



Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at [www.fundi.com/virtualcics](http://www.fundi.com/virtualcics) is an independently-operated vendor-neutral site run by and for the CICS user community.

## Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, "Extracting optimum performance out of CICS", and was presented by Satish Tanna, IBM's CICS and CICS Tools Technical Specialist. The session was introduced by Ted Caffarelli, CICS Tools Product Line Manager with IBM.

Satish told the user group that he would be talking about using CICS Tools to help with CICS Threadsafes and consolidation projects.

Being Threadsafes modernizes CICS applications and reduces TCB switching and CPU usage. It also increases the number of simultaneous CICS tasks that can run in a single CICS region, which reduces the need for vast numbers of CICS systems,

## Customer experiences of Threadsafes projects

### Danske Bank

Savings of around **300 MIPS** during the peak processing period - directly attributed to reduced TCB switching



### Major US bank

Saved **700 MIPS** by making one major application threadsafe

### Large US financial Services organization

Estimated **\$32M per year** in savings based on data center chargeback reduction  
Analysis done by 1 non-dedicated systems programmer in 6-7 months without threadsafe specific tools

Figure 1: Threadsafes projects

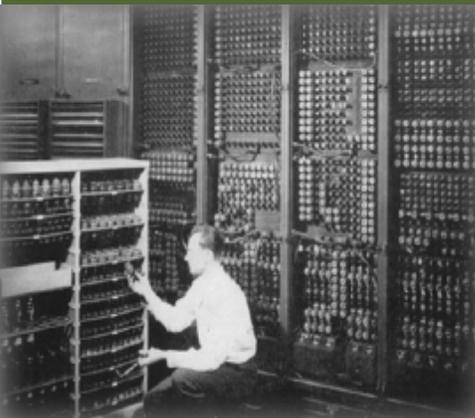
and saves on the cost of administering those systems and other overheads. It also better exploits modern z-Series hardware.

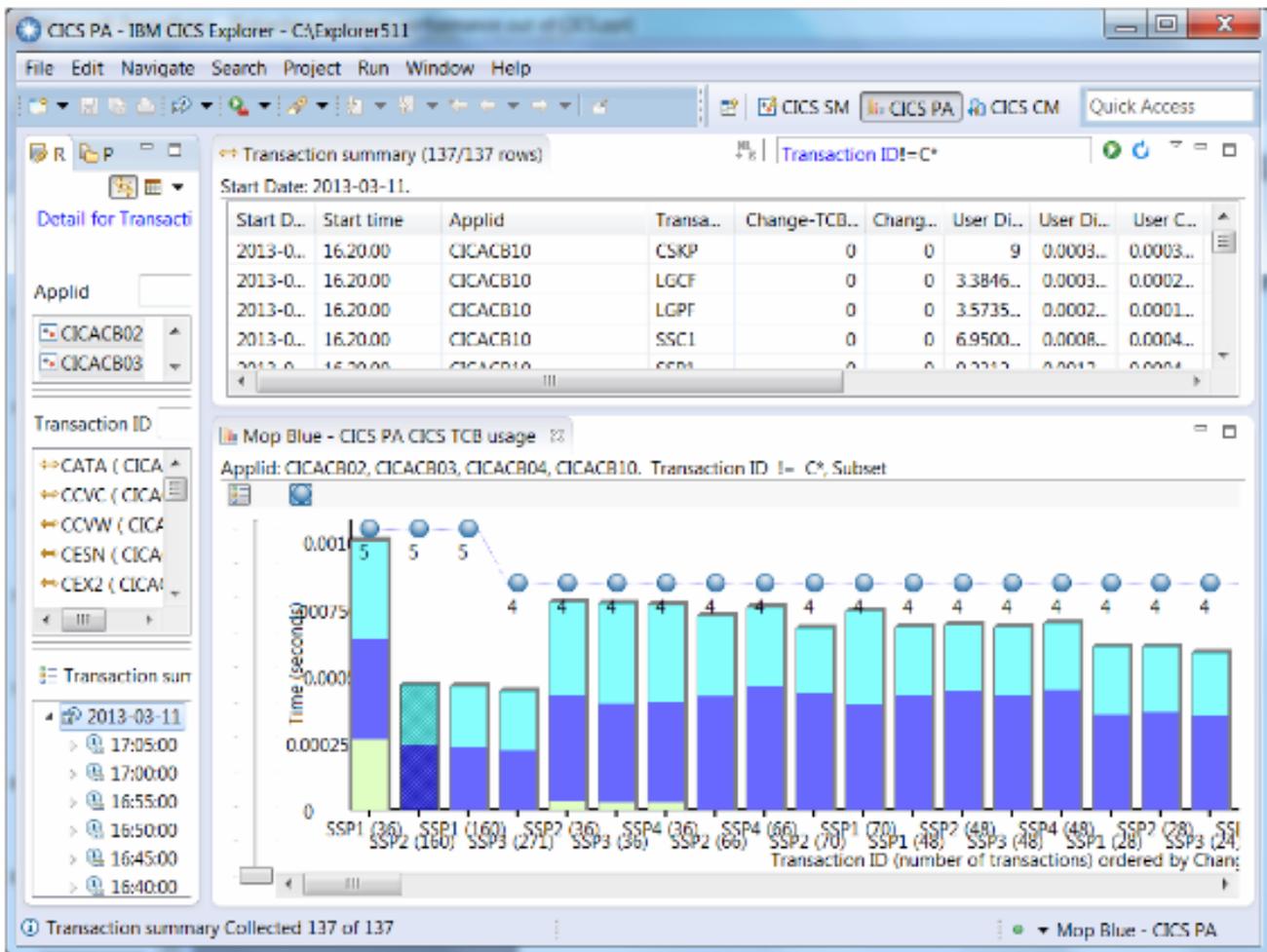
Examples of experiences of Threadsafes projects are shown in Figure 1.

Each TCB switch is approximately 2000

### Contents:

Virtual CICS user group presentation	1
Meeting dates	3
Recent CICS articles	4
CICS news	4
About the Virtual CICS user group	5





**Figure 2: CICS Explorer view showing TCB usage**

instructions. CICS TS V5.1, non-threadsafe DB2, MQ, and IMS transactions switch TCBs for each SQL statement or MQ command. So reducing instruction path length reduces costs and saves money for an organization.

CICS Tools can help to create threadsafe applications. Satish Tanna suggested that there are four stages in creating a threadsafe application. Step 1 is to identify applications that have a high number

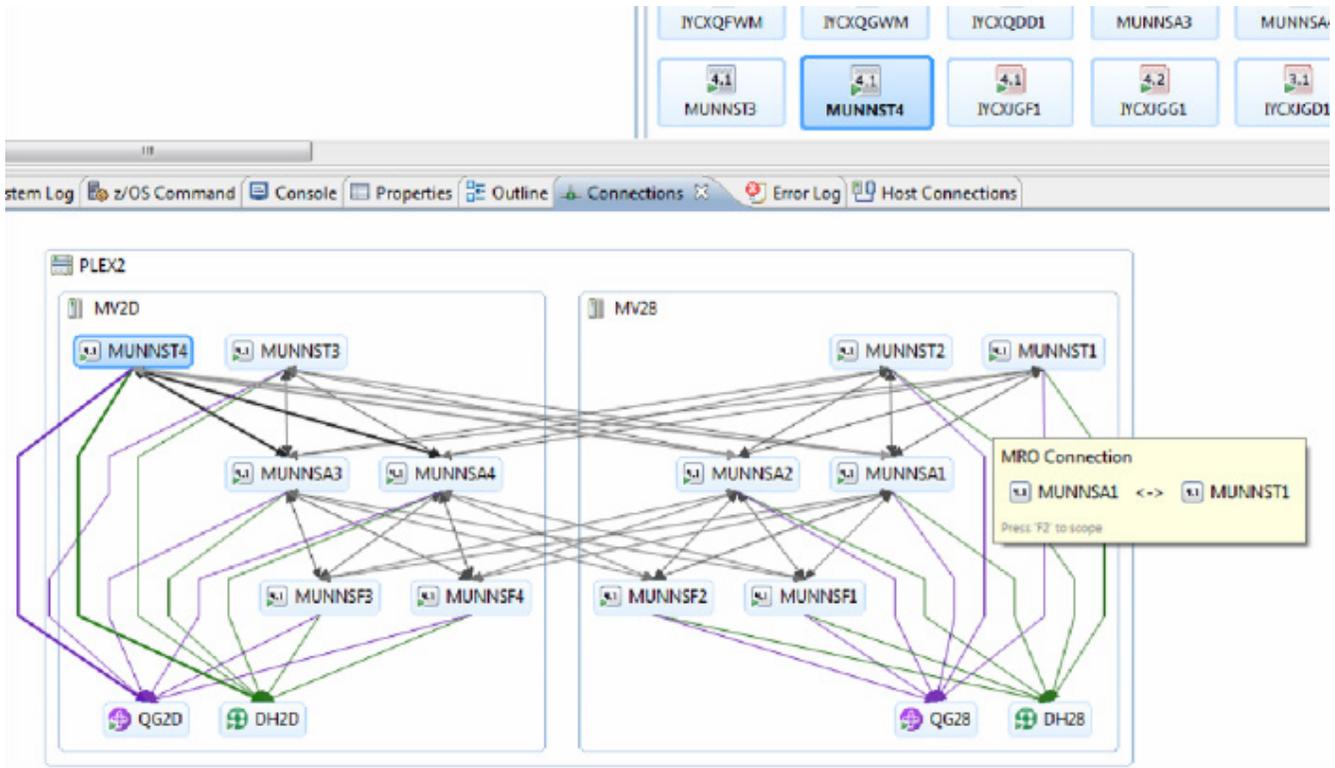
of TCB switches and identify programs in those transactions that are good threadsafe candidates.

Step 2 is to analyse programs to ensure the logic is threadsafe. Step 3 is to implement threadsafe programs. And the final step is to measure the results. CICS PA can be used for steps 1 and 4. CICS IA can be used for step 2. And CICS CM can be used for step 3.

CICS Performance Analyzer (PA) can analyse your CICS applications to determine

which ones are good candidates for threadsafe. It looks at how many switches occurred, how much CPU time was used, delays, and how much they cost.

CICS Interdependency Analyzer (IA) can be used to determine the cause of a high number of Change TCB modes. It looks at what commands are issued by the transaction, how many commands are threadsafe, whether there are any DB2, MQ, or IMS commands, whether there



**Figure 3: CICS DA visualization**

are any Dynamic COBOL commands, whether there are any inhibiting commands, and which commands cause a TCB swap and where they are in the sequence of events. Figure 2 shows an example Explorer view

Sites can also use CICS IA to verify that program logic is threadsafe. It looks for serialization techniques when accessing shared resources, enqueue and dequeue, compare and swap, reviews usage of ADDRESS CWA, EXTRACT EXIT, and GETMAIN SHARED. CICS will provide threadsafe access to its resources, eg files and queues.

CICS Configuration Manager (CM) Packaging,

Transformation, and Migration facilities can be used to manage programs.

CICS PA can then be used to compare the results using the CICS PA Transaction Profile Report. This can quickly show a comparison between before and after the threadsafe project.

When it comes to consolidation, Satish Tanna told the user group that using CICS TS V5.1 scalability can consolidate CICS systems to simplify management. New and improved capabilities in CICS TS V5.1 provide greater single region scalability by doubling the MAXTASK limit to 2000.

There's greater usage of 64-bit storage and reduced

usage of 24-bit storage.

There's greater application parallelism through threadsafe API and SPI extensions. There's greater system parallelism through optimized TCB usage. There are Java performance improvements from 64-bit Java 7 support. And there's greater access to 64-bit application storage when using Assembler programs.

CICS Deployment Assistant (DA) can discover CICS and CICSplex system topology. CICS IA can analyse application resources and interdependencies. CICS CM can implement region consolidation, including CSD and CPSM BAS resources. CICS PA can measure

performance. A CICS DA visualization is shown in Figure 3.

CICS DA will discover Sysplex, CICS assets, and other address spaces. It can visualize assets and interconnections graphically. And it can export discovery data for reporting.

A copy of Satish Tanna's presentation can be found at [http://prezi.com/jug\\_pvdstuw/extracting-optimum-performance-from-cics/](http://prezi.com/jug_pvdstuw/extracting-optimum-performance-from-cics/).

You can see and hear the whole user group meeting by downloading the WMV file from [www.fundi.com/virtualims/presentations/2013-07-09meeting.wmv](http://www.fundi.com/virtualims/presentations/2013-07-09meeting.wmv).

## Meeting dates

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

- On 10 September we have a presentation from Matter of Fact Software's Stephen Mitchell on Creating modern CICS Web applications by exploiting open source Javascript libraries.
- On 12 November there's a presentation from TechKnowledge.

We will be using Citrix

GoToMeeting for the user group meetings.

## Recent CICS articles

*CICS and the Open Transaction Environment: A Retrospective* by Russ Evans in *Enterprise Tech Journal* (June/July 2013). You can find the article at <http://enterprisesystemsmedia.com/article/cics-and-the-open-transaction-environment-a-retrospective>.

## CICS news

IBM has announced the CICS Transaction Server Feature Pack for Mobile Extensions V1.0, which enables users to extend the reach of their existing COBOL, C/C++, and PL/I programs to mobile devices, without having to change their applications. The feature pack adds support for Web service requests using JSON (JavaScript Object Notation) and the conversion between JSON and high-level language data structures, creating an efficient method of consuming enterprise data on a mobile device. Full details can be found at <http://www-01.ibm.com/software/http/cics/mobile/>.

Parasoft has announced a new release of its Service Virtualization solution, which

helps development and QA teams access the complete, realistic test environments needed to develop or test an application. They can capture real system behaviour by using monitors to record live transaction details, by analysing transaction logs, or by modelling behaviour from a simple interface. This latest release introduces advanced service virtualization for mainframes and enables fast, easy manipulation of complex data structures for use in defining sophisticated simulation behaviour.

Parasoft's Service Virtualization enables organizations to simulate the application under test's interactions with subsystems including CICS regions, DB2 databases, and IMS. Communication may occur over protocols such as MQ, HTTP, TCP/IP, and JDBC, and it may involve payloads such as Copybook, XML, fixed-length or other custom message format. This not only promotes faster, more complete testing, but also minimizes disruption to high-value mainframe resources that could be better utilized for runtime or later-stage testing and validation. Full details can be found at <http://www.parasoft.com/jsp/products/release.jsp?articleId=4361&type=Current>.

Compuware has

announced enhancements to Compuware APM for Mainframe, its 24/7 end-to-end transaction management solution. The product has extended its support for CICS to include CICS Transaction Gateway (CTG) and CICS Web Services (SOAP). These enhancements enable customers who use these technologies

to reduce MIPS usage, accelerate mean time to resolution, and deliver better performing applications to their end users. Full details can be found at [http://www.compuware.com/en\\_us/about/press-releases/2013/6/compuware-apm-for-mainframe-enhanced-with-greater-functionality-.html](http://www.compuware.com/en_us/about/press-releases/2013/6/compuware-apm-for-mainframe-enhanced-with-greater-functionality-.html).



## 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 [www.fundi.com/virtualcics](http://www.fundi.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](mailto:trevor@itech-ed.com).

The Virtual CICS user group is free to its members.