Available Now

New capabilities currently available on z/TPF

z/TPF Message Analysis Tool

- *In an application, identify where excessive resources are being used*
- *Analyze production system traffic to find inefficiencies in application code*
- *Train new-hire application developers by using application flow data from real production traffic to make them productive more quickly*

z/TPF Trace Log Enhancements

- *Analyze messages that span ECBs*
- *Get all trace information for a message regardless of which system traces were currently active*
- *In an application, identify where copy-on-write processing is occurring*

Network Security Enhancements

- *Validate that the connections with the z/TPF system are secure and using approved ciphers*
- *Identify which z/TPF applications and remote users that are connected to the z/TPF system are using a particular cipher*
- *Automatic notification when a z/TPF certificate is nearing expiration*

Recoup Enhancements — Fenced I-stream Eligible

- *Reduce the time it takes to run recoup on a z/TPFDF database by over 90% with the recoup optimized chain chase option for an indexed database with a large amount of single-record detail subfiles*
- *Grow a z/TPFDF indexed database to 100 billion or more single-record detail subfiles and still run recoup on that database in less than 1 hour*
- *Use dynamic CPU fenced I-streams to decrease the time it takes to run the recoup utility and do so without impacting transactional workload*

IBM z15 Hardware Compression for Network Traffic — TE Eligible

- *Reduce the CPU, I/O, and encryption costs of IBM MQ and HTTP processing*
- *Reduce the amount of 31-bit memory used by IBM MQ*
- *Reduce the network bandwidth used and costs of IBM MQ and HTTP server*
- *Reduce end user response time of larger IBM MQ and HTTP messages*

Java Enhancements — TE Eligible

- *Hardware-assisted encryption support - reduced CPU consumption for secure communications in Java*
- *Improved JIT performance - faster startup and lower CPU consumption during startup*
- *Improved garbage collection performance - reduced pause time and lower CPU consumption*
- *Low-priority ECB support - support for specific threads or JVMs to be marked as low priority to differentiate from transactional workloads*

Real-Time Runtime Metrics Collection Enhancements

- *Replaced analytics processing, which uses substantially less CPU, memory, and resources on Linux; simplified Linux on IBM Z installations*
- *User exit for easier coexistence with customer analytics*
- *Simplified administration by removing the dependency on Apache Tomcat*
- *Monitor JVM data on as many as 10 z/TPF processors*

DFDL Enhancements

- *Easily customize document values, such as floating point precision or date and time* — TE Eligible
- *Quickly validate and debug DFDL errors offline*

IBM

Moving Forward

Upcoming for z/TPF

Learning Platform

- *Acquiring z/TPF skills is difficult because of limited formal education materials and practical hands-on experience. To address this, IBM will be providing online educational material along with access to a z/TPF environment to learn by doing*
- *There will be no charge to register for access to the material, which will include a forum for help questions*
- *New material will be added to the platform to cover more details of existing z/TPF capabilities as well as new features as they are delivered*

Elliptic Curve Cryptography (ECC) cipher support for TLS ✅ TE Eligible

- *Increase security of TLS connections to the z/TPF system with ephemeral ECC ciphers*
- *The ECC ciphers will be hardware accelerated (on IBM z15 or above) and provide perfect forward secrecy, which minimizes the exposure if keys are compromised*

Network Override for Test Systems

- *Provides an easy and automatable way to override remote IP connections*
- *Makes it easier and less error-prone to create z/TPF test systems made from a copy of a production system*

OpenJDK Migration ✅ TE Eligible

- *Support of IBM Semeru Runtime Certified Edition, and later*
- *New mmap support to reduce startup time*
- *Recoverable storage use for faster recovery and reduced startup time after any planned or unplanned outages*

Integration of z/TPF Automated Test Framework with TPF Toolkit

- *A new view to display, run, and view results of automated test framework test cases on a z/TPF system*
- *Ability to automatically run test cases when a program is loaded and activated on a z/TPF system*

DFDL Enhancements

- *Parse very large JSON and XML documents*

Real-Time Runtime Metrics Collection Enhancements

- *A single utility can monitor as many as 10 z/TPF processors so that a single instance can monitor an entire z/TPF complex*
- *Complex-wide dashboards will show metrics from all LPARs in a complex in a single dashboard with new metrics, analytics, and REST specific analysis*
- *Analyze the overall traffic at a point in time or by name-value pair to determine the breakdown of TE vs GP MIPS usage*

z/TPF Message Analysis Tool Enhancements

- *Application Code Flow – shows the sequence of function and macro calls throughout the life of a message*
- *Subsumed Dashboard – helps you identify resource issues caused by the caller; for example, A calls B 5000 times so even though function B is consuming a lot of resources, it is function A that is the cause*
- *Message Analysis Tool Results Comparison Dashboard – compare summary data between two different collections, for example, before and after code load*

z/TPF Support for IBM Safeguarded Copy

- *Use your z/TPF system to create secure, safeguarded copies of your z/TPF volumes on IBM DASD control units*
- *Create safeguarded copies multiple times a day with little to no impact to your transactional traffic*
- *Keep more copies for longer periods compared to other types of copy services like IBM Flashcopy*

Dynamically Resizable Logical Record Cache

- *Increase the size of a logical record cache without losing any existing data in the cache, which eliminates the need and overhead associated with repopulating an empty cache*
- *Additional efficiency improvements for all large logical record caches*

64-Bit Support for IBM MQ

- *Ability to use 64-bit memory for high-volume FIFO queues to free up 31-bit memory and support higher message volumes*
- *More efficient IBM MQ checkpointing and sweeper logic to reduce I/O and CPU consumption*

Business Event Enhancements

- *Define multiple unordered dispatch queues for business event dispatch processing, where each unordered dispatch queue is processed independently from other dispatch queues*
- *Ability to assign high-volume business events to different unordered dispatch queues based on transmit methods, SLAs, or other criteria to prevent one slow or nonresponsive remote event consumer for impacting events destined for other event consumers*