

Migrating to CICS Transaction Server 2.2: User Experience



Steve Ware – UF

**SHARE 100
(SHARE in Dallas, TX)**

Session 1028



Migrating to CICS Transaction Server 2.2: User Experience

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Location:	Adam's Mark Dallas – 1st Floor – Dallas B

The University of Florida has completed its migration to CICS Transaction Server release 2.2. The speaker will relate his experiences from this conversion from CICS/ESA 4.1 to CICS TS 2.2.

This presentation is also available in PDF format at URL:

<http://nersp.nerdc.ufl.edu/~sftware/share100/s1028sw.pdf>

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The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/index.html>.

Last updated on February 4, 2003, by **Steve Ware**, <mailto:sfw@nersp.nerdc.ufl.edu>.

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Last updated on February 4, 2003, by **Steve Ware**, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Introduction

- NERDC at UF operates as a service bureau. UF is our "host" institution. We run CICS on a "pseudo" IBM 9672–R36. We actually bought an IBM 9672–R46, and then paid IBM ~\$10K to "neuter" a processor (to MVS), due to IBM and ISV software costs.
- Primary customers are UF, UNF, FCLA, FACTS, and IFAS.
- Our primary/production MVS LPAR includes CICS TS 2.2, z/OS 1.2, DB2 7.1, RACF, etc. During the conversion to CICS TS 2.2, we converted from OS/390 2.10 to z/OS 1.2, and from DB2 V5 to V7 (adding to the CICS conversion excitement ;-).
- We currently do nearly 2 million CICS tasks daily in 14 CICS internal, development, test, and production regions, with over 50% of these tasks CICS Socket Interface related, primarily to provide web access to CICS. Our peak daily task count is over 3 million, during August 2002 Fall semester UF and UNF student registration and drop/add.
- CICS TS 2.2 went GA on January 25, 2002, and we ordered it on January 29, 2002. We received the order (tapes) on February 7, 2002. As of June 30, 2002, we no longer run CICS/ESA 4.1.

[Display Introduction Notes](#), or [Jump to Migration Contributors](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sfware/share100/intro.html>.

Last updated on February 4, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Introduction Notes

The Northeast Regional Data Center (NERDC) at the University of Florida (UF) operates as a service bureau (formerly a State University System or SUS auxiliary) with our primary CICS customers being the Florida Center for Library Automation (FCLA), the University of Florida (UF – our host institution), the University of North Florida (UNF – located in Jacksonville, FL), Florida Academic Counseling and Tracking for Students (FACTS), and the UF Institute of Food and Agricultural Sciences (IFAS).

Our current production environment on our IBM 9672–R46 is CICS TS 2.2, z/OS 1.2, DB2 7.1, RACF, IBM's IP stack, etc. In CICS, we're presently supporting applications written in COBOL and Assembler. We have support in CICS for C/C++ application development.

[Jump to Migration Contributors](#), or [Jump to Table of Contents](#).

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Last updated on February 7, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Migration Contributors

Migration Contributors:

- SHARE, the SHARE CICS Project, and SHARE Proceedings.
 - ◆ SHARE technical sessions very helpful in migration.
 - ◆ SHARE proceedings very helpful in migration.

- IBM CICS Level 2 and CICS Hursley Development.
 - ◆ CICS Level 2 very helpful in problem resolution, etc.
 - ◆ CICS Hursley Development continues to enhance product and support "Classic" CICS.
 - ◆ CICS TS 2.2 "quickest/cleanest" install yet.
 - ◆ CICS TS 2.2 scheduled availability is currently ~99.999% at our site.

[Display Migration Contributors Notes](#), or [Jump to Migration Contributors 2](#), or [Jump to Table of Contents](#).

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Last updated on February 4, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Migration Contributor Notes

SHARE has continued to provide an excellent CICS technical program. The ease of our migration would have been much more difficult without SHARE technical sessions and proceedings. On more than one occasion, our site avoided CICS outages and/or MVS re-IPLs due to notes from SHARE and/or SHARE proceedings.

We've encountered very few problems with CICS TS 2.2, but when we did, the IBM CICS Level 2 and CICS Hursley Development support staff were responsive and top notch.

We're glad to see continual improvements in the CICS product, and enhancements to "Classic" CICS.

Since our conversion to CICS TS 2.2, we've had 3 brief outages (of several minutes). One outage was related to an MVS logger CICS code defect, one was related to a CICS DFHSRP code defect, and one was related to a DB2 outage caused by a distributed DB2 problem.

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Last updated on February 4, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Migration Contributors 2

Migration Contributors:

- !Candle – Omegamon II for CICS V520.
 - ◆ Support in product available on (or before) CICS TS 2.2 GA date.
 - ◆ !Candle continues to support and enhance "Classic" interface.
 - ◆ With current maintenance, Omegamon II for CICS V520 can run in "threadsafe" mode.
Here's the message issued at CICS startup:
◇ OC1034 EXEN MODULE KOCOME00 WILL RUN IN THREADSAFE MODE

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Contributor 2 Notes

!Candle has been and continues to be very helpful in the CICS arena, and continues to enhance the "classic" interface. I personally consider Omegamon II for CICS a "must have" tool for the CICS System Programmer and/or CICS Application Programmer and/or CICS Operations Support staff.

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors

- IBM – Cost.
 - ◆ CICS TS 2.2 license cost increased ~30% at our site.
 - ◆ Subset of CICS TS 2.2 hardcopy publications are "extra cost".
 - ◆ CICS TS 2.2 online ordering information is/was "interesting".
- IBM – MVS Logger.
 - ◆ MVS logger is required – would like option for "Classic" logging/journaling. (We're not holding our breath – you shouldn't either! Note that we're currently a MVS logger DASD–only log streams site.)
 - ◆ Auto/Forward Recovery/User journals add to the whole MVS logger "experience". (We'd rather be working on exploiting new CICS technology instead of reworking CICS logging/journaling.)
 - ◆ DFHLSCU and logger sizing issues.
 - ◇ CICS/ESA 4.1 system log: 5 3390–3 cylinders.
 - ◇ DFHLSCU: 8000+ 3390–3 cylinders with INTERVAL(0) – yikes!

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Last updated on February 4, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors Notes

Our site, like many others, has struggled with z/OS related software costs. The 30% increase in our CICS license costs was not well received at our site ;-). We understand software development costs and appreciate the continued enhancements and improvements to CICS, but we'd like to see IBM do *much* more to assist educational (and all) sites struggling to maintain a viable mainframe – CICS – z/OS workload.

Sites still need hardcopy documentation. Our site likes to keep at least one hardcopy of every available CICS manual. Softcopy documentation is great, especially for searching, but we'd like to see IBM continue to make hardcopy versions of all CICS manuals available for free when the product is ordered. We're not happy with the CICS Information Center Windows requirement, and have several CICS staff members that are unable to utilize it due to this (absurd Windows) requirement. Please consider using something platform independent like Java.

In January, 2002, the IBM ShopzSeries web site did not provide the capabilities to order CICS TS 2.2 with selected feature codes.

Frankly, the MVS logger requirement is a major migration inhibitor, and reduces our ability to provide 100% CICS availability. Don't forget that you'll need to include a JOURNAL FLUSH shutdown PLT program (see the Appendix for an example).

Thanks to Jim Grauel for all of his efforts to improve the MVS logger and the IBM supplied utility programs, like DFHLSCU.

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 2

- IBM – Language Environment.
 - ◆ In CICS TS R2.2, customers may start seeing sporadic DFHAP1200 messages with undocumented LE/370 return codes. The transaction will abend with an AEC8.
 - ◆ At our site, this affected an "older" IBM VisualGen COBOL II application that would simply not run in CICS TS 2.2.
 - ◆ Executive summary: Stay as current as you can with software maintenance ("leading edge" but not necessarily "bleeding edge" ;-).

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 2 Notes

The CICS LE environment was redesigned for CICS TS 2.x. IBM CICS and LE developers and support staff have been working towards CICS and LE improvements.

- See IBM APAR PQ61345/PTF UQ67539:
MSGDFHAP1200 ABENDAEC8 WITH A BAD LE RETURN CODE UPON RETURN FROM A RUNUNIT_END_INVOCATION CALL.
- ERROR DESCRIPTION:
In CICS TS R2.2, customers may start seeing sporadic DFHAP1200 messages with undocumented LE/370 return codes. The transaction will abend with an AEC8.
- As of 07/09/2002, PTF UQ67539 is superseded by UQ67579 (see APAR PQ53921 – affects IBM Debug Tool and CWA.)

Other than this one issue, LE has not been a major migration inhibitor at our site.

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 3

- IBM – CICS Socket Interface:
 - ◆ ERROR DESCRIPTION:
During GETHOSTBYNAME processing in the CICS TRUE EZACIC01 a storage overlay occurs. It is detected when the CICS storage manager does a storage verification during freemain processing. The following message is displayed. DFHSM0102 TDXC01 A storage violation (code X'0D11') has been detected by module DFHSMMF.
 - ◆ Fought similar problem with TCP/IP 3.2C (OS/390 1.3 from about August of 1998).

[Display Migration Inhibitors 3 Notes](#), or [Jump to Migration Inhibitors 4](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 3 Notes

Fighting the same problem across multiple releases of any software product is one of my favorite uses of my time – I'll bet it's one of yours too!

This problem slowed us down because we are heavy users of the IBM CICS Socket Interface, which has been very stable and extensively exploited at our site. Here are the details:

- APAR PQ58556/PTF UQ64119:
ABEND SM0102 0D11 DURING GETHOSTBYNAME IN CICS TRUE EZACIC01 DFHSM0102 TDXC01 A STORAGE VIOLATION (CODE X'0D11')
- ERROR DESCRIPTION:
During GETHOSTBYNAME processing in the CICS TRUE EZACIC01 a storage overlay occurs. It is detected when the CICS storage manager does a storage verification during freemain processing. The following message is displayed. DFHSM0102 TDXC01 A storage violation (code X'0D11') has been detected by module DFHSMMF.
- Fought similar problem with TCP/IP 3.2C (OS/390 1.3 – PQ18907 from about August of 1998).

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 4

- CA–InterTest for CICS (now Advantage CA–InterTest for CICS).
 - ◆ CA–InterTest for CICS 6.1 is required for CICS TS 2.2 and "IBM Enterprise COBOL for OS/390 and z/OS" support.
 - ◆ CICS TS 2.2 went GA (General Availability) on 01/25/2002.
 - ◆ Advantage CA–InterTest for CICS 6.1 went GA on 07/18/2002 (six months later).
 - ◆ We've had to raise issues (PMRs) against CA–InterTest for CICS 6.1 for DB2 V7.1, threadsafe support, Enterprise COBOL, COBOL dynamic CALLs, COBOL structure displays, ENQUEUE problems, and the CICS Socket Interface. Other than that, it seems to work fine ;-).
 - ◆ We've been unable to do thorough "threadsafe" testing in CICS TS 2.2 due to problems we've had with CA–InterTest 6.1 for CICS.

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Migrating to CICS Transaction Server 2.2: User Experience – Migration Inhibitors 4 Notes

CA–InterTest for CICS 6.1 was our biggest migration/conversion inhibitor. We've had many problems with both the beta version we had to run even after we had completed our conversion to CICS TS 2.2, and problems with the GA version after converting from DB2 V5.1 to V7.1, and problems with attempting to utilize threadsafe applications, etc.

Although our application developers are comfortable utilizing CA–InterTest after many years of use at our site, we suffered through many hours of lost productivity, both from our CICS application developers and our CICS systems staff.

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations

- "Considerations when using DFHLSCU".
 - ◆ DFHLSCU is the IBM supplied CICS log stream and coupling facility sizing utility.
 - ◆ Various "considerations" may reduce usefulness of utility.
(See CICS Operations and Utilities Guide.)
 - ◆ Be careful with INTERVAL(0) (default is INTERVAL(30)).
 - ◆ Be careful with LS_SIZE – DFHLSCU does not provide a recommendation, and your default might be 2 tracks, which is typically (always?) a little too small ;-).

- See IBMLink item RTA000164102:
 - ◆ USERS: All users of MVS Logger and CICS logstreams.
 - ◆ PROBLEM SUMMARY: Setup and performance tuning for MVS Logger in CICS.

[Display MVS Logger Considerations Notes](#), or [Jump to MVS Logger Considerations 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger.html>.

Last updated on February 4, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Notes

We had several problems with our initial attempts at utilizing the IBM supplied DFHLSCU utility program. Be sure to read the "Considerations when using DFHLSCU" in the CICS Operations and Utilities Guide.

INTERVAL(0) *will* provide "misleading" suggestions, especially for lower utilized 24x7 CICS regions (as we found out the hard way ;-). We had much better luck with the default INTERVAL(30) value.

From the CICS Installation Guide, "Managing log data sets" section:

"Use LS_SIZE to specify the size, in 4K blocks, of the log stream DASD data sets. Specify a size so that each data set can contain multiple offloads of the primary storage: this is particularly important where all the data is offloaded for a log stream, as in the case of user journals and forward recovery logs. The MVS system logger issues message IXG256I if you specify less than 64K.

If you omit the size parameter, the size is taken from the ALLOCxx member of PARMLIB (the default is 2 tracks, which leads to a high number of new data set allocations). Specify a size that is large enough to avoid a high frequency of new data set allocations—aim for a new data set to be allocated less often than once an hour."

For most of our test regions, we have LS_SIZE(1000). For most of our prod. regions, we have LS_SIZE(2000), with LS_SIZE(4000) for our busiest prod. regions, and LS_SIZE(10000) for a prod. user journal.

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 2

- Sample DASD-only CICS system log streams RDO definitions:

```
CEDA EX GR(NERLOGT1)
NAME      TYPE      GROUP
DFHLGLOG JOURNALMODEL NERLOGT1
DFHLOG    JOURNALMODEL NERLOGT1
DFHSHUNT  JOURNALMODEL NERLOGT1
```

```
OBJECT CHARACTERISTICS      CICS RELEASE = 0620
CEDA  View Journalmodel( DFHLGLOG )
  Journalmodel      : DFHLGLOG
  Group             : NERLOGT1
  Description       : Log of logs for VSAM recovery products
  Journalname       : DFHLGLOG
  Type              : Dummy                Mvs | Smf | Dummy
  Streamname        :
```

[Display MVS Logger Considerations 2 Notes](#), or [Jump to MVS Logger Considerations 3](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 2 Notes

We're a DASD-only MVS logger site, for a variety of reasons.

DFHLGLOG, the "log of logs", is written by CICS to provide information to forward recovery programs such as CICS VSAM Recovery (CICSVR). We specified Type(Dummy), as we are not using a forward recovery program product.

See section "Setting up CICS log streams" in the CICS System Definition Guide manual for a good description on how to define and create CICS log streams that exploit the MVS system logger to record journaling and logging information.

[Jump to MVS Logger Considerations 3](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 3

- Sample DASD-only CICS system log streams RDO definitions:

```
OBJECT CHARACTERISTICS    CICS RELEASE = 0620
CEDA View Journalmodel( DFHLOG  )
  Journalmodel   : DFHLOG
  Group          : NERLOGT1
  Description    : Primary CICS system log
  Journalname    : DFHLOG
  Type          : Mvs                Mvs | Smf | Dummy
  Streamname    : .
```

```
OBJECT CHARACTERISTICS    CICS RELEASE = 0620
CEDA View Journalmodel( DFHSHUNT )
  Journalmodel   : DFHSHUNT
  Group          : NERLOGT1
  Description    : Secondary CICS system log, shunted tasks
  Journalname    : DFHSHUNT
  Type          : Mvs                Mvs | Smf | Dummy
  Streamname    : .
```

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 3 Notes

"Each CICS region requires its own system log. The system log is implemented as two MVS system logger log streams – a primary and a secondary – but, together, they form a single logical log stream."

The primary log is DFHLOG, and the secondary is DFHSHUNT (for shunted tasks).

"The system log is used for recovery purposes – for example, during dynamic transaction backout, or during emergency restart, and is not meant to be used for any other purpose."

We use JOURNALMODEL and the STREAMNAME symbolics at our site.

The CICS/ESA 4.1 system log, DFHJ01, can now be reused as a user journal, as it is **not** the system log with CICS TS.

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 4

- Sample DASD-only CICS user journal log streams RDO definition:

```
CEDA EX GR(NERLOGT1)
```

```
NAME      TYPE      GROUP
DFHJ07    JOURNALMODEL NERLOGT1
```

```
OBJECT CHARACTERISTICS      CICS RELEASE = 0620
```

```
CEDA View Journalmodel( DFHJ07 )
```

```
Journalmodel      : DFHJ07
```

```
Group             : NERLOGT1
```

```
Description       : Define DFHJ07 User Journal as MVS log stream
```

```
Journalname       : DFHJ07
```

```
Type              : Mvs                Mvs | Smf | Dummy
```

```
Streamname        : .
```

[Display MVS Logger Considerations 4 Notes](#), or [Jump to MVS Logger Considerations 5](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 4 Notes

DFHJ07 was defined to CICS/ESA 4.1 as a user journal for automatic journaling, as noted below from our macro DFHJCT for test (for prod., we also had JOUROPT=(CRUCIAL)):

*

```
DFHJCT TYPE=ENTRY,                                +
        JFILEID=7,                                NOTIS - UPDATES / RECOVERY    +
        BUFSIZE=32760,                            AUTOMATIC JOURNALING        +
        SYSWAIT=ASIS,                              +
        OPEN=INITIAL,                              +
        JTYPE=DISK1                                DFHJ07A                      +
```

For CICS TS 2.2, we defined this user journal as an MVS log stream.

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 5

- Sample DASD-only log streams define JCL:

```
//LOGDEFN EXEC PGM=IXCMIAPU
//STEPLIB DD DSN=SYS1.MIGLIB,DISP=SHR
//SYSPRINT DD SYSOUT=A
//SYSIN DD *
DATA TYPE(LOGR) REPORT(NO)
DEFINE LOGSTREAM NAME(CICSRGN.NERCICST.DFHLOG)
                DASDONLY(YES) LS_SIZE(1000)
                MAXBUFSIZE(64000) STG_SIZE(500)
                LOWOFFLOAD(40) HIGHOFFLOAD(80)
                OFFLOADRECALL(NO)
DEFINE LOGSTREAM NAME(CICSRGN.NERCICST.DFHSHUNT)
                DASDONLY(YES) LS_SIZE(1000)
                MAXBUFSIZE(64000) STG_SIZE(500)
                LOWOFFLOAD(0) HIGHOFFLOAD(80)
                OFFLOADRECALL(NO)
DEFINE LOGSTREAM NAME(CICSRGN.NERCICST.DFHJ07)
                DASDONLY(YES) LS_SIZE(1000)
                MAXBUFSIZE(64000) STG_SIZE(500)
                LOWOFFLOAD(0) HIGHOFFLOAD(80)
                OFFLOADRECALL(NO)
                RETPD(0) AUTODELETE(NO)
/*
```

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Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 5 Notes

Notes from our PGM=IXCMIAPU run JCL:

```
//*****  
//*  
//* Define DASE-only log streams for CICS. *  
//* *  
//* The LOWOFFLOAD and STG_SIZE values are for illustration *  
//* only -- substitute values appropriate for your environment. *  
//* *  
//* Use LOWOFFLOAD(0) for user journals. *  
//* Note: Use DFHSHUNT as skeleton. *  
//* Use AUTODELETE(NO) and RETPD(0) for user journals. *  
//*****
```

[Jump to MVS Logger Considerations 6](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger5.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 6

DASD-only CICS log streams displays:

```
CEMT I JOUR
STATUS: RESULTS - OVERTYPE TO MODIFY
Jou(DFHJ07 ) Mvs Ena Str(CICSRGN.NERCICST.DFHJ07 )
Jou(DFHLGLOG) Dum Ena
Jou(DFHLOG ) Mvs Ena Str(CICSRGN.NERCICST.DFHLOG )
Jou(DFHSUNT) Mvs Ena Str(CICSRGN.NERCICST.DFHSUNT )
```

```
dsat 'ixglogr.cicsrgn.nercicst'
```

SERIAL	ALLOC	USED	EX	DSORG	-DCB	ATTRIBUTES-	CR.	DATE	-DSNAME-
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHJ06.A0000000
SYSG02	90	90	1	D-AM	U	4096	0	05/29/02	IXGLOGR.CICSRGN.NERCICST.DFHJ06.A0000000.
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHJ07.A0000008
SYSG01	90	90	1	D-AM	U	4096	0	07/24/02	IXGLOGR.CICSRGN.NERCICST.DFHJ07.A0000008.
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHJ07.NERPLEX
SYSG01	45	45	1	D-AM	U	4096	0	07/26/02	IXGLOGR.CICSRGN.NERCICST.DFHJ07.NERPLEX.D
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHJ08.A0000000
SYSG02	90	90	1	D-AM	U	4096	0	05/29/02	IXGLOGR.CICSRGN.NERCICST.DFHJ08.A0000000.
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHLOG.A0000014
SYSG01	90	90	1	D-AM	U	4096	0	07/24/02	IXGLOGR.CICSRGN.NERCICST.DFHLOG.A0000014.
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHLOG.NERPLEX
SYSG02	45	45	1	D-AM	U	4096	0	07/26/02	IXGLOGR.CICSRGN.NERCICST.DFHLOG.NERPLEX.D
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHSUNT.A0000000
SYSG01	90	90	1	D-AM	U	4096	0	05/29/02	IXGLOGR.CICSRGN.NERCICST.DFHSUNT.A0000000
				C-AM					IXGLOGR.CICSRGN.NERCICST.DFHSUNT.NERPLEX
SYSG02	45	45	1	D-AM	U	4096	0	07/26/02	IXGLOGR.CICSRGN.NERCICST.DFHSUNT.NERPLEX

585 585

16 DATA SETS DISPLAYED

Note that the "NERPLEX" datasets do not exist when CICS is down. Also note that our site is currently using 2 3390-3 type DASD volumes for MVS logger datasets (SYSG01 and SYSG02).

[Display MVS Logger Considerations 6 Notes](#), or [Jump to MVS Logger Considerations 7](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger6.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 6 Notes

In an attempt to bring most of the CICS related MVS logger pieces and parts together for a better understanding of the MVS logger from a CICS perspective, I included a CEMT INQUIRE JOURNAL display, and a dataset display (using a local DSAT command) of our MVS logger datasets from one of our CICS test regions (APPLID=NERCICST).

[Jump to MVS Logger Considerations 7](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger6.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 7

Sample CICS run JCL processing for MVS logger User Journals:

```
//*
//CPYJ07A EXEC PGM=DFHJUP
//STEPLIB DD DSN=CICS.V620.SDFHLOAD,DISP=SHR
//SYSPRINT DD SYSOUT=A,DCB=RECFM=FBA
//SYSUT1 DD DSN=CICSRGN.NERCICST.DFHJ07,
//          SUBSYS=(LOGR,DFHLGCV,LOCAL,COMPAT41),
//          DCB=BLKSIZE=32760
//SYSUT4 DD DSN=FCLA.NOTIS.TEST.DFHJ07A,DISP=SHR,
//          DCB=(DSORG=PS,RECFM=VB,BLKSIZE=32760,LRECL=32756)
//SYSIN DD *
OPTION COPY,NEWDCB
END
/*
//*
//CHKJ07A IF (CPYJ07A.RC = 0) THEN
//IEFBR14 EXEC PGM=IEFBR14
//LOGSTRM DD DSN=CICSRGN.NERCICST.DFHJ07,
//          SUBSYS=(LOGR,DFHLGCV,,DELETE)
//CHKJ07A ENDIF
```

```
SERIAL ALLOC USED EX DSORG -DCB ATTRIBUTES- CR. DATE -DSNAME-
FCLA21 195 195 1 PS VB 32760 32756 09/18/00 FCLA.NOTIS.TEST.DFHJ07A
```

[Display MVS Logger Considerations 7 Notes](#), or [Jump to MVS Logger Considerations 8](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger7.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 7 Notes

Our CICS customers required that they be provided with V620 MVS logger data that is *identical* to V410 user journal data. Key DFHJUP items for our site were LOCAL for LOCAL time instead of GMT time, COMPAT41 (obviously), and the explicit DCB specifications.

We currently run CICS as a batch job (vs started task), and note that this sample JCL is inserted into our CICS run JCL both before and after our PGM=DFHSIP step.

[Jump to MVS Logger Considerations 8](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger7.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger Considerations 8

- Some MVS logger resources:

- SHARE Online Resources:

- ◆ SHARE in San Francisco Conference Proceedings:
<http://www.share.org/proceedings/sh99/share.html>
- ◆ SHARE in Nashville Conference Proceedings:
<http://www.share.org/proceedings/SH98/share.htm>

- OS/390 Logger / CICS – Performance and Common Problems

"Abstract: Two presentations are provided. The first is on evaluating the performance of the z/OS logger when used by CICS. The second deals with overcoming common problems encountered when defining CICS to use the z/OS Logger. This material was developed by Jim Grauel of the CICS Level 2 organization and has been presented at user group meetings such as the Transaction and Messaging (CICS) Technical Conference, and SHARE. This material is being re-published with a publication date of 4/16/02."

<http://www-1.ibm.com/support/techdocs/atmastr.nsf/PubAllNum/PRS183>

[Display MVS Logger Considerations 8 Notes](#), or [Jump to Coexistence Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger8.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – MVS Logger 8 Notes

The SHARE Conference Proceedings and IBM Logger links were valid as of January 28, 2003. There are SHARE session proceedings about the MVS logger in the CICS and MVS projects. The SHARE proceedings and the IBM presentations by Jim Grauel should be considered **required** reading for both your CICS and MVS system programmer(s) involved with the MVS logger.

IBMLink searches with keywords like "cics" and "logger" can also be very enlightening.

[Jump to Coexistence Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/mvslogger8.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Considerations

- Running CICS V410 and V620 with "hybrid" LPA and LINKLIB datasets:
 - Build "hybrid" CICS LINKLIB with V620 .prefix.SDFHLINK, and include V410 modules DFHPD410, DFHTG410, DFHTR410.
 - Build "hybrid" CICS LPA with existing V410 modules, and include V620 prefix.SDFHLPA modules.
 - CICS V410 can still run with SIT LPA=YES, but CICS V620 must run with LPA=NO (initially).
 - For additional guidance, see the CICS "Installation Guide" and the "Program Directory for CICS Transaction Server for z/OS".

[Display Coexistence Notes](#), or [Jump to Coexistence Considerations 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Notes

Until our conversion to CICS TS 2.2 was complete, we needed to coexist with CICS/ESA 4.1.

With a "hybrid" CICS LPA and LINKLIB, this is fairly easily accomplished, and is very similar to most prior CICS conversions.

[Jump to Coexistence Considerations 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Considerations 2

- Sharing the DFHCSD (the CICS System Definition VSAM File):

- Create and initialize a new DFHCSD with V620 DFHCSDUP.
- Copy your local CSD definitions to new DFHCSD with V620 DFHCSDUP.
- Create a new RDO list (V4COMPL) for old CICS release:

```
CEDA EX LI (V4COMPL)
```

NAME	TYPE	LIST
DFHCOMP9	GROUP	V4COMPL
DFHCOMP8	GROUP	V4COMPL
DFHCOMP7	GROUP	V4COMPL
DFHCOMP6	GROUP	V4COMPL
DFHCOMP5	GROUP	V4COMPL

- Add new LIST(V4COMPL) to old CICS SIT GRPLIST:
 - ◆ GRPLIST=(BASELIST,TST1LIST,V4COMPL), for a V410 region.
 - ◆ GRPLIST=(NERLIST,DFHLIST,BASELST6,TST1LST6), for a V620 region, which does not have LIST(V4COMPL).

[Display Coexistence 2 Notes](#), or [Jump to Coexistence Considerations 3](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist2.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Notes 2

Our site prefers to run with a single CSD for administrative simplicity, etc.

See "CICS-supplied compatibility groups" in the "CICS Resource Definition Guide" manual for release specific info.

[Jump to Coexistence Considerations 3](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist2.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Considerations 3

- Reuse of old CICS release files:
 - CICS transaction dump datasets – ok.
 - CICS aux. temp. stor. VSAM datasets – ok.
 - CICS aux. trace VSAM datasets – ok.
 - CICS global catalog – NOT ok.
 - CICS local catalog – NOT ok.
- Assemble old CICS release tables with V620 libraries:
 - DCT (Destination Control Table)
 - MCT (Monitoring Control Table)
 - PLT (Program List Table(s))
 - RCT (DB2 Resource Control Table – see DB2 Considerations)
 - SIT (System Initialization Table)
 - SRT (System Recovery Table)
 - TCT (Terminal Control Table – for sequential terminals)
 - TLT (Terminal List Table for CEST access)
 - XLT (Shutdown Transaction List Table)

[Display Coexistence 3 Notes](#), or [Jump to Coexistence Considerations 4](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist3.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence 3 Notes

Although we created all new V620 CICS datasets for our internal test regions, we wanted to be able to reuse any CICS datasets that were not release specific, and were able to do so, with the exception of the GLOBAL and LOCAL catalog datasets.

We had very few changes (if any) to make to most of our CICS macro tables. However, the next several foils will discuss the "interesting" tables for this conversion, namely the DCT, JCT, and RCT.

[Jump to Coexistence Considerations 4](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist3.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence Considerations 4

- Migrate macro tables to RDO:
 - DCT (Destination Control Table)
(Note: We found that CICS will not re-install a TDQUEUE in CICS startup GRPLIST processing – we modify the IBM supplied definition for CSDL for local processing requirements. Also, we had to rename local DFH* prefix named entries. Our site was using DFHPS* for CICS Physical Sequential TD queues – they were renamed to NERPS*.)
 - JCT (Journal Control table – see Migration Inhibitors ;–)
 - RCT (DB2 Resource Control Table – see DB2 Considerations)

[Display Coexistence 4 Notes](#), or [Jump to Application Programming Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist4.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Coexistence 4 Notes

The DCT, JCT, and RCT macro CICS tables required the most effort in this conversion.

Due to an old local naming convention, DCT entries had to be renamed at our site. We then migrated the DCT to RDO as required for this release, and ran into the problem where CICS will not re-install a TQUEUE in CICS GRPLIST startup processing. This required us to have 2 DCT RDO groups, one for CSDL, and one with all other DCT entries.

The JCT no longer exists due to the MVS logger requirements – see the Migration Inhibitors section of this presentation ;-).

CICS now "owns" the CICS DB2 attach, so our site migrated our macro RCTs to RDO, and the CICS systems staff took over maintenance of the new RDO DB2 components, namely DB2CONN, DB2ENTRY, and DB2TRAN. We've been working through several schemes on how best to manage these components, with work continuing in this area.

[Jump to Application Programming Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/coexist4.notes.html>.

Last updated on February 3, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Application Programming Considerations

- See <http://www.lemon-tree.co.uk/Articles/migotcha.htm> for an excellent "CICS migration gotchas" page:
- READQ TS – INVREQ not QIDERR
 - ◆ CICS TS will now return an INVREQ for an EXEC CICS READQ TS QUEUE('queue') – where 'queue' is low-values. CICS V410 returned QIDERR. Some Application programs test for QIDERR to identify that the variable 'queue' has not been set yet. Application logic needs to be changed or the Global User Exit XTSEREQC could be used to set EIBRESP to QIDERR and emulate the CICS V410 response.
- EXEC CICS START with REQID – IOERR
 - ◆ EXEC CICS START FROM(xxxx...) REQID(xxxx...) no longer operates like it used to under CICS V410. The Response of IOERR can now be given when a duplicate REQID is used – this was not checked under CICS/ESA V410 (although the results would be unpredictable if a duplicate REQID already existed).

[Display Application Programming Notes](#), or [Jump to DB2 Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/appl.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Application Programming Notes

Our site experienced the noted 2 gotchas in 3 different CICS application programs – they were easily updated for this conversion, with minimal consternation.

With nearly 9,000 CICS application programs at our site, this is a tribute to the excellent compatability that CICS has provided between releases. My personal experience is that one typically does NOT enjoy this type of compatability with almost every other application programming environment. We have CICS code from the early 1980s (possibly earlier) that is untouched and still runs fine in CICS TS 2.2. We also have similar experiences with MVS, btw. Remarkable!

[Jump to DB2 Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/appl.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations

- DB2 macro RCT tables are no longer supported at CICS runtime.
- Assemble macro RCT tables with CICS V620 libraries.
- Run DFHCSDUP MIGRATE TABLE(DFHRCTT1) TOGROUP(NERRCTT1).
- Add RDO GR(NERRCTT1) to a LIST in SIT GRPLIST=.
- Specify SIT DB2CONN=YES.
- Check DB2 status with CEMT INQ DB2Conn (or CEMT I DB2C).
 - ◆ CEMT I TAS no longer shows long running DSNC task.
 - ◆ Omegamon shows CEX2 task in USERWAIT for resource CDB2TIME.
- Check SIT MAXOPENTCBS= if DB2 V6 or higher – should be greater than RDO DB2CONN "TCblimit" value according to IBM doc.
- DSNC STRT transaction processing has changed:
 - ◆ DSNC STRT xxxx is used to start the DB2 connection to the xxxx DB2 subsystem, not the xxxx RCT suffix. Simply DSNC STRT to connect to the DB2CONN specified subsystem (DB2Id).

[Display DB2 Considerations Notes](#), or [Jump to DB2 Considerations 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db2.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations Notes

Our DB2 sysprogs made minor RCT macro source code modifications to continue with "No Statements Flagged" assemblies due to DB2 RCT macro changes, etc.

DB2 RDO components are DB2CONN, DB2ENTRY, and DB2TRAN.

[Jump to DB2 Considerations 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db2.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations 2

- DB2 RDO DB2CONN STANDBYMODE(RECONNECT)
 - ◆ Our DB2 systems staff had the following in the macro RCT:
 - ◇ DSNCRCT TYPE=INIT,
STRTWT=YES,
 - ◇ STRTWT= can be one of: AUTO | YES | NO
 - ◆ For CICS TS 2.2, after migrating the macro RCT to RDO, we changed our DB2CONN from STANdbymode(Connect) to STANdbymode(Reconnect). It can now be one of: Reconnect | Connect | Noconnect
 - ◆ "The STANDBY keyword and the AUTO option of STRTWT are valid for CICS Transaction Server 1.1 and above. STRTWT=YES is the default for CICS Version 4 and earlier."

[Display DB2 Considerations 2 Notes](#), or [Jump to DB2 Considerations 3](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db22.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations 2 Notes

Due to several prod. DB2 outages, we've (unfortunately) exercised DB2CONN STANdbymode(Reconnect); however, we've been very happy with this change.

[Jump to DB2 Considerations 3](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db22.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations 3

- SIT RRMS=YES to register CICS as a resource manager with Recoverable Resource Management Services (RRMS) – MVS Resource Recovery Services (RRS).
 - ◆ Required for CICS transaction invocation stored procedure (DSNACICS) for transactional EXCI.
- DB2 V6 (and up) performance (APAR PQ67351).
 - ◆ Jim Grauel from IBM CICS Level 2 will comment.

[Display DB2 Considerations 3 Notes](#), or [Jump to USS Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db23.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – DB2 Considerations 3 Notes

MVS Resource Recovery Services (RRS) is also a user of the MVS logger, and our site has just begun testing in this area, primarily with the IBM supplied CICS transaction invocation stored procedure (DSNACICS) for transactional EXCI.

Here's the current text from IBM APAR PQ67351:

APAR Identifier PQ67351 Last Changed 03/02/06
NON THREADSAFE APPLICATIONS WITH LOTS OF SQL CALLS CAN PERFORM
POORLY WHEN USING CICS/TS 2.2 WITH DB2 V6 OR HIGHER.

Symptom PF PERFORM	Status CLOSED PER
Severity 2	Date Closed 03/02/03
Component 5697E9300	Duplicate of
Reported Release 200	Fixed Release 999
Component Name CICS Z/OS V6	Special Notice HIPER
Current Target Date ..03/02/03	Flags
SCP	PERFORMANCE
Platform	

Status Detail: SHIPMENT - Packaged solution is available for shipment.

PE PTF List:

PTF List:

Release 200 : PTF not available yet

Parent APAR:

Child APAR list:

[Jump to USS Considerations](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/db23.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – USS Considerations

"Some CICS facilities require access to OS/390 UNIX System Services." These include TCP/IP support provided by the CICS sockets domain, JVM, EJB deployment, etc. CICS TS has an "OMVS Requirement". "Before running the installation jobs: Ensure the MVS image was IPLed with OMVS full-function mode. Ensure the userid under which you are running the jobs has superuser authority." We circumvented this superuser requirement as follows:

- CICS sysprog (me) does not want (or need) superuser authority on MVS sysprog (spousal unit ;-)
system.
- MVS sysprog allocated HFS file with CICS sysprog ownership of /usr/lpp/cicsts mount point. The CICS sysprog userid does not have superuser authority, but has drwxr-xr-x (octal 755) file permissions to /usr/lpp/cicsts.
- MVS sysprog wrote execs to allow CICS sysprog mount and umount "privileges" for /usr/lpp/cicsts, for SMP/E maint., HFS backups, etc.
- All SMP/E work for CICS TS done with non-superuser CICS sysprog userid.

[Display USS Considerations Notes](#), or [Jump to Surprises, etc.](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/uss.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – USS Considerations Notes

CICS sysprog and MVS sysprog continue to live in harmony ("marital bliss" ;-) with this USS superuser circumvention.

[Jump to Surprises](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sftware/share100/uss.notes.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Surprises, etc.

- NETNAMES and Surrogate (remote) Terminal Entries (Barry Brooks from UF will comment).
 - ◆ EXEC CICS INQ TERM or INQ NETNAME used to return blanks in the NETNAME field for a surrogate (remote) TCTTE.
 - ◆ NETNAME is now filled in for surrogate TCTTE's
 - ◆ Potential problem for application programs?
 - ◆ Satisfies a long-standing SHARE requirement (be careful what you ask for; you might just get it)
 - ◆ Created a logic problem in our locally written terminal autoinstall program because we were assuming blanks in NETNAME field meant the TCTTE was a surrogate.
 - ◆ Corrected the logic as noted in the handout notes.

[Display Surprises Notes](#), or [Jump to Surprises 2](#), or [Jump to Table of Contents](#).

The URL for this document is <http://nersp.nerdc.ufl.edu/~sfware/share100/surprises.html>.

Last updated on February 6, 2003, by *Steve Ware*, <mailto:sfw@nersp.nerdc.ufl.edu>.

Migrating to CICS Transaction Server 2.2: User Experience – Surprises Notes

Old code:

```
* CHECK TO SEE IF THE LU (NETNAME) ALREADY HAS A TCTTE
SPACE
NETNAMCK EXEC CICS HANDLE CONDITION +
              TERMIDERR(SELECT1) +
              ERROR(RETURN)
SPACE
EXEC CICS INQUIRE , Normal return, already exists +
      NETNAME(NETNAME) , ..If not, go to SELECT1 +
      TERMINAL(DUPTRMID) +
      ACQSTATUS(ACQSTAT) +
      SERVSTATUS(SERVSTAT)
SPACE
MVC SELECTED_TERM_ID,DUPTRMID Pick up TERMID from TCTTE
MVI SELECTED_RETURN_CODE,RETURN_OK Indicate all is OK
B RETURN and exit
DFHEJECT ,
* SELECT TERMID FROM TABLE (ENQ to force single threading)
SPACE
SELECT1 EQU *
```

New Code:

```
NETNAMCK EXEC CICS HANDLE CONDITION +
              TERMIDERR(SELECT1) +
              ERROR(RETURN)
SPACE
EXEC CICS INQUIRE , Normal return, already exists +
      NETNAME(NETNAME) , ..If not, go to SELECT1 +
      TERMINAL(DUPTRMID) +
      REMOTENAME(REMOTEID) +
      ACQSTATUS(ACQSTAT) +
      SERVSTATUS(SERVSTAT)
SPACE
CLC REMOTEID(4),=CL4' ' REMOTE TERMINAL ENTRY?
BNE SELECT1 ..YES, DO NOT REUSE
SPACE
* REUSE LOCAL TERMINAL ENTRY FOR THIS NETNAME
SPACE
MVC SELECTED_TERM_ID,DUPTRMID Pick up TERMID from TCTTE
MVI SELECTED_RETURN_CODE,RETURN_OK Indicate all is OK
B RETURN and exit
DFHEJECT ,
* SELECT TERMID FROM TABLE (ENQ to force single threading)
SPACE
SELECT1 EQU *
```

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Migrating to CICS Transaction Server 2.2: User Experience – Surprises 2

- ASSIST/TS (formerly ASSIST/GT) releases prior to release 6.0 not supported in CICS Transaction Server releases (Barry Brooks from UF will comment).
 - ◆ Only one application using this product
 - ◆ Failed to check with GT Software ahead of time
 - ◆ Not discovered during testing
 - ◆ Running ASSIST/GT rel 4.6.5 at time of conversion
 - ◇ appeared to be working most of the time
 - ◇ occasional SM0102 dumps began occurring
 - ◆ GT Software said the product had to be re-written for CICS TS due to large changes in architecture of CICS; therefore, releases prior to 6.0 are NOT SUPPORTED in CICS TS.
 - ◆ With 6.0, product was renamed to ASSIST TS (I wonder why that name?)
 - ◆ Moral of the story: Don't forget to check with ALL vendors up front

[Display Surprises 2 Notes](#), or [Jump to Surprises 3](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – Surprises Notes 2

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Migrating to CICS Transaction Server 2.2: User Experience – Surprises 3

- Changed SIT DUMPDS=AUTO to DUMPDS=A to force to dump dataset A for local processing requirements.
- CICS DB2 CPU increased after DB2 V5 was converted to V7, or "Lies, Damn Lies, and Statistics":
 - ◆ From the IBM Manual "CICS Transaction Server for z/OS(TM) CICS DB2 Guide Version 2 Release 2 Document Number SC34-6014-00 Program Number 5697-E93", in the section "9.11 Accounting for processor usage in a CICS DB2 environment", subsection "9.11.2 DB2-generated processor usage information":

"In a CICS environment, the processor time from the DB2 accounting records is typically much greater than the processor time reported in the DB2 statistical records, because most of the processor time used is in the thread TCB itself and in the DB2 address spaces using cross memory services."

[Display Surprises 3 Notes](#), or [Jump to Summary](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – Surprises Notes 3

We needed to force CICS to use transaction dump dataset A at startup, which required a change from SIT DUMPDS=AUTO to DUMPDS=A.

If you do any sort of charge back or review of CICS CMF and/or DB2 SMF data, be sure to attempt to understand the implications of your DB2 version, and the way processor usage is accounted for.

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Migrating to CICS Transaction Server 2.2: User Experience – Summary

- CICS TS 2.2 was the "quickest/cleanest" install I've been involved with. We've had ~100% (aka "five nines" or 99.999%) scheduled availability of our production CICS environment since this conversion.
- With ~10K CICS application programs at our site, only 3 had to be modified for this conversion.
- Our migration was aided by the fact that we're currently a "Classic CICS" site. We're glad that IBM continues to enhance "Classic CICS" and extend the product functionality.
- MVS logger required more research, planning, resources, and implementation work than we would have liked. (Potential candidate for the "understatement of the year" ;-).
- OEM/ISV CICS ancillary product support was a typical migration inhibitor, with the notable exception of !CANDLE Omegamon II for CICS V520. We've been unable to do thorough "threadsafe" testing in CICS TS 2.2 due to problems we've had with CA-InterTest 6.1 for CICS.
- CICS is and has been a stable and robust server for us – plans are to continue to exploit CICS, the CICS Socket Interface, and some of the newer CICS functionality to provide even more CICS services at our site.

[Display the Summary Notes](#), or [Jump to Appendix](#), or [Jump to Table of Contents](#).

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Migrating to CICS Transaction Server 2.2: User Experience – Summary Notes

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Migrating to CICS Transaction Server 2.2: User Experience – Appendix

- NERDC CICS assembler application program DCNEPLTS used to attempt to perform a SET JOURNAL FLUSH command for each MVS logger user journal at PLT shutdown time. Note that currently, error handling is minimal or non-existent (left as an exercise for the "student" ;-).
- IBM CICS electronic publications:

<http://www.ibm.com/software/ts/cics/library/>

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