

Virtual CICS user group: Newsletter 71

Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at itech-ed.com/virtualcics is an independently-operated vendor-neutral site run by and for the CICS user community.

ΔProgram vName	ΔInvoked vCount	ΔCPU vTime	ΔElapsed vTime	ΔDispatch vTime	ΔCPU Time v on QR TCB	ΔNumber of vEXEC calls	ΔNumber v of Abends	ΔNumber of vMode Switches
- DPLLSTRT	1	.000033s	.000066s	.000063s	.000033s	3	0	0
- DPLLINKA	3	.000221s	.000381s	.000372s	.000221s	12	0	0
- DPLLINKB	1	.000054s	2.19312s	.000054s	.000054s	6	0	0
- DPLLINKC	2	.000274s	4.19449s	.000299s	.000274s	18	0	0
- DPLLINKD	1	.000086s	2.09694s	.000089s	.000086s	7	0	0
- DPLXCTLA	1	.000175s	2.09709s	.000221s	.000175s	7	0	0

Figure 1: Omegamon task program details

Virtual CICS user group presentation

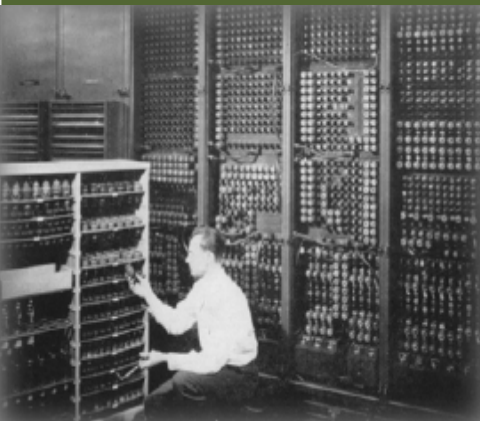
The latest webinar from the Virtual CICS user group was entitled, "OMEGAMON for CICS on z/OS 5.6 and CICS Performance". It was presented in November by Ezriel Gross, Principal Solutions Advisor for Rocket Software.

Ezriel Gross specializes in IBM CICS Tools. He was

formerly the CEO of Circle Software (acquired by Rocket Software in 2019), where he specialized in hands-on classes and consulting in CICS, DB2, and MQSeries. Ezriel was a Gold Consultant for many years and is currently an IBM Champion. His specialties include: Web Services, Web Support, Performance / Tuning, Internals, CICSplex SM, DevOps, and Liberty as they relate to CICS. He

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File Edit View Tools Navigate Help 02/04/2022 14:01:47

Command ==> KCPPRGS Program Summary

Auto Update : Off
CICSplex : SB3
Region : CICD5501

Installed Used

Programs which have been used on CICD5501

Columns 2 10 of 15 Rows 13 to 18 of 18

ΔProgram vName	ΔInvoked vCount	ΔTransaction vCount	ΔCPU vTime	ΔAverage vCPU Time	ΔElapsed vTime	ΔAverage vElapsed Time	ΔDispatch vTime	ΔAverage vDispatch Time	ΔCPU Time vOn QR TCB
- DPLL INKB	2	2	.000112s	.000056s	4.30868s	2.15434s	.000112s	.000056s	.000112s
- DPLL INKC	4	2	.000540s	.000135s	8.38270s	2.09567s	.000749s	.000187s	.000540s
- DPLL INKD	2	2	.000175s	.000088s	4.18710s	2.09355s	.000177s	.000089s	.000175s
- DPLL STRT	2	2	.000339s	.000170s	.005112s	.002556s	.005102s	.002551s	.000074s
- DPLXCTLA	2	2	.000329s	.000165s	4.18599s	2.09299s	.000525s	.000263s	.000329s
- MICKSTRS	12003	12003	.251720s	.000021s	20m 34s	.102881s	.703362s	.000059s	.251720s

Installed Used

Programs which have been used on CICD5501

Columns 9 to 15 of 15 Rows 13 to 18 of 18

ΔProgram vName	ΔAverage vDispatch Time	ΔCPU Time vOn QR TCB	ΔAverage CPU Time vOn QR TCB	ΔNumber of vEXEC Calls	ΔAverage vEXEC Calls	ΔNumber of vAbends	ΔNumber of vMode Switches
- DPLL INKB	.000056s	.000112s	.000056s	12	6	0	0
- DPLL INKC	.000187s	.000540s	.000135s	36	9	0	0
- DPLL INKD	.000089s	.000175s	.000088s	14	7	0	0
- DPLL STRT	.002551s	.000074s	.000037s	6	3	0	2
- DPLXCTLA	.000263s	.000329s	.000165s	14	7	0	0
- MICKSTRS	.000059s	.251720s	.000021s	84264	7	52	0

Figure 2: Omegamon program aggregation

recently co-architected the CPROF product, a tool that captures CICS trace without running in a CICS region.

Ezriel started his presentation by explaining that OMEGAMON for CICS has been around since the early 1980s, and there have been a number of updates since then. The latest level (V5.6) was released in June 2022.

The key features of Omegamon for CICS include:

- Real-time and historical data collection of CICS resources
- Proactive alerting
- Ability to take action directly within OMEGAMON or reflex actions automatically

- CICS Task History collection
- Application Trace Facility
- Resource Limiting
- Service Level Analysis
- Bottleneck Analysis.

Data is available through SOAP and REST interfaces for any third-party product to collect data and data is available to reporting tools – like CICS Performance Analyzer – through SMF 112 records.

Ezriel explained how a business transaction is usually made up of a number of tasks, and these tasks are, in turn, made up of any number of separate programs. OMEGAMON CICS provides details on each CICS defined program

that has been used by a task. This is available through the OMEGAMON CICS Active Task and Task History displays (see Figure 1).

The metrics collected cover the time when the program was the current program for the task. If program1 links to program2, data will not accumulate for program1 until program2 returns control to it. The invoked count is the number of times the program was entered, not the number of times it was in control. The default view will be the order that the programs were first used. It is not possible to infer that the third program was invoked by the second. It could have been either of the programs before it.

Program Aggregation (see Figure 2) will accumulate the

Start Date	Start Time	Tran	Task No	APPLID	UOW Seq	UOWID	Netname	# Progs
12/15/2021	13:27:15.633	CATA	80	CACD55JB	2	C3F8C65BBF8C	ROCKNET1.CACD55JB	4

Program	Count	CPU	Elapsed	Dispatch	QR CPU	Othr CPU	# ModeSW	# Exec	# Abends
DFHZATA	1	.000226	.001279	.000238	.000226	.000000	0	21	0
DFHZATDX	1	.000004	.000004	.000004	.000004	.000000	0	1	0
DFHZCQ	1	.000100	.000252	.000252	.000100	.000000	0	0	0
DFHERMSP	1	.000000	.000000	.000000	.000000	.000000	0	0	0
Total	4	.000330	.001535	.000494	.000330	.000000	0	22	0

Figure 3: HTAC: CICS PA OMEGAMON program list report

data for all the programs that have been used in the CICS region. This provides a useful view to see which programs are consuming more resources or abending. The program data is accumulated for a CICS region. The data is accumulated at the end of task/CMF record write. The data is reset when CICS statistics for Program Manager are reset.

Ezriel explained how to use this feature in some detail. He also looked at some other examples including using OMEGAMON CICS and OMEGAMON DB2 to follow a CICS transaction as it goes from CICS to Db2, identifying whether the delay is in CICS or Db2.

Ezriel then went on to look at CICS Performance Analyzer (PA) for z/OS, saying that it was a comprehensive performance reporting

and analysis tool for CICS that provides ongoing system management and measurement reports on all aspects of CICS application performance. It uses SMF data as input. It's useful because it reduces time and resource required to analyze offline performance data. It enables deep-dive CICS performance analysis and understanding of usage trends. It helps with capacity planning and tuning, And, it can quickly identify trends, and anticipate and prevent online performance problems.

The new CICS PA OMEGAMON Program List report provides details for each CICS defined program that has been used by a task (see Figure 3).

The Program List report contains an entry for each task and its associated

programs. Each task entry is divided into two sections, task information and program details. The Summary report provides summarized task and program statistics based on a user-specified key. By default, this report is ordered by key value. It can be ordered in ascending or descending sequence on a user-selected statistics field, eg CPU.

Ezriel gave a live demonstration for almost everything he was explaining.

A copy of Ezriel Gross' presentation is available for download from the Virtual CICS user group website at <https://itech-ed.com/virtualcics/presentations/CICSOMEGAMONNov22.pdf>

You can see and hear the whole user group meeting at <https://youtu.be/I0zBAe-UoEw>

Meeting dates

The following meeting dates have been arranged for the Virtual CICS user group:

- On 10 January we have Todd Havekost, Senior z/OS Performance Consultant at IntelliMagic, who will be discussing, “New Ways to Analyze CICS Transaction and Statistics Data”.
- The following meeting is on 7 March, when Larry Strickland, Chief Product Officer at DataKinetics will be discussing “Attention Application Developers – In-memory performance is key to Modernization efforts”.

We are using Zoom for the user group meetings.

CICS articles and blogs

Lifting the Lid on CICS File Control by Andy Wright, Felicity Merrison, and Dai Middleton in Enterprise Tech Journal issue 5 (November 2022): You can find the article at: <https://mydigitalpublication.com/publication/?i=768403&p=10&view=issueViewer>

Navigating directly between CICS Task History and Db2 Thread History by Paul Kenney and Mick Harris in the IBM Z and LinuxONE Community (3 November

2022). You can find the article at: <https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/paul-kenney/2022/10/28/navigating-between-cics-history-and-db2-history>

CICS IA – Host side report generation by Preethikashree M in the IBM Z and LinuxONE Community (18 October 2022). You can find the article at: <https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/preethikashree-m/2022/10/17/cics-ia-host-side-report-generation>

CICS IA – Scanner component in CICS IA by Preethikashree M in the IBM Z and LinuxONE Community (18 October 2022). You can find the article at: <https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/preethikashree-m/2022/10/17/cics-ia-scanner-component-in-cics-ia>

Virtual Db2 user group

Introducing the brand new Virtual Db2 user group. If you use Db2 for z/OS or have colleagues who do, go to itech-ed.com/virtualdb2 and sign up. The first meeting is on 17 January when Craig S Mullins, President & Principal Consultant at

Mullins Consulting, will be discussing, “Understanding Your Rolling 4 Hour Average to Tune Db2 and Lower Mainframe Costs”.

About the Virtual CICS user group

The Virtual CICS user group was established as a way for individuals using IBM’s CICS TS systems to exchange information, learn new techniques, and advance their skills with the product.

The Web site at itech-ed.com/virtualcics/ provides a central point for coordinating periodic meetings (which contain technically-oriented topics presented in a webinar format), and provides articles, discussions, links, and other resources of interest to IBM CICS practitioners. Anyone with an interest in CICS is welcome to join the Virtual CICS user group and share in the knowledge exchange.

To share ideas, and for further information, contact trevor@itech-ed.com.

The Virtual CICS user group is free to its members.