



TPF Toolkit V3.2

# TPF Users Group Spring 2008 TPF Toolkit Updates

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Venue: Development Tools Subcommittee

AIM Enterprise Platform Software  
IBM z/Transaction Processing Facility Enterprise Edition 1.1.0

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# Updates

- **TPF Toolkit V3.4**
- **Interim Fixes**
  - V3.2.4
  - V3.2.5
  - V3.2.6

# TPF Toolkit V3.4

- **Based on Eclipse V3.4**
- **Key features**
  - Editor enhancements
  - Source Scan tools enhancements
  - RSE enhancements
  - TPF Merge integration
  - and more

# Requirements

- **V07006F (Interim Fix V3.2.4)**
  - Enhance "General HLAsm Rule Template" to allow 'list files' for position/key values
- **V07001S (Interim Fix V3.2.5)**
  - Support RSE Server Timeout
  - -DDSTORE\_IDLE\_SHUTDOWN\_TIMEOUT variable
- **V07002F (Interim Fix V3.2.5)**
  - Add file extension column to RSE table display

# Single Source Updates

- **New Rules**

- **PJ31214b (ASM)**

- Detect ENTER macros in assembler source files that do not call a BAL program
- Disabled by default

- **PJ32307a (ASM)**

- On z/TPF BEGIN macro uses the *&BGSECT* global variable to generate the CSECT name
- Flag *&CG2* global variable used to establish the CSECT name

- **PJ32373a (ASM)**

- On z/TPF *&BGBASELBL* global variable has been added for use with USING statements in place of *\$IS\$*
- Flag all USING statements with *\$IS\$* as operand

- **PJ32522a (ASM)**

- Remove usage of *#BGNSZ* equate
- Flag all occurrences of *#BGNSZ* system equate label

# Single Source Updates

- **New rules**

- **PJ33086a (ASM)**

- Transfer vectors, including skipped transfer vectors, must be declared in BEGIN statements
    - Transfer vectors defined at position 0 must be coded on the ALIAS parameter of the BEGIN macro

- **OTRBGINa (ASM)**

- On z/TPF, the only valid value for the DRIVER parameter on the BEGIN macro is DRIVER=NO
    - Flag DRIVER=YES, DRIVER=SDS and DRIVER=CPS on BEGIN macro statements, which are obsolete

- **OTRPACKd (C/C++)**

- Detect inconsistent use of `_Packed` keyword
    - TPF Systems technical newsletter article
      - *Obscure C Compiler Facts: Why Are My `_Packed` Structures Padded?*  
<http://www.ibm.com/tpf/news/nv4n4/v4n4a9.html>
    - Service bulletin 146

# Single Source updates

- **Updated rules (Interim Fix V3.2.6)**
  - PJ29575a (C/C++)
    - handle decimal template class pointer types
  - OTRKYWDc (C/C++)
    - handle the `_Export` keyword on function statements for TPF 4.1
    - also handles the visibility attribute correctly for z/TPF
  - OTRPACKc (C/C++)
    - apply the packed attribute on structure and union declarations



# Single Source updates

- **Obsolete rules**

- PJ29218g (ASM)
  - Replaced by rule PJ33086a
- PJ29218h (ASM)
  - Replaced by rule PJ33086a
- PJ29691d (ASM)
  - Replaced by "Branch Relative Target Check Mode" functionality runtime diagnostic tool in z/TPF PUT 04 APAR PJ31568

## Source Scan updates

- **Source scan also scans for ignored error annotations**
  - Removed Scan for Ignored Errors action
- **CPP Plain Text Matching template allows restricting matches in code section only**

# Editor Updates

- **Two new tutorials (Interim Fix V3.2.4)**
  - **Contributing actions to the System z LPEX editor pop-up menu**
  - **Contributing actions to the Remote C/C++ editor pop-up menu**

# Menu Manager updates

- **Interactive substitution variables**
  - &PROMPT\_TEXT
    - Text field
  - &PROMPT\_BROWSE
    - Browse dialog
  - &PROMPT\_ORDERED\_LIST
    - Selection list
  - &PROMPT\_ENUM
    - Drop-down list
  - &PROMPT\_BOOL
    - Check box
  - &PROMPT\_NAV
    - TPF project navigator

The screenshot shows the 'Input Dialog' window with the following elements:

- Enter values** section:
  - A text field with a red 'X' icon and the text 'Enter a file name.'
  - 'Defect Number:' field with the value '1000'.
  - 'File:' field with a 'Browse...' button.
- Ordered List** section:
  - 'Input List:' containing 'Item1' and 'Item3'.
  - 'Output List:' containing 'Item2'.
  - Buttons: 'Add >', '< Remove', 'Up', and 'Down'.
- 'PUT Level' dropdown menu with 'PUT18' selected.
- 'Enforce Permissions' checkbox.
- Filter Selection** section:
  - A list box containing 'Project1', 'Project2', and 'Project3', each with a plus icon and a folder icon.
- Buttons: '?', 'OK', and 'Cancel'.

# Menu Manager updates

- **Interactive substitution variables**

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  - Drop-down list
- **&PROMPT\_BOOL**
  - Check box
- **&PROMPT\_NAV**
  - TPF project navigator

The screenshot shows the 'Input Dialog' window with the following elements:

- Enter values** section:
  - A text field with a red 'X' icon and the text 'Enter a file name.' (This field is empty).
  - A text field labeled 'Defect Number:' containing the value '1000'. This field is highlighted with a red border, and a red arrow points from the '&PROMPT\_TEXT' variable in the list to it.
  - A 'File:' text field with a 'Browse...' button.
- Ordered List** section:
  - Input List:** Contains 'Item1' and 'Item3'.
  - Output List:** Contains 'Item2'.
  - Buttons: 'Add >', '< Remove', 'Up', and 'Down'.
- PUT Level:** A dropdown menu currently showing 'PUT18'.
- Enforce Permissions:** An unchecked checkbox.
- Filter Selection:** A list box containing three items: 'Project1', 'Project2', and 'Project3', each with a plus icon to its left.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

# Menu Manager updates

- **Interactive substitution variables**
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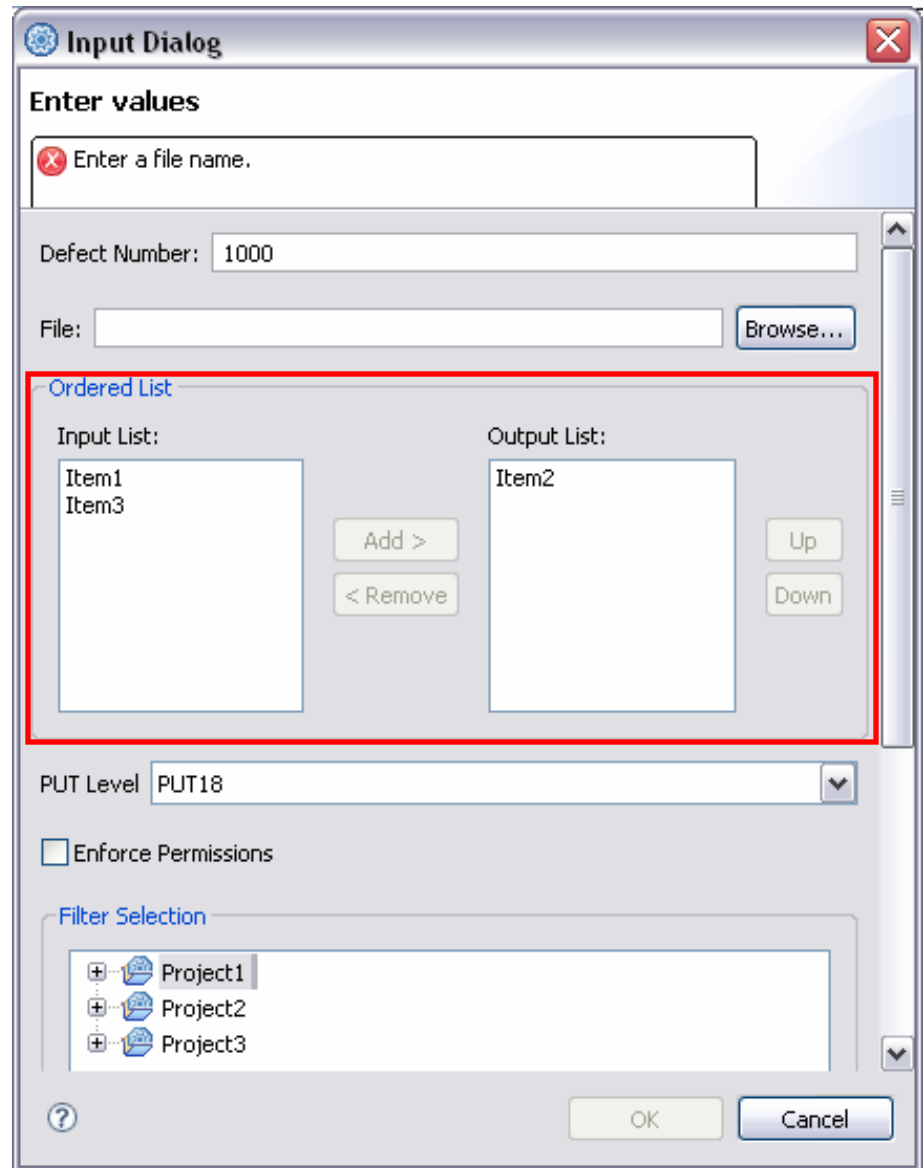
The screenshot shows the 'Input Dialog' window with the following elements:

- Enter values** section:
  - Text field: Enter a file name. (Error icon)
  - Text field: Defect Number: 1000
  - File:** [Text field] [Browse...] (This row is highlighted with a red box, and a red arrow points from the list item '&PROMPT\_BROWSE' to it.)
- Ordered List** section:
  - Input List:** Item1, Item3
  - Output List:** Item2
  - Buttons: Add >, < Remove, Up, Down
- Text field: PUT Level: PUT18
- Check box: Enforce Permissions
- Filter Selection** section:
  - Tree view: Project1, Project2, Project3
- Buttons: ? (Help), OK, Cancel

# Menu Manager updates

- **Interactive substitution variables**

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    - **Drop-down list**
  - &PROMPT\_BOOL
    - Check box
  - &PROMPT\_NAV
    - TPF project navigator

The screenshot shows the 'Input Dialog' window with the following elements:

- Enter values** section: A text field with a red 'X' icon and the text 'Enter a file name.' Below it, a text field for 'Defect Number' containing '1000' and a 'File:' field with a 'Browse...' button.
- Ordered List** section: Two lists, 'Input List' (containing 'Item1' and 'Item3') and 'Output List' (containing 'Item2'). Between them are 'Add >' and '< Remove' buttons. To the right are 'Up' and 'Down' buttons.
- PUT Level** section: A drop-down list currently showing 'PUT18'. This section is highlighted with a red rectangle, and a red arrow from the text '&PROMPT\_ENUM Drop-down list' in the previous slide points to it.
- Enforce Permissions** section: A checkbox that is currently unchecked.
- Filter Selection** section: A list box containing three items: 'Project1', 'Project2', and 'Project3', each with a plus icon to its left.
- Buttons: 'OK' and 'Cancel' buttons at the bottom right.



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- Ordered List** section: Two lists, 'Input List' (containing 'Item1' and 'Item3') and 'Output List' (containing 'Item2'). Between them are 'Add >' and '< Remove' buttons. To the right of the 'Output List' are 'Up' and 'Down' buttons.
- PUT Level** section: A dropdown menu currently showing 'PUT18'.
- Enforce Permissions** section: A checkbox that is currently unchecked. This section is highlighted with a red rectangular box, and a red arrow points from the text '&PROMPT\_BOOL' in the list on the left to this checkbox.
- Filter Selection** section: A list box containing three items: 'Project1', 'Project2', and 'Project3', each with a plus sign icon to its left.
- At the bottom right, there are 'OK' and 'Cancel' buttons.

# Menu Manager updates

- **Interactive substitution variables**

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The screenshot shows the 'Input Dialog' window with the following elements:

- Enter values** section: A text field with a red 'X' icon and the prompt 'Enter a file name.'
- Defect Number:** A text field containing '1000'.
- File:** A text field with a 'Browse...' button.
- Ordered List** section:
  - Input List:** A list box containing 'Item1' and 'Item3'.
  - Output List:** A list box containing 'Item2'.
  - Buttons: 'Add >', '< Remove', 'Up', and 'Down'.
- PUT Level:** A dropdown menu showing 'PUT18'.
- Enforce Permissions:** An unchecked checkbox.
- Filter Selection:** A list box containing 'Project1', 'Project2', and 'Project3', highlighted with a red border.
- Buttons:** 'OK' and 'Cancel' at the bottom right.

## Other updates

- **z/TPF APAR PJ32902**
  - Version control file index (VCFX) support for z/TPF file systems
  - Easier to manage applications that depend on the content of a file
  - Wizards to help create load files in TPF Toolkit
  - Actions to load using load file in TPF Toolkit
- **TPF 4.1 - Continue link when prelinker has errors/warnings**
  - New environment variable: `TPF_LD_PRELINKER_FAIL_WARNING`
  - Set the environment variable to a non-zero value to abort link action when the prelinker step issues a warning.

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