



IBM Software Group

# CICS Performance Analyzer for z/OS, V1.4

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## Preface

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## CICS Performance Analyzer

- What does it do?
  - ▶ Enables off-line performance analysis of CICS, and CICS-related DB2, WebSphere MQ, and MVS SMF records, as well as IMS information
  - ▶ Provides flexible reporting and analysis capabilities with supplied reports or your own reports for day-to-day performance analysis
  - ▶ Historical data processing for trending and capacity planning
- Why do I need it?
  - ▶ Reduce cost of effort to analyze performance
  - ▶ Improves tuning and capacity planning analysis
  - ▶ Helps take proactive approach to CICS systems tuning
  - ▶ Helps plan capacity for optimal performance
  - ▶ Helps review application performance and identify potential to improve application design
  - ▶ Use with online monitors to quickly identify and correct causes of online problems



## CICS Performance Analyzer - Benefits

### CICS PA CAN HELP:

- ▶ Improve CICS system resource usage
- ▶ Evaluate the effects of CICS system tuning efforts
- ▶ Improve transaction response times
- ▶ Analyze CICS application performance
- ▶ Enable faster resolution of online problems
- ▶ Provide ongoing system management and measurement reports
- ▶ Increase the productivity of system and application programmers
- ▶ Provide awareness of usage trends, assisting in future growth estimates



## CICS Performance Analyzer

*Optimize performance today and plan for the future with comprehensive analysis and flexible reporting*

### New in CICS PA V1.4 (GA 18 March 2005)

- CICS PA now provides comprehensive reporting and analysis of CICS statistics and CICS server statistics data
- CICS PA Statistics online reporter available
  - reporting of CICS Statistics data directly from an unloaded SMF data set or from a CICS PA Historical Database
- Full exploitation of CICS TS 3.1
- Powerful control options over the Performance Summary Report format
- HDB enhancements, inc extract into CSV format data sets
- Improved administration
  - Shared system definitions
  - Automated SMF file selection facility
- Can be used as data source for Tivoli Accounting Workstation

### Benefits

- ▶ Complete and easy to use performance analysis for CICS to help improve CICS system performance, lower maintenance costs, and strategically plan IT investments
- ▶ Powerful trending and capacity planning capabilities for optimal performance
- ▶ Faster response to CICS online performance issues to help prevent outages
- ▶ Ability to tailor the analysis to your needs more easily to proactively tune your systems
- ▶ Critical CICS TS 3.1 performance data analysis for customers implementing SOA
- ▶ Accounting and chargeback capabilities with Tivoli Accounting Workstation



## CICS Performance Analyzer

**No prerequisites**  
**All you need to know about CICS performance in one tool**  
**Now address the requirement for a CICS Accounting and Chargeback (can be used as data source for Tivoli Accounting Workstation for z/OS)**  
**Can complement IBM Tivoli Decision Support for z/OS for 'deep-dive' CICS analysis.**



## CICS PA: Key Advantages

- **Part of IBM systems management strategy**
  - ▶ Complements IBM online monitors for a complete solution
    - Tivoli OMEGAMON XE for CICS on z/OS
  - ▶ Complements other IBM batch performance analysis tools (e.g. IMS PA)
  - ▶ Complements IBM enterprise wide historical trend analysis solution (Tivoli Decision Support for z/OS) with detailed CICS analysis for fast online problem resolution, CICS tuning and capacity planning
- **Functionality**
  - ▶ CICS PA is a functionally outstanding analysis tool designed for proactive and cost-effective ongoing performance analysis, capacity planning and tuning
- **Support and utilization of the latest technologies in CICS**
  - ▶ CICS PA fully exploits CICS TS 3.1 from GA and aim to exploit all the new CICS TS releases in a timely manner
- **Ease of use**
  - ▶ Short learning curve
  - ▶ CICS PA comes with over 130+ pre-supplied reports to help you get started quickly, and provides a comprehensive ISPF dialogue to manage and tailor reports
- **Education**
  - ▶ IBM provides detailed RedBooks and technical presentations so the education is inexpensive (RedBook download is free)
- **Service and Support**

7

## CICS PA 1.4 – How do customers use it to complement their online monitors?

- ▶ Ensure quick response to online performance issues identified by an online monitor
  - drilling down into CICS and its related subsystems performance data to identify the cause of the problem
- ▶ Tuning of the CICS systems for optimal performance
- ▶ Trend analysis for capacity planning
- ▶ Detailed performance bottleneck analysis
- ▶ Identification of usage trends leading to reduced CICS performance or even outages.
- ▶ Review performance before applications go into production
- ▶ CICS PA also complements the enterprise-wide historical performance capabilities of IBM Tivoli ® Decision Support for z/OS

8

## Large US insurance company uses CICS PA

- **Business Problem**
  - ▶ Growing business
  - ▶ Need effective way to evaluate CICS usage trends and plan for the future
  - ▶ Quickly determine root causes of undesirable trends
- **IBM Solution**
  - ▶ CICS Performance Analyzer
    - Creates management reports with minimal effort
    - Answers day to day queries about the cause of online problems
    - Improve capacity planning
- **Why They Chose CICS PA Over Other Alternatives**
  - ▶ Easier to use
  - ▶ More comprehensive
  - ▶ Everything the customer needed to know about CICS performance analysis in one product

**CICS PA  
enables  
reporting and  
problem  
resolution with  
minimal effort.**



## CICS PA: References

- CICS PA Version 1.4 - Product information ...
  - ▶ Program Product - 5655-F38
  - ▶ Releases Supported ...
    - CICS Transaction Server for z/OS, Version 3 and Version 2
    - CICS Transaction Server for OS/390, Version 1
  - ▶ More Information (ann letter, data sheet, docs, presentations)
    - <http://www.ibm.com/cics/>
- Presentations in the Sales Kit on XL
  - ▶ <http://w3.ibm.com/software/xl>
- IBM Tivoli Decision Support Accounting Workstation for z/OS V2.1.1
  - ▶ Program Product – 5698-A42
- More Information ...
  - <http://www.ibm.com/software/tivoli/products/tds-acct/>





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# CICS Performance Analyzer for z/OS

**CICS PA Release 4**

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12

## Presentation Overview

- CICS PA Release 4 Highlights
- CICS PA Overview
- CICS PA Release 4 Content
- Summary
- Requirements Addressed in CICS PA Release 4
- Questions



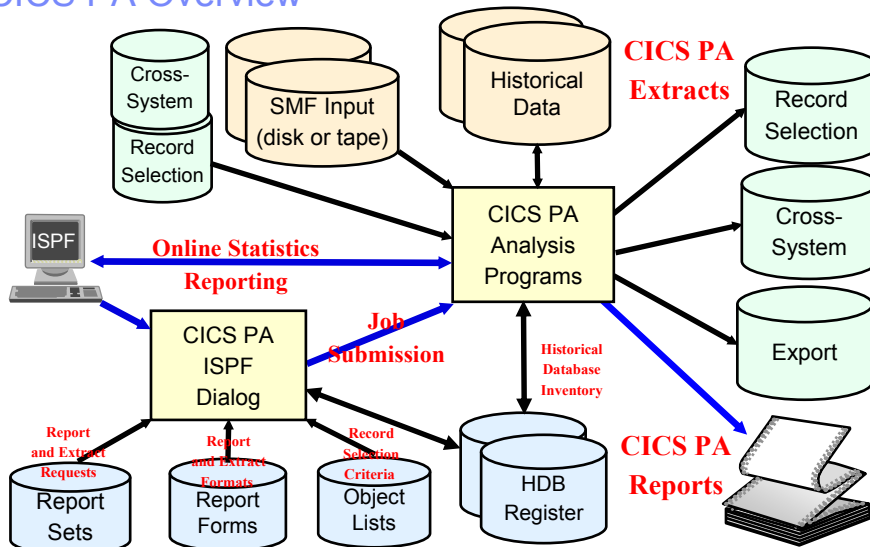
## CICS PA Release 4 Highlights

- CICS Statistics and CICS Server Statistics support
- CICS Transaction Server for z/OS Version 3.1 Support
- Historical Database (HDB) Enhancements
- Performance Summary Report Enhancements
- Report Form Enhancements
- SMF File Management Enhancements
- Report Set Enhancements
- ISPF Dialog Enhancements
- Record Selection Extract Enhancements
- NLS and Globalization Enablement
- IBM Tivoli Decision Support Accounting Workstation for z/OS
- Announce and GA – 22/02/2005 and 18/03/2005

## CICS PA Overview

- CICS Performance Analyzer for z/OS
  - Comprehensive Performance Reporting and Analysis for CICS
    - Including DB2, WebSphere MQ, and z/OS System Logger
  - Extensive Tabular Reports and Extract Data Sets
  - Historical Database (HDB)
    - Trending and Capacity Planning
  - ISPF Dialog to build, maintain, and submit reports and extracts
- Part of IBM systems management strategy
  - Complements IBM online monitors for a complete solution
    - Tivoli OMEGAMON XE for CICS on z/OS
  - Complements other IBM batch performance analysis tools (e.g. IMS PA)
  - Complements IBM enterprise wide historical trend analysis solution (Tivoli Decision Support for z/OS) with detailed CICS analysis for fast online problem resolution, CICS tuning and capacity planning

## CICS PA Overview





## CICS PA Overview

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
V1R4M0          CICS Performance Analyzer - Primary Option Menu
Option ==>
0 CICS PA Profile          Customize your CICS PA dialog profile
1 Personal Systems        Specify personal CICS Systems, SMF Files and Groups
2 Report Sets             Request and submit reports and extracts
3 Report Forms            Define Report Forms
4 Object Lists            Define Object Lists
5 Historical Database      Collect and process historical data
6 Shared Systems          Specify shared CICS Systems, SMF Files and Groups
7 Statistics              Report CICS Statistics
X Exit                   Terminate CICS PA

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MA c                                04/014
  
```

## CICS PA Release 4 Content

- CICS Statistics and CICS Server Statistics Support
- CICS Transaction Server for z/OS Version 3.1 Support
- Historical Database (HDB) Enhancements
- Performance Summary Report Enhancements
- Report Form Enhancements
- SMF File Management Enhancements
- Shared System Definitions
- ISPF Dialog Enhancements
- Record Selection Extract Enhancements
- NLS and Globalization Enablement
- IBM Tivoli Decision Support Accounting Workstation for z/OS

## CICS Statistics and CICS Server Statistics Support

- CICS PA now provides comprehensive reporting and analysis of CICS statistics and CICS server statistics data
- The CICS PA Statistics online reporter provides comprehensive reporting of CICS Statistics data ...
  - ▶ Directly from an unloaded SMF data set or from a CICS PA Historical Database
  - ▶ The reporting facility has QMF-like features; including ...
    - Tabular reporting, Sorting by field (column), ...
    - Forms to design personalized reports
    - Print facility (to a data set or to SYSOUT)
- CICS Statistics data can also be collected into a CICS PA Historical Database (HDB)
  - ▶ Facilities to Export to a DB2 table or Extract to a CSV file for off-host analysis
  - ▶ Historical statistics data can also be reported using the online reporting facility
- Supported for CICS Transaction Server for z/OS Version 2.2 or later

## CICS Statistics and CICS Server Statistics Support

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
-
V
0
1
2
3
4
5
6
X
      CICS Statistics Online Reporting Menu
Command ==> _____
Select an option then press Enter.
  1. SMF Files defined in your personal System Definitions
  2. SMF Files Defined to SMF Manager
  3. Historical Databases for CICS Statistics
  4. Process SMF File
    'CBAKER.CJB.SMFAPD.DATA2' _____ +
Options 2 and 3:
HDB Register . . . TEST.CICSTS31.REGISTER _____ +
  
```

# CICS Statistics and CICS Server Statistics Support

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
----- CICS Statistics -----
C
S CICS PA is scanning the SMF File for statistics intervals.
4 Data Set Name . . . : CBAKER.CJB.SMFAPD.DATA2
   Number of SMF records processed . . . . . : 3,000
   Number of statistics intervals found . . . : 252
0 Press Attention (ATTN) to halt the scan and display the intervals
   found so far.
M@ d X SYSTEM 03/005

```

# CICS Statistics and CICS Server Statistics Support

```

MVS2CTS0 - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
Run STATS HDB Report - SAMPLE Row 1 to 1 of 1
Command ==> Scroll ==> PAGE
Specify run options then press Enter.
Select data sets by:
2 1. Report Interval Report Interval HDB contains data
   2. Data set name From YYYY/MM/DD HH:MM:SS.TH in the range:
                        To
Data Set Name ----- Start ----- Volume
CBAKER.SAMPLE.D05040.T145313.HDB 2005/02/08 14:50:59 P2P145
***** Bottom of data *****
M@ b 04/015

```

## CICS Statistics - Notes

The previous three slides showed an example of the CICS Statistics Online Reporting Menu where we selected option 4, Process SMF file. This option allows you to view and/or print the selected statistics interval or just a subset of the statistics data collected in the interval.

The CICS Statistics Online Reporting Menu allows you to select the statistics data from an SMF data set from your personal or shared system definitions, from a CICS PA Historical Database (HDB), or from any unloaded SMF data set.

The third slide showed an example of viewing a statistics report from an HDB.

The next slide shows the selected Statistics Interval and the type of data that was collected in that interval. From this panel you can either view or print the selected statistics data.



## CICS Statistics and CICS Server Statistics Support

Command ==> Row 1 from 670  
Scroll ==> CSR

Select the required CICS Statistics interval.

System	Image	VRM	Type	Collection Time	Reset	Duration
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:04:00 Thu	02:02:00 00:02:00
—	IYK3ZDF9	MV2C	640	INT	2004/12/09 02:05:00 Thu	02:00:00 00:05:00
—	IYK3ZDF6	MV2C	640	INT	2004/12/09 02:05:00 Thu	02:00:00 00:05:00
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:06:00 Thu	02:04:00 00:02:00
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:08:00 Thu	02:06:00 00:02:00
—	IYK3ZDF6	MV2C	640	INT	2004/12/09 02:10:00 Thu	02:05:00 00:05:00
—	IYK3ZDF9	MV2C	640	INT	2004/12/09 02:10:00 Thu	02:05:00 00:05:00
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:10:00 Thu	02:08:00 00:01:00
—	IYK3Z4	MV2C	640	REQ	2004/12/09 02:10:00 Thu	02:10:00
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:10:24 Thu	02:10:00
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:10:33 Thu	02:10:00
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:10:34 Thu	02:10:00
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:10:38 Thu	02:10:00
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:11:00 Thu	02:10:00 00:01:00
—	IYK3Z4	MV2C	640	INT	2004/12/09 02:12:00 Thu	02:11:00 00:01:00
—	IYK3Z7DD	MV2C	640	USS	2004/12/09 02:12:57 Thu	00:54:12
—	IYK3Z7DD	MV2C	640	EDD	2004/12/09 02:12:57 Thu	00:54:12
—	IYK3Z7DD	MV2C	640	USS	2004/12/09 02:13:02 Thu	02:12:57
—	IYK3Z7DA	MV2C	640	USS	2004/12/09 02:13:19 Thu	00:54:01
—	IYK3Z7DA	MV2C	640	EDD	2004/12/09 02:13:19 Thu	00:54:01
—	IYK3Z7DA	MV2C	640	USS	2004/12/09 02:13:24 Thu	02:13:19
—	IYK3Z7DA	MV2C	640	USS	2004/12/09 02:13:25 Thu	02:13:19
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:13:54 Thu	02:12:00
—	IYK3Z4	MV2C	640	USS	2004/12/09 02:13:56 Thu	02:12:00

MVS3TSO - [32 x 80] 04/015



## CICS Statistics - Notes

The previous slide shows the statistics data that is available in the interval that we selected from the unloaded SMF data set. From this panel you can either view the selected data, customize the report layout, or print the selected statistics data.

The next slide shows the selected Statistics Interval and the statistics data that was collected by the statistics interval. The data is shown by category, you can expand or collapse each category group, print the entire interval, or print a subset of the interval either by category or by a specific statistics record type.



## CICS Statistics and CICS Server Statistics Support

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
Statistics Reports Line 1 of 87
Command ==> Scroll ==> CSR
System: IYK3Z0F9/MV2C Type: INT Interval: 2004/12/09 02:05:00 Thursday

** Categories **
Regions 424
- CICS Dispatcher 42
  Dispatcher Overview 1
  Dispatcher TCB Modes 18
  Dispatcher TCB Pools 4
  MVS TCB Overview 1
  MVS TCBS 18
- CICS Storage 358
  Storage Overview 1
  DSAs 8
  Domain Subpools 345
  Task Subpools 4
- CICS Dumps 5
  Transaction Dump Overview 1
  Transaction Dumps 3
  System Dump Overview 1
  System Dumps 0
  Enqueue Pools 18
- Connectivity 6
  VTAM 1
  Terminal Autoinstall 1
  Terminals 2
  ISC/MRO Connections 0
    
```



## CICS Statistics and CICS Server Statistics Support

- The CICS PA Statistics online reporter provides comprehensive reporting of CICS Statistics data ...
  - The reporting facility has QMF-like features; including ...
    - Tabular reporting, Sorting by field (column), ...
    - Forms to design personalized reports
    - Hyper-links to jump directly to related reports
    - Print facility (to a data set or to SYSOUT)

## CICS Statistics and CICS Server Statistics Support

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
Command ==>
System: IYK3ZO
                                     Line Actions
                                     f 87
                                     CSR
                                     ay
                                     Select by number or action code then press Enter.
-      * 1. Display report...          (S)
-      R 2. Display report information... (I)
-      / 3. Print report...           (P)
-      4. Delete report...            (D)

-      Dispatcher TCB Pools          4
-      MVS TCB Overview              1
-      MVS TCBS                      18
-      CICS Storage                   358
-      Storage Overview              1
-      DSAs                          8
-      Domain Subpools                345
-      Task Subpools                  4
-      CICS Dumps                     5
-      Transaction Dump Overview     1
-      Transaction Dumps             3
-      System Dump Overview          1
-      System Dumps                  0
-      Enqueue Pools                 18
-      Connectivity                   6
-      VTAM                          1
-      Terminal Autoinstall           1
-      Terminals                      2
-      ISC/MRD Connections            0
    
```

07/019

## CICS Statistics and CICS Server Statistics Support

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
Report Information
Statistics Reports
Line 1 of 87
Scroll ==> CSR
Command ==>
Interval Identification:
System . . . : IYCUZC01 Image . . . : MV2A
VRM . . . : 640
Type . . . : REQ
Reset . . . : 11:21:25
Duration . . . :
Interval . . . : 2005/01/25 11:22:25 Tuesday
Report Identification:
Category . . : Regions
Report . . . : Dispatcher Overview
CICS Identification:
Domain . . . : DS Macro . . . : DFHDSGDS
Stats ID . . : 060 DSECT . . : DFHDSGDS
Transaction Dumps 3
System Dump Overview 1
System Dumps 0
Enqueue Pools 18
Connectivity 525
VTAM 1
Terminal Autoinstall 1
Terminals 522
M b 04/019
  
```

29

## CICS Statistics - Notes

The previous slide shows an example the statistics report information showing details of the statistics interval, report type and CICS data used to format the statistics data.

The next two slides show examples of the Dispatcher Overview and Dispatcher TCB Modes reports.

30

## CICS Statistics and CICS Server Statistics Support

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Form Options Help
REPORT Dispatcher Overview Line 00000001
Command ==> Scroll ==> CSR
System: IYK3Z0F9/MV2C Type: INT Interval: 2004/12/09 02:05:00 Thursday
Global Statistics Length . . . . . 128
CICS TCB MODES . . . . . 18
CICS TCB POOLS . . . . . 4
Current ICV Time . . . . . 5,000
Current ICVR Time . . . . . 5,000
Current ICVTSO Time . . . . . 500
Current PRTYAGE Time . . . . . 32,768
Concurrent Subtask TCBS . . . . . 0
Current Tasks . . . . . 17
Peak Tasks . . . . . 18
Excess TCB Scans . . . . . 1
Excess TCBS Detached . . . . . 0
    
```

## CICS Statistics and CICS Server Statistics Support

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Form Options Help
REPORT Dispatcher TCB Modes Line 00000001 Col 002 008 >
Command ==> Scroll ==> CSR
System: IYK3Z0F9/MV2C Type: INT Interval: 2004/12/09 02:05:00 Thursday
TCB Mode TCB TCB TCB Current Peak
Name Mode Open Pool Attaches Attach Failures Attached Attached
QR NOTOPEN NA 0 0 0 1 1
RO NOTOPEN NA 0 0 0 1 1
CO UNKNOWN NA 0 0 0 0 0
SZ UNKNOWN NA 0 0 0 0 0
RP UNKNOWN NA 0 0 0 0 0
FO NOTOPEN NA 0 0 0 1 1
SL NOTOPEN NA 0 0 0 1 1
SO NOTOPEN NA 0 0 0 1 1
SP NOTOPEN NA 0 0 0 1 1
D2 UNKNOWN NA 0 0 0 0 0
JM NOTOPEN NA 0 0 0 0 0
SB UNKNOWN NA 0 0 0 0 0
L9 OPEN OPEN 0 0 0 1 1
L8 UNKNOWN NA 0 0 0 0 0
J8 UNKNOWN NA 0 0 0 0 0
J9 OPEN JVM 0 0 0 1 1
X8 UNKNOWN NA 0 0 0 0 0
X9 UNKNOWN NA 0 0 0 0 0
    
```



## CICS Statistics and CICS Server Statistics Support

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Filter Options Help
Print Statistics Report      Report not printed
C Command ==>
S Specify Statistics Report print options.
P Report Destination:
  1 1. Data Set  2. SYSOUT
Output Data Set:
  Data Set Name . . . XM.STATS
  Disposition . . . 1 1. OLD  2. MOD  (If cataloged)
Enter "/" to select option
/ Browse output data set
Report Output:
  SYSOUT Class . . . a      Print Lines per Page . . . 60_ (0-255)

IYK3Z4  MV2C  640  INT  2004/12/09  02:12:00  Thu  02:11:00  00:01:00
IYK3Z7DD MV2C  640  USS  2004/12/09  02:12:57  Thu  00:54:12
IYK3Z7DD MV2C  640  EDD  2004/12/09  02:12:57  Thu  00:54:12
IYK3Z7DD MV2C  640  USS  2004/12/09  02:13:02  Thu  02:12:57
IYK3Z7DA MV2C  640  USS  2004/12/09  02:13:19  Thu  00:54:01
IYK3Z7DA MV2C  640  EDD  2004/12/09  02:13:19  Thu  00:54:01
IYK3Z7DA MV2C  640  USS  2004/12/09  02:13:24  Thu  02:13:19
IYK3Z7DA MV2C  640  USS  2004/12/09  02:13:25  Thu  02:13:19
IYK3Z4   MV2C  640  USS  2004/12/09  02:13:54  Thu  02:12:00
IYK3Z4   MV2C  640  USS  2004/12/09  02:13:56  Thu  02:12:00
MA b                                     04/019
  
```

33

## CICS Statistics - Notes

The previous slide shows an example printing a statistics report. The report can be sent to either a data set, which can then be browsed, or to SYSOUT.

The next two slides show an example of browsing a statistics report sent to a dataset.

34

## CICS Statistics and CICS Server Statistics Support

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
Menu Utilities Compilers Help
BROWSE CBAKER.DSMODE.STATS Line 00000000 Col 001 080
Command ==> Scroll ==> PAGE
***** Top of Data *****
V1R4M0 CICS Performance Analyzer
CICS Statistics - Dispatcher TCB
System: IYK3Z0F6/MV2C VRM: 640 Type: INT Interval: 2004/11/09 02:10:00 Tuesda
TCB Mode TCB TCB TCB TCB TCB Current Peak
Name Open Pool Attaches Attach Failures TCBs TCBs
Attached Attached
QR NOTOPEN NA 0 0 0 1 1
RO NOTOPEN NA 0 0 0 1 1
CO UNKNOWN NA 0 0 0 0 0
SZ UNKNOWN NA 0 0 0 0 0
RP UNKNOWN NA 0 0 0 0 0
FO NOTOPEN NA 0 0 0 1 1
SL NOTOPEN NA 0 0 0 1 1
SO NOTOPEN NA 0 0 0 1 1
SP NOTOPEN NA 0 0 0 1 1
D2 UNKNOWN NA 0 0 0 0 0
JM NOTOPEN NA 0 0 0 0 0
SB UNKNOWN NA 0 0 0 1 0
LB OPEN OPEN 0 0 0 1 0
L9 UNKNOWN NA 0 0 0 0 0
J8 UNKNOWN NA 0 0 0 0 0
J9 UNKNOWN NA 0 0 0 0 0
X8 UNKNOWN NA 0 0 0 0 0
X9 UNKNOWN NA 0 0 0 0 0
MA b 04/015
    
```

## CICS Statistics and CICS Server Statistics Support

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
FORM Dispatcher TCB Modes Line 1 of 21
Command ==> Scroll ==> CSR
----- Width -----
Usage Column Max Report
TCB Mode Name FIX 8 8
TCB Mode Open OMIT 8
TCB Pool OMIT 8
TCB Attaches OMIT 10
TCB Attach Failures OMIT 10
Current TCBs Attached OMIT 10
Peak TCBs Attached OMIT 10
Current Mode TCBs 10 20
Peak Mode TCBs 10 32
TCB Allocates OMIT 10
TCB Detaches Unclean OMIT 10
TCB Detaches Stolen OMIT 10
TCB Detaches Excess OMIT 10
TCB Detaches Other OMIT 10
TCB Steals OMIT 10
TCB Mismatches OMIT 10
MVS Waits 10 44
Total MVS Wait Time 19 66
Total TCB Dispatch Time 19 86
Total TCB DS CPU Time 19 107
Total TCB CPU Time 19 128
***** End of Form *****
MA b 04/015
    
```

## CICS Statistics - Notes

The previous slide shows an example of the report form for the Dispatcher TCB Modes report. Fields can be moved, omitted, etc, on the report as required. In this particular example we want to omit a number of the fields.

The next slide shows the Dispatcher TCB Modes report using the report from shown on the previous slide.

## CICS Statistics and CICS Server Statistics Support

TCB Mode Name	Current Mode TCBS	Peak Mode TCBS	MVS Waits	Total MVS Wait Time	TCB D
QR	1	1	62	00:04:59.844786	00:00:00
RO	1	1	0	00:00:00.000000	00:00:00
CO	0	0	0	00:00:00.000000	00:00:00
SZ	0	0	0	00:00:00.000000	00:00:00
RP	0	0	0	00:00:00.000000	00:00:00
FD	1	1	0	00:00:00.000000	00:00:00
SL	1	1	0	00:00:00.000000	00:00:00
SO	1	1	0	00:00:00.000000	00:00:00
SP	1	1	0	00:00:00.000000	00:00:00
D2	0	0	0	00:00:00.000000	00:00:00
JM	0	0	0	00:00:00.000000	00:00:00
SB	0	0	0	00:00:00.000000	00:00:00
LB	0	0	0	00:00:00.000000	00:00:00
LS	0	0	0	00:00:00.000000	00:00:00
J8	0	0	0	00:00:00.000000	00:00:00
J9	0	0	0	00:00:00.000000	00:00:00
X8	0	0	0	00:00:00.000000	00:00:00
X9	0	0	0	00:00:00.000000	00:00:00

## CICS Transaction Server for z/OS Version 3.1 Support

- CICS Transaction Server for z/OS Version 3.1 support includes ...
  - ▶ Support for all new CMF Performance Class data fields ...
    - Performance List, ListX, and Summary Reports and Extracts
    - Performance Record Selection Criteria
  - ▶ New and updated Statistics records
  - ▶ Revised Performance Totals Report
  - ▶ Revised Performance Wait Analysis Report
  - ▶ Additional Summary Report and Extract By keywords
  - ▶ Additional Performance ListX Report By and Limit keywords
  - ▶ Revised Cross-System Work Extract default record format
  - ▶ Revised Performance Data Extract default record format
  - ▶ Additional Sample Report Forms



## CICS Transaction Server for z/OS Version 3.1 Support

- CICS Performance Analyzer provides customize reports ...
  - ▶ Custom reports are provided which enables extensive performance analysis of the many new functions introduced in CICS Transaction Server V3.1
    - Including CICS Integration and Application Transformation
  - ▶ Detailed and summary reports provided include ...
    - Transaction CPU Analysis – including CICS TCB usage for ...
      - OPENAPI Applications, XPLink, ...
    - Web services applications
    - CICS Web support and Secure Sockets Layer (SSL) enhancements
    - Application Transformation - inter-program data transfer ...
      - Channel Container usage, Program request channel activity, ...
  - ▶ Online Statistics Reporting is available for all CICS statistics data ...
    - Including the new statistics data on the CICS resources for Web services ...
      - PIPELINE, URIMAP, and WEBSERVICE
    - And the CICS Web support enhancements to TCP/IP Services



## CICS Transaction Server for z/OS Version 3.1 Support

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Confirm Samples Options Help
Report Forms 2 members added
Command ==> Scroll ==> PAGE
Report Forms Data Set . . : CBAKER.CICSPA.FORM

/ Name      Type      Description      Changed      ID
- ACCTSUM   SUMMARY  Accounting Summary HDB Extract  2005/01/13 10:10 CBAKER
- CCLST     LIST     Channel Container Activity      2005/03/25 00:00 CICSPA
- CCSUM     SUMMARY  Channel Container Activity      2005/03/25 00:00 CICSPA
- CC3LST    LIST     Channel Container Activity (V3)  2005/03/25 00:00 CICSPA
- CC3SUM    SUMMARY  Channel Container Activity (V3)  2005/03/25 00:00 CICSPA
- CPU3LEXT LIST     CPU Analysis and Extract (V3)   2005/03/25 00:00 CICSPA
- CPU3SEXT SUMMARY  CPU Analysis and Extract (V3)   2005/03/25 00:00 CICSPA
- IC3LST    LIST     Interval Control Activity (V3)  2005/03/25 00:00 CICSPA
- IC3SUM    SUMMARY  Interval Control Activity (V3)  2005/03/25 00:00 CICSPA
- PC3LST    LIST     Program Request Channel Activity 2005/03/25 00:00 CICSPA
- PC3SUM    SUMMARY  Program Request Channel Activity 2005/03/25 00:00 CICSPA
- TCB3LST  LIST     CICS TCB Usage and Delays (V3)  2005/03/25 00:00 CICSPA
- TCB3SUM  SUMMARY  CICS TCB Usage and Delays (V3)  2005/03/25 00:00 CICSPA
- WBSV3LST LIST     CICS WEBSERVICE Usage (V3)     2005/03/25 00:00 CICSPA
- WBSV3SUM SUMMARY  CICS WEBSERVICE Usage (V3)     2005/03/25 00:00 CICSPA
- WBS3LST  LIST     CICS Web Support Analysis (V3)  2005/03/25 00:00 CICSPA
- WBS3SUM  SUMMARY  CICS Web Support Analysis (V3)  2005/03/25 00:00 CICSPA
- WB3LST   LIST     CICS Web Support Analysis (V3)  2005/03/25 00:00 CICSPA
- WB3SUM   SUMMARY  CICS Web Support Analysis (V3)  2005/03/25 00:00 CICSPA
***** Bottom of data *****
    
```

## CICS Transaction Server V3.1 Support - Notes

This slide shows some of the 130+ standard reports that are supplied pre-defined with CICS PA Release 4. Those shown on the slide are those that have been specifically added to enable you to analyze your CICS applications that exploit the new functions introduced in CICS TS 3.1.

## CICS PA Historical Database (HDB) - Today

- Flexible and easy-to-use facility for collecting and managing historical performance data for your CICS systems
- The CICS PA history database function provides ...
  - ▶ Short term history data detailing individual transaction performance for use in performance problem analysis
  - ▶ Long term history data summarized over time can be used for trend analysis and capacity planning
  - ▶ Powerful and flexible definition facility for historical data repositories based on Report Forms
  - ▶ Comprehensive reporting facilities
  - ▶ Optionally load history data into DB2 for further analysis and reporting
  - ▶ Definition and management of the historical databases (HDBs) from the CICS PA ISPF dialog
  - ▶ Trending and capacity planning



## CICS PA Historical Database (HDB) Enhancements

- CICS Statistics support
  - ▶ A new type of HDB called the Statistics HDB allows the collection of CICS Statistics and CICS Server Statistics
  - ▶ Statistics HDBs can be reported using the online Statistics Reporting facility
- HDB Load request integration into Report Sets
  - ▶ Allows the user to run their reports and extracts and also produce historical performance and statistics data in a single pass of the SMF File
  - ▶ Multiple HDB load requests are supported
- HDB Load audit trail
  - ▶ HDB Load requests are now audited in the HDB Register to prevent duplicate container data sets being generated
  - ▶ Audit information can be viewed from the HDB dialog
- New facility to extract HDB List, Summary and Statistics data to a CSV (comma-separated variable) format data set



## CICS PA Historical Database (HDB) Enhancements

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
Historical Database Menu
Option ==>
1 Templates      Design HDB Templates
2 Define         Define a new HDB
3 Load           Load data into the HDBs
4 Report         Submit HDB report requests
5 Export         Export HDB data sets to DB2
6 Extract        Extract HDB data sets to CSV
7 Maintenance    Maintain HDB definitions and data sets
8 Housekeeping   Perform HDB housekeeping

HDB Register . . . TEST.CICSTS31.REGISTER
  
```

45

## CICS PA Historical Database (HDB) - Notes

The previous slide shows the Historical Database Menu with the additional option to extract HDB data sets to a CSV data set.

The next slide shows the panel for a new statistics type HDB definition. It is very similar to the existing HDB definitions for performance data and allows you to select the statistics categories of the data to be collected in the HDB.

46

## CICS PA Historical Database (HDB) Enhancements

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Systems Options Help
New HDB Definition
Command ==>
Specify new HDB definition options then press EXIT to save.
Name . . . . . APPLID + Image
Description . . . . .
Statistics Categories:
_ Select to specify Statistics Categories
Data Retention Period:
Years . . . 1 Months . . . Weeks . . . Days . . . Hours . . .
Data Set Allocation Settings:
DSN Prefix . . . . . CBAKER
Management class . . . . . (Blank for default management class)
Storage class . . . . . (Blank for default storage class)
Volume serial . . . . . (Blank for system default volume)
Device type . . . . . (Generic unit or device address)
Data class . . . . . (Blank for default data class)
Space Units . . . . . CYLS (TRKS, CYLS)
Primary quantity . . . . . 5 (In above units)
Secondary quantity . . . . . (In above units)
MA c 12/003
    
```

## CICS PA Historical Database (HDB) Enhancements

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
EDIT Statistics Reports Line 1 of 87
Command ==> Scroll ==> CSR
** Reports ** Collect
Regions No
- Transaction Manager No
- CICS Dispatcher No
  Dispatcher Overview No
  Dispatcher TCB Modes No
  Dispatcher TCB Pools No
  MVS TCB Overview No
  MVS TCBs No
- CICS Storage No
  Storage Overview No
  DSAs No
  Domain Subpools No
  Task Subpools No
- CICS Dumps No
  Transaction Dump Overview No
  Transaction Dumps No
  System Dump Overview No
  System Dumps No
  Enqueue Pools No
- Connectivity No
  VTAM No
  Terminal Autoinstall No
  Terminals No
  ISC/MRO Connections No
  LU62 Mode Names No
  ISC Security No
MA b 04/015
    
```



## CICS PA Historical Database (HDB) Enhancements

- HDB Load request integration into Report Sets
  - ▶ Allows the user to run their reports and extracts and also produce historical performance and statistics data in a single pass of the SMF File
  - ▶ Multiple HDB load requests are supported
    - But they must all use the same HDB Register
- HDB Load audit trail
  - ▶ HDB Load requests are now audited in the HDB Register to prevent duplicate container data sets being generated
  - ▶ Audit information can be viewed from the HDB dialog
  - ▶ Expired audit records are removed from the HDB Register via the HDB Housekeeping process



## CICS PA Historical Database (HDB) - Notes

The next two slides show examples of:-

1. An HDB Load request in a Report Set
2. HDB Load Audit view from the CICS PA ISPF Dialog.



## CICS PA Historical Database (HDB) Enhancements

```
MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Systems Options Help
R4TEST - HDB Load
Command ==>
System Selection:                               Extract Recap:
APPL ID . . . . . +                            DDname . . . . . HDBL0001
Image . . . . . MV2C +
Group . . . . . +
Historical Database:
HDB . . . . . ACCTDLY +
HDB Register . . . . . CBAKER.CICSPA.SAMPLE.REGISTER
M& b 04/015
```

## CICS PA Historical Database (HDB) Enhancements

```
MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Options Help
HDB Audit
Audit Statistics
Command ==>
SMF Data Set . . . : CPPSS.SMFDUMP.MV2C.G1163V00
Status . . . . . : OK
Data Start . . . . : 2005/02/09 04:52:34
Data End . . . . . : 2005/02/09 09:03:47
Record Count . . . : 614
Container Count . . : 1
First SMF Record:
0 . . . . . MV2CSMF
0F001401C5000DEFCEDC4444403300007EEEEED488CCCCCE4EEEDCE4DCCE
1E00E00A98154F4523246000000385152F2823122000936313B28273572B4313
M& b 04/017
```

## CICS PA Historical Database (HDB) Enhancements

- The existing facility to export to HDB List and Summary performance data to a DB2 table has been extended to support Statistics data
- A new facility is provided to extract HDB List, Summary and Statistics data into a CSV (comma-separated variable) format data set
  - This allows the user to analyze both CICS Monitoring and CICS Statistics historical data off-host using PC spreadsheet or database tools

## CICS PA Historical Database – Export and Extract

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
Historical Database Menu
Option ==>
1 Templates      Design HDB Templates
2 Define         Define a new HDB
3 Load           Load data into the HDBs
4 Report         Submit HDB report requests
5 Export         Export HDB data sets to DB2
6 Extract        Extract HDB data sets to CSV
7 Maintenance    Maintain HDB definitions and data sets
8 Housekeeping   Perform HDB housekeeping
HDB Register . . . TEST.CICSTS31.REGISTER
  
```

## CICS PA Historical Database – Export and Extract

- Export to DB2
  - A facility to load history data into DB2 for further analysis and reporting
    - Creates the DDL to define the DB2 Table
    - Generates the JCL to load an HDB into a DB2 Table
  - Access to DB2 Tools, such as ...
    - DB2 Query Management Facility (QMF)
      - Query and Reporting tool
- Extract to CSV data set
  - A facility to extract history data into a CSV format data set
    - Can then be imported by database or PC spreadsheet tools for further processing and analysis.

## CICS PA Historical Database – Export and Extract

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
Export HDB Data Set
Command ==>
HDB Name . . . : ACCTDLY
Data Set Name . . : CBAKER.ACCTDLY.D05021.T141045.HDB

Select option
2 1. Create DDL to define table          2. Load data into table

Create Options                                Load Options
- Create Database                          1 1. Resume
- Create Storage Group                      2 2. Replace

DB2 Settings:
DB2 Subsystem ID . . . DB01
DSNTIAD Plan Name . . . DSNTIA71
DB2 Load Library . . . 'DB2710.SDSNLOAD'
DB2 Exit Library . . . 'DB2710.SDSNEXIT'
DB2 RUNLIB Library . . . 'DB2710.RUNLIB.LOAD'
Database . . . . . CICSPAHD Storage Group . . . CPA14STG
VCAT Catalog name . . DB2CAT Volume . . . . .
Allocation: Primary Secondary . . . . .

Include Clock Field Components                Summary Options
1 1. Time and Count                          - Include Sums of Squares
2 2. Time only
3 3. Count only
  
```

## CICS PA Historical Database (HDB) Enhancements

```

MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help

Run SUMMARY HDB Extract - SAMPLE

Command ==>

Specify Extract request options then press Enter to continue submit.

Report Interval _____ HDB contains data
  YYYY/MM/DD HH:MM:SS.TH in the range:
From 1999/02/04 11:10 Extract Recap:
To 1999/02/16 08:10 DDname . . . HDEX0001

Output Data Set:
Data Set Name . . HDB_EXTRACT_TEST
Disposition . . . 1 1. OLD 2. MOD (If cataloged)

Extract Format:
Form . . . . . ACCTSUM + Enter "/" to select option
Delimiter . . . . 1 - Include Field Labels
- Numeric Fields in Float format

Processing Options:
Time Interval . . (hh:mm:ss) Enter "/" to select option
- Edit JCL before submit

MA c 04/017
  
```

57

## CICS PA Historical Database (HDB) – Release 4

- Flexible and easy-to-use facility for collecting and managing historical performance and statistics data for your CICS systems
- The CICS PA history database function provides ...
  - ▶ Short term history data detailing individual transaction performance for use in performance problem analysis
  - ▶ Long term history data summarized over time that can be used for trend analysis, capacity planning and accounting purposes
  - ▶ Statistics history data for use in performance analysis and reporting purposes
  - ▶ Powerful and flexible definition facility for historical data repositories based on Report Forms
  - ▶ Comprehensive reporting facilities
  - ▶ Optionally export history data to a DB2 table for further analysis and reporting
  - ▶ Optionally extract history data into a CSV format data set
  - ▶ Definition and management of the historical databases (HDBs) from the CICS PA ISPF dialog
- Performance analysis, trending, capacity planning and accounting

58

## Performance Summary Report Enhancements

- Maximum number of Summary keys increased from 3 to 8
- Summary reports can be sorted by numerical fields
  - ▶ Alternate Summary Report key sequencing allows users to alter the sequence of Summary report lines by one of the numerical fields in the report, instead of alphabetically by key
    - For example, order the report by Response time
      - The report is by default, sequenced in Sort key order (for example Transaction Code)
      - Now the report can be sequenced in ascending or descending numerical field order (for example Response time)
      - The transactions with the highest response time are printed at the top of the report, quickly pinpointing potential performance problems
- Additional Summary By keys ...
  - ▶ Transaction ORIGIN – allows more flexibility and report format control than that provided by the existing Transaction Group Summary report

59

## Performance Summary Report Enhancements

- Optional sub-total level
  - ▶ Sub-totals at each key break in the report can be excluded if not required
- Optional grand-total line
  - ▶ Printed at the end of the report summarizing the report data for each field
    - Grand Total is a viable alternative to the Performance Totals report which is a very expensive report to run because it accumulates data against all CMF fields (282 or more!)
    - The Performance Summary report provides similar information to the Totals report, but with the advantage that it only accumulates data against the required fields specified in the Report Form

60

## Performance Summary Report Enhancements

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Systems Options Help
SAMPLE - Performance Summary Report
Command ==>
System Selection:                               Report Output:
APPLID . . . . . +                               DDname . . . . . : SUMM0001
Image . . . . . +                               Print Lines per Page . . . (1-255)
Group . . . . . +
Report Format:
Form . . . . . +
Title . . . . .
Reporting Options:
Time Interval . . 00:01:00 (hh:mm:ss)
Totals Level . . . - (blank or 0-8)
Selection Criteria:                               Execution Option:
_ Performance                                       _ Use External Sort
MVS a 04/015

```

61

## Performance Summary Report Enhancements

- Field formatting and Field precision enhancements ...
  - A new TASKCNT special field can optionally accumulate based on Task (transaction) count, rather than performance record count
  - Time stamp fields can optionally be reported as separate date and time values
  - Field precision reduction
    - Numerical Report fields can have their precision reduced by the specification of a divisor
      - For example, instead of reporting storage values in units of bytes, divide by 1024 to report the value in units of kilobytes or megabytes
    - Optional increased precision for numerical fields
      - From the standard 4 decimal places to 6 (micro-seconds) decimal places
- These enhancements combine to significantly increase the power and flexibility of the CICS PA Performance Summary reporting capabilities

62

## Other Report Enhancements

- Performance List and ListX Report Enhancements ...
  - Field precision enhancements ...
    - Field precision reduction
      - Numerical Report fields can have their precision reduced by the specification of a divisor
    - Optional increased precision for numerical fields
      - From the standard 4 decimal places to 6 (micro-seconds)
- Resource Usage Report Enhancement ...
  - Tsqueue resource names are printed in hexadecimal when necessary

## Report Enhancements – Field Precision

The screenshot shows a terminal window titled 'MVS2CTSO - [32 x 80]' with a menu bar containing 'File', 'Systems', 'Options', and 'Help'. The main display area shows the following text:

```

Command ==>
SAMPLE - Global Options

System Selection:
CICS APPLID . . . . . + Image . . . . . + Group . . . . . +
DB2 SSID . . . . . + Image . . . . . + Group . . . . . +
MQ SSID . . . . . + Image . . . . . + Group . . . . . +
Logger . . . . . + Image . . . . . + Group . . . . . +

Report Formatting Options:
Print Lines per Page . . 60 (1-255)
Time Zone . . . . . (Blank for system default or -12 to +12 hours)
Date Delimiter . . . . . Z
Time Delimiter . . . . . :
Precision . . . . . 4 (4-6)
  
```

At the bottom of the terminal window, there is a status bar with 'MVS' on the left and '07/019' on the right.



## Report Form Enhancements

- Report Form Enhancements ...
  - Model a new Report Form from an HDB Template
    - Modelling a new Report Form from an HDB Template will allow the user to report (and extract to CSV) HDB data easier and with more reliability because the Report Form will mirror the data being collected
  - New Report Form "Select field categories" has been enhanced to make field group selection easier
  - New and updated sample Report Forms
    - More than 130 sample forms are now provided
    - Covering every aspect of CICS transaction activity and resource usage ...
      - CPU, Storage Usage, Request Analysis, ...
      - CICS RMI Analysis, Abend Analysis, DBCTL, SOAP for CICS, ...
      - Worst CPU, File, Temporary Storage, Transient Data usage, ...
      - Response Time Distribution, ...

## Report Form Enhancements ...

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Systems Options Help

New Report Form

Command ==> _____

Specify new Report Form options.

Name . . . _____ Version (VRM) . . . ____ +
System Selection:          Field Categories:
APPLID . . . _____ +  _ Select to specify Field Categories
MVS Image . . . _____

Form Type or Model:
- 1. List                  4. Model (Report Form)
  2. List Extended (Sorted) 5. Model (HDB Template)
  3. Summary

Model . . . _____ +
Report Forms Data Set . . . 'CBAKER.CICSPA.FORMTEST' +
HDB Register . . . . . CICSPA.SAMPLE.REGISTER +

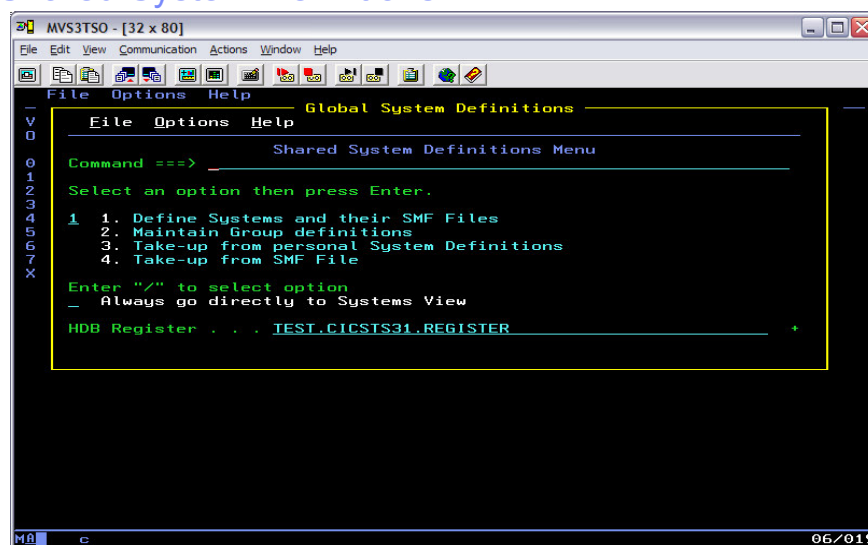
MA b 08/013
  
```

## SMF File Management Enhancements

- Shared System Definitions
  - Provides the ability to share CICS system and related subsystem definitions
    - Based on Personal System Definitions and Groups
  - Shared System Definitions are saved in the HDB Register
    - Available to all users of the HDB Register
  - Take-up of Shared Definitions from Personal Definitions or an SMF data set
  - Use of Personal or Shared Definitions can be specified at report run-time

67

## Shared System Definitions ...



```
MVS3TSO - [32 x 80]
File Edit View Communication Actions Window Help
File Options Help
Global System Definitions
File Options Help
Shared System Definitions Menu
Command ==>
Select an option then press Enter.
1 1. Define Systems and their SMF Files
2 2. Maintain Group definitions
3 3. Take-up from personal System Definitions
4 4. Take-up from SMF File
Enter "/" to select option
_ Always go directly to Systems View
HDB Register . . . TEST.CICSTS31_REGISTER +
WA c 06/019
```

68

# Shared System Definitions ...

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Edit Filter View Options Help
Shared System Definitions
Command ==>
Row 1 from 45
Scroll ==> PAGE
Select a System to edit its definition and SMF Files.
SMF Files
System
/ System Type Image Description
- A02CICP1 CICS SYSE System added by take-up
- A02CICP2 CICS SYSE System added by take-up
- A02CICP5 CICS SYSE System added by take-up
- A02CICQ1 CICS SYSE System added by take-up
- A02CICT1 CICS SYSE System added by take-up
- CURT003 CICS MV27 System added by take-up
- DEWDB9A0 CICS MV2C System added by take-up
- DEWDB9C0 CICS MV2C System added by take-up
- IMCC23C0 CICS MV2C System added by take-up
- IMCC23M0 CICS MV2C System added by take-up
- IYCRST71 CICS MV27 System added by take-up
- IYCRST72 CICS MV27 System added by take-up
- IYCUZC01 CICS MV2A System added by take-up
- IYCUZC19 CICS MV2A System added by take-up
- IY101 CICS MV27 System added by take-up
- IY102 CICS MV27 System added by take-up
- IY103 CICS MV27 System added by take-up
- IY104 CICS MV27 System added by take-up
- IY105 CICS MV27 System added by take-up
- IYK2ZAF1 CICS MV2C System added by take-up
- IYK2ZAL1 CICS MV2C System added by take-up
- IYK2ZEV1 CICS MV2C George's test system 2
- IYK2ZEV2 CICS MV2C George's test system 1
- IYK2ZFYZ CICS MV2C System added by take-up
MA b 04/015

```

# Shared System Definitions ...

```

MVS2CTSO - [32 x 80]
File Edit View Communication Actions Window Help
File Dictionary View Options Help
EDIT
Command ==>
CICS System
CICS System definition:
APPLID . . . . . IYK2Z1V2 MVS Image . . . MV2C
Description . . . . . System added by take-up
System View:
1 1. Definition 2. Cyclic SMF Files 3. Daily SMF Files
Specify CICS System Definition:
CICS Version (VRM) . . . . . 630
MCT Suffix . . . . .
MCT Load Library . . . . .
SDFHLOAD Library . . . . .
Dictionary DSN . . . . .
MA b 04/015

```

## Shared System Definitions – RUN Time selection ...

```

MVS2CTS0 - [32 x 80]
File Edit View Communication Actions Window Help
File Systems Options Help
Comma - 1. Specify System Definitions...
        * Use Personal System Definitions
        3. Use Shared System Definitions
Speci submit.

System Selection:
CICS APPLID . . . + Image . . . MV2C + Group . . . +
DB2 SSID . . . + Image . . . + Group . . . +
MQ SSID . . . + Image . . . + Group . . . +
Logger . . . + Image . . . + Group . . . +

Override System Selections specified in Report Set

Missing SMF Files Option:
1 1. Issue error message
2 2. Leave DSN unresolved in JCL
3 3. Disregard offending reports

Report Interval
From YYYY/MM/DD HH:MM:SS.TH
To

Enter "/" to select option
/ Edit JCL before submit
  
```

71

## SMF File Management Enhancements ...

- Automated SMF File Selection
  - Provides time-based SMF file selection for reporting purposes
    - Removes the requirement to explicitly specify SMF file data set names
  - Shared System Definitions provide two new SMF file types ...
    - Cyclic ...
      - GDG data set definitions for multiple generations of periodic SMF data
      - For example – daily, weekly, or monthly SMF files
    - Daily ...
      - Daily SMF files are built from the SMF dump process
      - Contain data for a particular period of time during the current day
      - Expired daily SMF files are removed from the Register via the HDB Housekeeping process

72

## SMF File Management Enhancements ...

```

MVS3T50 - [32 x 80]
File Edit View Communication Actions Window Help
File Dictionary View Options Help
EDIT CICS System
Command ==>
CICS System definition:
APPLID . . . . . CICSQ1   MVS Image . . . MV2C
Description . . . . . ** New CICS system **
System View . . . . . 1   1. Definition      3. Non-cyclic SMF Files
                        2. Cyclic SMF Files

Specify CICS System Definition:
CICS Version (VRM) . . . . .
MCT Suffix . . . . .
MCT Load Library . . . . .
SDFHLOAD Library . . . . .
Dictionary DSN . . . . .
  
```

73

## Report Set and ISPF Dialog Enhancements

- Report Set Enhancements ...
  - One or more HDB Load requests can be specified in a Report Set
    - Allows HDB load requests to be more easily included into daily CICS PA reports and extracts
    - Allows the user to run their reports and produce historical data in a single pass of the SMF file
  - Report Form type validation for List, ListX and Summary reports
- ISPF Dialog Enhancements ...
  - Cross-System Report Select Unit-of-Work support
    - Allows selection criteria to be applied to the group of records within a network unit-of-work
  - FIND command is now available for selected member lists ...
    - Report Sets, Report Forms, Sample Report Forms, Object Lists, and HDB

74

## Other Enhancements

- Record Selection Extract Enhancements
  - ▶ Now supports all SMF record types, not just CMF performance class records
    - CICS CMF Exception and Resource class records
    - CICS Statistics and CICS Server Statistics
- NLS and Globalization Enablement
  - ▶ CICS PA ISPF Dialog is enabled for NLS and Globalization support



75

## Interface to Tivoli Accounting Workstation for z/OS

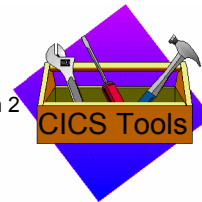
- What is Tivoli Decision Support Accounting Workstation for z/OS ?
  - ▶ Stand-alone IT accounting and charge-back application
- CICS PA can be used as a data source for Tivoli Accounting Workstation
  - ▶ Using CICS PA's Historical Database (HDB) support ...
    - To collect and summarize the CICS transaction performance data
    - To Extract to CSV or Export to DB2 to provide flexible data access
    - HDB Load Audit trail to provide information on the data collected
- Together ...
  - ▶ CICS PA HDB support and Tivoli Accounting Workstation for z/OS address the requirement for a CICS Accounting and Chargeback capability
- IBM Tivoli Decision Support Accounting Workstation for z/OS V2.1.1
  - ▶ Program Product – 5698-A42
- More Information ...
  - <http://www.ibm.com/software/tivoli/products/tds-acct/>



76

## Summary

- CICS Performance Analyzer for z/OS
  - ▶ Comprehensive Performance Reporting for CICS
    - Including DB2, WebSphere MQ, and MVS System Logger
  - ▶ CICS Monitoring Facility (CMF) and CICS Statistics SMF 110 data
  - ▶ Extensive Tabular Reports and Extract Data Sets
  - ▶ Historical Database
    - Trending and Capacity Planning
  - ▶ ISPF Dialog to build, maintain, and submit reports and extracts
- CICS PA Version 1.4 - Product information ...
  - ▶ Program Product - 5655-F38
  - ▶ Releases Supported ...
    - CICS Transaction Server for z/OS, Version 3 and Version 2
    - CICS Transaction Server for OS/390, Version 1
  - ▶ More Information ....
    - <http://www.ibm.com/cics/>



77

## Requirements Addressed in this Release

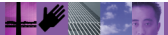
- MR0122012821
  - ▶ Allow PA to process CICS Statistics records
- MR102703532
  - ▶ Allowing Sorting and Selection on Response Times
    - Avg, Max, Min, Dev, etc.
- MR0122012821
  - ▶ Need Extract function that will include all CMF classes
- MR0525046213
  - ▶ Add ORIGIN to Summary Report Forms in CICS PA
- MR1020035911 (partial – alternative solution now available)
  - ▶ Adding a function to CICS PA to do internal invoice
- MR0607045020
  - ▶ CICS PA needs to specify RECFM=VBS on the DCB for SMFINnnn
- MR052504451 (alternative solution now available)
  - ▶ Provide TRANGROUP Summary without Detail



78

## Questions

- Any Questions?



## References

*CICS Performance Analyzer for z/OS User's Guide, SC34-6307*

*CICS Performance Analyzer for z/OS Report Reference, SC34-6308*

*CICS Performance Analyzer Release 3, SG24-6063*

*Tivoli Decision Support Accounting Workstation for z/OS User Guide, SH19-4516*

