

z/TPF EE V1.1

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TPF Toolkit for WebSphere® Studio V3

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Extending TPF Toolkit with Custom Plug-ins

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Plug-ins

- Code written in Java to extend the functionality of eclipse based products such as TPF Toolkit.
- Plug-in to existing extension points
- Created using TPF Toolkit as a development environment.
- Administrators can deploy plug-ins to users in a custom update site.

Plug-in Perspective

- In TPF Toolkit, open the Plug-in Development Perspective
 - Each plug-in is stored a project
 - Plug-in contains a plugin.xml file to list it's extensions
 - Plug-in contains Java classes to perform plug-in specific functionality.
 - Plug-in projects are automatically built whenever source code is changed.

Runtime Workbench

- A second instance of TPF Toolkit that contains the plug-ins you have created is loaded to test the plug-ins you add.
- The Java debugger can be used to debug the runtime workbench.

Example: Hello World

- Demonstrates
 - Using the plug-in development perspective to create a plug-in project
 - Using the `org.eclipse.ui.actionSets` extension point to contribute an action to the menu bar
 - Starting a runtime workbench to test a plug-in
 - Using a pre-defined template project to get started quickly

Example: Hello World

- Goal: Add an action to the menu bar that displays a message.
- [Demo](#)

Example: Toolbar Button

- You can use extensions to add buttons to the toolbar
 - Extension Point: `org.eclipse.ui.actionSets`
- `actionSets` Extension Point Documentation
 - Site: <http://help.eclipse.org/help30/index.jsp>
 - Page: Platform Plug-in Developer Guide > Reference > Extension Point Reference > `org.eclipse.ui.actionSets`

Example: Toolbar Button

- Demonstrates:
 - Adding dependencies to a plug-in
 - Creating a new class in the Plug-in development perspective
 - Importing sample source files
 - Adding and extension to plugin.xml

Example: Toolbar Button

- How it works
 - Assume there is an existing external tools action called “Create RSE Connections”
 - Create an action that calls the existing external tools action.
 - Add an extension to put a button on the toolbar
 - Associate the action with the toolbar button
 - The button will call the action which in turn will call the external tools action.

Example: Toolbar Button

- [Demo](#)

Example: Extending Menu Manager

- You can add Java written actions to be called by the menu manager
- Extension Point
 - ID: `com.ibm.tpf.menumanager.actions`
 - More Information in TPF Toolkit Help
 - Reference > APIs > Menu Manager extension point > `com.ibm.tpf.menumanager.actions`

Example: Extending Menu Manager

- Demonstrates:
 - Using an extension point to contribute an IAction to the Menu Manager.
 - Using dialogs to prompt users for required information.
 - Calling tpftool from a Java program
 - Running an action on a separate thread
 - Using hot code replace to modify running code.

Example: Extending Menu Manager

- How it works
 - Action is invoked from file pop-up menu
 - Query a user variable for the user name, if not set, prompt and save it in a user variable.
 - Prompt for a defect number (use the previously entered defect number to pre-populate entry field)
 - Download the file to a local temporary directory
 - Update the files revision history with time stamp, user name, and defect number. (Adds a comment line to the top of the file)
 - Upload the file
 - Delete the local replica from the temp directory
 - Open the file for editing

Example: Extending Menu Manager

- To Do
 - Add required dependencies to our project
 - com.ibm.tpf.core
 - com.ibm.tpf.util
 - com.ibm.tpf.connectionmgr
 - com.ibm.tpf.menumanager
 - Import Required Source Files
 - OpenForEditingAction.java
 - TPFToolUtility.java
 - TPFToolCommandResult.java
 - UpdateAndOpenFileThread.java

Example: Extending Menu Manager

- To Do (Continued)
 - Add an extension point to contribute our IAction
 - Add the `-Xj9` argument to take advantage of hot code replace
 - Debug our application
 - Wrap our IAction with a Menu Manager generic action
 - Run our Action
 - Modify our action while running
 - View changes while running

Example: Extending Menu Manager

- [Demo](#)

Contributing Editor Actions

- Tutorial coming soon
 - Adds an action to the LPEX pop-up menu
 - Adds an action to the Remote C/CPP Editor

Summary

- TPF Toolkit can be customized using plug-ins
- Examples Shown
 - Menu bar action contribution (Hello World)
 - Toolbar button contribution to call external tools action
 - IAction contribution to prompt for information while running menu manager actions.
- Resources
 - TPF Toolkit Help
 - <http://www.eclipse.org/articles/>
 - <http://help.eclipse.org/help30/index.jsp>

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