



IBM TPF Toolkit V3.6 delivers development tool enhancements based on the latest Eclipse technology

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Overview

IBM® 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 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 V3.6

- Integration of the latest Eclipse V3.6 technology
- Enhanced High Level Assembler (HLASM) user macros and content assistant, providing increased ease of use
- Remote C/C++ Editor and System z® Live Parsing Extensible Editor (LPEX), providing source formatting capability
- New Code Coverage feature, improving the effectiveness of software testing
- Enhanced Trace Log, providing a graphical hierarchical view and analysis view
- New 3270 host emulator, enabling easier access to TPF systems with macro recording support
- Enhanced debug support to associate debug sessions with TPF projects, providing better management of debug sessions
- New source scan API feature, providing more powerful custom rules creation
- Enhanced TPFTool utility for supporting interactive substitution variables
- Improved remote index search

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: SE001).

Key prerequisites

For details, refer to the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

December 17, 2010: Electronic and physical software delivery

Description

TPF Toolkit V3.6 delivers the following enhancements:

Editor improvements

The language used to define HLASM user macros is enhanced to allow defining macros with parameters that contain bracket lists, thus providing increased accuracy from the HLASM syntax checker and reducing the need to compile to ensure correct HLASM source. The new language now allows for greater precision when defining macros, eliminating the need to have multiple macro definitions, thus increasing clarity of errors provided by the syntax checker. A new user interface to define macros is also provided, thus making it easier to input new macros into user macro files and helping to reduce errors in macro syntax.

The HLASM content assistant is significantly enhanced to provide advanced content assist, automatically adding required parameters, as well as providing assistance on parameter names, and values for keyed and positional parameters. The content assistant also provides contextual information from within the program by providing the user with proposals of variables, symbols, and labels defined within the file. Combined, these enhancements help the user input syntactically correct HLASM code at a much quicker pace, without having to refer to reference materials, helping to provide the user with significant productivity gains.

The Remote C/C++ Editor and System z LPEX Editor now provide the user with the ability to format their source. The user can define and share their own formatting options, or use one of the preconfigured code styles to make C/C++ code easier to read, increasing code understanding, and enforce standard formatting for teams.

Code Coverage tool

A critical measure of the effectiveness of software testing is how much of an application is executed by various test suites. To maintain high quality, it is important that test suites cover a range of scenarios that test many aspects of an application. The new Code Coverage feature in TPF Toolkit allows you to easily analyze your test suites. The Code Coverage tool displays the percentage of code executed at various levels of detail and can be used to determine if testing coverage is adequate.

Trace log enhancements

In previous versions of TPF Toolkit, trace log collections were managed through commands run from the debug console. In Version 3.6, users can start and stop trace log collection conveniently through the Debug view while the associated debug session is active.

The System z LPEX Editor is enhanced for trace log files (*.report) so that a graphical hierarchical view of the trace log file is presented to the user. This new tree view allows the user to better understand the flow of the trace log and can be configured to indicate which information needs to be displayed or hidden, helping the user analyze the file for desired information. Existing filters can be run against this new view, along with new filters that can be created which allow data to be excluded from the list, again helping the user with their analysis of the raw data provided in a trace log file.

In addition to the graphical tree view for trace log files, an analysis function which opens the Trace Log Analysis view with statistics from the trace log file is provided. The analysis view displays various measurable statistics of critical areas such as allocation, deallocation, log size, and macro counts, helping the user to find bottlenecks and identify critical entries in the trace log. Users who have created their own macro families will also see counts for these in the Trace Log Analysis view, which can be configured to hide or display statistics as desired, thus providing the user with a configurable statistical summary of their trace log file.

Embedded 3270 Emulator

With the introduction of a new 3270 host emulator, access your TPF systems without having to switch away from your development environment. The host emulator feature also allows you to record macros that can be replayed at any time to perform repetitive tasks automatically.

Associate project with debug session

In previous versions of TPF Toolkit, users could only associate TPF projects containing source code with a debug session when the session was active. In Version 3.6, TPF projects can be linked to a particular debug session when the session is created and they can be managed through the Remote Systems Explorer. This makes management of debug sessions easier for an administrator as well as end users.

Scan Tool Java™ API

In previous releases, the source scan tools available in TPF Toolkit aided in migration and governance tasks. In addition to the existing tools, IBM-supplied rules and custom template rules developed by users, TPF Toolkit added a source scan API feature. Using the new source scan Java API, users can create more powerful custom rules to analyze C/C++ and HLASM source files.

Launch interactive substitution variables from TPFtool

The TPFtool utility is enhanced to support interactive substitution variables. Take advantage of this feature and incorporate user interaction into your TPFtool scripts.

Remote index search improvements

Users can now specify multiple index directories to search through when performing a remote index search. The most recent index among the index directories specified will be automatically selected when retrieving search results. Using this new feature, an administrator could perform a scheduled index of larger portions of the code base in a common directory, while individual developers could index smaller portions of the code base in their own personal directories while still ensuring that the most up-to-date results would always be displayed when a remote index search is performed. In addition, index creation performance has been improved, shortening the time it takes to create an index for a large directory.

Accessibility by people with disabilities

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

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

Section 508 of the U.S. Rehabilitation Act

IBM TPF Toolkit V3.6 is capable as of December 17, 2010, 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 on the following website

<http://w3-03.ibm.com/able/index.html>

Product positioning

TPF Toolkit is built on the Eclipse application development environment.

The Eclipse project was initiated 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 if you want to:

- Move up to the latest in application development technology based on the Eclipse application development environment
- Gain flexibility to integrate your 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.

Program number

Program number	VRM	Program name
5724-H79	3.6.0	IBM TPF Toolkit

Offering Information

Product information is available via the Offering Information website

<http://www.ibm.com/common/ssi>

Also, visit the Passport Advantage® website

<http://www.ibm.com/software/passportadvantage>

Publications

No publications are shipped with this program.

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
- Microsoft Windows 7 Ultimate
- 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 function and stability of the following components: debugger, performance analysis, web services, and code coverage. 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
 - For code coverage: PJ37973
 - 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 1.10, or later, with the following installed

- OS/390® C/C++ V2R10, or z/OS C/C++ V1R10, or later.
- High Level Assembler.

- z/OS Communication Server (TCPIP 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).
- IBM 31-bit SDK for z/OS Java 2 Technology Edition, V5 or IBM 64-bit SDK for z/OS Java 2 Technology Edition, V5 (optional). This is required to run the Remote System Explorer (RSE). For more information, visit
<http://www.ibm.com/servers/eserver/zseries/software/java/j5pcont31.html>
<http://www.ibm.com/servers/eserver/zseries/software/java/j5pcont64.html>

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->Required Linux Software.

- Additional Linux on System z system requirements
 - TCPIP.
 - REXEC or SSH server enabled.
 - Optional: IBM Developer Kit for Linux Java 2 Technology Edition 5.0 31- 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.

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

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For additional information, refer to [Usage restriction](#) in the [Terms and conditions](#) section of this announcement, or to the license information document that is available on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

Planning information

Packaging

IBM TPF Toolkit V3.6 CD

Security, auditability, and control

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

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Ordering information

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Product identifier description	PID	Product group	Product category
IBM TPF Toolkit	5724-H79	IBM Application Integration Middleware Other	websphere

Charge metric

Program name	Part number or PID number	Charge metric
IBM TPF Toolkit	5724-H79	Authorized User

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.

Media pack description	Part number
IBM TPF Toolkit V3.6	BA108ML

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License Information form number

L-RCEO-87CS8H

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Yes

Limited warranty

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No

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Variable charges apply

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Educational allowance available

Not applicable

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