IBM TPF Toolkit V3.4 delivers enhancements to support SOA, z/TPF, and the latest Eclipse technology

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Overview

The TPF Toolkit integrates Transaction Processing Facility (TPF) application development with the Eclipse-based development environment. It supports development of applications for TPF and z/TPF. TPF Toolkit offers TPF application developers with state-of-the-art workstation-based tools that are designed to be integrated and powerful, yet easy to use and easy to customize.

What's new in TPF Toolkit V3.4

• Integration of the current Eclipse V3.4 technology, an open source and platform-independent development environment, to make a number of improvements available to TPF Toolkit
• New SOAP Consumer feature to support service-oriented architecture (SOA), a service-oriented framework to help develop, deploy, and manage Web Services on z/TPF
• Enhanced Source Scan rules, providing additional functionality when migrating from TPF 4.1 to z/TPF
• New debug registration features and TPF Memory View configuration support
• Fully integrated, Eclipse-based, three-way file merge capability
• Override IBM-supplied assembler macro definitions
• Live Parsing Extensible Editor (LPEX) editor now supports all C/C++ features previously only available in the Remote C/C++ Editor
• Improved Assembler Outline view

Planned availability date

• December 12, 2008: Electronic software delivery
• December 19, 2008: Physical software delivery

Description

Built on the Eclipse technology, IBM® TPF Toolkit brings a comprehensive set of development tools to help you create and maintain applications for the IBM Transaction Processing Facility (TPF) and IBM z/TPF.

TPF Toolkit is updated to include Eclipse V3.4 technology

This release of TPF Toolkit is built on Eclipse V3.4. Eclipse is an award-winning, open source platform for the construction of software development tools and rich desktop applications.
Web Services SOAP Consumer Support

z/TPF continues its modernization journey into the SOA realm with the introduction of Web Services support.

SOA is a framework for integrating business processes and supports IT infrastructure as secure, standardized components and services that can be reused and combined to address changing business priorities.

Continuing with the TPF Toolkit support for Web Services development, functionality is added to support consumer Web Services development for z/TPF. New wizards have been created to enable quick creation of consumer Web Service deployment descriptors and Web Service stub code templates. A new subsystem has been added to RSE for the remote management of consumer Web Service resources, including actions to list, add, remove, deploy, and undeploy consumer Web Services resources. A new Files subsystem has also been added to Remote System Explorer (RSE) to enable you to access the z/TPF file system.

Single Source z/TPF Migration Tooling

A number of existing Source Scan rule templates have been enhanced to provide greater functionality. For example, it is now possible to specify more complex scopes for rules using Boolean operators and to replace labels in HLASM instructions as part of the custom fix for a rule.

In addition, several features have been added to the Source Scan extensibility tools, such as the ability to create a copy of an existing custom rule and the introduction of a “Preconditions” tab in the Source Scan preference pages, which aids in the management of preconditions for custom rules.

Integrated three-way merge

TPF Toolkit now includes a fully integrated three-way merge capability. The TPF Merge tool is extremely useful in comparing two or three files or directories and provides flexible merge options for generating the merged results.

Editor improvements

Many of the C/C++ features that are available in the Remote C/C++ Editor have been provided in the System z® LPEX editor. You can now leverage one editor for both C/C++ and Assembler programming. C/C++ features now available in the LPEX editor include content assist, code templates, remote open include, remote open declaration, remote open definition, and quick fix.

The Improved Assembler outline aggregates constructs into groups of sections, macros, using domains, and symbols. This makes the elements easier to find and identify.

Users now have the ability to override IBM-supplied assembler macro definitions in TPFHLASM.dat with their own enterprise modified versions.

The System z LPEX Editor now provides an autosave function.

The Assembler parser now has improved syntax checking along with quick fix solutions to syntax errors. It has also been enhanced to provide margin-aware editing and task tag management.

Users may now define code templates for Assembler and access them through the content assist function in the Assembler parser.

Debugger improvements

Debug registration has been made more flexible. You can now register your debug session by function name, program name, and system error number.

In the previous release, new debugger views were introduced to support TPF-specific structures like ECB, DECB, and SW00SR. To aid in managing the XML files underlying this support, a new preference TPF Memory Views Configuration has been introduced where new groups of view configurations can be created and managed separately as a set.
New tutorials

The documentation has been enhanced with new step-by-step tutorials.

Learn how to bring an existing application into TPF Toolkit by creating a project and building it with MakeTPF.

If TPF Toolkit customization is important for your enterprise, a new tutorial outlining the use of Interactive Substitution Variables will help you develop and deploy custom dialogs to prompt your users for input to be used in custom actions.

Accessibility by people with disabilities

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at


Section 508 of the U.S. Rehabilitation Act

TPF Toolkit V3.4 is capable as of December 12, 2008, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested at

http://www-03.ibm.com/able/product_accessibility/index.html

Product positioning

TPF Toolkit is built on the Eclipse application development environment.

The Eclipse project began when IBM donated the source code for their latest internal application development platform to the developer community by way of the open source Eclipse Public License. Currently, the Eclipse project is managed by a consortium of companies that includes IBM.

Eclipse is an open and universal tool platform. Eclipse is open source in that anyone can obtain the source code. Eclipse is universal in that it allows for near-infinite extensions to the integrated development environment (IDE) through the use of plug-ins.

For more information on the Eclipse project, visit

http://www.eclipse.org

IBM TPF Toolkit is an ideal product for TPF customers, who want to:

• Move up to the latest in application development technology based on the Eclipse application development environment
• Gain flexibility to integrate their own tools into the extensible integrated development environment
• Gain skills that are portable to other IBM application development tools based on Eclipse
• Benefit from the latest Eclipse implementation of tools that are ported to TPF Toolkit
• Be positioned to exploit new Eclipse technology in the future

TPF Toolkit continues to support programming of applications in C, C++, and High Level Assembler targeted to run on a TPF system. TPF customers are aware that assembler programmers are becoming scarce and more expensive. TPF Toolkit offers an excellent opportunity for TPF customers who want to expand their skills by starting to write more applications in C or C++, while simplifying their assembler programming environment.
Using the Java™ Development Tools (JDT) that are included within TPF Toolkit's development environment, TPF customers can write stand-alone workstation applications in Java. They can also use JDT to create Java plug-ins to extend the TPF Toolkit IDE.

Publications

No publications are shipped with this product.

Technical information

Specified operating environment

Hardware requirements

Before attempting to install IBM TPF Toolkit, you must ensure that you meet the client system requirements for each workstation.

Each workstation must meet the following requirements:

- Intel® Pentium® III 800 MHz processor (minimum requirement).
- 650 MB disk space for the installation of the English national language version (NLV). More disk space may be required for the installation of other NLV support.
- 512 MB RAM minimum (1 GB recommended if running multiple applications).
- 17-inch monitor.
- XGA display 1024 x 768 (minimum requirement).

Software requirements

Client programming requirements

- Microsoft® Windows® XP Professional SP1, or later
- Microsoft Windows Vista Business or Enterprise
- TCP/IP (installed and configured)
- Hummingbird Maestro™ V10.0, or later (optional)

TPF system requirements

- It is recommended that the TPF system be at the latest PUT level for complete debugger and performance analysis function and stability. The following lists the minimum system levels required.
- One of the following:
  - z/TPF V1.1: PUT 2 with the following APARs applied
    -- For Debug: PJ31357, TPF Views APAR PJ31890, SW00SR View APAR PJ32221, and Registration Enhancements APAR PJ34615 (z/TPF), and PK77217 (z/TPFDF)
    -- For Performance Analysis: PJ31771 and PJ31854
    -- For Web Services: PJ31953
  - TPF 4.1
    -- PUT 15 or 16 TPF system with APARs PJ28041, PJ28176 (CXML), PJ27905, and PJ29430 applied.
    -- PUT 17 TPF system with APAR PJ29430 applied. If this system already has APAR PJ28649 (merged Assembler/C debug capability) applied, then APAR PJ29585 must also be applied.
    -- Debug: TPF Views APAR PJ31891, SW00SR View APAR PJ32240.
    -- TPF Views APAR PJ31891.

z/OS® system requirements
z/OS 1.7, or later, with the following installed:

- OS/390® C/C++ V2R10, or z/OS C/C++ V1R7, or later.
- High Level Assembler.
- z/OS Communication Server (TCP/IP with REXEC or SSH server enabled).
- IBM Ported Tools for z/OS (optional). This contains a ported version of the OpenSSH application and is required if you want to access your remote host using the SSH protocol. After installing this product, you must enable OpenSSH to handle password and key authentication using SSH2. For more information, visit http://www.ibm.com/servers/eserver/zseries/zos/unix/port_tools.html
- Distributed file system - Server Message Block (SMB) (optional).
- Network File System (NFS) (optional).

Linux® on System z system requirements

- For detailed information on the development system requirements for z/TPF Enterprise Edition V1.1, refer to the z/TPF book available in the IBM TPF Product Information Center located at http://www.ibm.com/tpf/pubs/tpfpubs.htm

Detailed information can be found in z/TPF -> Reference -> Migration -> Operating system requirements and Planning information -> Software -> Operating system requirements.

- Additional Linux on System z system requirements
  - TCP/IP
  - REXEC or SSH server enabled
  - Optional, IBM Developer Kit for Linux Java 2 Technology Edition 5.0 31-bit or 64-bit zSeries® -- This is required to run the Remote System Explorer. For more information, refer to http://www.ibm.com/developerworks/java/jdk/linux/download.html
  - DFS™ - SMB (optional)
  - NFS (optional)
  - OpenSSH server that supports the SSH2 protocol (optional)

Note: The OpenSSH server must be configured to use the SSH2 protocol and allow password and key authentication.

Terms and conditions

License Information form number

LI form number: L-RCEO-7JTMQH

The program's License Information will be available for review on the IBM Software License Agreement Web site


Ordering information

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<th>Charge unit description</th>
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<td>Authorized User(s)</td>
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Charge metrics definitions

Authorized user

An authorized user is one and only one individual (named or unnamed) within or outside your enterprise. A Proof of Entitlement (PoE) must be obtained for each individual user accessing the program in any manner. A program licensed under an authorized user PoE may be installed on a single computer or server, and accessed by multiple users, provided that a PoE has been obtained for each individual user accessing the program either directly or indirectly (through a multiplexing program, device, or application server) through any means on behalf of the user.

Passport Advantage® program licenses TPF Toolkit

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Passport Advantage supply

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Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

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Prices

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**Note:** Shipments will begin after the planned availability date.

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