

WAVV 2004
Chattanooga, TN

CICS TS Migration and Exploitation User Experiences

Big M, Inc. 12 Vreeland Ave. Totowa, NJ 07512	Presented by: John Lawson illustro Systems info@illustro.com
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Company Background



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System Background

- Hardware
 - Tserver Flex-ES system from T3
 - Two native VSE Images
 - Production – 368MB real
 - Systems programmer test – 128MB real
 - Emulated 3380-3 and 3390-3 DASD
 - Integrated Ethernet cards for TCPIP
 - 3745 NCP for connectivity to remote sites and credit card authorization

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System Background...

- Former Production Environment
 - VSE/ESA 2.2
 - Five CICS/VSE 2.3 partitions
 - Three production, one test, one for ICCF
 - Screen Definition Facility (SDF) V1R5 for BMS map development
 - Primarily COBOL/VSE command level applications
 - Some macro level programs in credit card system
 - VSE IUI used for sign-on, selection panels and application dialogs

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System Background...

- Former Production Environment ...
 - Vendor products
 - Computer Associates CIS 1.4 9907
 - CA DYNAM Family 6.0
 - CA RAPS 5.0 9907
 - Barnard Systems TCPIP Tools 2.1.7
 - SYNSORT 3.3
 - IPCP 4.2B
 - PC Mainframe 5.4 (file transfer)
 - MacKinney Global Search and Replace 2.1

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System Background...

- Test Environment
 - Started migration to 2.5 in 2002 with part-time systems help
 - Initial migration and testing done on VSE 2.5
 - FSU to 2.7.0 in July 2003
 - Required upgrade to FLEX-ES to support 2.7
 - Engaged illustro services in January 2004 to help complete migration
 - FSU to 2.7.1, software updates and CICS TS migration
 - Initial tests on production image end of February
 - In production on April 1, 2004

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System Background...

- Current Production Environment
 - VSE/ESA 2.7.1
 - Six CICS partitions
 - CICS Transaction Server
 - Two production, one test, ICCF
 - SDF II for BMS map development
 - CICS/VSE 2.3
 - One production for credit card application system
 - One development for SDF V1R5
 - VSE Basic Security Manager and IUI used for sign-on to CICS TS partition

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System Background...

- Current Production Environment ...
 - Vendor products
 - Computer Associates CIS 1.4 SP7 (0304)+
 - CA DYNAM Family 7.0 SP2 (0304)+
 - CA RAPS 5.0 SP7+
 - Barnard Systems TCPIP Tools 2.3.5
 - SYNCSORT 3.4B
 - IPCP 4.4A
 - PC Mainframe 5.4 (file transfer)
 - MacKinney Global Search and Replace 2.1

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Migration Considerations

- VSE and CICS System Setup
 - Increased CICS partition sizes from 30MB to 50MB
 - Increased VSIZE to 512M to support larger CICS TS partitions
 - Shared CSD for CICS TS partitions
 - Separate shared CSD for CICS/VSE 2.3 partitions
 - Moved CICS partition from FB to dynamic, BSM server runs in FB

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Migration Considerations...

- CICS TS Resource Definitions
 - Created jobstreams to assembly and migrate PCT, PPT and TCT to CSD file
 - Removed IBM definitions from tables
 - Used DFHxxx TYPE=GROUP macros
 - Created vendor definitions in CSD for new installs
 - Added DEFINE TRANCLASSES to replace SIT CMXT
 - FCT macro tables were not migrated
 - Removed VSE IES file copybook (defined in CSD)
 - Other tables assembled with CICS TS updates

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Migration Considerations...

- CICS TS Security
 - BSM used for sign-on and transaction security
 - IESBLDUP utility used to migrate IUI definitions
 - Intended to run only once after initial installation
 - Created copy of IESCNTRL file and ICCF file with IBM installed entries only to rerun at cutover
 - LU6.2 terminals with preset security
 - OPERSEC and OPERRSL parameters defined in TCT
 - Replaced with USERID parameter
 - Defined user profile for preset security values

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Migration Considerations...

- CICS TS Security
 - Display active users dialog problem
 - Showed all terminals were signed on
 - Displays signed-on terminals based on non-blank OPID value in terminals installed in CICS partition
 - CICS default user profile determines default security for terminals
 - SIT DFLTUSER
 - DBDCCICS and PRODCICS default profiles installed in IESCNTRL file with blank OPID field
 - IUI Maintain User Dialog does not support changing these profiles unless non-blank OPID is entered. (received patch from IBM to enter blanks)

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Migration Considerations...

- CICS/VSE Security
 - Used IUI on VSE/ESA 2.2
 - VSE/ESA 2.7 IUI not supported on CICS/VSE
 - Solution
 - Copied VSE/ESA 2.2 IES programs to private library on 2.7
 - Copied VSE/ESA 2.2 IES files to user catalog on 2.7
 - Used VSE/ESA 2.2 CICS table definitions for CICS/VSE partition (except ICCF PCT and PPT entries)
 - Used for sign-on, selection panels and application dialogs only

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Migration Considerations...

- Applications
 - Command level Cobol/VSE
 - Most were object compatible
 - Converted programs with EXEC CICS LINK to CEMT program DFHEMTP
 - Incompatible parameters SET "DATASET" OPEN
 - Converted to EXEC CICS SET FILE(OPEN)
 - Macro level programs in credit card system
 - Coexistence CICS/VSE 2.3 partition
 - CICS/VSE 2.3 partition for SDF 1.5 until more experience with SDF II BMS map definition

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Migration Considerations...

- Others
 - CEMT command parameters different
 - CEMT INQ TRAN must now be CEMT INQ TRANS
 - CEMT INQ DA(TASET) is now CEMT INQ FILE
 - IUI Sign-on LOGON HERE changed from input option 2 to PF12 key input
 - VSE MSG command improved
 - MSG CICSICCF,DATA=CEMT PERF SHUTDOWN
 - Option 9 on ICCF member display for viewing

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Migration Considerations...

- Others
 - System dumps on ASRA transaction abends
 - Implemented PLT dump suppression program to suppress
 - Maximum number of dumps control in SIT too small
 - SIT TRDUMAX and SYDUMAX
 - IBM supplied settings 1, changed to 20 and 3
 - CICS performance appears slower at times
 - More CPU for TurboDispatcher and CICS TS
 - No tuning or exploitation done yet to improve performance

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Summary

- CICS TS migration takes extra planning and work
- Thorough test plan for CICS TS is a must
- VSE 2.7 and CICS TS have been very stable

"The system has been so consistent that we have yet to IPL it since we converted." Desmond Duncker, Mainframe Development Manager (DESMOND@mandee.com)

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