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IBM® Rational® Application Developer V6

Debug Enhancements

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Goals

- Review languages and environments supported by Application Developer

- Describe enhancements made to Application Developer's overall debugging functionality

Agenda

- Overview

- Overall Debugging Enhancements

Section

Overview

Debugging Tools

- Application Developer includes support for debugging several languages and environments
    - Java™
    - Compiled Languages
    - Active Script (client-side JavaScript or VisualBasic script)
    - SQL Stored Procedures
    - EGL
    - XSL Transformations
    - SQLJ
    - Mixed language *New V6*
    - WebSphere® Application Server environment (includes servlets, JSPs, and EJBs)

Section

Overall Enhancements

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General Functionality
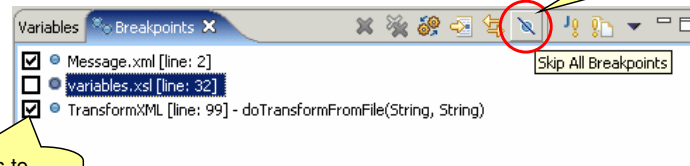
- New button in Debug view to enable or disable the filtering for the "step" functions (step into and step return)
  - ▸ Configure step filters in Preferences > Run/Debug > Java and Mixed Language Debug > Step Filters

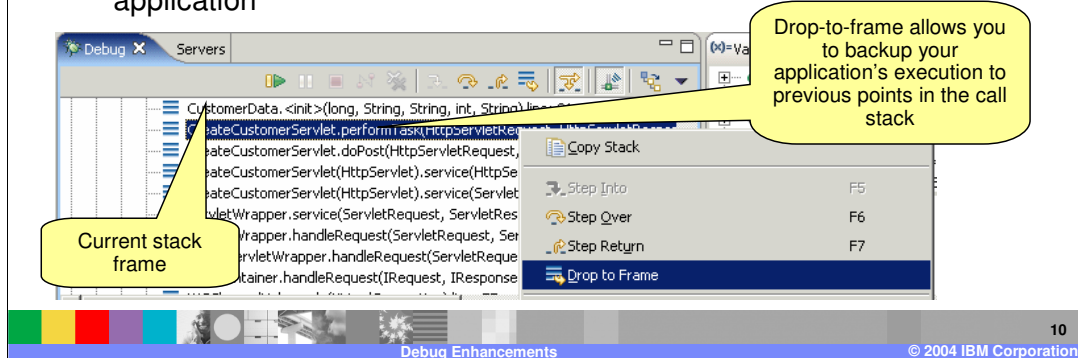Enable/disable the use of step filters with step functions
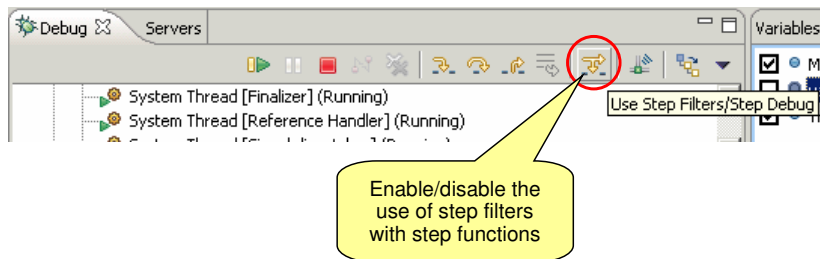
Source Location Definition

- Simpler interface for setting source locations

Version 5 Implementation

Source Lookup Path:

C:/Program Files/IBM/WebSphere Studio/Application D
C:/Program Files/IBM/WebSphere Studio/Application D
C:/Program Files/IBM/WebSphere Studio/Application D
C:/Program Files/IBM/WebSphere Studio/Application D

Up
Down
Remove
Add Projects...
Add JARs...
Add External JARs...
Advanced...

Multiple buttons available for adding the different types of source files

Version 6 Implementation

Source Lookup Path:

Default

Add...
Edit...

Adding source has been reduced to one button

Add Source
Select the t...up path

Archive
Debug engine
Directory
External Archive
Folder
Java Classpath Variable
Java Library
Java Project
Project
Working set
Workspace

Add Source window allows you add different locations of source code to your launch configuration

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Debug Enhancements

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Drop-to-Frame Functionality

- Allows you back up execution of your application
    - ▸ Now supported when debugging applications on WebSphere Application Server
        - Only available when debugging Java

- Useful when testing extreme values
    - ▸ Multiple input values can be entered without having to rerun application

> Drop-to-frame allows you to backup your application's execution to previous points in the call stack

Debug ✕ **Servers**

CustomerData.<init>(long, String, String, int, String)
...ateCustomerServlet.performTask(HttpServletReq...
...ateCustomerServlet.doPost(HttpServletRequest,
...ateCustomerServlet(HttpServlet).service(HttpSe
...ateCustomerServlet(HttpServlet).service(Servlet
...letWrapper.service(ServletRequest, ServletRes
...rapper.handleRequest(ServletRequest, Ser
...ervletWrapper.handleRequest(ServletReque
...tainer.handleRequest(IRequest, IResponse

> Current stack frame

|		
Copy Stack		
Step Into	F5
Step Over	F6
Step Return	F7
Drop to Frame	

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Capabilities Support

- Capabilities reduces UI clutter by hiding workbench features until they are needed
  - ▶ Debuggers participate in Capabilities support
  - ▶ For example XSLT debugging is disabled by default or until an XML project is created

- Enable capabilities through Preferences > Workbench > Capabilities

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Debug Enhancements

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View Management

- Allows debug-related views to be opened in non-debug perspectives

- UI clutter is reduced by only opening the views necessary for debugging the launched process
  - ▶ After process has terminated the opened debug-related views are closed

- Configured through either the Debug view or Window > Preferences > Run/Debug > View Management
  - ▶ Debug perspective participates in View Management by default
 - ▶ Additional perspectives can be configured to participate

View Management: Example

Version 5: Debug Perspective – currently debugging a Java process

| Variables |
| args= String[0] (id=14) |
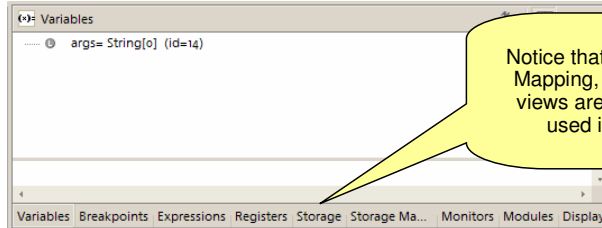
Notice that the Registers, Storage, Storage Mapping, Monitors, Modules, and Display views are open even though they are not used in debugging a Java process

Variables | Breakpoints | Expressions | Registers | Storage | Storage Ma... | Monitors | Modules | Display

Version 6: Debug Perspective - currently debugging a Java process

| Variables | Breakpoints |
| class$0= null |
| args= String[2] (id=12) |
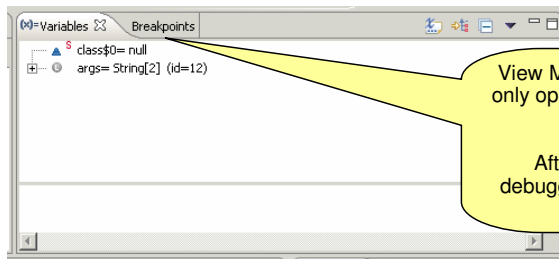
View Management reduces the UI clutter by only opening the views used to debug a Java process

After the process has finished being debugged, the related debugging views are closed

Section

Summary and Reference

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Summary

- Application Developer allows you to debug many different languages and environments

- Improvements have been made to the user interface to make debugging your application's easier

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