z/TPF EE V1.1
z/TPFDF V1.1
TPF Toolkit for WebSphere® Studio V3
TPF Operations Server V1.2

IBM Software Group

TPF Users Group Fall 2005

TPF Performance Task Force Update

Luis R. Vega-Zayas
IBM TPF Development

AIM Core and Enterprise Solutions
IBM z/Transaction Processing Facility Enterprise Edition 1.1.0

Agenda:

- CDC APAR's and enhancements
- Performance Tools Future Work
- CDC Customer Experiences
- Questions

CDC Update:

- CDC Data now available on MXG
  - CDC SAS enabler. Standard Data Collection support also available
- TPFDF CDC database enhancements
  - PJ30233 - CDC support for TPFDF LLR
  - PJ30701 - B+Tree indexing on the daily sub-files for faster query response times

CDC Update:

- DB2 changes (PJ30503)
  - All DB2 tables now contain a DB2 timestamp
  - All tables now contain a SMALLINT column indicating the partition number
  - Several tables have small column/name changes
  - The ZCDCO command will no longer drop/delete table information from DB2 or the TPF file system (this was never the case with tape or TPFDF)
  - Table create statements are provided in a separate file (sample/cdc_tables.sql).
  - The ZCDCO command will still create the DB2 tables if they are not present

CDC Update (cont.):

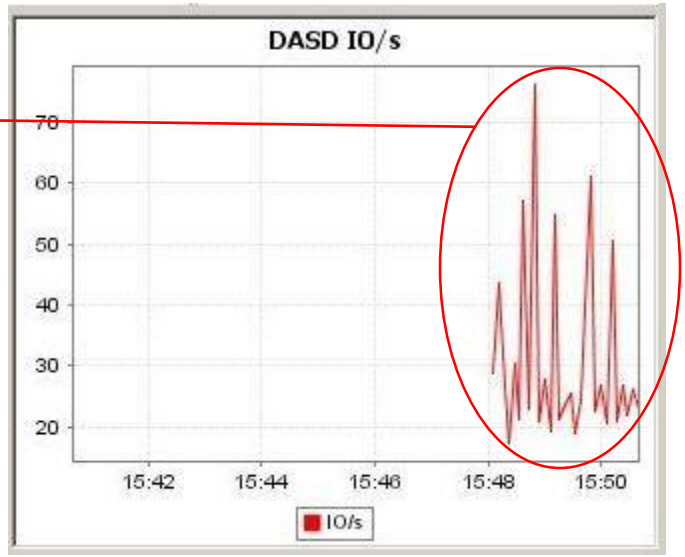
- PJ30609 - Decoupling the client refresh rate from the host collection rate
  - Previously, the displayed consisted of instantaneous values accompanied by a Min, Max, Mean over a configurable period of time:

Instantaneous value

Min, Max, Mean over last15 min. (time is configurable)

System Blocks and Frames

Metric	Use %	Min %	Max %	Mean %	Allocated
IOB	0.0	0.0	0.03	0.00	2704
SWB	11.26	11.26	11.26	11.26	1252
Frames	9.64	9.62	9.83	9.64	10000
Common Blocks	0.61	0.61	0.61	0.61	485
ECBs	3.59	3.59	4.0	3.63	500



CDC Update (cont.):

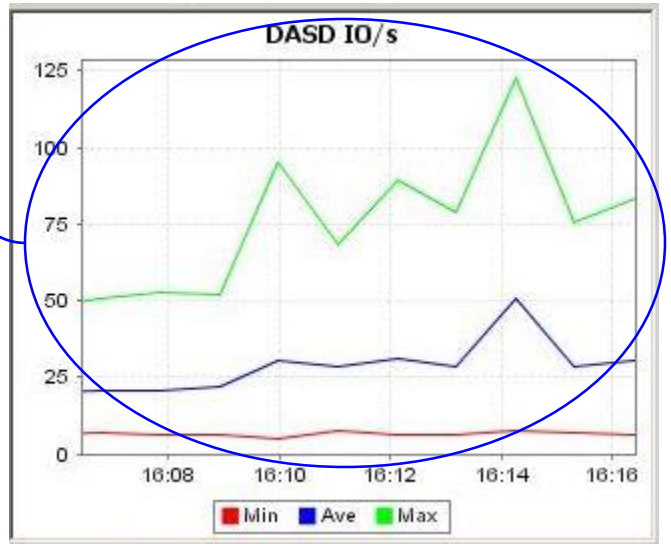
- PJ30609 - Decoupling the client refresh rate from the host collection rate (cont.)
  - Now, the user has the option to display the data in the following way:

No instantaneous value column displayed.

Min, Max, Mean over the last minute (time is user configurable)

System Blocks and Frames

Metric	Min %	Max %	Mean %	Allocated
IOB	0.0	0.07	0.01	2704
SWB	10.62	11.34	10.90	1252
Frames	9.61	10.94	9.76	10000
Common Blocks	0.61	0.61	0.61	485
ECBs	3.59	4.0	3.70	500



CDC Update (cont.):

- PJ30609 - Decoupling the client refresh rate from the host collection rate (cont.)
  - When decoupling the screen refresh rate from the host collection rate not all values shown on the display are an average over time. For example:
    - Top 10 busiest MQ queues
    - Top 10 busiest MPIF paths
    - etc.
  - See client README file for more information
  - PJ30609 also introduces support to monitor TPF 4.1 and z/TPF from the same CDC client application instance
    - PJ30609 is z/TPF APAR
    - Matching TPF 4.1 APAR is PJ30503

CDC Update (cont.):

- **Released APAR's:**

APAR # (TPF 4.1)	APAR # (z/TPF)	Description
PJ29925	Included in GA	New version of CDC
PJ30137	Included in GA	Fixed IPL from LGF / New tape header
PJ30215	Included in GA	Does not allow a collection to be defined when another is running
PJ30216	Not applicable	CDCP build script fix
PJ30233	PJ30403	Support for TPFDF LLR in CDC
PJ30251	PJ30419	Changed MQ queue naming convention
PJ30253	Included in GA	Fixed CTL-E1 when the system is in cycle down state from NORM to 1052
PJ30465	PJ30609	Fixed OPR-4 when more than one MQ Queue Manager is defined
PJ30503	PJ30609	DB2 Table definition updates
PJ30701	PJ30742	Improved TPFDF query time

Performance Tools Future Work:

- z/TPF Channel Monitor:
  - Provide channel utilization (busy time) for all 256 channels
    - A report will be made available in standard Data Reduction
    - A new “tab” will be added to the CDC display
  - Device measurement block information will be written to tape by data collection
    - No reduction will be provided for the device measurement blocks
    - Format will be disclosed

Performance Tools Future Work (cont.):

- z/TPF LPAR utilization reporting
  - z/TPF will be able to collect utilization information for all LPAR's on a CEC
  - A new Data Reduction report will be provided
  - A new "tab" will be added to the CDC display that will show LPAR utilization

CDC Customer Experiences:

- Has it been implemented?
  - If not, what is missing to do so?

Questions & Comments:

- Does any one have any?

Trademarks:

IBM is a trademarks of International Business Machines Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.
Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.
Intel, Intel Inside (logos), MMX, Celeron, Intel Centrino, Intel Xeon, Itanium, Pentium and Pentium III Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States, other countries, or both.
UNIX is a registered trademark of The Open Group in the United States and other countries.
Linux is a trademark of Linus Torvalds in the United States, other countries, or both.
MXG is a trademark of Merrill Consultants, in the United States, other countries or both.
Other company, product, or service names may be trademarks or service marks of others.

Notes
Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, and the information may be subject to change without notice. Consult your local IBM business contact for information on the product or services available in your area.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography.

This presentation and the claims outlined in it were reviewed for compliance with US law. Adaptations of these claims for use in other geographies must be reviewed by the local country counsel for compliance with local laws.