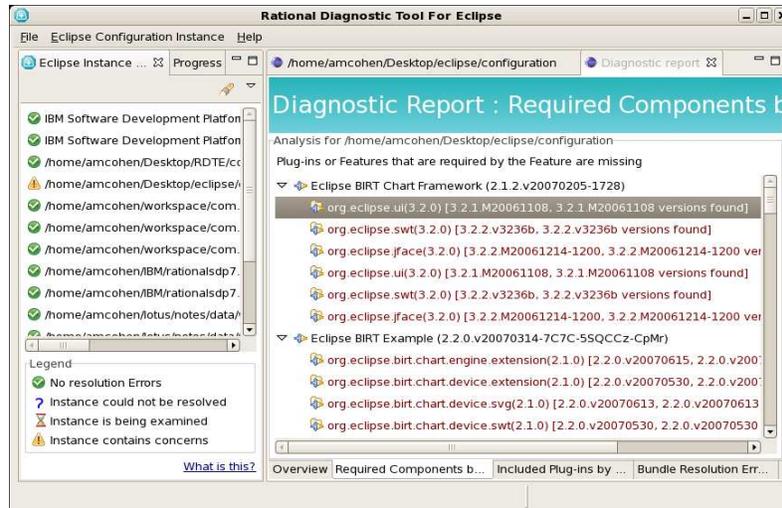
# Diagnoses report

The screenshot displays the Rational Diagnostic Tool for Eclipse interface. On the left, the 'Eclipse Instance Navigator' lists several instances, with 'IBM Software Development Platform [7.0.0]' selected. A yellow callout bubble labeled 'Eclipse instance' points to this entry. The main area shows a 'Diagnostic Report : Overview' for the selected instance. The report title is 'Diagnostic Report : Overview'. Below the title, it shows 'Results for IBM Software Development Platform [7.0.0]'. There are three sections of results, each with a 'Concerns Found' button and a 'Feature Missing' button: 'Required Components', 'Included Plugins', and 'Bundle Resolution'. The 'Bundle Resolution' section shows a 'Good' button and a 'Bundle Resolution Concerns' button. A legend at the bottom left explains the status icons: a green checkmark for 'No resolution Errors', a question mark for 'Instance could not be resolved', a red 'X' for 'Instance is being examined', and a yellow warning triangle for 'Instance contains concerns'. A 'What is this?' link is also present. The bottom of the slide features a colorful bar with the text 'Using Rational Diagnostic Tool for Eclipse to diagnose Eclipse 3.2' and '© 2007 IBM Corporation'.

5

Once Rational Diagnostic Tool for Eclipse has found your Eclipse instance, it inspects and reports concerns for missing dependencies including: missing required components, missing included plug-ins, and bundle resolution errors.

## Missing required components



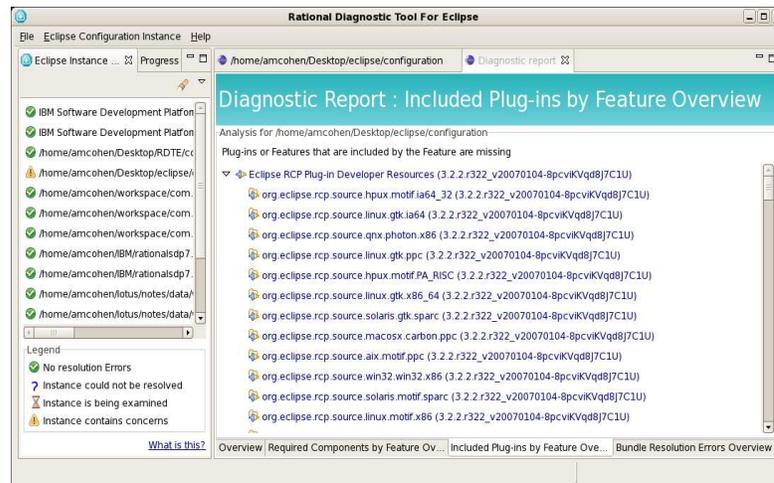
6

Using Rational Diagnostic Tool for Eclipse to diagnose Eclipse 3.2

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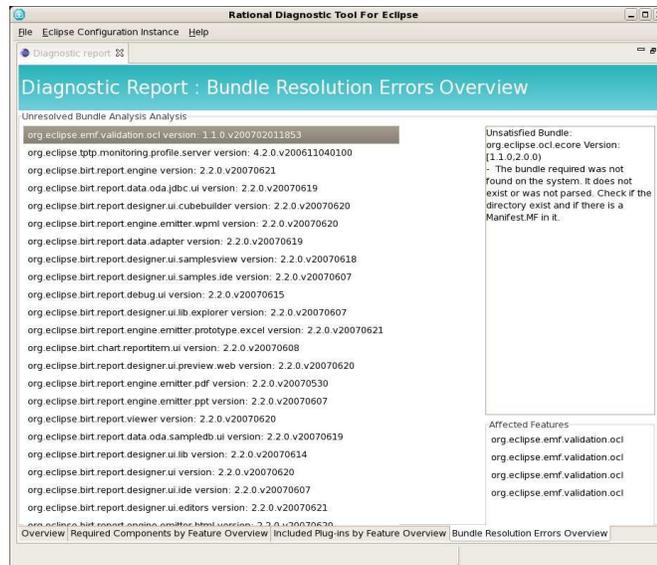
If you selected the required components error from the example in the previous diagnostic report slide, you will see the required components and dependencies errors. You can also walk through each dependency and identify incorrect plug-ins or features.

## Missing included components



Similar to the missing required components area, this report tells you what components should have been installed. Keep in mind that a bundle may not get installed due to a filter such a "wrong OS." So the fact that it is listed here does not mean that something is wrong.

## Bundle resolution errors



If you selected the bundle resolution concerns from the diagnostic report slide, you will be able to see the analysis and errors overview. This example shows the errors when bundles cause malfunctions in Eclipse.

## Properties



The Rational Diagnostic Tool for Eclipse properties view allows you to view several files that are scattered throughout the configuration. In this example, you can view the various details about Eclipse instance properties including: Name, path, configuration files, recent workspaces, and so on.

## Compare

**Comparison of Eclipse Instance OSGI Bundles**

Package	IBM Software Development Platform [7.0.0]	IBM Software Development Platform [7.0.0]
com.ibm.xttools.petal.core.policies	7.0.200.v20070423_1846	
com.ibm.xttools.petal.ui	7.0.200.v20070509_1939	
com.ibm.xttools.modeler.ui.properties	7.0.110.v20070504_1917	7.0.120.v20070613_1047
com.ibm.xttools.patterns.ui.apply	7.0.101.v20070507_1941	7.0.120.v20070613_1010
com.ibm.xttools.sample.rasset.expr	7.0.1.v20061205	7.0.2.v20070619
com.ibm.xttools.transform.uml2.jav	7.0.110.v20070530_1947	
com.ibm.xttools.transform.uml2.jav	7.0.2.v20070531	
com.ibm.xttools.patterns.framework	7.0.101.v20070517_1941	7.0.101.v20070412_1635
com.ibm.xttools.rose.model.import	7.0.2.v20070215	
com.ibm.xttools.modeler.wst.valida	7.0.110.v20070308_1920	
com.ibm.xttools.transform.uml2.jav	7.0.2.v20070509	
com.ibm.xttools.comparemerge.m	7.1.110.v20070522_1007	7.1.110.v20070705_1920

Legend:

- ✓ No resolution Errors
- ? Instance could not be resolved
- ⌚ Instance is being examined
- ⚠ Instance contains concerns

Filter:  All  Same  Different

Arguably the most useful feature of Rational Diagnostic Tool for Eclipse is the compare feature. The ability to compare two or more instances will help you identify uniqueness, including details about packages, versions, differences, and other crucial details. You can discover the answers to questions like: Why does this configuration work and this configuration not? And, What got updated in a configuration that caused a problem in Eclipse?

## Summary

- Using Rational Diagnostic Tool for Eclipse to diagnose Eclipse 3.2
- The path taken to analyze Eclipse
- Rational Diagnostic Tool for Eclipse diagnoses report
  - ▶ Missing dependencies
  - ▶ Bundle resolution errors
- Bundle properties
- Bundle compare



In summary, this module covered the Rational Diagnostic Tool for Eclipse 3.2. You should now be familiar with Rational Diagnostic Tool for Eclipse, its uses to diagnosing Eclipse 3.2, the path it takes to analyze Eclipse, the Rational Diagnostic Tool for Eclipse diagnoses reports including: missing dependencies and bundle resolution errors. You should also now be comfortable reviewing bundle properties and understand the importance of bundle compare.

## Additional resources

- IBM Rational software  
<http://www.ibm.com/software/rational>
- IBM Rational Software Delivery Platform  
<http://www.ibm.com/software/info/developer/index.jsp>
- Process and portfolio management  
<http://www.ibm.com/software/rational/offerings/lifecycle.html>
- Change and release management  
<http://www.ibm.com/software/rational/offerings/scm.html>
- Quality management  
<http://www.ibm.com/software/rational/offerings/testing.html>



For more information, visit [www.eclipse.org](http://www.eclipse.org), [www.osgi.org](http://www.osgi.org), or any of the links listed here and on the next slide.

## Additional resources (continued)

- Architecture management  
<http://www.ibm.com/software/rational/offerings/design.html>
- Rational trial downloads  
[http://www.ibm.com/developerworks/rational/downloads/?S\\_TACT=105AGX23&S\\_CMP=RCD](http://www.ibm.com/developerworks/rational/downloads/?S_TACT=105AGX23&S_CMP=RCD)
- developerWorks® Rational  
<http://www.ibm.com/developerworks/rational>
- IBM Rational TV  
[http://www.ibm.com/software/info/television/index.jsp?cat=rational&media=video&item=en\\_us/rational/xml/M259765N40519Z80.xml](http://www.ibm.com/software/info/television/index.jsp?cat=rational&media=video&item=en_us/rational/xml/M259765N40519Z80.xml)
- IBM Rational Business Partners  
<http://www.ibm.com/software/rational/partners/>



(five seconds of silence)

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