

## **Installation Summary for**

**AUTOMON/CICS OS/390 & z/OS**

### **Publication Number**

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**WORLD HEADQUARTERS  
UNICOM Systems, Inc.**

1143 Summit Drive  
Beverly Hills, CA 90210  
(818) 838-0606 Fax: (818)838-0776

**MISSION HILLS DIVISION  
UNICOM Systems, Inc.**

15535 San Fernando Mission Blvd.  
Mission Hills, CA 91345, U.S.A.  
(818) 838-0606 Fax: (818)838-0776

**FAREAST DIVISION  
UNICOM Systems, Korea**

Hawangshimnidong 301 102  
Sungdong-ku, Seoul, Korea  
(02) 296-5476

# AUTOMON/CICS INSTALLATION

## A) MACHINE-READABLE MATERIAL

### 1) DISTRIBUTION TAPE:

AUTOMON/CICS is distributed on an IBM standard, Cart, 6250 or 1600 BPI IEBCOPY format tape reel. The feature number on the tape indicates the tape density.

FEATURE #	DENSITY	PRODUCT	OPER SYSTEMS
OT38-0420-1	6250	AUTOMON/CICS	OS/390, z/OS
OT38-0420-2	1600	AUTOMON/CICS	OS/390, z/OS
OC38-0420-3	CART	AUTOMON/CICS	OS/390, z/OS

### 2) DISTRIBUTION TAPE CONTENTS

FILE#	FILE NAME	DESCRIPTION
1	UNICOM.INSTLIB	Installation JCL
2	UCCF.V420.AUTHLIB	UCCF/Server Subsystem
3	UNICOM.CENTRAL.V420.LOADLIB	Load Library
4	UNICOM.CENTRAL.V420.REXX	REXX Library
5	UNICOM.CENTRAL.V420.HELP	Help File
6	UNICOM.CENTRAL.V420.PANELS	Panel Library
7	UNICOM.V420.LICENSE	License Library
8	UNICOM.CENTRAL.V420.SAMPLE	Sample Library
9	AUTOMON.LA.V420.LOADLIB	AUTOMON Log Analyzer Load Library
10	AUTOMON.LA.V420.IVPLIB	AUTOMON Log Analyzer IVP Library
11	AUTOMON.LA.V420.CSHCMACD	CICS Message File
12	AUTOMON.CICSTS32.LOADLIB	AUTOMON CICS TS 3.2 Load Library
13	AUTOMON.CICSTS31.LOADLIB	AUTOMON CICS TS 3.1 Load Library
14	AUTOMON.CICSTS23.LOADLIB	AUTOMON CICS TS 2.3 Load Library
15	AUTOMON.CICSTS22.LOADLIB	AUTOMON CICS TS 2.2 Load Library
16	AUTOMON.CICSTS13.LOADLIB	AUTOMON CICS TS 1.3 Load Library
17	AUTOMON.CICSTS12.LOADLIB	AUTOMON CICS TS 1.2 Load Library
18	AUTOMON.CICSTS11.LOADLIB	AUTOMON CICS TS 1.1 Load Library

## **B) INSTALLATION STEPS**

AUTOMON/CICS libraries are distributed in IEBCOPY format. IEBCOPY is described in the OS/VS MVS Utility Manual.

### **1) UNLOAD INSTALLATION LIBRARY**

The following sample JCL will unload the UNICOM installation and licensing libraries from tape to a DASD device of your choice. A different BLKSIZE can be specified on the DCB and SPACE statements if desired, in which case the space allocation may need to be adjusted.

Note:

1. You should follow your system naming conventions to replace UNIT=TAPE with input tape drive name and replace UNIT=uuuu with DASD devices for output datasets.
2. You should replace VOL=SER=vvvvvv with a suitable volume serial number.
3. You can change the output dataset name to meet the naming conventions of your environment.

```
//UNLOAD JOB , 'UNLOAD UNICOM INSTALLATION LIBRARY' ,CLASS=A
//UNLOAD EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//IN1 DD UNIT=TAPE,DSN=UNICOM.INSTLIB,
// DISP=OLD,LABEL=(1,SL,EXPDT=98000),
// VOL=(,RETAIN,SER=UNICOM)
//IN2 DD UNIT=TAPE,DSN=UNICOM.V420.LICENSE,
// DISP=OLD,LABEL=(7,SL,EXPDT=98000),
// VOL=(,RETAIN,SER=UNICOM)
//OUT1 DD UNIT=uuuu,DSN=UNICOM.INSTLIB,
// DISP=(,CATLG),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),
// SPACE=(CYL,(7,1,25)),VOL=SER=vvvvvv
//OUT2 DD UNIT=uuuu,DSN=UNICOM.V420.LICENSE,
// DISP=(,CATLG),
// DCB=(RECFM=VB,LRECL=255,BLKSIZE=6065),
// SPACE=(TRK,(2,1,2)),VOL=SER=vvvvvv
//SYSIN DD *
C I=((IN1,R)),O=OUT1
C I=((IN2,R)),O=OUT2
/*
```

## **2) UNLOAD AUTOMON/CICS LIBRARIES**

This JCL will allow the user to download the AUTOMON/CICS libraries which are required by AUTOMON/CICS to function properly. You only need to download the libraries which pertain to the CICS release(s) at your installation. This job uses a BLKSIZE of 4000. A different BLKSIZE can be specified on the DCB and SPACE statements if desired, in which case the space allocation might need adjusting. A copy of this JCL may be found in the UNICOM.INSTLIB in member @38IEBCO.

Note:

1. You should follow your system naming conventions to replace UNIT=TAPE with input tape drive name and replace UNIT=uuuu with DASD devices for output datasets.
2. You should replace VOL=SER=vvvvvv with a suitable volume serial number.
3. You should be careful in your selection of dataset name prefix, because it will be the same for all of the product libraries.
4. You should replace xxx with the CICS release(s) which are installed at your site. Also change the LABEL=(?,SL) to reflect the file # which corresponds with the load library of the CICS release.(Refer to "Distribution Tape Contents" for the file sequence number). For each CICS release running at your installation, you should download the corresponding AUTOMON/CICS load library.

```
//UNLOAD JOB , 'UNLOAD AUTOMON/CICS LIBRARIES' ,CLASS=A
//UNLOAD EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//IN1 DD UNIT=TAPE,DSN=AUTOMON.CICSxxx.LOADLIB,DISP=OLD,
// LABEL=(?,SL,EXPDT=98000),
// VOL=(,RETAIN,SER=UNICOM)
//OUT1 DD UNIT=uuuu,DSN=AUTOMON.CICSxxx.LOADLIB,
// DISP=(,CATLG),DCB=(BLKSIZE=4000),
// SPACE=(CYL,(3,1,30)),VOL=SER=vvvvvv
//SYSIN DD *
C I=((IN1,R)),O=OUT1
/*
```

### **3) UNLOAD UCCF/SERVER**

The Universal Command Control Facility (UCCF) server subsystem task will issue a number of Authorized MVS commands. UCCF/Server is a proprietary product, which must be licensed separately from AUTOMON/CICS. UCCF/Server enhances AUTOMON/CICS product functions in several areas when the two products are active.

These functions include:

- 1.) Enhanced Loop Kill Abilities
- 2.) The ability to optionally generate an MVS SDUMP at the time that AUTOMON/CICS detects a Storage Violation or System Crash Condition.
- 3.) The ability to issue Console Commands directly from AUTOMON/CICS.

#### **WARNING:**

- 1.) This is an optional feature which performs various authorized MVS functions. The UCCF.V420.AUTHLIB must be included in the APF list in order for these functions to be available. Implementation of these features is at the discretion of the user.
- 2.) In the event of a loop in a non-CICS module (ie. DB2, DL1 programs) associated with the CICS system. The possibility exists that AUTOMON/CICS may not be able to cancel the looping transaction unless the UCCF/Server subsystem task has been activated.
- 3.) The UCCF/Server subsystem task requires MVS/ESA and TSO/E V2.

The following sample JCL will unload the tape file containing the UCCF/Server load library to a DASD device of your choice, using a BLKSIZE of 4000. A different BLKSIZE can be specified on the DCB and SPACE statements if desired, in which case the space allocation might need adjusting. If the user elects not to install the UCCF/Server please skip to Step 7 of the AUTOMON/CICS installation steps.

Note:

1. The following JCL can be found in member @38IEBC1 of the UNICOM installation library.
2. You should follow your system naming conventions to replace UNIT=TAPE with input tape drive name and replace UNIT=uuuu with DASD devices for output datasets.
3. You should replace VOL=SER=vvvvvv with a suitable volume serial number.
4. You should be careful in your selection of dataset name prefix, because it will be the same for all of the product libraries.

```

//UNLOAD JOB , 'UNLOAD UCCF/SERVER' , CLASS=A
//UNLOAD EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//IN1 DD UNIT=uuuu, DSN=UCCF.V420.AUTHLIB, DISP=OLD,
// LABEL=(2, SL, EXPDT=98000) ,
// VOL=( , RETAIN, SER=UNICOM)
//OUT1 DD UNIT=uuuu, DSN=UCCF.V420.AUTHLIB,
// DISP=( , CATLG) , DCB=(BLKSIZE=4000) ,
// SPACE=(CYL, (2, 1, 30)) , VOL=SER=vvvvvv
//SYSIN DD *
C I=(( IN1, R) ) , O=OUT1
/*

```

#### **4) AUTHORIZE LIBRARY**

The Universal Command Control Facility (UCCF/Server) is optional, it requires Authorized Program Facility (APF) authorization.

Note:

1. To authorize the UCCF/Server load library, add "UCCF.V420.AUTHLIB" into member IEAAPFxx of SYS1.PARMLIB.
2. The above authorization definitions will take effect after next system IPL.

#### **5) ALLOCATE UCCF/SERVER LOG FILE**

The UCCF/Server requires the allocation of a System Log File. This is a physical sequential file with the following attributes:

- |                   |                         |
|-------------------|-------------------------|
| 1) RECFM=FBA      | - Record format         |
| 2.) LRECL=121     | - Logical Record Length |
| 3.) BLKSIZE=23474 | - Block size            |

The file should be allocated with 1 track as both the primary and secondary allocations. This file may be allocated through TSO or by submitting a job stream to allocate the file.

The file name for the UCCF/Server Log File must match file name specified by the DD card 'CSHLOG' in the JCL to start the UCCF/Server subsystem task, please reference the example on page 16.

## **6) DEFINE SYSTEM DEFINITION FILE**

The AMON501 VSAM dataset is required as a UCCF/Server system file. If your installation is using UNICOM/CENTRAL you should register this product using the UNICOM/CENTRAL administration function. If you do not have UNICOM/CENTRAL installed at your installation a sample JCL is provided in UNICOM.INSTLIB(@00A501). Change the JCL to suit the requirements of your installation. A different CISIZE can be specified if desired, in which case the space allocation may need to be adjusted.

Note:

1. The JCL to follow can be found in member @00A501 of the UNICOM installation library.
2. You should replace VOL=SER=vvvvvv with a suitable volume serial number.
3. You should change the VSAM dataset name to meet the naming convention of your environment.
4. Member INITIAL of the UNICOM.V420.LICENSE dataset is normally pre-coded with installation codes valid for the duration of your trial.
5. After this JOB is successfully executed, the system definition file will be defined and initialized with default data.

### **Registering UCCF/Server for NON-UNICOM/CENTRAL Users**

```
//CSHVSAM JOB , 'IDCAMS-UNICOM PRODUCT REGISTRATION' ,CLASS=A
//DEFINE EXEC PGM=IDCAMS,REGION=4096K
//IN501 DD DISP=SHR,DSN=UNICOM.V420.LICENSE(INITIAL)
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DELETE UNICOM.CENTRAL.AMON501
DEFINE CLUSTER (NAME(UNICOM.CENTRAL.AMON501) -
    SHR(3 3)) -
    DATA (NAME(UNICOM.CENTRAL.AMON501.DATA) UNIQUE -
    CYLINDERS(5 2) VOLUME(??????) CISZ(8192) -
    FSPC(10 10) KEYS(10 0) RECSZ(256 16000)) -
    INDEX (NAME(UNICOM.CENTRAL.AMON501.INDEX) UNIQUE -
    CYLINDERS(1 1) VOLUME(??????))
REPRO INFILE(IN501) OUTDATASET(UNICOM.CENTRAL.AMON501)
/*
```

## **7) CREATE UCCF/SERVER START-UP PROC**

The following sample JCL may be used to start the UCCF/Server Subsystem as a started task. The job stream to start the subsystem is located in UNICOM installation library member @00PROC and must meet the following requirements:

1. The STEPLIB must point to the UCCF.V420.AUTHLIB When the UCCF.V420.AUTHLIB is not in the link list.
2. The library pointed to by STEPLIB must have been previously included in the Authorized Program Facility (APF) list.
3. CSHLOG must exist and must point to the UCCF/Server subsystem log file allocated during installation.
4. CSH00SIP can either be initiated as a started task using the MVS START command, which is recommended, or submitted as a batch job. The SYSNAME start-up parameter specifies the name to be assigned to the UCCF/Server subsystem task. The SYSNAME parameter identifies the UCCF/Server subsystem to AUTOMON/CICS. The SYSNAME PARM must be a unique 4-byte subsystem name.

### **JCL to Start UCCF/Server Subsystem**

```
//*+=====+*
//* | THIS JOB IS OPTIONAL
//* | IF YOU START THIS JOB, AUTOMON/CICS WILL ISSUE VARIOUS
//* | APF AUTHORIZED MVS ACTION COMMANDS. COMMANDS SUCH AS:
//* | . AUTHORIZED LOOP_KILL
//* | . SDUMP - SVC DUMP
//* | . MGCR - CONSOLE COMMANDS
//* | ("STEPLIB" NEEDS TO BE INCLUDED IN THE APF LIST)
//*+=====+*
//CSH00SIP PROC
//*+=====+*
//* | START UCCF/SERVER ADDRESS SPACE
//*+=====+*
//CSH00SIP EXEC PGM=CSH00SIP,TIME=1440,
// PARM='SUBSYS(UCCF),MAXCICS(32),MAXUSER(32)'
//STEPLIB DD DISP=SHR,DSN=UCCF.V420.AUTHLIB
//CSHRPL DD DISP=SHR,DSN=UCCF.V420.AUTHLIB
//CSHLOG DD DISP=SHR,DSN=UCCF.SUBSYS.LOG
//AMON501 DD DISP=SHR,DSN=UNICOM.CENTRAL.AMON501
```



## **8) DEFINE UMON001 VSAM FILE**

The UMON001 VSAM dataset is required as an AUTOMON/CICS system file. A sample JCL is provided in UNICOM.INSTLIB:

### Members in UNICOM.INSTLIB:

UMON001:	Default system entries and messages (Upper/lower case)
UMON01U:	Default system entries and messages (Upper case)
UMON001R:	Updated Messages only for existing users (Upper/lower case)
UMON01UR:	Updated Messages only for existing users (Upper case)

First time users MUST use UMON001 or UMON01U. Existing users may use UMON01U or UMON01UR to refresh the messages. Change the JCL to suit the requirement of your installation. A different CISIZE can be specified if desired, in which case the space allocation might need adjusting.

### Note:

1. You only need to define one UMON001 file for unlimited CICS address spaces.
2. A different CISIZE, SHR and SPACE parameters can be specified if desired.
3. The UMON001 VSAM file should be defined locally with read and browse capabilities in all regions. The user should then select a region from which all updates to the UMON001 file will be made. In the region selected, the user should define the UMON001 file with the additional capabilities of update, add and delete.

## **9) DEFINE AMON001 VSAM FILE**

AMON001 VSAM dataset is required as an AUTOMON/CICS history database. A sample JCL is provided in UNICOM.INSTLIB (AMON001). Change the JCL to suit the requirement of your installation.

### **Note:**

1. If you wish to monitor multiple CICS regions, residing on different CPUs from a single logon to CICS or TSO/ISPF, then the AMON001 VSAM dataset needs to be allocated on a shared DASD volume.
2. A different CISIZE, SHR and SPACE parameters can be specified if desired.
3. It is recommended that the AMON001 file be defined as a local FCT entry in the File Owning Region (FOR)-[or an AOR] and defined as remote FCT entries in all other regions that are running AUTOMON/CICS.
4. Non-MRO users should consider that the possibility of file corruption to AMON001 exists especially when the file is shared among multiple LPARs. To ensure complete data integrity in a non-MRO environment a separate AMON001 file should be defined for each region in which you install AUTOMON/CICS.

## **10) ASSEMBLE CICS TABLES**

The following CICS/VS system tables must be modified and reassembled:  
(Please see UNICOM.INSTLIB(CSHCSDxx) for RDO definitions).

UNICOM.INSTLIB (CSHCSD62) – for CICS TS 2.2

UNICOM.INSTLIB (CSHCSD63) – for CICS TS 2.3

UNICOM.INSTLIB (CSHCSD64) – for CICS TS 3.1

UNICOM.INSTLIB (CSHCSD65) – for CICS TS 3.2

- DFHPCT
- DFHPPT
- DFHFCT
- DFHPLTPI
- DFHPLTSD
- DFHSIT

## **11) MODIFY CICS START-UP JCL**

- a) Add AUTOMON/CICS load library to the DFHRPL - A sample JCL is provided in UNICOM.INSTLIB(@38CICS)

```
//DFHRPL DD DISP=SHR,DSN=AUTOMON.V420.CICSTS31.LOADLIB
```

- b) If you are using the UCCF/Server subsystem the authorized UCCF/Server load library must be added to the STEPLIB of the CICS start-up JCL.

```
//STEPLIB DD DISP=SHR,DSN=UCCF.V420.AUTHLIB
```

## **12) APPLY AMASPZAP**

If you are a trial user, please apply zap located in member @38ZAP of the UNICOM.INSTLIB. This member has been pre-coded for trial installation. If you are a licensed user, please apply the ZAP code that is shipped with this installation tape. Change your dataset name as needed in STEP1 of your installed load library name.

### **Note:**

1. If you have systems products installed in your installation, (eg. TMON, ACF2 etc.) Then you need to exclude AUTOMON/CICS transactions from them.  
(Transaction IDs=AMON, U\$AM, UMON, AON and AOFF)

## **13) NAME AND PASSWORD**

You will be prompted for a name and password when you sign on to the "UMON" transaction. Please enter the following information when the sign on screen is displayed.

NAME = UNICOM

PASSWORD = ACE

## **14) PROGRAM SERVICES**

This program is classified as a Licensed Program. Contact your UNICOM Marketing representative or System Engineer (SE) for specific information about available program services.

## **15) STATEMENT OF SUPPORT PROCEDURE**

Report any difficulties you have using this product to your UNICOM SUPPORT CENTER. If an APAR is required, submit the date to the location identified in this publication.

## **C) INSTALLATION VERIFICATION PROCEDURE**

AUTOMON/CICS is now fully installed. This section consists of three parts: sign-on instruction, verify AUTOMON/CICS base product and verify AUTOMON/CICS system files.

- Sign-On Instruction
  
- Verify AUTOMON/CICS base product
  - UMON online transaction
  - AMON interface task
  - Short on storage detection
  - Storage violation detection
  - Loop detection
  
- Verify AUTOMON/CICS system files
  - UMON001 VSAM file
  - AMON001 VSAM file

## 1) Sign-On Instruction

- 1.1 Key in "UMON", hit Enter.
- 1.2 UMON sign-on menu display.

```
(WELCOME)                ***SIGN-ON***                UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:34:25,TERM=4L23,NAME=
```

```
                COPYRIGHT (C)
                UNICOM SYSTEMS
                INCORPORATED
                1985-2002
```

```
                AUTOMON/CICS IS A LICENSED PRODUCT
                COPYING, DISTRIBUTION, MODIFICATION OR
                ILLEGAL USE WITHOUT THE EXPRESS WRITTEN
                CONSENT OF UNICOM IS PROHIBITED
                ALL RIGHTS RESERVED
```

```
                NAME      : _____
                PASSWORD   :
```

```
                TYPE NAME AND PASSWORD AND PRESS "ENTER"
```

```
PF1=N/A  PF2=PRINT  PF3/PA1/CLEAR=EXIT
```

**PF1=N/A PF2=PRINT PF3/PA1/CLEAR=EXIT**

- 1.3 Key in your Name and Password, hit ENTER.

1.4 You have now successfully logged on to UMON.  
This presents the starting point for further activity for  
AUTOMON/CICS, UNIMON/CICS and UMF/CICS products.

```
ENTER OPTION ==> _____          ***UNIMON/CICS***          UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:37:46,TERM=4L23,NAME=UNICOM
```

- 0 - PROFILE.....UNIMON/CICS USER PROFILE
- 1 - CICS/VS.....DISPLAY CICS/VS STATISTICS
- 2 - TASKS.....DISPLAY CICS/VS TASKS
- 3 - STORAGE.....DISPLAY STORAGE UTILIZATION
- 4 - RESOURCE.....DISPLAY RESOURCE STATISTICS
- 5 - DATA AREA.....DISPLAY SYSTEM CONTROL BLOCKS
- 6 - SERVICE AID.....DEBUGGING AND TROUBLE SHOOTING
- 7 - MESSAGES.....DISPLAY MESSAGES AND ABEND CODES
- 8 - SECURITY.....DISPLAY/ADD/UPDATE/DELETE SECURITY
- A - UMF/O.....UNICOM MONITORING FACILITY/ONLINE
- B - UCCF/CICS....UNIVERSAL COMMAND CONTROL FACILITY/CICS
- E - AUTOMON/CICS.....AUTOMON/CICS
- F - IVP.....PRODUCT INSTALLATION VERIFICATION PROCEDURE
- X - EXIT.....END UNIMON/CICS

```
PF1=N/A PF2=PRINT PF3/PA1/CLEAR=EXIT
```



## 2) VERIFY AUTOMON/CICS BASE PRODUCT

### **Step 1      Activate UCCF/Server.**

Verify that the UCCF/Server task is active. If the UCCF/Server task has not been started, use the PROC created during installation to start the UCCF/Server task.

### **Step 2      Adjust CICS values for the Installation Verification Procedure.**

Type "=6.4" in the "*ENTER OPTION ==>*" field and hit ENTER, then type "*SET TIME*".

```
SET TIME
STATUS: RESULTS - OVERTYPE TO MODIFY
  AGing( 32768 ) PROGAUTOInst( AUTOINACTIVE )
  AKp( 00200 ) RDSasize( 00262144 )
  CDSasize( 04718592 ) REENTPROTEct( REENTPROT )
  CMDPROTEct( CMDPROT ) RELEase( 0410 )
  Dfltuser( CICSUSER ) Runaway( 300000 )
  DSalimit( 05242880 ) SCandelay( 0300 )
  DTTrprogram( DFHDYP ) SDSasize( 00262144 )
  ECdsasize( 0002097152 ) SOSStatus( NOTSOS )
  EDSalimit( 0020971520 ) SToreprotect( INACTIVE )
  ERdsasize( 0003145728 ) TIme( 1001000 )
  ESdsasize( 0000000000 ) TRanisolate( INACTIVE )
  EUdsasize( 0001048576 ) Udsasize( 00000000 )
  MAxtasks( 050 )
  MRobatch( 001 )
  OPRel( 10 )
  OPSys( X )
  PROGAUTOctlg( CTLGMODIFY )
  PROGAUTOExit( DFHPGADX )

SYSID=CICT APPLID=CICS640
RESPONSE: NORMAL TIME: 13.08.25 DATE: 12.06.95
PF 1 HELP 3 END 7 SBH 8 SFH 9 MSG 10 SB 11 SF
```

- Set "*RUNAWAY=300000*"

### Step 3      Activate AUTOMON/CICS.

Type "=0.1" in the "ENTER OPTION ==>" field and hit ENTER.

```
ENTER COMMAND => _____ ***AUTOMON/CICS STATUS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:39:05,TERM=4L23,NAME=UNICOM
AUTOMON/CICS
PRODUCT EXPIRATION DATE
2006/06/30

AUTOMON/CICS STATUS
ACTIVE            START_UP            TOTAL
INDICATOR        DATE            TIME            MESSAGES
ON            2006/02/23 15:05:53            9

MASTER FLAG INDICATORS
WTO IGNORE MAXIMUM HISTORY FILE    VIEW    LOG TABLE SIZE
ON    100    10000    ON AMON001    AMON001            400

AUTOMON/CICS SYSTEM TABLES
AIT            THT            XLT1            XLP1            XLT2            XLP2
TE            TE            T1            P1            T2            P2

ABEND RECOVERY_RETRY_COUNT    STORAGE_VIOLATION    AMXT    SCS
CURRENT            MAXIMUM            (ALL|CUR|NON) LEVEL FLAG FLAG
0            20            ALL            4    ON    ON

PF1=N/A    PF2=PRINT    PF3=RETURN    PF4=MENU    PF6=CHANGE    PF9=REFRESH    PA1/CLEAR=EXIT
```

- If "INDICATOR" shows "ON", go to Step 4.

(AUTOMON/CICS can be activated automatically by defining the CSHAPLP program to your DFHPLTPI. Also a utility transaction called "AON" is provided to activate AUTOMON/CICS).

Type "ON" in the "ACTIVE INDICATOR" field and hit PF6 (Change). This is the third way to turn AUTOMON/CICS on and off. Changing this indicator is equivalent to activating AUTOMON/CICS with the "AON" transaction.

## Step 4 Display the AUTOMON/CICS log.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER.

```
ENTER COMMAND => _____ ***DISPLAY AUTOMON/CICS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=05:54:41,TERM=RR01,NAME=UNICOM
TIME -----MESSAGE-----
05:46:03 CSH6025W-*WARNING* YOU ARE LOADING A "TRIAL_VERSION" OF AUTOMON/CICS.
05:46:03 CSH6027I-*(LICENSE)* COMPANY_NAME : *TRIAL_VERSION*
05:46:03 CSH6028I-*(LICENSE)* CUSTOMER_I.D.: *TRIAL_VERSION*
05:46:03 CSH6000I-AUTOMON/CICS SUBTASK ATTACHED. AIT=TE,LOG=400,VER=C41A420-9603
05:46:03 CSH6800I-SUBSYSTEM INQUIRY SUCCESSFUL. SUBSYS=UCCF,ADDR=00C36B10
05:46:03 CSH6019I-AUTOMON/CICS CSH00SIP ATTACHED. MAX= 20,STAGES=12345678
05:46:03 CSH6019I-AUTOMON/CICS CSHSRP ATTACHED. MAX= 20,STAGES=12345678
05:46:03 CSH6019I-AUTOMON/CICS CSHAXIP ATTACHED. MAX= 20,STAGES=12345678
05:46:03 CSH6101A-*ACTION* ADJUSTING SYSTEM PARAMETERS. RC=ACCP_MORE_TASKS
05:46:03 CSH6705A-*ACTION* MXT VALUE ALTERED. MXT=490,TASKS= 4
05:46:03 CSH6707A-*ACTION* AMXT VALUE ALTERED. AMXT=487,AMXTC= 3
05:46:03 CSH6160I-(LOG) MXT NEW=490,OLD= 20
05:46:03 CSH6161I-(LOG) AMXT NEW=487,OLD= 10
```

- You should see CSH6000I AUTOMON/CICS messages. If not, repeat Step 3.

## Step 5 Display/set AUTOMON threshold values.

Type "=0.2" in the "ENTER COMMAND =>" field and hit ENTER.

```

ENTER COMMAND => _____ ***AUTOMON/CICS THRESHOLDS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:40:25,TERM=4L23,NAME=UNICOM
  
```

ITEM	ACTIVE INDICATOR			CYCLE (SEC)	THRESHOLDS		DESCRIPTION
	FLAG	NOTFY	ACT		NOTIFY	ACTION	
LOOP DETECTION	ON	ON	ON	---	20	180	IN SECONDS
STORAGE HWM	ON	ON	ON	30	300000	750000	IN BYTES
SHORT ON STORAGE	ON	ON	ON	---	1	60	IN SECONDS
PERFORMANCE DATA	ON	---	---	---	3600	---	IN SECONDS
VSAM STRING WAIT	ON	---	---	60	1	---	1ST CONDITION
VTAM TERMNL WAIT	ON	---	---	60	1	---	1ST CONDITION
JOURNAL SWITCH	ON	---	---	60	1	---	1ST CONDITION
AUX TEMP STORAGE	ON	---	---	60	98 %	---	PERCENTAGE
EXCEPTIONAL	ON	---	---	60	1	---	1ST CONDITION
DEGRADATIONAL	ON	---	---	60	1	---	1ST CONDITION
	FLAG	LOW	HIGH	CYCLE	LOW	HIGH	
MXT	OFF	ON	ON	30	32	490	NUMBER OF TASK

```

PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT
  
```

- Set Loop Detection Notify and Action values to 20 and 30 respectively and hit PF6 (Change).

## Step 6 Display AUTOMON exceptional (EXC) threshold values.

Type "=0.3" in the "ENTER COMMAND =>" field and hit ENTER.

```

ENTER COMMAND => _____ ***EXCEPTION THRESHOLDS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:42:23,TERM=4L23,NAME=UNICOM
-----

```

ITEM	THRESHOLD	DESCRIPTION	ITEM	THRESH	DESCRIPTION
SOS	5	NUMBER OF SOS	DSA	98 %	STORAGE
STORAGE Q"D	1	NUMBER OF QUEUES	CON	30 %	ALLOCATION
STOR Q HWM	1	HIGH WATER MARK	TP	30 %	
STOR Q ZERO	1	NUMBER OF CHAINS	MIX	30 %	
GETMAIN	500000	NUMBER OF GETMAINS	ISO	40 %	
FREEMAIN	500000	NUMBER OF FREEMAINS	SHR	60 %	
AMXT HWM	1	ACTIVE TASKS HWM	RPL	30 %	
RUNAWAY HWM	1	RUNAWAY TASKS HWM	PGM	90 %	
TOTAL TASKS	10000	TOTAL CICS/VIS TASKS			
VTAM RA RPL	1000	VTAM RECEIVE ANY			
ACT RA RPL	10	CONCURRENT RA RPL"S			
FREE RPL"S	1	AVAILABLE RPL"S			

```

-----
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT

```

- More of AUTOMON/CICS Thresholds.... hit PF3 (Return).

## Step 7      A short on storage condition detection.

Type "=F.0" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait several minutes-

```
ENTER OPTION ==>                    ***AUTOMON/CICS IVP***                    UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM
```

```
0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP).....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A   PF2=PRINT   PF3=RETURN   PF4=MENU   PF9=REFRESH   PA1/CLEAR=EXIT
```

- Your transaction "UMON" will cause a stress condition and the task will be purged with a dump written to the dump dataset. Abend code = "AEXY/UAMC/UAMD/???"

-At this point, you need to sign back on to "UMON"-

## Step 8 Display short on storage messages.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER.

- You should see CSH6300W and CSH6301A AUTOMON/CICS notification and action messages in both the AUTOMON/CICS Log Display (=E.0) and the CICS job log. If not, repeat Step 7.

```
ENTER COMMAND => _____ ***DISPLAY AUTOMON/CICS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=16:46:26,TERM=RR01,NAME=UNICOM
TIME -----MESSAGE-----
16:45:19 CSH6300W-EXCESSIVE STORAGE USAGE. TRAN=UMON,TERM=RR01,STOR= 751352
16:45:19 CSH6301A-*ACTION* STORAGE USAGE. TRAN=UMON,TERM=RR01,STOR= 751352
16:45:19 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=RR01,ABCD=UAMC
16:45:19 CSH6206I-PSW=00000000,ENTRY=85CAE0F8,OFFSET=+0000,LAN=ASSMBLER
16:45:19 CSH6207I-OBJ=.....,RC=ABNORMAL CONDITION
16:45:19 CSH6016W-(0-5) 0000D180 00FF0000 05CAEDEF 50898DC2 00899DC1 0089ADC0
16:45:19 CSH6016W-(6-B) 00072CCC 00000002 008F3C94 0089AE48 00019030 00072C60
16:45:19 CSH6016W-(C-F) 00070190 008F63C0 7089AB9A 00000000
16:45:20 CSH6181I-(DUMP) STORAGE DUMP. COUNT= 1

PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF7=UP F8=DN PF9=REFRSH PA1/CLR=EXIT
```

- If WTO flag is turned to "ON" in the AUTOMON/CICS AIT table(Default) then all AUTOMON/CICS messages are also written to the MVS SYSLOG before they are written to the AUTOMON History file defined by the DD card AMON001. This is done for two reasons:
  - 1) It allows the user to interface with any other automation products at their installation.
  - 2). AUTOMON/CICS uses a CICS transaction to write it's messages to the AMON001 History file. In the event that CICS is having trouble with file control, in certain situations, some AUTOMON/CICS messages may not be written to the history file. This duplication of AUTOMON/CICS messages ensures that diagnostic information will always be available to the user.

When the WTO flag is set to "ON" all AUTOMON/CICS messages are also sent to the CONSOLE. If you do not want your operators to see AUTOMON/CICS messages you may set the WTO flag in the AIT table to "WTL"(Write To Log). In this case, AUTOMON/CICS messages will only be duplicated in the MVS SYSLOG.

The user may change this flag permanently by changing the WTO flag in the AUTOMON/CICS AIT table(=E.3 typed at the command line). This change may also be made for the current session of AUTOMON/CICS by changing the WTO flag in the AUTOMON/CICS Status panel(=0.1).

- You may wish to start another session to verify the duplication of AUTOMON/CICS messages in the MVS SYSLOG.

```

SDSF OUTPUT DISPLAY CICS212T STC07429 DSID 2 LINE 246 COLUMNS 01- 80
COMMAND INPUT ==> SCROLL ==> CSR
16:45:19 STC07429 +CICS212T:CSH6300W-EXCESSIVE STORAGE USAGE. TRAN=UMON,TERM=RR01,STOR= 751352
16:45:19 STC07429 +CICS212T:CSH6301A-*ACTION* STORAGE USAGE. TRAN=UMON,TERM=RR01,STOR= 751352
16:45:19 STC07429 +CICS212T:CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=RR01,ABCD=UAMC
16:45:19 STC07429 +CICS212T:CSH6206I-PSW=00000000,ENTRY=85CAE0F8,OFFSET=+0000,LAN=ASSMBLER
16:45:19 STC07429 +CICS212T:CSH6207I-OBJ=.....,RC=ABNORMAL CONDITION
16:45:19 STC07429 +CICS212T:CSH6016W-(0-5) 0000D180 00FF0000 05CAEDEF 50898DC2 00899DC1 0089ADC0
16:45:19 STC07429 +CICS212T:CSH6016W-(6-B) 00072CCC 00000002 008F3C94 0089AE48 00019030 00072C60
16:45:19 STC07429 +CICS212T:CSH6016W-(C-F) 00070190 008F63C0 7089AB9A 00000000
16:45:20 STC07429 +CICS212T:CSH6181I-(DUMP) STORAGE DUMP. COUNT= 1

```



## Step 9 A storage violation detection.

Type "*F.I*" in the "*ENTER COMMAND =>*" field and hit ENTER.

-Wait a few seconds-

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:43:52,TERM=4L23,NAME=UNICOM

      0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
      1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
      2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
      3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
      4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
      5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
      6 - IVP (DFHICP).....THIS PANEL CORRUPTS A NUCLEUS MODULE
      7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
      8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
      9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
      A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
      X - EXIT.....END UNIMON/CICS

PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

- Your transaction "*UMON*" will corrupt an *SCZ/SAA* and the overlaid storage area will be recovered by *AUTOMON/CICS*.

## Step 10      Display storage violation messages.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER. AUTOMON/CICS storage violation messages begin with message CSH6702E. Enter CSH6702 on the command line and hit the PF05 key to find the character string.

- You should see storage violation messages. (CSH6702E) If not, repeat Step 9.

```
12:43:54 CSH6702E-STORAGE VIOLATION. TRN=UMON,TSK=03136,TRM=RR01,PGM=CSHPCF0  
12:43:54 CSH6304E-HEAD=00073B20:8C000048 00073C00,TAIL=00073B68-E5C5D9D3 C1E85C
```

This message is produced when AUTOMON/CICS detects a storage violation condition. AUTOMON/CICS identifies the transaction owning the storage which was violated. The address and contents of the header/trailer storage accounting areas or storage check zones will be displayed.

```

12:43:54 CSH6305E-DATA=-----
12:43:54 CSH6305E-DATA=00073AA0:00000000 00000000 00000000 00000000 .....
12:43:54 CSH6305E-DATA=00073AB0:00000000 00000000 00000000 00000000 .....
12:43:54 CSH6305E-DATA=00073AC0:00000000 00000000 00000820 0085CAE2 .....
12:43:54 CSH6305E-DATA=00073AD0:F0000738 90000820 0085CAE2 F0000738 0.....
12:43:54 CSH6305E-DATA=00073AE0:90000820 0085CAE2 F0000738 90000820 .....S0..
12:43:54 CSH6305E-DATA=00073AF0:0085CAE2 F0000738 90000820 0085CAE2 ...S0.....
12:43:54 CSH6305E-DATA=00073B00:F0000738 90000820 0085CAE2 F0000738 0.....
12:43:54 CSH6305E-DATA=00073B10:90FF0000 00000000 8C0000C8 00073880 .....
12:43:54 CSH6305E-DATA=00073B20:8C000048 00073C00 00070004 0087731E .....
12:43:54 CSH6305E-DATA=00073B30:00011300 00000000 00000000 C1D4D6D5 .....
12:43:54 CSH6305E-DATA=00073B40:E3E2F0F0 00000000 00000000 00000000 TS00.....
12:43:54 CSH6305E-DATA=00073B50:00000000 00000000 9D000038 00075CE2 .....
12:43:54 CSH6305E-DATA=00073B60:E3D6D9C1 C7C56DD6 E5C5D9D3 C1E85C00 TORAGE_OVER
12:43:54 CSH6305E-DATA=00073B70:8C000028 00073990 C100E4D5 C9C3D6D4 .....A.U
12:43:54 CSH6305E-DATA=00073B80:404000C1 00E4D5C9 C3D6D440 40000000 ...A.UNICOM
12:43:54 CSH6305E-DATA=00073B90:00000000 00000000 8C000028 00073990 .....
12:43:54 CSH6305E-DATA=-----
12:43:54 CSH6305E-DATA=00073AE0:90000820 0085CAE2 F0000738 90000820 .....S0..
12:43:54 CSH6305E-DATA=00073AF0:0085CAE2 F0000738 90000820 0085CAE2 ...S0.....
12:43:54 CSH6305E-DATA=00073B00:F0000738 90000820 0085CAE2 F0000738 0.....
12:43:54 CSH6305E-DATA=00073B10:90FF0000 00000000 8C0000C8 00073880 .....
12:43:54 CSH6305E-DATA=00073B20:8C000048 00073C00 00070004 0087731E .....
12:43:54 CSH6305E-DATA=00073B30:00011300 00000000 00000000 C1D4D6D5 .....
12:43:54 CSH6305E-DATA=00073B40:E3E2F0F0 00000000 00000000 00000000 TS00.....
12:43:54 CSH6305E-DATA=00073B50:00000000 00000000 9D000038 00075CE2 .....
12:43:54 CSH6305E-DATA=00073B60:E3D6D9C1 C7C56DD6 E5C5D9D3 C1E85C00 TORAGE_OVER
12:43:54 CSH6305E-DATA=00073B70:8C000028 00073990 C100E4D5 C9C3D6D4 .....A.U
12:43:54 CSH6305E-DATA=00073B80:404000C1 00E4D5C9 C3D6D440 40000000 ...A.UNICOM
12:43:54 CSH6305E-DATA=00073B90:00000000 00000000 8C000028 00073990 .....
12:43:54 CSH6305E-DATA=00073BA0:8C000058 00073B70 00000000 00000008 .....
12:43:54 CSH6305E-DATA=00073BB0:05DA09C0 00000002 00000000 00000000 ...{.....
12:43:54 CSH6305E-DATA=00073BC0:00000000 00000000 00000000 00000000 .....
12:43:54 CSH6305E-DATA=00073BD0:00000000 00000000 00000000 00000000 .....

```

AUTOMON/CICS will display X'80' bytes above and below each header/trailer SAA or Storage Check Zone. This "mini-dump" is taken at the time that AUTOMON/CICS detects the storage violation. This information is often valuable in determining the cause of the storage violation.

```

12:43:54 CSH6703E-STORAGE ERROR DETECTION. SVC= 1,IC=(06,DUP SAA)
12:43:54 CSH6016W-(0-5) 00073C08 000738F8 85CAEE09 85CAE40E 000738F8 00073B28
12:43:54 CSH6016W-(6-B) 00000024 00000008 008F3C94 008F1E48 00075DD4 00072C60
12:43:54 CSH6016W-(C-F) 00070190 008F63C0 808F1F08 808F1FE0

```

These AUTOMON/CICS messages indicate the contents of the registers of the program whose storage was overlaid.

```

12:43:54 CSH6704A-*ACTION* CSHASCR SUBTASK ATTACHED. RC=STORAGE_VIOLATION.
12:43:54 CSH6600I-*(SRP)* AUTOMON/CICS RECOVERY IN CONTROL. CNT= 0,MAX= 20
12:43:54 CSH6601I-*(SRP)* STAGE=12345678,NOTIFY=12345678,ACTION=.234567.
12:43:54 CSH6602I-*(SRP)* STAGE (1) RECOVERY IN PROGRESS.
12:43:54 CSH6611I-*(SRP)* TRAN=UMON,PGM=CSHPCF0 ,TERM=RR01,TASK= 3136,TCATCDC=20
12:43:54 CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=STORGE_VIOLATION
12:43:54 CSH6305E-TCA =-----
12:43:54 CSH6305E-TCA =00070190:00070000 00000000 01075DD4 008F67C0 .....)
12:43:54 CSH6305E-TCA =000701A0:00072F20 00075DD4 20400100 04810000 .....)M...
12:43:54 CSH6305E-TCA =000701B0:808F1F08 808F1FE0 00073C08 000738F8 .....)\...
12:43:54 CSH6305E-TCA =000701C0:85CAEE09 85CAE40E 000738F8 00073B28 .....U...
12:43:54 CSH6305E-TCA =000701D0:00000024 00000008 008F3C94 008F1E48 .....
12:43:54 CSH6305E-TCA =000701E0:00075DD4 00072C60 008EE7CE 00072CCC ..)M...-X
12:43:54 CSH6305E-TCA =000701F0:8089AF20 00000006 00000040 000738F8 .....
12:43:54 CSH6305E-TCA =00070200:05CAEDEF 00000000 85CAEDB0 00072DC8 .....
12:43:54 CSH6305E-TCA =00070210:00073C08 C1D4D6D5 E3E2F0F0 00014000 ...AMONTS0
12:43:54 CSH6305E-TCA =00070220:01000000 00000000 00140000 00000001 .....
12:43:54 CSH6305E-TCA =00070230:008F2D4C 808F42E4 A08F42D6 00072D80 ...<...U...
12:43:55 CSH6305E-TCAS=000700D0:00073600 00000000 AC16B043 097E4400 .....
12:43:55 CSH6305E-TCAS=000700E0:00000000 85CAE0F8 C3E2C8C1 E7C9D740 ..... \8CSH
12:43:55 CSH6305E-TCAS=000700F0:C3E2C8E9 C3D74040 0058A008 5018FEFF CSHZCP....
12:43:55 CSH6305E-EIB =-----
12:43:55 CSH6305E-EIB =00072DC8:0123903C 0095342F E4D4D6D5 0003136C .....UMO
12:43:55 CSH6305E-EIB =00072DD8:D9D9F0F1 00000016 00007D12 08000000 RR01.....'
12:43:55 CSH6305E-EIB =00072DE8:000000E4 D4D6D5F0 F0F14000 00000000 ...UMON001.
12:43:55 CSH6305E-EIB =00072DF8:00000040 40404040 40404000 00000000 .....
12:43:55 CSH6305E-EIB =00072E08:00000000 00000000 00000000 00000000 .....
12:43:55 CSH6305E-EIB =00072E18:00000000 00000000 00000000 00000000 .....
12:43:55 CSH6681E-*(SRP)* STORAGE VIOLATION. (IC=0000,RC=PROGRAM INTERRUPT)
12:43:55 CSH6016W-(0-5) 00073C08 000738F8 85CAEE09 85CAE40E 000738F8 00073B28
12:43:55 CSH6016W-(6-B) 00000024 00000008 008F3C94 008F1E48 00075DD4 00072C60
12:43:55 CSH6016W-(C-F) 00070190 008F63C0 808F1F08 808F1FE0

```

In STAGE 1 the diagnostic information pertains to the transaction in control at the time when AUTOMON/CICS detects the storage violation. This is likely to be the transaction responsible for the storage violation. Either a snap dump or an SVC dump may optionally be produced at this point to provide the user with a snapshot of the system information before the repair subtask intercepts the storage violation. This may be done by turning on the Stage 1 action flag in the AUTOMON/CICS SRT Table.

```
12:43:55 CSH6602I-*(SRP)* STAGE (2) RECOVERY IN PROGRESS.
12:43:55 CSH6620I-*(SRP)* CSA=008F63C0,OFL=008F67C0,SSA=00844FA0,PAM=00019030
12:43:55 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

In STAGE 2 of the AUTOMON/CICS systems recovery program, the verification of CICS/VS foundation will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the CICS/VS foundation. AUTOMON/CICS specifies whether the damaged system areas will be repaired or not.

```
12:43:55 CSH6602I-*(SRP)* STAGE (3) RECOVERY IN PROGRESS.
12:43:55 CSH6630I-*(SRP)* .....ACTIVE TASKS.....
12:43:55 CSH6611I-*(SRP)* TRAN=CSTP,PGM= ,TERM=RR01,TASK=TCP ,TCATCDC=40
12:43:55 CSH6611I-*(SRP)* TRAN=CSSY,PGM=DFHJCBSP,TERM=N/A ,TASK=JJJ ,TCATCDC=80
12:43:55 CSH6611I-*(SRP)* TRAN=AMON,PGM=CSHAMPC ,TERM=N/A ,TASK= 15,TCATCDC=80
12:43:55 CSH6611I-*(SRP)* TRAN=UMON,PGM=CSHPCF0 ,TERM=RR01,TASK= 3136,TCATCDC=20
12:43:55 CSH6611I-*(SRP)* TRAN=CSSY,PGM= ,TERM=N/A ,TASK= 14,TCATCDC=80
12:43:55 CSH6630I-*(SRP)* .....SUSPENDED TASKS.....
12:43:55 CSH6611I-*(SRP)* TRAN=CSSY,PGM=DFHJCBSP,TERM=N/A ,TASK=JJJ ,TCATCDC=10
12:43:55 CSH6611I-*(SRP)* TRAN=CSSY,PGM=DFHJCBSP,TERM=N/A ,TASK=JJJ ,TCATCDC=10
12:43:55 CSH6630I-*(SRP)* .....END.....
```

In STAGE 3 of the AUTOMON/CICS systems recovery program, the verification of the task chains will be performed for the possibility of storage overlay conditions. This stage provides the user with a list of all the tasks in the system at the time the storage violation occurred. It is very likely that the transaction causing the storage violation will be listed.

```
12:43:55 CSH6602I-*(SRP)* STAGE (4) RECOVERY IN PROGRESS.
12:43:55 CSH6620I-*(SRP)* DSA=0001A000,PGA=00000143,PGF=00000509,PGT=000006B2
12:43:55 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
12:43:55 CSH6713E-*ERROR* INVALID SAA A=00073B20,H=8C00004800073C00,T=E5C5D9D3
12:43:55 CSH6714A_*ACTION* REPAIR SAA A=00073B20,H=8C00004800073C00,T=8C000048
```

In STAGE 4 of the AUTOMON/CICS systems recovery program, the verification of the dynamic storage area will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged storage areas. AUTOMON/CICS specifies whether the damaged storage areas will be corrected or not.

```
12:43:55 CSH6602I-*(SRP)* STAGE (5) RECOVERY IN PROGRESS.  
12:43:55 CSH6620I-*(SRP)* KCP=408EE74C,PCP=0088EE28,SCP=008E1828,TCP=0089B9C8  
12:43:55 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

In STAGE 5 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS nucleus modules will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS nucleus modules.

```
12:43:55 CSH6602I-*(SRP)* STAGE (6) RECOVERY IN PROGRESS.  
12:43:55 CSH6620I-*(SRP)* FCT=0087C490,PCT=0004CDB4,PPT=0003F2A4,TCT=0002E404  
12:43:55 CSH6650I-*(SRP)* DFHFCT VERIFICATION IN PROGRESS.  
12:43:55 CSH6650I-*(SRP)* DFHPCT VERIFICATION IN PROGRESS.  
12:43:55 CSH6650I-*(SRP)* DFHPPT VERIFICATION IN PROGRESS.  
12:43:55 CSH6650I-*(SRP)* DFHTCT VERIFICATION IN PROGRESS.
```

In STAGE 6 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS system tables will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS system tables.

```
12:43:55 CSH6602I-*(SRP)* STAGE (7) RECOVERY IN PROGRESS.  
12:43:55 CSH6620I-*(SRP)* TCX=0089B3B8,QCA=008F8C30,TBM=006CFB78,TST=00000000  
12:43:55 CSH6650I-*(SRP)* DFHAID VERIFICATION IN PROGRESS.  
12:43:55 CSH6650I-*(SRP)* DFHICE VERIFICATION IN PROGRESS.
```

In STAGE 7 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS system areas and pointers will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS system areas and pointers.

```
12:43:55 CSH6602I-*(SRP)* STAGE (8) RECOVERY IN PROGRESS.  
12:43:55 CSH6680I-*(SRP)* .ENTRIES...ENABLED.....USED.....TOTAL  
12:43:55 CSH6680I-*(SRP)* ...FCTTE 11 45 158  
12:43:55 CSH6680I-*(SRP)* ...PCTTE 415 44 554  
12:43:55 CSH6680I-*(SRP)* ...PPTTE 1,070 136 1,329  
12:43:55 CSH6680I-*(SRP)* ...TCTTE 147 4 147  
12:43:55 CSH6605I-*(SRP)* AUTOMON/CICS RECOVERY HAS BEEN COMPLETED.  
12:43:55 CSH6606A-*ACTION* CONTROL IS BEING GIVEN TO CICS/MVS.
```

In STAGE 8 of the AUTOMON/CICS systems recovery program, the summary report will be produced. If the stage 8 action flag is turned on, a snap dump (ID=08) will be produced on to the AMON002 files. The snap dump contains the after image of the system following the completion of all AUTOMON recovery stages.

## Step 11 A loop detection.

Type "=F.2" in the "ENTER COMMAND =>" field and hit ENTER.

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM

      0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
      1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
      2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
      3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
      4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
      5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
      6 - IVP (DFHICP).....THIS PANEL CORRUPTS A NUCLEUS MODULE
      7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
      8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
      9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
      A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
      X - EXIT.....END UNIMON/CICS

PF1=N/A  PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

- Your transaction "UMON" will cause a logical loop condition and the task will be purged with a dump written to the dump dataset. Abend code = "UAMA/UAMB/AKEA/ASRA/AICA/????".
- If the UCCF/Server subsystem task has been activated the "UMON" transaction may be abended with abend code ="UAMK".

-At this point, you need to sign back on to "UMON"-



## Step 12 Display loop detection messages.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER. AUTOMON/CICS loop detection messages start with CSH6200W. Enter CSH6200 on the command line and hit PF05 to locate the character string.

- You should see loop messages. (CSH6200W) If not, repeat Step 11.

```
13:38:09 CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0,ID= 29,TERM=R001
13:38:19 CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0,ID= 29,TRM=R001,ABCD=UAMB
13:38:21 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=DFHUEH ,TERM=R001,ABCD=UAMB
13:38:21 CSH6206I-PSW=85D0618E,ENTRY=85D09000,OFFSET=+0000,LAN=ASSMBLER
13:38:21 CSH6207I-OBJ=.....,RC=ABNORMAL CONDITION
13:38:21 CSH6016W-(0-5) 05B7B150 00061100 05D09B1E 85D06000 00844008 80046B08
13:38:21 CSH6016W-(6-B) 00000363 05D09B1E 0004715C 00046A86 0000D230 00061348
13:38:21 CSH6016W-(C-F) 00061000 80044BA0 86D47248 00000000
```

- You should also see AUTOMON/CICS messages in the JOB or System log.

```
COMMAND INPUT ==> SCROLL ==> CSR
13.38.19 STC00507 +DFHME0126 CICS330
Error in SYMREC invocation. Return code in R15 = X'000C', Reason code
in R0 = X'0F1C'.
13.38.19 STC00507 +DFHAP0001 CICS330 An abend (code 0C1/AKEA) has occurred at offset X'FFFFFFF' in
module DFHUEH.
13.38.19 STC00507 +DFHME0116 CICS330
(Module:DFHMEME) CICS symptom string for message DFHAP0001 is
PIDS/566540301 LVLs/330 MS/DFHAP0001 RIDs/DFHUEH AB/S00C1 AB/UAKEA
RIDS/DFHUEH ADRS/FFFFFFF
13.38.19 STC00507 +DFHDU0201 CICS330 ABOUT TO TAKE SDUMP. DUMPCODE: AP0001 , DUMPID: 1/0001
13.38.21 STC00507 IEA794I SVC DUMP HAS CAPTURED:
13.38.21 STC00507 +DFHDU0202 CICS330 SDUMP COMPLETE.
DUMPID=001 REQUESTED BY JOB (CICS330 )
DUMP TITLE=CICS DUMP: SYSTEM=CICS330 CODE=AP0001 ID=1/0001
13.38.21 STC00507 +CICS330 :CSH6205I-TASK ABENDED. TRAN=UMON,PGM=DFHUEH ,TERM=R001,ABCD=UAMB
13.38.21 STC00507 +CICS330 :CSH6206I-PSW=85D0618E,ENTRY=85D09000,OFFSET=+0000,LAN=ASSMBLER
13.38.21 STC00507 +CICS330 :CSH6207I-OBJ=.....,RC=ABNORMAL CONDITION
13.38.21 STC00507 +CICS330 :CSH6016W-(0-5) 05B7B150 00061100 05D09B1E 85D06000 00844008 80046B08
13.38.21 STC00507 +CICS330 :CSH6016W-(6-B) 00000363 05D09B1E 0004715C 00046A86 0000D230 00061348
13.38.21 STC00507 +CICS330 :CSH6016W-(C-F) 00061000 80044BA0 86D47248 00000000
```

This step of the IVP caused a hard loop condition in which control of the system is never released back to the CICS task dispatcher. AUTOMON/CICS will initially attempt to purge the looping transaction with a mechanism equivalent to a CEMT purge of the transaction. In this case CICS never gains control so this mechanism fails. If the initial attempt to cancel the looping transaction fails, AUTOMON/CICS will then attempt to force an SOC1 operation exception abend of the looping transaction in the CICS user exit. The job log messages above indicate that AUTOMON/CICS killed the looping transaction with this method.

If this method of purging a looping transaction failed and the UCCF/Server subsystem is active, AUTOMON/CICS will purge the looping transaction with an SOC6 specification exception.

### Step 13 Crash the system. (U203/U615/U602/U601)

Type "=F.3" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait a few seconds-

- Your transaction "UMON" will crash the system. The AUTOMON/CICS system recovery program (CSHASRP) will take corrective actions and disable the UMON transaction. Abend code = "UAMF/ASRB/U203/U405/U409/U601/U602/U615"

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM
```

```
0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

-At this point, you need to enable the UMON transaction-  
"CEMT SET TRAN(UMON) ENABLE"

## Step 14 Display system recovery function messages.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER. AUTOMON/CICS system recovery messages start with message number CSH6708A. Enter CSH6708 at the command line and hit the PF05 key to find this character string.

- You should see recovery messages. (CSH6708A) If not, repeat Step 13.

```
13:59:04 CSH6708A-*ACTION* CSHASRP SUBTASK ATTACHED. RC=SYSTEM FAILURE.
13:59:04 CSH6600I-*(SRP)* AUTOMON/CICS RECOVERY IN CONTROL. CNT= 1,MAX= 40
13:59:05 CSH6601I-*(SRP)* STAGE=12345678,NOTIFY=12345678,ACTION=.234567.
13:59:05 CSH6602I-*(SRP)* STAGE (1) RECOVERY IN PROGRESS.
13:59:05 CSH6611I-*(SRP)* TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,TASK= 30,TCATCDC=10
13:59:05 CSH6610E-*(SRP)* PSW=078D0000 85D09434,ABCD=U0203,AREA=INSIDE-OF-DSA
```

These messages indicate that a system crash condition has been detected by AUTOMON/CICS. The transaction and program causing this problem is identified. AUTOMON/CICS also reports the ABEND code that has been detected. As with a storage violation, AUTOMON/CICS will freeze the system and go through 8 stages of recovery in an effort to keep the system available.

```
13:59:05 CSH6305E-TCA =-----
13:59:05 CSH6305E-TCA =00061000:00061100 00000001 05CBBA08 00044FB0 .....
13:59:05 CSH6305E-TCA =00061010:05B8D910 00000000 13930100 00000010 ..R.....
13:59:05 CSH6305E-TCA =00061020:00000000 00000000 00000000 00000000 .....
13:59:05 CSH6305E-TCA =00061030:00000000 86CD0850 00000000 05000084 .....&...
13:59:05 CSH6305E-TCA =00061040:00000004 0006D77C 85D09044 00048960 .....P@.}.
13:59:05 CSH6305E-TCA =00061050:85D0A028 85D09028 0005D330 86CC9992 .}...}....L
13:59:05 CSH6305E-TCA =00061060:00010000 0006DDC0 C1D4D6D5 E3E2F0F0 .....{AMO
13:59:05 CSH6305E-TCA =00061070:00014000 00000000 00000000 00140000 .....
13:59:05 CSH6305E-TCA =00061080:00000001 85D09028 80047B96 80047B88 .....}....#
13:59:05 CSH6305E-TCA =00061090:0006D7CC 00082FBB 8006B216 0000D020 ..P.....
13:59:05 CSH6305E-TCA =000610A0:80046BB4 00000000 00000000 0004715C ..,.....
13:59:05 CSH6305E-TCA =000610B0:86CC23B0 05D0A6C1 00061348 00000000 .....}A...
13:59:05 CSH6305E-TCA =000610C0:00000000 01000300 05CF92D0 C5F70200 .....
13:59:05 CSH6305E-TCA =000610D0:0006DC28 00000000 00000000 80044BA0 .....
13:59:05 CSH6305E-TCA =000610E0:00000000 00000000 00000000 0006B008 .....
13:59:05 CSH6305E-TCA =000610F0:00002710 00000000 00000000 00000000 .....
13:59:05 CSH6305E-TCAS=-----
13:59:05 CSH6305E-TCAS=00061100:05F80000 00000000 85D09028 0000D020 .8.....}.
13:59:05 CSH6305E-TCAS=00061110:0000030C 00000000 00000000 05CFA510 .....
13:59:05 CSH6305E-TCAS=00061120:05C8C330 00000000 00000000 00000000 .HC.....
13:59:05 CSH6305E-TCAS=00061130:00000000 00000000 800480A6 05CF92D0 .....
13:59:05 CSH6305E-TCAS=00061140:00000000 00000000 0006DC28 0006DC18 .....
13:59:05 CSH6305E-TCAS=00061150:00061300 00000000 05D0A1A8 00000000 .....}~
13:59:05 CSH6305E-TCAS=00061160:00000000 00000000 00C00000 00000000 .....{.
13:59:05 CSH6305E-TCAS=00061170:00000000 00000000 80000000 00000000 .....
13:59:05 CSH6305E-TCAS=00061180:00000000 00000000 85D09028 00400000 .....}.
13:59:05 CSH6305E-TCAS=00061190:00061348 00000000 0006D840 00000000 .....Q
13:59:05 CSH6305E-TCAS=000611A0:00000000 800444B0 00000000 00000000 .....
13:59:05 CSH6305E-TCAS=000611B0:00000000 05CBBA08 00000000 00000000 .....
```

```

13:59:05 CSH6305E-TCAS=000611C0:00000000 E4D4D6D5 00000000 00000000 ....UMON...
13:59:05 CSH6305E-TCAS=000611D0:05CB0B70 00000000 00000000 00000000 .....
13:59:05 CSH6305E-TCAS=000611E0:00000000 00000000 00000000 00000000 .....
13:59:05 CSH6305E-TCAS=000611F0:AC16BD90 6D22EF02 85D09028 05D09000 .....}.
13:59:05 CSH6305E-EIB =-----
13:59:05 CSH6305E-EIB =0006D7E4:0133833C 0095342F E4D4D6D5 0000030C .....UMO
13:59:05 CSH6305E-EIB =0006D7F4:D9F0F0F1 00000016 00007D0A 04000000 R001.....'
13:59:05 CSH6305E-EIB =0006D804:000000E4 D4D6D5F0 F0F14000 00000000 ...UMON001.
13:59:05 CSH6305E-EIB =0006D814:000000C1 D4D6D5E3 E2F0F000 00000000 ...AMONTS00
13:59:05 CSH6305E-EIB =0006D824:00000000 00000000 00000000 00000000 .....
13:59:05 CSH6305E-EIB =0006D834:00000000 00000000 00000000 00000000 .....

```

In STAGE 1 the diagnostic information pertains to the transaction in control at the time when AUTOMON/CICS detects the system crash condition. Either a snap dump or an SVC dump may optionally be produced at this point to provide the user with a snapshot of the system information before the repair subtask intercepts the system crash condition. This may be done by turning on the Stage 1 action flag in the AUTOMON/CICS SRT Table.

```

13:59:05 CSH6602I-*(SRP)* STAGE (2) RECOVERY IN PROGRESS.
13:59:05 CSH6620I-*(SRP)* CSA=80044BA0,OFL=00044FB0,SSA=05C8B000,KCB=00006000
13:59:05 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.

```

In STAGE 2 of the AUTOMON/CICS systems recovery program, the verification of CICS/VS foundation will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the CICS/VS foundation. AUTOMON/CICS specifies whether the damaged system areas will be repaired or not.

```

13:59:05 CSH6602I?*(SRP)* STAGE (3) RECOVERY IN PROGRESS.
13:59:05 CSH6630I?*(SRP)* .....CURRENT TASKS.....
13:59:05 CSH6611I?*(SRP)* TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,TASK= 30,TCATCDC=10
13:59:05 CSH6611I?*(SRP)* TRAN=CSSTP,PGM= ,TERM=R001,TASK=TCP ,TCATCDC=00
13:59:05 CSH6611I?*(SRP)* TRAN=CSNE,PGM=DFHZNAC ,TERM=N/A ,TASK= 4,TCATCDC=00
13:59:05 CSH6611I?*(SRP)* TRAN=CSSY,PGM= ,TERM=N/A ,TASK= 5,TCATCDC=00
13:59:05 CSH6611I?*(SRP)* TRAN=CSSY,PGM= ,TERM=N/A ,TASK= 6,TCATCDC=00
13:59:05 CSH6611I?*(SRP)* TRAN=CSSY,PGM= ,TERM=N/A ,TASK= 19,TCATCDC=80
13:59:05 CSH6611I?*(SRP)* TRAN=AMON,PGM=CSHAMPC ,TERM=N/A ,TASK= 20,TCATCDC=80
13:59:05 CSH6611I?*(SRP)* TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,TASK= 30,TCATCDC=10
13:59:05 CSH6630I?*(SRP)* .....END.....
13:59:05 CSH6624I?*(SRP)* ACTION IN STORAGE VIOLATION.
13:59:05 CSH6612A- *ACTION* TRANSACTION CONTROL. TRAN=UMON,RC=DISABLED

```

In STAGE 3 of the AUTOMON/CICS systems recovery program, the verification of the task chains will be performed for the possibility of storage overlay conditions. This stage provides the user with a list of all the tasks in the system at the time the system crash condition was detected. If the Stage 3 action flag is turned on in the AUTOMON/CICS SRT table, AUTOMON/CICS will disable the transaction responsible for the system crash condition.

```
13:59:05 CSH6602I-*(SRP)* STAGE (4) RECOVERY IN PROGRESS.  
13:59:05 CSH6620I-*(SRP)* DSA=00000000,PGA=00000000,PGF=00000000,PGT=00000000  
13:59:05 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

In STAGE 4 of the AUTOMON/CICS systems recovery program, the verification of the dynamic storage area will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged storage areas. AUTOMON/CICS specifies whether the damaged storage areas will be corrected or not.

```
13:59:05 CSH6602I-*(SRP)* STAGE (5) RECOVERY IN PROGRESS.  
13:59:05 CSH6620I-*(SRP)* KCP=86C82D78,PCP=86CC7704,SCP=86C78EC4,TCP=0004D168  
13:59:05 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

In STAGE 5 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS nucleus modules will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS nucleus modules.

```
13:59:05 CSH6602I-*(SRP)* STAGE (6) RECOVERY IN PROGRESS.  
13:59:05 CSH6620I-*(SRP)* FCT=05CCA1F0,PCT=05CFA270,PPT=05CEBB20,TCT=05CD7030  
13:59:05 CSH6650I-*(SRP)* DFHFCT VERIFICATION IN PROGRESS.  
13:59:05 CSH6650I-*(SRP)* DFHPCT VERIFICATION IN PROGRESS.  
13:59:06 CSH6650I-*(SRP)* DFHPPT VERIFICATION IN PROGRESS.  
13:59:06 CSH6650I-*(SRP)* DFHTCT VERIFICATION IN PROGRESS.
```

In STAGE 6 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS system tables will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS system tables.

```
13:59:06 CSH6602I-*(SRP)* STAGE (7) RECOVERY IN PROGRESS.  
13:59:06 CSH6620I-*(SRP)* TCX=0004CB80,QCA=05CFA270,TBM=05CC4028,TST=00000000  
13:59:06 CSH6650I-*(SRP)* DFHAID VERIFICATION IN PROGRESS.  
13:59:06 CSH6650I-*(SRP)* DFHICE VERIFICATION IN PROGRESS.
```

In STAGE 7 of the AUTOMON/CICS systems recovery program, the verification of key CICS/VS system areas and pointers will be performed for the possibility of storage overlay conditions. The repair subtask will be attached to take corrective actions to repair the damaged CICS/VS system areas and pointers.

```

13:59:06 CSH6602I-*(SRP)* STAGE (8) RECOVERY IN PROGRESS.
13:59:06 CSH6680I-*(SRP)* .ENTRIES...ENABLED.....USED.....TOTAL
13:59:06 CSH6680I-*(SRP)* ...FCTTE 3 3 11
13:59:06 CSH6680I-*(SRP)* ...PCTTE 117 11 117
13:59:06 CSH6680I-*(SRP)* ...PPTTE 241 38 244
13:59:06 CSH6680I-*(SRP)* ...TCTTE 9 1 9
13:59:06 CSH6605I-*(SRP)* AUTOMON/CICS RECOVERY HAS BEEN COMPLETED.
13:59:06 CSH6606A-*ACTION* CONTROL IS BEING GIVEN TO CICS/ESA.

```

In STAGE 8 of the AUTOMON/CICS systems recovery program, the summary report will be produced. If the stage 8 action flag is turned on, a snap dump (ID=08) will be produced on to the AMON002 files. The snap dump contains the after image of the system following the completion of all AUTOMON recovery stages.

---

## Step 15 A storage overlay in CSA.

Type "=F.5" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait a few seconds-

```

ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM

```

```

0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA)....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS

```

```

PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT

```

- Your transaction "UMON" will corrupt the area.

## Step 16 Display storage overlay messages.

Type "*=E.0*" in the "*ENTER COMMAND =>*" field and hit ENTER. This set of AUTOMON/CICS messages begins with CSH6621E. At the command line type CSH6621E and hit the PF05 key to find the character string.

- You should see overlay messages. (CSH6621E) If not, repeat Step 15.

```
14:45:21 CSH6621E-*(SRP)* A STORAGE VERIFICATION FAILED.
14:45:21 CSH6622E-*(SRP)* ADDRESS=00044C2C,MODULE=DFHCSA ,OFFSET=+000008C
14:45:21 CSH6623E-*(SRP)* CURRENT=85FFFFFF00000008 SHOULD BE=85C0F97800000006
14:45:21 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

This step of the IVP will corrupt storage containing the Common System area. AUTOMON/CICS will detect and correct the storage overlay in this key CICS control block.

---

## Step 17 A storage overlay in DFHICP.

Type "*=F.6*" in the "*ENTER COMMAND =>*" field and hit ENTER.

-Wait a few seconds-

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM

      0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
      1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
      2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
      3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
      4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
      5 - IVP (DFHCSA)....THIS PANEL CORRUPTS A CONTROL BLOCK
      6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
      7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
      8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
      9 - IVP (SDUMP)....THIS PANEL CAUSES A SUBSYSTEM SDUMP
      A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
      X - EXIT.....END UNIMON/CICS

PF1=N/A  PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

- Your transaction "*UMON*" will corrupt the DFHICP module. You may encounter an ASRA abend condition, if you have LPA=YES specified in your DFHSIT table. If so, you need to sign back on to "*UMON*".  
Possible Abend code = "*ASRA*"

## Step 18 Display storage overlay messages.

Type "*=E.0*" in the "*ENTER COMMAND =>*" field and hit ENTER. This set of AUTOMON/CICS messages begins with CSH6621E. At the command line type CSH6621E and hit the PF05 key to find the character string.

- You should see overlay messages. (CSH6621E) If not, repeat Step 17.

```
05:54:34 CSH6621E-*(SRP)* A STORAGE VERIFICATION FAILED.
05:54:34 CSH6622E-*(SRP)* ADDRESS=008E1829,MODULE=DFHICP ,OFFSET=+0000001
05:54:34 CSH6623E-*(SRP)* CURRENT=00182C50E0C05858 SHOULD BE=8E182C50E0C05858
05:54:34 CSH6624I-*(SRP)* ACTION IN STORAGE VIOLATION.
```

This step of the IVP will corrupt storage containing a key CICS nucleus module. AUTOMON/CICS will detect and correct the storage overlay in this module.

---

## Step 19 A program interrupt condition.

Type "*=F.7*" in the "*ENTER COMMAND =>*" field and hit ENTER.

-Wait a few seconds-

- Your transaction "*UMON*" will cause an S0C1 program check and the task will be purged with a dump written to the dump dataset. Abend code = "*ASRA/????*"

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:43:52,TERM=4L23,NAME=UNICOM
```

```
0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA)....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

-At this point, you need to sign back on to "*UMON*"-



## Step 20 Display program check messages.

Type "=E.0" in the "ENTER COMMAND =>" field and hit ENTER. Transaction abend messages begin with CSH6205I. At the command line, type CSH6205 and hit the PF05 key to find the character string.

- You should see transaction abend messages (CSH6205I). If not, repeat Step 19.

```
15:21:27 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,ABCD=ASRA
15:21:27 CSH6206I-PSW=85D09460,ENTRY=85D09000,OFFSET=+0460,LAN=ASSMBLER
15:21:27 CSH6207I-OBJ=9610B0780000.416001E0,RC=0C1-OPERATION EXCEPTION
15:21:27 CSH6016W-(0-5) 05D09B34 0006DC90 85D0A028 85D09028 0006DC28 0006D7E4
15:21:27 CSH6016W-(6-B) 00061100 00844008 05CF92D0 86CCA6D0 05CF92D0 0006B580
15:21:27 CSH6016W-(C-F) 0006B008 0006D77C 85D091EC 00000000
```

AUTOMON/CICS provides diagnostic information for all transaction abends. The object code may be decoded in assembler to pinpoint the exact instruction causing the program failure.

Steps 21 through 26 allows users to test the functions of the UCCF/Server Subsystem. If you have elected not to use UCCF/Server or the UCCF/Server Subsystem task is not active skip to Step 27.

## Step 21 UCCF/Server Subsystem KILL.

Type "=F.8" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait a few minutes-

- Your transaction "UMON" will cause a hard loop condition in CICS. The task will be KILLED with an SOC6 specification exception and purged with a dump written to the dump dataset. Abend code = "ASRA/UAMK/???"

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640 ,CICS=640 ,DATE=2006/02/23 ,TIME=15:43:52 ,TERM=4L23 ,NAME=UNICOM
```

```
0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

-Wait several minutes. The "UMON" transaction will abend with abend code "ASRA" or "UAMK". At this point, you need to sign back on to "UMON"-

## Step 22 Display AUTOMON/CICS KILL messages.

Type "*E.O*" in the "*ENTER COMMAND =>*" field and hit ENTER. To display the last set of messages written by AUTOMON/CICS type "*M*" on the command line and hit the "*PF08*" key. This will position you at the bottom of the AUTOMON/CICS core log. The loop KILL messages for AUTOMON/CICS begin with CSH6200W.

- You should see a number of loop related messages starting from(CSH6200W). If not, repeat Step 21.

```
06:07:28 CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,ID= 36,TERM=R001
06:07:38 CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0 ,ID= 36,TRM=R001,ABCD=UAMA
06:08:08 CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0 ,ID= 36,TRM=R001,ABCD=UAMB
06:08:28 CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,ID= 36,TERM=R001
06:08:29 CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,ID= 36,TERM=R001
06:08:39 CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0 ,ID= 36,TRM=R001,ABCD=UAMA
06:09:09 CSH6800I-SUBSYSTEM INQUIRY SUCCESSFUL. SUBSYS=UCCF,ADDR=00C36B10
06:09:09 CSH6722A-*ACTION* LOOP KILL. TRAN=UMON,ID= 36,PSW=86088BC6,ABCD=UAMK
06:09:11 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,ABCD=UAMK
06:09:11 CSH6206I-PSW=86088BD1,ENTRY=860886E8,OFFSET=+04E9,LAN=ASSMBLER
06:09:11 CSH6207I-OBJ=F034DE070045.10352600,RC=0C6-SPCFICATN EXCEPTION
06:09:11 CSH6016W-(0-5) 00002328 0003CDFA 860896E8 860886E8 00118B08 001160D0
06:09:11 CSH6016W-(6-B) 05E74B6E 00000000 00045980 00000001 00000000 00116990
06:09:11 CSH6016W-(C-F) 001163D0 0011605C 86088874 51E8C047
```

AUTOMON/CICS implements a number of different mechanisms in its attempts to kill a looping transaction. When the loop action threshold for AUTOMON/CICS has expired, AUTOMON/CICS will initially attempt to purge the looping transaction with the equivalent of a CEMT purge command and a "*UAMA*" abend code.

When the next action threshold cycle has expired, AUTOMON/CICS will check to see if the attempt to purge the transaction was successful. In the event of an unsuccessful task purge, AUTOMON/CICS will attempt the equivalent of a CEMT force purge command with a "*UAMB*" abend code.

AUTOMON/CICS will then sleep until the next action threshold cycle has expired. At this point, AUTOMON/CICS will check to see if the attempt to force purge the transaction was successful. In the event of an unsuccessful task purge, AUTOMON/CICS will attempt to force an S0C1 abend in the transaction from the AUTOMON/CICS user exit(CSHAXIP).

AUTOMON/CICS will then sleep until the next action threshold cycle has expired. If AUTOMON/CICS detects that the transaction is still looping, it will pass a request to the UCCF/Server Subsystem to do an authorized kill of the looping transaction. The user transaction will be killed with an S0C6 specification exception. AUTOMON/CICS will report the resulting transaction abend with a "*UAMK*" abend code.

- You may wish to start another session to view the AUTOMON/CICS messages(in the MVS SYSLOG) which are associated with the UCCF/Server Subsystem KILL.

```

SDSF OUTPUT DISPLAY CICS212T STC07429 DSID 2 LINE 246 COLUMNS 01- 80
COMMAND INPUT ==> SCROLL ==> CSR
06:09:07.99 STC09324 +(CSHPCF0) *IVP*-AUTOMON/CICS FUNCTION "KILL" BEGIN.
06:09:09.10 STC09324 +CICS640 :CSH6800I-SUBSYSTEM INQUIRY SUCCESSFUL. SUBSYS=UCCF,ADDR=00C36B10
06:09:09.10 JOB09324 CSH301030 Subsystem service KILL requested by CICS640 for CICS640 RC=X'00000000'
06:09:09.11 STC09324 +CICS640 :CSH6722A-*ACTION* LOOP KILL. TRAN=UMON,ID= 36,PSW=86088BC6,ABCD=UAMK
06:09:09.12 STC09324 +DFHME0126 CICS640 390
390 Error in SYMREC invocation. Return code in R15 = X'000C', Reason code in R0 = X'0F1C'.
06:09:09.13 STC09324 +DFHAP0001 CICS640 An abend (code 0C6/AKEA) has occurred at offset X'00000511'
in module CSHPCF0.
06:09:09.14 STC09324 +DFHME0116 CICS640 392
392 (Module:DFHMEME) CICS symptom string for message DFHAP0001 is
392 PIDS/565501800 LVLS/410 MS/DFHAP0001 RIDSD/DFHSRP PTFs/ESA410 AB/S00C6
392 AB/UAKEA RIDSD/CSHPCF0 ADRS/00000511
06:09:09.15 STC09324 +DFHDU0201 CICS640 ABOUT TO TAKE SDUMP. DUMPCODE: AP0001 , DUMPID: 68/0002
06:09:10.76 STC09324 +DFHDU0202 CICS640 SDUMP COMPLETE.
394 IEA794I SVC DUMP HAS CAPTURED: 394
394 DUMPID=165 REQUESTED BY JOB (CICS640 )
394 DUMP TITLE=CICS DUMP: SYSTEM=CICS640 CODE=AP0001 ID=68/0002
06:09:11.26 STC09324 +CICS640 :CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,ABCD=UAMK
06:09:11.26 STC09324 +CICS640 :CSH6206I-PSW=86088BD1,ENTRY=860886E8,OFFSET=+04E9,LAN=ASSMBLER
06:09:11.27 STC09324 +CICS640 :CSH6207I-OBJS=F034DE070045.10352600,RC=0C6-SPCFICATN EXCEPTION
06:09:11.27 STC09324 +CICS640 :CSH6016W-(0-5) 00002328 0003CDFA 860896E8 860886E8 00118B08 001160D0
06:09:11.28 STC09324 +CICS640 :CSH6016W-(6-B) 05E74B6E 00000000 00045980 00000001 00000000 00116990
06:09:11.28 STC09324 +CICS640 :CSH6016W-(C-F) 001163D0 0011605C 86088874 51E8C047

```

When AUTOMON/CICS performs the authorized loop KILL, it will first check to see if the UCCF/Server Subsystem is available. If the subsystem task is active, AUTOMON/CICS passes the request to KILL the looping transaction to the Subsystem. The Subsystem will write a message to the SYSLOG as well as Subsystem Job Log to indicate that a KILL request has been made. This message contains a return code to indicate the result of the KILL request. When the KILL is performed by the UCCF/Server Subsystem, an SDUMP may be produced(Depending on your CICS dump dataset options).

If the "UMON" transaction is not abended with a "UAMK" abend code, please verify that both AUTOMON/CICS and the UCCF/Server Subsystem task are active. Then retry Step 21.

## Step 23 UCCF/Server Subsystem SDUMP.

Type "=F.9" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait a few seconds-

- Your transaction "UMON" will cause an asynchronous SDUMP to be written to the SYS1.DUMP dataset.

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:43:52,TERM=4L23,NAME=UNICOM
```

```

0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA)....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP)....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

Wait several seconds. AUTOMON/CICS will issue a request to the UCCF/Server Subsystem to produce an SDUMP of the system.-

## Step 24 Display SDUMP messages in the MVS SYSLOG

- You may wish to view the AUTOMON/CICS messages(in the MVS SYSLOG) which are associated with the UCCF/Server Subsystem SDUMP request. Position your display at the bottom of the SYSLOG. Then type "f (CSHPCF0) prev" on the command line to display the messages associated with the IVP generation of the SDUMP.

```
SDSF SYSLOG 2903.133 CPUI CPUI 2/01/96 LINE 2,384 COLUMNS 1 80
COMMAND INPUT ==> SCROLL ==> CSR
09:15:59.56 STC09533 +(CSHPCF0)*IVP*-AUTOMON/CICS FUNCTION "SDUMP" BEGIN.
09:16:01.45 STC09533 +(CSHPCF0)*IVP*-AUTOMON/CICS FUNCTION "SDUMP" COMPLETED.
09:16:01.44 STC09533 IEA794I SVC DUMP HAS CAPTURED: 106
106 DUMPID=166 REQUESTED BY JOB (CICS640 )
106 DUMP TITLE=(CSH30IRB) UNICOM REQUESTED SVC DUMP
09:16:01.45 JOB09233 CSH301030I Subsystem service SDUMP was requested by CICS640 for CICS640
RC=X'00000000'
```

The SDUMP produced by AUTOMON/CICS is a formatted dump and may be read with any dump formatting utility(such as IPCS). The UCCF/Server Subsystem will issue a message to indicate whether the SDUMP was successfully completed. A non-zero return code most likely indicates that all of the SYS1.DUMP datasets were full. Use the dump console commands to clear a dump dataset and retry step 23.

When AUTOMON/CICS detects a storage violation or a system crash condition, an SDUMP will be requested by AUTOMON CICS under the following conditions.

- 1). The stage 1 action flag in the AUTOMON/CICS System Recovery Table(SRT) is "ON".
- 2). The UCCF/Server Subsystem task is active. Once an SDUMP has been requested by AUTOMON/CICS the stage 1 action flag in the active SRT table will be reset to "OFF".

## Step 25 UCCF/Server Subsystem COMMANDS

Type "=F.A" in the "ENTER COMMAND =>" field and hit ENTER.

-Wait a few seconds-

☞ Your transaction "UMON" will cause AUTOMON/CICS to issue a request to the UCCF/Server Subsystem for an MVS CONSOLE command. In this case the console command to display the CPU Serial Number is issued.

```
ENTER OPTION ==>                ***AUTOMON/CICS IVP***                UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:43:52,TERM=4L23,NAME=UNICOM
```

```
0 - IVP (SOS).....THIS PANEL CAUSES A SHORT ON STORAGE
1 - IVP (SV).....THIS PANEL CAUSES A STORAGE VIOLATION
2 - IVP (LOOP).....THIS PANEL CAUSES A PROGRAM LOOP
3 - IVP (CRASH).....THIS PANEL CAUSES A SYSTEM CRASH
4 - IVP (HALT).....THIS PANEL CAUSES A PERMANENT WAIT
5 - IVP (DFHCSA).....THIS PANEL CORRUPTS A CONTROL BLOCK
6 - IVP (DFHICP).....THIS PANEL CORRUPTS A NUCLEUS MODULE
7 - IVP (ASRA).....THIS PANEL CAUSES A PROGRAM CHECK
8 - IVP (KILL).....THIS PANEL CAUSES A SUBSYSTEM KILL
9 - IVP (SDUMP).....THIS PANEL CAUSES A SUBSYSTEM SDUMP
A - IVP (CMD).....THIS PANEL CAUSES A SUBSYSTEM COMMAND
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF9=REFRESH PA1/CLEAR=EXIT
```

Wait several seconds. AUTOMON/CICS will issue a request to the UCCF/Server Subsystem to issue a CONSOLE command.-

## Step 26 Display COMMAND messages in the MVS SYSLOG

- You may wish to view the AUTOMON/CICS messages(in the MVS SYSLOG) which are associated with the UCCF/Server Subsystem CONSOLE Command request. Position your display at the bottom of the SYSLOG. Then type "f (CSHPCF0) prev" on the command line to display the messages associated with the IVP Subsystem COMMAND.

```
SDSF SYSLOG 2903.133 CPUI CPUI 2/01/96 LINE 2,384 COLUMNS 1 80
COMMAND INPUT ==> SCROLL ==> CSR
10:25:35.95 STC09533 +(CSHPCF0)*IVP*-AUTOMON/CICS FUNCTION "COMMAND" BEGIN.
10:25:35.96 STC09533 D M=CPU
10:25:35.97 STC09533 +(CSHPCF0)*IVP*-AUTOMON/CICS FUNCTION "COMMAND" COMPLETED.
10:25:35.97 JOB09233 CSH301030I Subsystem service COMMAND was requested by CICS640 for D M=CPU
RC=X'00000000'
10:25:35.98 JOB09751 IEF234E K 0481,R25524,PVT,HSH1CART,GENCHK
10:25:36.00 SB0996I HSH1CART.#R25524 .GENCHK RC=ZERO T=0128 D=0183 MT=.38S ET=164S
10:25:36.08 JOB09751 IEE174I 10.25.35 DISPLAY M 925
925 PROCESSOR STATUS
925 ID CPU SERIAL
925 1 + 1708483090
925 2 + 1708483090
925 3 + 1708483090
925 4 + 1708483090
925 + ONLINE - OFFLINE . DOES NOT EXIST
```

The UCCF/Server Subsystem task is capable of issuing any MVS CONSOLE command automatically. All COMMANDS issued by the UCCF/Server Subsystem are logged to the SYSLOG as well as the UCCF/Server Subsystem Log. The message(CSH301030) written by the UCCF/Server Subsystem will indicate the command issued. This feature of the UCCF/Server Subsystem is not implemented in the current release of AUTOMON/CICS. It will be used in conjunction with future enhancements to the product.

If these messages are not found in the SYSLOG, verify that the UCCF/Server Subsystem task is active and retry Step 25.

---

## Step 27 Sign-off.

Hit CLEAR twice.



## Step 28 Print the AUTOMON/CICS History database.

Change the sample JCL provided in UNICOM.INSTLIB("CSHLIST") to suit the requirement of your installation and submit.

```
//CSHLIST JOB (0,0000), 'AUTOMON/CICS BATCH', CLASS=0, MSGLEVEL=(1,1)
//*****
//*+-----+*
//*|          PRINT AUTOMON/CICS HISTORY DATABASE          |*
//*+-----+*
//*****
//CSHLIST EXEC  PGM=CSHLIST, REGION=4096K
//STEPLIB  DD DISP=SHR, DSN=AUTOMON.V420.CICS640.LOADLIB
//AMON001  DD DISP=SHR, DSN=AUTOMON.SYS001
//UMON001  DD DISP=SHR, DSN=UNIMON.SYS001
//SYSPRINT DD SYSOUT=*, DCB=BLKSIZE=133
//SYSOUT   DD SYSOUT=*, DCB=BLKSIZE=133
//*SYSOUT  DD DISP=(NEW,KEEP), DSN=CSH.AUTOMON.LOG, UNIT=CART,
//*        DCB=BLKSIZE=133, LABEL=(1,SL,EXPDT=98000), VOL=SER=UNICOM,
//*        TRTCH=NOCOMP
//SYSIN    DD *
WTO(YES), -          WRITE TO OPERATOR MESSAGES.....(YES|NO)
COMPANY(COMPANY NAME), - YOUR COMPANY NAME.....(UPTO 42)
APPLID(*), -        APPLICATION ID(S).....(UPTO 8)
DETAIL(YES), -      PRINT DETAIL REPORT.....(YES|NO)
SUMMARY(YES), -    PRINT SUMMARY REPORT.....(YES|NO)
FROM(1997/01/01,00:00:00), - FROM.....(YYYY/MM/DD,HH:MM:SS)
TO(1999/12/31,24:00:00), - TO.....(YYYY/MM/DD,HH:MM:SS)
EXCLUDE(CSH0000,CSH0000), - MESSAGE EXCLUSION.....(UPTO 8)
PAGESIZE(50), -    NUMBER OF LINES PER PAGE.....(10-999)
COUNT(999999), -  MAX RECORD SELECTION.....(0-9999999)
SCAN(FORWARD), -   DIRECTION.....(FORWARD|BACKWARD)
SKIP(0), -         # OF RECORDS TO BE BYPASSED....(0-9999999)
TYPE(*)            RECORD SELECTION(S).....(A,E,I,W)
/*
```

-End of Installation Verification Procedure I-

### 3) Verify AUTOMON/CICS System Files

#### **Step 1 Sign-on to UNIMON/CICS from a CICS/VS terminal.**

Type "UMON", hit ENTER. After the sign-on menu is displayed, enter your Name and Password.

---

#### **Step 2 Verify UMON001 system file.**

Type "=7.2" in the "ENTER COMMAND =>" field and hit ENTER.

- You should see AUTOMON/CICS messages. If not, follow the UNIMON/CICS error message located in the lower-left portion of your current screen.

```
ENTER COMMAND => _____ ***UNIMON/CICS MESSAGES*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/24,TIME=08:51:49,TERM=4L05,NAME=UNICOM
MSG/ABND SEQ -----DESCRIPTION-----
CODE NO
CSH0000 -UNIMON/CICS PRODUCT EXPIRED.
EXPLANATION: AN ERROR CONDITION HAS OCCURRED DURING THE PRODUCT
VERIFICATION AND SECURITY CHECK PROCESS.
SYSTEM ACTION: UNIMON/CICS ABNORMALLY TERMINATES ITS OWN PROCESS
USER ACTION: CONTACT THE UNICOM SUPPORT CENTER.
CSH0001 -UNIMON/CICS PRODUCT EXPIRATION DATE VERIFICATION FAILED.
EXPLANATION: AN ERROR CONDITION HAS OCCURRED DURING THE PRODUCT
VERIFICATION AND SECURITY CHECK PROCESS.
SYSTEM ACTION: UNIMON/CICS ABNORMALLY TERMINATES ITS OWN PROCESS
USER ACTION: CONTACT THE UNICOM SUPPORT CENTER.
CSH0002 -UNIMON/CICS PRODUCT WILL EXPIRE WITHIN 30 DAYS.
EXPLANATION: A WARNING CONDITION HAS OCCURRED DURING THE PRODUCT
VERIFICATION AND SECURITY CHECK PROCESS.
SYSTEM ACTION: UNIMON/CICS CONTINUES ITS OWN PROCESS.
USER ACTION: CONTACT UNICOM SYSTEMS, INC.
CSH0003 -UNIMON/CICS IS NOT LICENSED FOR THIS CPU.
EXPLANATION: AN ERROR CONDITION HAS OCCURRED DURING THE PRODUCT
VERIFICATION AND SECURITY CHECK PROCESS.
PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF7=UP F8=DN PF9=REFRSH PA1/CLR=EXIT
```

This step of the IVP verifies that the UMON001 system definition file has been correctly defined to the CICS system.

If you do not see a display similar to that shown above, an error message will be generated to help in the problem determination. After the file definition has been modified, please repeat this step.

### Step 3 Verify AMON001 History Database.

Type "=E.I" in the "ENTER COMMAND =>" field and hit ENTER.

- You should see AUTOMON/CICS generated messages. If not, follow the UNIMON/CICS error message located in the lower-left portion of your current screen.

```
ENTER COMMAND => ***DISPLAY MULTI AUTOMON/CICS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/24,TIME=08:52:40,TERM=4L05,NAME=UNICOM
FILE AMON001 SELECT * APPLID FROM 2006/02/24 00:00:00
APPLID DATE TIME MESSAGE
LJLDFH63 2006/02/24 06:00:00 CSH6693I-(HH) I/O : TOT= 32,RATE=
LJLDFH63 2006/02/24 06:00:00 CSH6693I-(HH) CONN: TOT= 0.000,RATE= 0.00
LJLDFH63 2006/02/24 06:29:17 CSH6690I-06:29:17 |..CURRENT..|..AVERAGE..|...HWM..
LJLDFH63 2006/02/24 06:29:17 CSH6690I-TRANS |.00/SEC|.00/SEC|.03/SE
LJLDFH63 2006/02/24 06:29:17 CSH6690I-FILE I/O|.00/SEC|.00/SEC|.16/SE
LJLDFH63 2006/02/24 06:29:17 CSH6690I-VTAM|.00/SEC|.00/SEC|.00/SE
LJLDFH63 2006/02/24 06:29:17 CSH6690I-AUX TS|.00/SEC|.00/SEC|.00/SE
LJLDFH63 2006/02/24 06:29:17 CSH6691I-MAIN TS. CUR= 24,MAX= 24,TSQ#=
LJLDFH63 2006/02/24 07:00:00 CSH6693I-(HH) CPU : TOT= 12.489,RATE= 0.34
LJLDFH63 2006/02/24 07:00:00 CSH6693I-(HH) TRAN: TOT= 1,RATE=
LJLDFH63 2006/02/24 07:00:00 CSH6693I-(HH) I/O : TOT= 30,RATE=
LJLDFH63 2006/02/24 07:00:00 CSH6693I-(HH) CONN: TOT= 0.000,RATE= 0.00
LJLDFH63 2006/02/24 07:30:32 CSH6690I-07:30:32 |..CURRENT..|..AVERAGE..|...HWM..
LJLDFH63 2006/02/24 07:30:32 CSH6690I-TRANS |.00/SEC|.00/SEC|.03/SE
LJLDFH63 2006/02/24 07:30:32 CSH6690I-FILE I/O|.00/SEC|.00/SEC|.16/SE
LJLDFH63 2006/02/24 07:30:32 CSH6690I-VTAM|.00/SEC|.00/SEC|.00/SE
LJLDFH63 2006/02/24 07:30:32 CSH6690I-AUX TS|.00/SEC|.00/SEC|.00/SE
LJLDFH63 2006/02/24 07:30:32 CSH6691I-MAIN TS. CUR= 24,MAX= 24,TSQ#=
PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF7=UP F8=DN PF9=REFRSH PA1/CLR=EXIT
```

This step of the IVP verifies that the AMON001 History Database file has been correctly defined to the CICS system.

If you do not see a display similar to that shown above, an error message will be generated to help in the problem determination. After the file definition has been modified, please repeat this step.

---

### Step 4 Sign-off.

Hit CLEAR twice.

# AUTOMON/CICS Customization

## 1) Overview

AUTOMON/CICS is comprised of a number of different tables which control the functions and actions which AUTOMON/CICS will perform during the course of an AUTOMON/CICS session. These tables may be modified to optimize the benefits which you will receive from AUTOMON/CICS. In this section, each of the AUTOMON/CICS tables and their key parameters will be explained. Helpful tips will also be given to help you tailor this product to the individual need of your environment. All AUTOMON/CICS system definition tables may be modified through the utility transaction "UMON". The "UMON" transaction has more than 50 panels to provide users with both control and monitoring functions.

There are two main groups of control panels in the "UMON" transaction, Option "0" and Option "E", which will be discussed in this customization section. Subpanels of Option "0" on the AUTOMON/CICS main menu will dynamically alter the AUTOMON/CICS control blocks. The subpanels of Option "E" of the AUTOMON/CICS main menu will modify AUTOMON/CICS table definitions located in the UMON001 file.

```
ENTER OPTION ==> _____          ***UNIMON/CICS***          UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:37:46,TERM=4L23,NAME=UNICOM
```

```
0 - PROFILE.....UNIMON/CICS USER PROFILE
1 - CICS/VS.....DISPLAY CICS/VS STATISTICS
2 - TASKS.....DISPLAY CICS/VS TASKS
3 - STORAGE.....DISPLAY STORAGE UTILIZATION
4 - RESOURCE.....DISPLAY RESOURCE STATISTICS
5 - DATA AREA.....DISPLAY SYSTEM CONTROL BLOCKS
6 - SERVICE AID.....DEBUGGING AND TROUBLE SHOOTING
7 - MESSAGES.....DISPLAY MESSAGES AND ABEND CODES
8 - SECURITY.....DISPLAY/ADD/UPDATE/DELETE SECURITY
A - UMF/O.....UNICOM MONITORING FACILITY/ONLINE
B - UCCF/CICS...UNIVERSAL COMMAND CONTROL FACILITY/CICS
E - AUTOMON/CICS.....AUTOMON/CICS
F - IVP.....PRODUCT INSTALLATION VERIFICATION PROCEDURE
X - EXIT.....END UNIMON/CICS
```

```
PF1=N/A PF2=PRINT PF3/PA1/CLEAR=EXIT
```

### **1.a) Option "0": AUTOMON/CICS Control Blocks**

Panels located under option 0 "*PROFILE*" allow users to make dynamic changes to the AUTOMON/CICS control blocks which are loaded when the AUTOMON/CICS subtask is attached. This group of panels will contain the current settings in effect for this session of AUTOMON/CICS.

Changes made to the AUTOMON/CICS control blocks from any "*PROFILE*" subpanel will be effective immediately. However, be aware that changes made from these panels are only made in virtual storage, therefore, these changes are only effective for the current session of AUTOMON/CICS. These panels allow users to test the results of changes to any of the AUTOMON/CICS tables prior to implementing these changes on a permanent basis.

On entry to any of the "*PROFILE*" subpanels, all the current settings for the selected AUTOMON/CICS table will be displayed. The user may tab the cursor to any modifiable field and make changes to the table dynamically. There are certain fields which may not be modified and the cursor will skip over these fields and come to rest on the next modifiable field when the tab key is pressed.

AUTOMON/CICS requires you to press the PF06 key after you have changed the values in any of the modifiable fields for the changes to be effective. This is done in an effort to prevent an accidental change to any field in the active AUTOMON/CICS control tables.

### **1.b) Option "E": AUTOMON/CICS Table Definitions**

Panels located under option E "*AUTOMON/CICS*" allow users to make permanent changes to the UMON001 system definition file. When the AUTOMON/CICS subtask is attached, the table definitions stored in this file are used to create the AUTOMON/CICS control blocks. These control blocks determine the actions AUTOMON/CICS will take. This group of panels will contain the default table definitions provided with the product as well as any user defined table definitions. Two sets of default control tables, with the suffix of "*WN*" and "*TE*", are provided with the product. These table suffixes allow AUTOMON/CICS to run in either a "*WARNING*" or "*ACTION*" mode.

- Tables with the "*WN*" suffix contains settings which allow users to run AUTOMON/CICS in a warning-mode only state. If a user runs AUTOMON/CICS in "*WARNING*" mode, AUTOMON/CICS will report problems that it detects in the system and provide the user with valuable diagnostic information as to the cause of these problems. However, no corrective actions will be attempted by AUTOMON/CICS when the product is running in "*WARNING*" mode. In order to properly start AUTOMON/CICS in warning mode, the APPLID of the region should be defined in the AUTOMON/CICS APPLID table with an AIT table suffix of "*WN*".

- Tables with the "TE" suffix contain settings which allow users to run AUTOMON/CICS in an action mode state. If a user runs AUTOMON/CICS in "ACTION" mode, AUTOMON/CICS will report and diagnose problems that it detects in the system and take corrective actions where appropriate. The "TE" table suffix is the normal default of AUTOMON/CICS. This means that AUTOMON/CICS will start in "ACTION" mode if the CICS APPLID is not defined in the AUTOMON/CICS APPLID table.

Any changes made to the AUTOMON/CICS table definitions from any subpanels in Option "E" will not take effect until the next session of AUTOMON/CICS. However, changes made from any of these subpanels will be permanently in effect once the AUTOMON/CICS session has been recycled. The user may tab the cursor to any modifiable fields and make changes to the table.

Modifications to permanent table definitions are accomplished by typing an action code, the modified value and pressing the PF06 key. There are three 1 byte action codes which are available to make modifications to any given AUTOMON/CICS table definition. These action codes are "A" for ADD, "C" for CHANGE and "D" for DELETE. Users can modify the AUTOMON/CICS system definition tables by performing the following steps.

1. Code the appropriate action code on the underscore in front of the AUTOMON/CICS table definition. If you are adding a table definition, you may code an "A" in front of any existing table definition.
2. Change any of the user definable fields to the desired value.
3. Press the PF06 key to perform the change request.

### **1.c) Starting and Stopping the AUTOMON/CICS Subtask**

As mentioned previously, all changes made through option E "AUTOMON/CICS" subpanels will not take effect until the next session of AUTOMON/CICS. A session of AUTOMON/CICS consists of the time between the attach of the AUTOMON/CICS subtask and the time the subtask is detached. There are three ways in which you can turn AUTOMON/CICS ON and OFF.

1. Define CSHAPLP as the last program in the PLTPI and the first program in the PLTSD. Sample sources for the PLT definitions are provided in UNICOM.INSTLIB in members DFHPLTPI and DFHPLTSD.
2. There are two utility transactions provided to start and stop the AUTOMON/CICS subtask. The "AON" transaction will start the AUTOMON/CICS subtask and the "AOFF" transaction will terminate the AUTOMON/CICS subtask.
3. The active indicator may be changed in the AUTOMON/CICS STATUS panel(=0.1).

## **2) Customization Steps**

AUTOMON/CICS is shipped with two sets of default table definitions. These definitions were created to provide increased productivity and availability in any CICS region. However, each user's environment is designed differently. Therefore, the user may be able to further optimize their AUTOMON/CICS functions by customizing AUTOMON/CICS to their environment. Customization usually involves creating new table definitions or updating the control tables default table definitions. These definitions are tailored by users to fit into the individual needs of their environment. This section will discuss some of the key parameters which are most commonly modified to optimize the performance of AUTOMON/CICS. Please refer to the AUTOMON/CICS Users Guide for a detailed description of all the parameters in the AUTOMON/CICS tables.

### **2.a) AUTOMON/CICS APPLID Table(=E.2)**

Like CICS itself, AUTOMON/CICS is table driven. The AUTOMON/CICS APPLID table is the first table loaded when the AUTOMON/CICS subtask is attached. The function of the APPLID table is to link the APPLID of the region with an AIT table suffix. This information allows AUTOMON/CICS to determine which table definitions it should use when building the AUTOMON/CICS control blocks for the region.

Once the APPLID table has been loaded, AUTOMON/CICS checks to see if the APPLID for this CICS region has been defined in the APPLID table. If a match is found, AUTOMON/CICS will then use the AIT table suffix associated with this APPLID to load the AIT table. The functions of the AIT table are described in the next section.







When the "WTO" field is set to "ON", then all AUTOMON/CICS core log messages are also written to the MVS SYSLOG before they are written to the AUTOMON History file. This is done for two reasons:

1. It allows the user to interface with any other automation products at their installation by intercepting the WTO messages.
2. AUTOMON/CICS uses a CICS transaction to write its messages to the AMON001 History file. In the event that CICS is having trouble, in certain situations, some AUTOMON/CICS messages may not be written to the history file because CICS was unable to perform the file control write request at the time of trouble. This duplication of AUTOMON/CICS messages ensures that diagnostic information will always be available to the user.

When the "WTO" field is set to "ON", all AUTOMON/CICS messages are also sent to the CONSOLE. If you do not want your operators to see AUTOMON/CICS messages, set the "WTO" field to "WTL"(Write To Log). In this case, AUTOMON/CICS messages will be duplicated in the System log but will not show up on the system console.

When the "WTO" field is set to "OFF" then neither of the above actions will take place. Please note that if this field is set to "OFF" the possibility exists that some data may be lost if CICS is not able to write the AUTOMON/CICS messages to the AMON001 History file.

### ***THT***

The "THT" field is used to specify what table suffix will be used by AUTOMON/CICS when it build control blocks for 4 of the AUTOMON/CICS tables. These 4 tables include the AUTOMON/CICS Threshold table(THT), AUTOMON/CICS Exception table(EXC), AUTOMON/CICS Degradation table(DEG) and the AUTOMON/CICS System Recovery Table(SRT). Once a table suffix value is specified in this field, all of the four above tables will be using the same suffix. Users need to verify the existence of these tables. For example, when the user creates a new THT table with the suffix of 'AA' and assigns this suffix in this field, the user should also create the other three tables, EXC, DEG, & SRT, with the same suffix of 'AA'. For further details on creating new tables please refer to section 2.h.

### ***XLT1/XLP1/XLT2/XLP2***

AUTOMON/CICS allows you to specify transactions and or programs in special exclusion list tables(XLT). There are two reasons that the user may wish to define a transaction in one of the AUTOMON/CICS Exclusion List Tables.

1. You may wish to exclude a transaction or program from one of AUTOMON/CICS purge actions.
2. You may wish to define purge thresholds for a transaction or program which are different from the global action thresholds set in the AUTOMON/CICS Threshold table(THT).

The AIT table has 4 fields which allow the user to specify table suffixes for exceptions to the global action thresholds in the THT table. These 4 fields are "XLT1", "XLP1", "XLT2" and "XLP2".

"XLT1" - Determines which XLT table suffix will be used to define action thresholds for AUTOMON/CICS's looping mechanism on a transaction ID basis.

"XLP1" - Determines which XLT table suffix will be used to define action thresholds for AUTOMON/CICS's looping mechanism on a program name basis.

"XLT2" - Determines which XLT table suffix will be used to define action thresholds for AUTOMON/CICS's storage high water mark mechanism on a transaction ID basis.

"XLP2" - Determines which XLT table suffix will be used to define action thresholds for AUTOMON/CICS's storage high water mark mechanism on a program name basis.

For further details regarding the AUTOMON/CICS AIT table definitions, please refer to the AUTOMON/CICS User's Guide.

## 2.c) AUTOMON/CICS XLT Table(=E.4)

The AUTOMON/CICS XLT table allows the user to define sets of transactions or programs to be exempted from the AUTOMON/CICS global action mechanisms. In addition, this table allows users to assign warning and action thresholds to transactions and programs which will override the global notification and action thresholds defined in the AUTOMON/CICS THT table. These entries are associated with an XLT table suffix. The AIT table entry determines which XLT table suffix is used to make the exceptions to AUTOMON/CICS's global warning and action mechanisms.

```
ENTER COMMAND => _____ ***EXCLUDE LIST TABLE*** UNIMON/CICS V420
APPLID=CICS640 ,CICS=640,DATE=2006/02/23,TIME=11:46:32,TERM=0059,NAME=UNICOM
XLT TRAN/PGM MASTER_WARNING_ACTION _WARNING _ACTION_
_ P1 CSHAMPC ON ON ON 0 0
_ P2 CSHAMPC ON ON ON 0 0
_ T1 CDB* ON ON ON 0 0
_ T1 CSKC ON ON ON 0 0
_ T1 CSNE ON ON ON 0 0
_ T1 CSTP ON ON ON 0 0
_ T1 DSNC ON ON ON 0 0
_ T1 I$$Q ON ON ON 0 0
_ T1 IESO ON ON ON 0 0
_ T1 IESX ON ON ON 0 0
_ T1 JNL2 ON ON ON 0 0
_ T1 MCI1 ON ON ON 0 0
_ T1 MCI2 ON ON ON 10 0
_ T1 MCI3 ON ON ON 0 200
_ T1 MCX* ON ON ON 0 0
_ T1 TM* ON ON ON 0 0
_ T1 U$AM ON ON ON 0 0
_ T1 U* ON ON ON 10 0
_ T2 AMON ON ON ON 0 0

PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF6=CHANGE PF7=UP PF8=DN PF9=REFRESH
```

AUTOMON/CICS is shipped with 4 pre-coded XLT tables. These XLT tables are table suffixes P1, T1, P2 and T2. The XLT table suffixes used by AUTOMON/CICS are defined in the AIT table.

There are a set of rules which apply to the the XLT table flags and thresholds. These rules are summarized below.

- 1) If the master flag is 'OFF' in an XLT entry, then no XLT processing will be performed for the transaction or program in the XLT entry.
- 2) If an XLT warning threshold is less than the global AUTOMON/CICS THT notification threshold, the global notification threshold will be used.
- 3) If an XLT action threshold is less than the global AUTOMON/CICS THT notification threshold, the global notification threshold will be used.
- 4) If the XLT warning flag is 'ON' and the XLT warning threshold is '0' then no warning message will be issued by AUTOMON/CICS.
- 5) If the XLT action flag is 'ON' and the XLT action threshold is '0' then AUTOMON/CICS will issue a \*BYPASS\* message when the global action threshold is reached.
- 6) If the XLT action flag is 'ON' and the XLT action threshold is '0' then SOS action for the specified transaction or program will be ignored.(XLT2 and XLP2 only)
- 7) If the XLT action flag is 'ON' and the XLT action threshold is non-zero then SOS action for the specified transaction or program will be taken.(XLT2 and XLP2 only)
- 8) If the PPT/PLCB pointer to the program is zero, then the program XLT process will be ignored.

AUTOMON/CICS is shipped with 4 pre-coded XLT tables. These XLT tables are table suffixes P1, T1, P2 and T2. The XLT table suffixes used by AUTOMON/CICS are defined in the AIT table.

To illustrate how the XLT works, the T1 XLT table will be used as an example. The default AIT suffix of "TE" has the XLT table suffix of T1 for its "XLT1" field. This indicates that the entries in the T1 XLT table will be transactions excluded from AUTOMON/CICS's global looping threshold defined in the THT table.

```
AIT RETRY WTO-IGNOR-MAX AUX LOG THT XLT1 XLP1 XLT2 XLP2 SV AMXT SCS LACCDATE
_ TE 20 ON 100 10000 ON 400 TE T1 P1 T2 P2 A 4 ON ON 2006/02/23
```

The T1 XLT entry for the DSNC transaction has been defined with both warning and action thresholds of 0. If you define a transaction/program with a threshold value of zero in any of the XLT tables, the transaction or program will be exempted from the AUTOMON/CICS warning or action associated with the table. In this case if the DSNC transaction went into a loop:

- 1) No warning message would be issued when the global notification threshold was exceeded in the AUTOMON/CICS THT table.
- 2) The DSNC transaction is excluded from the looping action mechanism of AUTOMON/CICS when the global action threshold is exceeded in the AUTOMON/CICS THT table.
- 3) A LOOP \*BYPASS\* message will be issued by AUTOMON/CICS when the DSNC reaches the global action threshold to indicate that the transaction would have been purged by AUTOMON/CICS had it not been defined in the XLT1 table. To avoid the \*BYPASS\* message completely change the XLT threshold to a very large number. Valid XLT threshold values are between 0 and 99999998.

XLT TRAN/PGM MASTER_WARNING_ACTION_WARNING_ACTION_							
_ T1	DSNC	ON	ON	ON	0	0	

The user may insert a wildcard character of "\*" at the end of the "TRAN/PGM" field to exclude a group of transactions/programs from the action mechanisms of AUTOMON/CICS. The following example illustrates how a wildcard of "\*" may be used to exclude all transactions which start with the character string of "CS"(and are at least 3 characters long) may be excluded from the looping action mechanism of AUTOMON/CICS.

XLT TRAN/PGM MASTER_WARNING_ACTION_WARNING_ACTION_							
_ T1	CS*	ON	ON	ON	0	0	

The user may assign a warning and/or action threshold which is different than the global action threshold defined in the AUTOMON/CICS Threshold(THT) table. The following T1 XLT definition will set the warning and action thresholds for the SAMP transaction to 500 and 600 seconds. The global notification and action thresholds set in the THT table are 20 and 180 seconds in the TE THT table. If the SAMP transaction was not defined in the T1 XLT table, AUTOMON/CICS would issue warning messages for the SAMP transaction beginning at the time the transaction either held exclusive control of the task dispatcher for 20 second or accumulated 20 seconds of CPU time. These warning messages would be issued periodically until the global loop action threshold was reached. At this point AUTOMON/CICS would purge the SAMP transaction with a UAMA or UAMB abend code. With the SAMP entry in the T1 XLT(shown below), the XLT warning threshold of 500 seconds will override the 20 second threshold in the AUTOMON/CICS THT and the XLT action threshold of 600 second, will override the global action threshold of 180 cpu seconds in the THT. Therefore, with this entry defined in the T1 XLT table, AUTOMON/CICS will not take any action to purge the transaction until the transaction has run for more than 600 cpu seconds and no warning messages will be issued by AUTOMON/CICS until the transaction has run for more than 500 seconds.

<b>XLT TRAN/PGM</b>	<b>MASTER_WARNING_ACTION</b>	<b>_WARNING_ACTION_</b>			
<b>_ T1 SAMP</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>500</b>	<b>600</b>

**Note:**

An entry may also be defined in one of the XLT tables which has a threshold lower than the action threshold defined in the AUTOMON/CICS THT table. However, if the threshold is defined lower than the global warning threshold, then AUTOMON/CICS will not take any action until the transaction/program reaches the global warning threshold.

## 2.d) AUTOMON/CICS THT Table(=E.5)

The AUTOMON/CICS THT table is a very important table when customizing AUTOMON/CICS to your environment. This table allows users to control the frequency with which AUTOMON/CICS will check the system as well as the global warning and action thresholds for various AUTOMON/CICS mechanisms. This panel also allows users to selectively turn on or off many of the features of AUTOMON/CICS.

```

ENTER COMMAND => _____      ***THRESHOLD TABLE***      UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:48:52,TERM=4L23,NAME=UNICOM
THT +-----+-----+-----+-----+-----+-----+-----+-----+
- TE |  ITEM  |  FLAGS | CYCLE | NOTIFY | ACTION |  ITEM  |  FLG | CYCLE |
-----+-----+-----+-----+-----+-----+-----+-----+
    | LOOP   |  O O O |   --- |    20   |   180  | VSAM STRING WAIT |  O  |   60 |
    | STOR HWM | O O O |   30  | 300000  | 750000 | VTAM TERMNL WAIT |  O  |   60 |
    | MXT    |  F O O |   30  |    32   |   490  | JOURNAL SWITCH   |  O  |   60 |
    | TS HWM  |  O - - |   60  |    98 % |    --- | EXCEPTIONAL      |  O  |   60 |
    | SOS    |  O O O |   --- |    ---  |    60  | DEGRADATIONAL    |  O  |   60 |
    | PER DATA | O - - |   --- |    3600 |    --- |                   |    |    |
-----+-----+-----+-----+-----+-----+-----+
- WN |  ITEM  |  FLAGS | CYCLE | NOTIFY | ACTION |  ITEM  |  FLG | CYCLE |
-----+-----+-----+-----+-----+-----+-----+
    | LOOP   |  O O F |   --- |    20   |   180  | VSAM STRING WAIT |  O  |   60 |
    | STOR HWM | O O F |   30  | 300000  | 750000 | VTAM TERMNL WAIT |  O  |   60 |
    | MXT    |  F O O |   30  |    32   |   490  | JOURNAL SWITCH   |  O  |   60 |
    | TS HWM  |  O - - |   60  |    98 % |    --- | EXCEPTIONAL      |  O  |   60 |
    | SOS    |  O O F |   --- |    ---  |    60  | DEGRADATIONAL    |  O  |   60 |
    | PER DATA | O - - |   --- |    3600 |    --- |                   |    |    |
-----+-----+-----+-----+-----+-----+
PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF6=CHANGE PF7=UP PF8=DN PF9=REFRESH

```

### FLAGS

The first important item to notice in this panel is the "FLAGS" field. There are 3 user definable flags in this field which from left to right are named the Master flag, Notify flag and Action flag.

The Master flag has two possible values, O for ON and F for OFF. This flag is used to turn a particular AUTOMON/CICS function ON or OFF. When the Master flag is set to OFF, it overrides the settings in the Notify and Action flags.



The Notify flag has two possible values, O for ON and F for OFF. If the Notify and Master flags are both ON, AUTOMON will produce a warning message whenever the notification threshold has been exceeded. In the example below, if a transaction is running for longer than 20 cpu seconds, AUTOMON/CICS will produce a warning message. During the IVP, a looping condition in the UMON transaction was created. The CSH6200W message was written to the AMON001 History file when the UMON transaction's cpu usage exceeded the global warning threshold defined in the "NOTIFY" field of the LOOP feature.

TE	ITEM	FLAGS	CYCLE	NOTIFY	ACTION	ITEM	FLG	CYCLE
	LOOP	0 0 0	---	20	180	VSAM STRING WAIT	0	60

CSH6200W-LOOP/WAIT DETECTION. TRAN=UMON,PGM=CSHPCF0 ,ID= 27,TRM=RR01

The Action flag has two possible values, O for ON and F for OFF. If the Action and Master flags are both ON, AUTOMON will purge a transaction if it exceeds the global action threshold defined in the "ACTION" field. In the example below, if a transaction is running for longer than 180 cpu seconds, AUTOMON/CICS will purge the looping transaction. An action message will be written to the AMON001 History file indicating the transaction purged by AUTOMON/CICS as well as the reason that the transaction was purges. In the IVP you created a looping condition in the UMON transaction. The CSH6201A message was written to the AMON001 History file when the UMON transaction exceeded the global action threshold defined in the "ACTION" field of the LOOP record.

TE	ITEM	FLAGS	CYCLE	NOTIFY	ACTION	ITEM	FLG	CYCLE
	LOOP	0 0 0	---	20	180	VSAM STRING WAIT	0	60

CSH6201A-\*ACTION\* LOOP. TRAN=UMON,PGM=CSHPCF0 ,ID= 27,TRM=RR01,ABCD=UAMB

### **CYCLE**

The "CYCLE" field allows users to set the frequency with which AUTOMON/CICS will perform its functions. Some AUTOMON/CICS functions have their own default values and are not user definable. Your cursor will skip the "CYCLE" field if attempt to tab to and modify the cycle field for this type of item. However, the majority of items in this table allow the user to set the "CYCLE" to a different value. All values listed in the "CYCLE" field are in seconds.

## ***NOTIFY***

The "*NOTIFY*" field is used to specify the global warning threshold for AUTOMON/CICS functions. When this threshold has been exceeded and the flag setting for notification is ON, a message will be written to the AUTOMON/CICS History File.

The values set for the global notify threshold for LOOP and STOR HWM impacts how AUTOMON/CICS handles user defined XLT settings. AUTOMON/CICS will not take any actions to purge a transaction until, at least, the global warning threshold set in the "NOTIFY" field for these two items has been reached.

Assume that a transaction SAMP has been defined in the XLT1 table suffix with a value of 10 cpu seconds. Also assume that the global warning threshold is set to 20 cpu seconds for AUTOMON/CICS's looping mechanism. Even though the SAMP transaction exceeds 10 cpu seconds, AUTOMON/CICS will not purge the transaction until the transaction accumulates 20 seconds of cpu time. In order to kill the transaction at 10 cpu seconds the value set in the "NOTIFY" field for the LOOP item must be 10 or less.

## ***Customizing Threshold Values Using "NOTIFY"***

To customize the threshold values to fit into an individual user's environment, users need to have good transaction profile information. User may easily produce a transaction profile for a CICS region by adjusting the "*NOTIFY*" thresholds while in warning mode. As an example, suppose a user wished to produce a storage usage profile of the transactions in a particular region. The user could start by setting the "*NOTIFY*" threshold of the STOR HWM(Storage High Water Mark) ITEM to 100000 bytes. If the user let AUTOMON/CICS run for a few days, they could then use the AUTOMON/CICS batch utility job to get a listing of all the transactions which consume more than 100000 bytes of storage.

The user could then set a new warning threshold of 200,000 bytes and repeat the process of collecting and reporting the data. This second list would only contain the names of transactions using more than 200000 bytes of storage. Therefore, any transactions that appear in the first report but not found on the report would normally be consuming between 100,000 and 200,000 bytes of storage.

Repeating this process a number of times would produce a good transaction profile for the region. Once the transaction profile has been produced, users can assign appropriate "*NOTIFY*" and "*ACTION*" threshold values for their individual CICS regions. This process could be used to customize any of the other AUTOMON/CICS features.

## ***ACTION***

The "*ACTION*" field is used to specify the global action threshold for AUTOMON/CICS functions. When this threshold value has been exceeded and the flag setting for action is ON, AUTOMON/CICS will take the action which corresponds to the listed item. The only exception to this rule applies to transaction/programs listed in one of the AUTOMON/CICS XLT tables.

## ***ITEM***

This section will describe the AUTOMON/CICS functions which apply to each of the "ITEM" records listed in the AUTOMON/CICS THT table.

## **LOOP**

The **LOOP** related functions of AUTOMON/CICS apply to transactions or programs which hold control of CICS for longer than the global thresholds defined in the "NOTIFY" and "ACTION" fields. The value specified for these **LOOP** fields are in cpu seconds. If the user is running CICS with the monitoring facility(CMF) ON in class PERFORMANCE, AUTOMON/CICS will also check the accumulated cpu time of the transaction/program against the global threshold values. When the global **LOOP** notification threshold has been exceeded, AUTOMON/CICS will issue the warning message CSH6200W. When the global action threshold has been exceeded, AUTOMON/CICS will issue the action message CSH6201A. This message indicates that AUTOMON/CICS is purging the named transaction. AUTOMON/CICS will abend the transaction with either a UAMA, UAMB or UAMK abend code.

Any transactions/programs specified in the XLT tables will not be governed by the global action threshold. Transactions/programs specified in the XLT tables will either be bypassed if the XLT threshold is zero; or be purged when the threshold specified in the XLT table has been exceeded.

## **STOR HWM**

The **STOR HWM** related functions of AUTOMON/CICS apply to transactions or programs whose storage usage exceeds the global thresholds defined in the "NOTIFY" and "ACTION" fields. The value specified for these **STOR HWM** fields are in bytes. When the global **STOR HWM** notification threshold has been exceeded, AUTOMON/CICS will issue the warning message CSH6300W. When the global action threshold has been exceeded, AUTOMON/CICS will issue the action message CSH6301A. This message indicates that AUTOMON/CICS is purging the named transaction. AUTOMON/CICS will abend the transaction with either a UAMC or UAMD abend code.

Any transactions/programs specified in the XLT tables will not be governed by the global action threshold. Transactions/programs specified in the XLT tables will either be bypassed if the XLT threshold is zero; or be purged when the threshold specified in the XLT table has been exceeded.

## **MXT**

The **MXT** related functions of AUTOMON/CICS are designed to increase transaction throughput by balancing the transaction workload with available CICS resources. CICS requires the user to specify a MXT value in the CICS SIT table. The value specified in the SIT is the best possible value for the full range of workloads the CICS region is likely to experience. However, because the workload of CICS is not static, the MXT value chosen for the SIT may not be the best possible value at any given time. The AUTOMON/CICS MXT function is designed to set the MXT to a value which will optimize CICS transaction throughput and performance at any given time.

In the case of a SOS condition, AUTOMON/CICS will lower the MXT value to limit incoming transactions to the system. This will allow CICS to better handle the stress condition it is experiencing. At other times, there may be unused DSA in the system which could handle additional transactions, but the MXT value may have already been reached. AUTOMON/CICS will dynamically adjust the MXT value, so no new transaction are allowed into the system. The AUTOMON/CICS MXT functions could be thought of as a CICS traffic cop which will direct CICS traffic to prevent a traffic jam.

The "*NOTIFY*" and "*ACTION*" fields for this item are actually the minimum and maximum values within which the MXT value is to be adjusted. As each user's environment is different, this range of MXT values will vary from one installation to another. When the AUTOMON/CICS tape is installed, the Master flag for this feature is initially turned OFF.

If the user elects to use this feature, it is recommended that the "*ACTION*" value be set initially 10% higher than MXT value specified in the SIT. The user should then monitor the region and adjust this value up or down based on the observed results.

### **TS HWM**

The **TS HWM** feature of AUTOMON/CICS will issue the warning message CSH6403W whenever the percentage of AUX temporary storage usage exceeds the value specified in the "*NOTIFY*" field for this item. As with all AUTOMON/CICS messages, this message is produced with a time stamp which indicates when the TS storage usage reached this level. If the user is not sure of their current AUX TS usage the notify threshold may be lowered until this message is found in the AUTOMON/CICS history log.

### **SOS**

The **SOS** feature of AUTOMON/CICS is designed to recover from an SOS condition in the event that the CICS mechanism is unable to recover from the stress condition on its own. When CICS goes short on storage a bit is turned on in the CSA. When this bit is on and the user has activated the MXT feature of AUTOMON/CICS, the MXT value will be lowered to limit the number of transactions in the system. AUTOMON/CICS will then wait for the interval defined in the "*ACTION*" field for this item to expire before it takes any further actions. If the SOS bit in the CSA is still on after the "*ACTION*" interval expires, AUTOMON/CICS will assume that CICS is unable to recover from this stress condition. AUTOMON will then scan through the task chain and determine which transactions should be purged to relieve the stress condition.

If AUTOMON/CICS is able to relieve the stress condition, AUTOMON will increase the storage cushion size by 4K to allow CICS to better handle the next stress condition it encounters.

### **PER DATA**

Every time the interval specified in the "*NOTIFY*" field expires, the number of units processing successfully completed per second will be reported by AUTOMON/CICS. The data such as recording unit time, current rate, average rate, high water mark, and high water mark time will be reported by transaction, file I/O, VTAM transmissions, and AUX temporary storage requests. The current level of MAIN temporary storage usage as well as the high water mark for MAIN TS usage is also displayed in every interval.

### **VSAM STRING WAIT**

AUTOMON/CICS detects all VSAM string wait conditions occurring in the region at its detection cycle. If a VSAM string wait condition occurred, AUTOMON/CICS will issue a set of warning messages. These messages will indicate the tasks that are holding the strings and those tasks that are waiting for a string. These messages provide users with valuable information in solving their string wait problems.

c

The frequency that AUTOMON/CICS performs the VSAM string wait checking is controlled by the "*CYCLE*" field.

### **VTAM TERMNL WAIT**

AUTOMON/CICS performs the VTAM terminal wait condition checking based on the time specified in the "*CYCLE*" field. If a MRO/ISC link was hanging for longer than the interval specified in the "*CYCLE*" field, AUTOMON/CICS will issue a VTAM terminal pending message with a type of ISC.

If a LU type 2 device was hanging for longer than the interval specified in the "*CYCLE*" field, AUTOMON/CICS will issue a VTAM terminal pending message with a type of TERM.

The frequency that AUTOMON/CICS performs the VTAM terminal wait checking is controlled by the "*CYCLE*" field.

For further details regarding the AUTOMON/CICS THT table definitions, please refer to the AUTOMON/CICS User's Guide.

## 2.e) AUTOMON/CICS EXC Table(=E.6)

The AUTOMON/CICS EXC table is designed to produce warning messages which will show exceptional conditions on various resource usage in the system. These warning messages are identified by the characters "(EXC)" following the AUTOMON/CICS message ID. The default values shipped with the product are generally quite good for most CICS environments. It is normal to see these messages appear in the AUTOMON/CICS History log from time to time. However, if one of these warning messages appears in the History log frequently, this message should be investigated. Most of the items specified in the AUTOMON/CICS EXC table are explained in the CICS Performance Guide. Refer to this IBM manual for recommended actions for the user's CICS release.

```

ENTER COMMAND => _____ ***EXC THRESHOLD TABLE*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:51:04,TERM=4L23,NAME=UNICOM
+-----+-----+-----+-----+-----+-----+
EXC | ITEM | THREADS | ITEM | THREADS | ITEM | THREADS |
+-----+-----+-----+-----+-----+-----+
- TE | DSA | 98 % | CON SUBPOOL | 30 % | TP SUBPOOL | 30 % |
| MIX SUBPOOL | 30 % | ISO SUBPOOL | 40 % | SHR SUBPOOL | 60 % |
| RPL SUBPOOL | 30 % | PGM SUBPOOL | 90 % | SOS | 5 |
| STORAGE Q"D | 1 | STOR Q HWM | 1 | STOR Q ZERO | 1 |
| GETMAIN | 500000 | FREEMAIN | 500000 | AMXT HWM | 1 |
| RUNAWAY HWM | 1 | TOTAL TASKS | 10000 | VTAM RA RPL | 1000 |
| ACT RA RPL | 10 | FREE RPL"S | 1 |
+-----+-----+-----+-----+-----+-----+
- WN | DSA | 98 % | CON SUBPOOL | 30 % | TP SUBPOOL | 30 % |
| MIX SUBPOOL | 30 % | ISO SUBPOOL | 40 % | SHR SUBPOOL | 60 % |
| RPL SUBPOOL | 30 % | PGM SUBPOOL | 90 % | SOS | 5 |
| STORAGE Q"D | 1 | STOR Q HWM | 1 | STOR Q ZERO | 1 |
| GETMAIN | 500000 | FREEMAIN | 500000 | AMXT HWM | 1 |
| RUNAWAY HWM | 1 | TOTAL TASKS | 10000 | VTAM RA RPL | 1000 |
| ACT RA RPL | 10 | FREE RPL"S | 1 |
+-----+-----+-----+-----+-----+-----+
PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF6=CHANGE PF7=UP PF8=DN PF9=REFRESH

```

For further details regarding the AUTOMON/CICS EXC table definition, please refer to the AUTOMON/CICS User's Guide.

## 2.f) AUTOMON/CICS DEG Table(=E.7)

The AUTOMON/CICS DEG table is designed to produce warning messages which will indicate degradation or bottleneck conditions which have developed within the system. These warning messages are identified by the characters "(DEG)" following the AUTOMON/CICS message ID. The default values shipped with the product are generally quite good for most CICS environments. It is normal to see these messages appear in the AUTOMON/CICS History log from time to time. However, if one of these warning messages appears in the History log frequently, this message should be investigated. Most of the items specified in the AUTOMON/CICS EXC table are explained in the CICS Problem Determination Guide. Refer to this IBM manual for recommended actions for the user's CICS release.

The AUTOMON/CICS THT table contains a **DEGRADATIONAL** item. The "CYCLE" field in the THT table for this item determines how often AUTOMON/CICS will go through the task chain in an effort to identify bottleneck conditions. As AUTOMON/CICS scans through the task chain, it will identify the type of wait or request associated with each task in the system. Each type of wait or request condition that is identified is accumulated in a bucket by AUTOMON/CICS. When the total number of tasks accumulated in the same type of wait or request bucket reaches the threshold defined in the "THRED" field, an AUTOMON/CICS warning message will be issued to the History log.

```

ENTER COMMAND => _____ ***DEG THRESHOLD TABLE*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:52:07,TERM=4L23,NAME=UNICOM

```

DEG	ITEM	THRED	ITEM	THRED	ITEM	THRED	ITEM	THRED
_ TE	ACT TASKS	40	TS WAIT	1	ECB LIST	10	DFHPC REQ	10
	SUS TASKS	40	STOR WAIT	1	CICS WAIT	30	DFHSC REQ	10
	NON_DSPTR	10	ENQ WAIT	1	BMS REQ	40	DFHTC REQ	40
	DISPATCHR	10	FILE I/O	5	DL/I REQ	10	DFHTD REQ	10
	AMXT WAIT	1	PAGE WAIT	1	DFHDI REQ	10	DFHTS REQ	10
	CMXT WAIT	1	SRB MODE	1	DFHFC REQ	10	TERM WAIT	40
	DFHIC WT	10	ECB WAIT	10	DFHIC REQ	10	DFHDC REQ	10
	_ WN	ACT TASKS	40	TS WAIT	1	ECB LIST	10	DFHPC REQ
SUS TASKS		40	STOR WAIT	1	CICS WAIT	30	DFHSC REQ	10
NON_DSPTR		10	ENQ WAIT	1	BMS REQ	40	DFHTC REQ	40
DISPATCHR		10	FILE I/O	5	DL/I REQ	10	DFHTD REQ	10
AMXT WAIT		1	PAGE WAIT	1	DFHDI REQ	10	DFHTS REQ	10
CMXT WAIT		1	SRB MODE	1	DFHFC REQ	10	TERM WAIT	40
DFHIC WT		10	ECB WAIT	10	DFHIC REQ	10	DFHDC REQ	10

```

PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF6=CHANGE PF7=UP PF8=DN PF9=REFRESH

```

For further details regarding the AUTOMON/CICS DEG table definition, please refer to the AUTOMON/CICS User's Guide.

## 2.g) AUTOMON/CICS SRT Table(=E.8)

The AUTOMON/CICS System Recovery Table is called by AUTOMON/CICS when a storage violation or system crash condition is detected by AUTOMON/CICS. The AUTOMON/CICS System Recovery Program (CSHASRP) will receive control when the above condition happened. CSHASRP will notify the operator immediately, suspend the CICS TCB and performs eight (8) Abend recovery stages automatically to identify and potentially repair the problems. Each Abend recovery stage has its own master, notify and action flags and you may specify different combinations of flags in these stages.

```

ENTER COMMAND => _____ ***SYSTEM RECOVERY TABLE*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:52:40,TERM=4L23,NAME=UNICOM
-----+-----+-----+-----+-----+-----+
SRT | STAGE | MASTER | NOTIFY | ACTION | DESCRIPTION |
-----+-----+-----+-----+-----+-----+
- TE | 1 | ON | ON | OFF | DISPLAY PSW/PRODUCE A DUMP |
    | 2 | ON | ON | ON | VERIFY/REPAIR CICS/VS FOUNDATION |
    | 3 | ON | ON | ON | VERIFY/DISABLE A TRANSACTION |
    | 4 | ON | ON | ON | VERIFY/REPAIR DYNAMIC STORAGE AREA |
    | 5 | ON | ON | ON | VERIFY/REPAIR CICS/VS PROGRAMS |
    | 6 | ON | ON | ON | VERIFY/REPAIR CICS/VS TABLES |
    | 7 | ON | ON | ON | VERIFY/REPAIR CICS/VS CNTL BLOCKS |
    | 8 | ON | ON | OFF | SUMMARY REPORT/PRODUCE A DUMP |
-----+-----+-----+-----+-----+
- WN | 1 | ON | ON | OFF | DISPLAY PSW/PRODUCE A DUMP |
    | 2 | ON | ON | OFF | VERIFY/REPAIR CICS/VS FOUNDATION |
    | 3 | ON | ON | OFF | VERIFY/DISABLE A TRANSACTION |
    | 4 | ON | ON | OFF | VERIFY/REPAIR DYNAMIC STORAGE AREA |
    | 5 | ON | ON | OFF | VERIFY/REPAIR CICS/VS PROGRAMS |
    | 6 | ON | ON | OFF | VERIFY/REPAIR CICS/VS TABLES |
    | 7 | ON | ON | OFF | VERIFY/REPAIR CICS/VS CNTL BLOCKS |
    | 8 | ON | ON | OFF | SUMMARY REPORT/PRODUCE A DUMP |
-----+-----+-----+-----+-----+
PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF6=CHANGE PF7=UP PF8=DN PF9=REFRESH

```

The Abend recovery stages that are most frequently customized by the user. Each of these stages is described below.

### STAGE 1

When AUTOMON/CICS recovers from a system crash condition or storage violation, more than 100 messages are usually produced to provide users with a great deal of diagnostic information. AUTOMON/CICS freezes the CICS system and goes through the control blocks at the time the condition is detected. Key information which might take a user hours to extract from a DUMP is captured and formatted by AUTOMON/CICS at machine speed. In most situations, these messages provides the user with enough information to determine the cause of the problem.



Occasionally, users may require more information to solve the problem detected by AUTOMON/CICS. In this case, users may optionally turn on the STAGE 1 action flag. When the STAGE 1 action flag is turned on, AUTOMON/CICS will take a dump when it detects a storage violation or system crash condition before the AUTOMON/CICS subtask attempts any repairs. For MVS users, when the UCCF/Server Subsystem task is active, AUTOMON/CICS will generate an MVS System SVC Dump. When the UCCF/Server subsystem task is inactive, AUTOMON/CICS will produce a SNAP dump, written to the AMON002 DD card. For VSE users, this SNAP dump will be written to SYSLST.

### **STAGE 3**

In the case of a SYSTEM CRASH condition, the action flag for STAGE 3 of the SRT will determine whether to disable the transaction causing the crash condition. This action is taken in an effort to prevent other users from creating another system crash once AUTOMON/CICS has recovered the system. This gives system programmers time to correct the problem transaction without jeopardizing the integrity of the system.

Some users may have an "umbrella" transaction that all users sign on to. This type of transaction usually provides users with a master menu when the "umbrella" transaction is entered. Then, users select subfunctions from this master menu. If an "umbrella" transaction is involved in a system crash, disabling the transaction is effectively the same as bringing the region down. If this type of a transaction exists in the user's environment, the STAGE 3 action flag should be set to OFF. When the STAGE 3 action flag is off, AUTOMON/CICS will still attempt to recover from the system crash condition. However, the transaction involved in the system crash condition will not be disabled by AUTOMON/CICS.

### **STAGE 4**

In the case of a STORAGE VIOLATION, the action flag for STAGE 4 of the SRT will determine whether to repair the SAA/SCZ header and/or trailer involved in the storage violation. Certain industries, such as the banking industry have strict provisions regarding the changing of storage within the system.

While many banks enjoy the benefits of AUTOMON/CICS's unique storage violation detection mechanism, they do not wish to have AUTOMON/CICS repair the damaged storage chains. These institutions elect to turn the STAGE 4 action flag to OFF. If the STAGE 4 action flag is OFF, AUTOMON/CICS will report the storage violation(s) detected, however the SAA/SCZ headers and trailers will not be repaired.

For further details regarding the AUTOMON/CICS SRT table definition, please refer to the AUTOMON/CICS User's Guide.

## **2.h) AUTOMON/CICS Customization - Review**

To customize AUTOMON/CICS to an individual CICS environment, the following steps are recommended.

- 1) Add 5 new AUTOMON/CICS table definitions(AIT, THT, EXC, DEG and SRT) all with the same table suffix.
- 2) The new AIT table entry should specify this new table suffix in the "*THT*" field.
- 3) Add the APPLID of the region in which you wish to customize AUTOMON/CICS to the AUTOMON/CICS APPLID table making sure that the "*AIT*" field points to the new table suffix created.
- 4) Modify the parameters in the newly created AUTOMON/CICS table definitions to optimize the performance of AUTOMON/CICS in your environment.

## **2.i) AUTOMON/CICS Display Local Messages(=E.0)**

The AUTOMON/CICS Display Local Messages screen will display the messages in the AUTOMON/CICS core log which is GETMAINED above the 16MB line. This is a wrap around table showing the latest messages produced by AUTOMON/CICS in the APPLID specified. The size of this log is determined by the "LOG" field in the AUTOMON/CICS AIT table. The "LOG" field will specify how many AUTOMON/CICS messages will fit into the core log. When the core log fills, new messages will overwrite messages at the beginning of the table.

```
ENTER COMMAND => _____ ***DISPLAY AUTOMON/CICS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/24,TIME=07:07:23,TERM=R001,NAME=UNICOM
TIME -----MESSAGE-----
07:02:06 CSH6025W-*WARNING* YOU ARE LOADING A "TRIAL_VERSION" OF AUTOMON/CICS.
07:02:06 CSH6027I-*(LICENSE)* COMPANY_NAME : *TRIAL_VERSION*
07:02:06 CSH6028I-*(LICENSE)* CUSTOMER_I.D.: *TRIAL_VERSION*
07:02:06 CSH6000I-AUTOMON/CICS SUBTASK ATTACHED. AIT=TE,LOG=400,VER=C41A420-96
07:02:06 CSH6019I-AUTOMON/CICS CSHSRP ATTACHED. MAX= 20,STAGES=12345678
07:02:06 CSH6019I-AUTOMON/CICS CSHAXIP ATTACHED. MAX= 20,STAGES=12345678
07:02:07 CSH6018E-VSAM WRITE ERROR. FILE=AMON001 ,RC=ERROR
07:05:28 CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,ID= 31,TERM=
07:05:37 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,ABCD=AICA
07:05:37 CSH6206I-PSW=8008217E,ENTRY=860856E8,OFFSET=+0000,LAN=ASSEMBLER
07:05:37 CSH6207I-OBJ=.....,RC=ABNORMAL CONDITION
07:05:37 CSH6016W-(0-5) 05BF4730 05D06200 060861DE 00118B70 80081570 800814A8
07:05:37 CSH6016W-(6-B) 00000361 060861DE 00081D74 000813C2 06031228 00054388
07:05:37 CSH6016W-(C-F) 00054080 060099D0 05D2E09F 80081570
07:05:58 CSH6100I-A SHORT-ON-STORAGE CONDITION. MXT= 32,TASKS= 13
07:05:58 CSH6107I-CICS IS UNDER STRESS. AREA=BLW_16MB
07:06:10 CSH6300W-EXCESSIVE STORAGE USAGE. TRAN=UMON,TERM=R001,STOR= 3782464
07:06:10 CSH6301A-*ACTION* STORAGE USAGE. TRAN=UMON,TERM=R001,STOR= 3782464
07:06:10 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R001,ABCD=AEXY

PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF7=UP F8=DN PF9=REFRSH PA1/CLR=EXIT
```

### ***TIME***

This field specifies the time that AUTOMON/CICS issued the message.

### ***MESSAGE***

This field contains the actual AUTOMON/CICS message. It will display the AUTOMON/CICS message number followed by the corresponding message.

### *Screen Actions*

- PF5 - Locate
- PF7 - Page Up
- PF8 - Page Down
- PF10 - Scroll Left
- PF11 - Scroll Right

The user may enter any character string on the command line and press the PF05 key to find the first occurrence of the specified character string in the log. The search begins from the current log pointer.

The user may also type an "M" on the command line and press the PF07 or PF08 key to jump to the top or bottom of the core log.

## 2.i) AUTOMON/CICS Display Multi Messages(=E.1)

The AUTOMON/CICS Display Multi messages display allows the user to browse the AUTOMON/CICS History file. The AMON001 file may be shared by multiple CICS regions, therefore this display will show the AUTOMON/CICS messages of all the regions sharing this file. This can be very useful in determining problems in an MRO/ISC environment. Many times an apparent problem in one region is actually the result of a problem occurring in a different region. The ability to see all AUTOMON/CICS messages together can facilitate the debugging process in this circumstance.

```
ENTER COMMAND => _____ ***DISPLAY MULTI AUTOMON/CICS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/24,TIME=07:14:03,TERM=R001,NAME=UNICOM
FILE AMON001 SELECT * APPLID _____ FROM 1995/12/15 00:00:00
APPLID DATE TIME _____ MESSAGE
CICS640 12/13/95 14:08:43 CSH6690I-AUX TS ] .00/SEC ] .00/SEC] .00/SEC]
CICS640 12/13/95 14:08:43 CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM=
CICS640 12/13/95 18:46:39 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=
CICS640 12/13/95 18:46:39 CSH6206I-PSW=00000000,ENTRY=00115028,OFFSET=+0000,LA
CICS640 12/13/95 18:46:39 CSH6207I-OBJ=.....,RC=ABNORMAL CONDI
CICS640 12/13/95 18:46:39 CSH6016W-(0-5) 0000001E 06038624 000780A0 85ED3ED4 0
CICS640 12/13/95 18:46:39 CSH6016W-(6-B) 00078338 82FFFFFFC4 001187A6 06038618 0
CICS640 12/13/95 18:46:39 CSH6016W-(C-F) 00054680 80045570 85ED4744 00000000
CICS640 12/13/95 18:46:40 CSH6405E-VTAM NODE ERROR. TERM=R002,NETNAME=TVR002
CICS640 12/13/95 18:53:06 CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=
CICS640 12/13/95 18:53:06 CSH6206I-PSW=00000000,ENTRY=00115028,OFFSET=+0000,LA
CICS640 12/13/95 18:53:06 CSH6207I-OBJ=.....,RC=ABNORMAL CONDI
CICS640 12/13/95 18:53:06 CSH6016W-(0-5) 0000050D 06038234 0007A5A4 85ED3ED4 0
CICS640 12/13/95 18:53:06 CSH6016W-(6-B) 0007A338 82FFFFFFC4 00121E47 06038228 0
CICS640 12/13/95 18:53:06 CSH6016W-(C-F) 00054080 80045570 85ED4744 00000000
CICS640 12/13/95 18:53:06 CSH6405E-VTAM NODE ERROR. TERM=R001,NETNAME=TVR001
CICS640 12/13/95 23:02:55 CSH6690I-23:02:14]..CURRENT..]..AVERAGE..]....HWM...]
CICS640 12/13/95 23:02:55 CSH6690I-TRANS ] .00/SEC ] .00/SEC] .00/SEC]

PF1=N/A PF2=PRT PF3=RET PF4=MENU PF5=FIND PF7=UP F8=DN PF9=REFRSH PA1/CLR=EXIT
```

### **SELECT**

This field specifies the type of messages displayed. Valid select codes are A, E, I, W and \*. Code a valid select code in the field and hit the enter key.

- A - Display only AUTOMON/CICS Action messages
- E - Display only AUTOMON/CICS Error messages
- I - Display only AUTOMON/CICS Informational messages
- W - Display only AUTOMON/CICS Warning messages
- \* - Display all AUTOMON/CICS messages

### **APPLID**

This field allows users to view only the messages generated from a particular APPLID. Enter the APPLID of the CICS region whose messages are to be viewed and hit the enter key.

## **FROM**

The "*FROM*" field allows users to set the record pointer in the AMON001 History file to a particular date and time. Code the date and time desired and hit the enter key. AUTOMON/CICS messages will be displayed starting from the date and time specified.

### **Screen Actions**

- PF5 - Locate
- PF7 - Page Up
- PF8 - Page Down
- PF10 - Scroll Left
- PF11 - Scroll Right

The user may enter any character string on the command line and press the PF05 key to find the first occurrence of the specified character string in the file. The search begins from the current file pointer.

The user may also type an "M" on the command line and press the PF07 or PF08 key to jump to the top or bottom of the AMON001 History file.

## 2.k) AUTOMON/CICS Status Display(=0.1)

The AUTOMON/CICS Status display contains the current table suffixes and startup parameters which were used during the AUTOMON/CICS subtask initialization. This panel will also display the product expiration date and the Active Status of AUTOMON/CICS(Either ON or OFF). A number of fields in this display may be modified by the user. The cursor will come to rest on a modifiable field when the Tab key is pressed.

```
ENTER COMMAND => _____ ***AUTOMON/CICS STATUS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:53:23,TERM=4L23,NAME=UNICOM
AUTOMON/CICS
PRODUCT EXPIRATION DATE
2006/06/30

AUTOMON/CICS STATUS
ACTIVE START_UP TOTAL
INDICATOR DATE TIME MESSAGES
ON 2006/02/23 15:05:53 19

MASTER FLAG INDICATORS
WTO_IGNORE_MAXIMUM HISTORY_FILE VIEW LOG_TABLE_SIZE
ON 100 10000 ON AMON001 AMON001 400

AUTOMON/CICS SYSTEM TABLES
AIT THT XLT1 XLP1 XLT2 XLP2
TE TE T1 P1 T2 P2

ABEND_RECOVERY_RETRY_COUNT STORAGE_VIOLATION AMXT SCS
CURRENT MAXIMUM (ALL|CUR|NON) LEVEL FLAG FLAG
0 20 ALL 4 ON ON

PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT
```

The user may turn AUTOMON/CICS ON or OFF from this panel by overtyping the "ACTIVE INDICATOR". This allows users to recycle AUTOMON/CICS without having to leave the "UMON" transaction. This dynamic method of turning AUTOMON/CICS ON or OFF is equivalent to executing the two utility transactions "AON" and "AOFF".

Any changes made to this panel will be effective immediately, however these changes will only be effective for the current session of AUTOMON/CICS.

For further details regarding the AUTOMON/CICS STATUS display, please refer to the AUTOMON/CICS User's Guide or the description of the AUTOMON/CICS AIT table earlier in this section.

## 2.1) AUTOMON/CICS Thresholds(=0.2)

The AUTOMON/CICS Threshold display has the same look and feel as the AUTOMON/CICS Threshold table definitions in the UMON001 System file. This panel displays THT settings currently in use by AUTOMON/CICS in the region. This panel will update the AUTOMON/CICS threshold control block in virtual storage instead of the THT table definition in the UMON001 system file. Any changes made to this panel are temporary changes valid only for this session of AUTOMON/CICS. A number of fields in this display may be modified by the user. The cursor will come to rest on a modifiable field when the Tab key is pressed.

```

ENTER COMMAND => _____ ***AUTOMON/CICS THRESHOLDS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:53:46,TERM=4L23,NAME=UNICOM
-----
| ITEM | ACTIVE INDICATOR | CYCLE | THRESHOLDS | DESCRIPTION |
| FLAG NOTIFY ACT | (SEC) | NOTIFY ACTION | |
-----
| LOOP DETECTION | ON ON ON | --- | 20 180 | IN SECONDS |
| STORAGE HWM | ON ON ON | 30 | 300000 750000 | IN BYTES |
| SHORT ON STORAGE | ON ON ON | --- | 1 60 | IN SECONDS |
| PERFORMANCE DATA | ON --- --- | --- | 3600 --- | IN SECONDS |
| VSAM STRING WAIT | ON --- --- | 60 | 1 --- | 1ST CONDITION |
| VTAM TERMNL WAIT | ON --- --- | 60 | 1 --- | 1ST CONDITION |
| JOURNAL SWITCH | ON --- --- | 60 | 1 --- | 1ST CONDITION |
| AUX TEMP STORAGE | ON --- --- | 60 | 98 % --- | PERCENTAGE |
| EXCEPTIONAL | ON --- --- | 60 | 1 --- | 1ST CONDITION |
| DEGRADATIONAL | ON --- --- | 60 | 1 --- | 1ST CONDITION |
-----
| | FLAG LOW HIGH | CYCLE | LOW HIGH | |
-----
| MXT | OFF ON ON | 30 | 32 490 | NUMBER OF TASK |
-----

```

PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT

For further details regarding the AUTOMON/CICS Threshold display please refer to the AUTOMON/CICS User's Guide or the description of the AUTOMON/CICS THT table earlier in this section.



## 2.m) AUTOMON/CICS EXC(=0.3)

The AUTOMON/CICS EXC display has the same look and feel as the AUTOMON/CICS Exception table definitions in the UMON001 System file. This panel displays EXC settings currently in use by AUTOMON/CICS in the region. This panel will update the AUTOMON/CICS exception threshold control block in virtual storage instead of the EXC table definition in the UMON001 system file. Any changes made to this panel are temporary changes valid only for this session of AUTOMON/CICS. A number of fields in this display may be modified by the user. The cursor will come to rest on a modifiable field when the Tab key is pressed.

```

ENTER COMMAND => _____ ***EXCEPTION THRESHOLDS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:54:32,TERM=4L23,NAME=UNICOM
-----
| ITEM | THRESHOLD | DESCRIPTION | ITEM | THRESH | DESCRIPTION |
|-----|-----|-----|-----|-----|-----|
| SOS | 5 | NUMBER OF SOS | DSA | 98 % | STORAGE |
| STORAGE Q"D | 1 | NUMBER OF QUEUES | CON | 30 % | ALLOCATION |
| STOR Q HWM | 1 | HIGH WATER MARK | TP | 30 % | |
| STOR Q ZERO | 1 | NUMBER OF CHAINS | MIX | 30 % | |
| GETMAIN | 500000 | NUMBER OF GETMAINS | ISO | 40 % | |
| FREEMAIN | 500000 | NUMBER OF FREEMAINS | SHR | 60 % | |
| AMXT HWM | 1 | ACTIVE TASKS HWM | RPL | 30 % | |
| RUNAWAY HWM | 1 | RUNAWAY TASKS HWM | PGM | 90 % | |
| TOTAL TASKS | 10000 | TOTAL CICS/VIS TASKS | | | |
| VTAM RA RPL | 1000 | VTAM RECEIVE ANY | | | |
| ACT RA RPL | 10 | CONCURRENT RA RPL"S | | | |
| FREE RPL"S | 1 | AVAILABLE RPL"S | | | |
|-----|-----|-----|-----|-----|
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT

```

For further details regarding the AUTOMON/CICS Exception display, please refer to the AUTOMON/CICS User's Guide or the description of the AUTOMON/CICS EXC table earlier in this section.

## 2.n) AUTOMON/CICS DEG(=0.4)

The AUTOMON/CICS DEG display has the same look and feel as the AUTOMON/CICS Degradation table definitions in the UMON001 System file. This panel displays DEG settings currently in use by AUTOMON/CICS in the region. This panel will update the AUTOMON/CICS degradation threshold control blocks in virtual storage instead of the DEG table definition in the UMON001 system file. Any changes made to this panel are temporary changes valid only for this session of AUTOMON/CICS. A number of fields in this display may be modified by the user. The cursor will come to rest on a modifiable field when the Tab key is pressed.

```

ENTER COMMAND => _____ ***DEGRADATION THRESHOLDS*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:55:06,TERM=4L23,NAME=UNICOM
-----
| ITEM | THRSH | ITEM | THRSH | ITEM | THRSH |
|-----|-----|-----|-----|-----|-----|
| ACTIVE TASKS | 40 | TEMP STORAGE WAIT | 1 | BMS REQUESTS | 40 |
| SUSPENDED TASKS | 40 | STORAGE WAIT | 1 | DL/I REQUESTS | 10 |
| NON-DISPATCHABLE | 10 | ENQUEUE WAIT | 1 | DFHDC REQUESTS | 10 |
| DISPATCHER WAIT | 10 | FILE I/O WAIT | 5 | DFHDI REQUESTS | 10 |
| ATTACH WAIT | 1 | PAGE WAIT | 1 | DFHFC REQUESTS | 10 |
| AMXT WAIT | 1 | SRB MODE | 1 | DFHIC REQUESTS | 10 |
| CMXT WAIT | 1 | ECB WAIT | 10 | DFHPC REQUESTS | 10 |
| DFHIC WAIT | 10 | ECB LIST WAIT | 10 | DFHSC REQUESTS | 10 |
| | | CICS WAIT | 30 | DFHTC REQUESTS | 40 |
| | | TERM WAIT | 40 | DFHTD REQUESTS | 10 |
| | | | | DFHTS REQUESTS | 10 |
|-----|-----|-----|-----|-----|-----|
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT

```

For further details regarding the AUTOMON/CICS Degradation display, please refer to the AUTOMON/CICS User's Guide or the description of the AUTOMON/CICS DEG table earlier in this section.

## 2.o) AUTOMON/CICS SRT(=0.5)

The AUTOMON/CICS SRT display has the same look and feel as the AUTOMON/CICS System Recovery table definitions in the UMON001 System file. This panel displays SRT settings currently in use by AUTOMON/CICS in the region. This panel will update the AUTOMON/CICS SRT control blocks in virtual storage instead of the DEG table definition in the UMON001 system file. Any changes made to this panel are temporary changes valid only for this session of AUTOMON/CICS. A number of fields in this display may be modified by the user. The cursor will come to rest on a modifiable field when the Tab key is pressed.

```
ENTER COMMAND => _____ ***SYSTEM RECOVERY TABLE*** UNIMON/CICS V420
APPLID=CICS640,CICS=640,DATE=2006/02/23,TIME=15:55:31,TERM=4L23,NAME=UNICOM
```

STAGE	MASTER	NOTIFY	ACTION	DESCRIPTION
1	ON	ON	OFF	DISPLAY PSW/PRODUCE A SYSTEM DUMP
2	ON	ON	ON	VERIFY/REPAIR CICS/VS FOUNDATION
3	ON	ON	ON	VERIFY/DISABLE A TRANSACTION
4	ON	ON	ON	VERIFY/REPAIR DYNAMIC STORAGE AREA
5	ON	ON	ON	VERIFY/REPAIR CICS/VS PROGRAMS
6	ON	ON	ON	VERIFY/REPAIR CICS/VS TABLES
7	ON	ON	ON	VERIFY/REPAIR CICS/VS CNTL BLOCKS
8	ON	ON	OFF	SUMMARY REPORT/PRODUCE A DUMP

```
PF1=N/A PF2=PRINT PF3=RETURN PF4=MENU PF6=CHANGE PF9=REFRESH PA1/CLEAR=EXIT
```

For further details regarding the AUTOMON/CICS System Recovery Table display, please refer to the AUTOMON/CICS User's Guide or the description of the AUTOMON/CICS SRT table earlier in this section.

### **3) AUTOMON/CICS Batch Utility**

#### **3.a) AUTOMON/CICS Message Reports**

Since AUTOMON/CICS is capable of detecting and correcting problems automatically, users may not be aware of certain developing system problems that have been taken care of by AUTOMON/CICS automatically. AUTOMON/CICS will log every condition that it detects as well as every action which may be taken in response to a perceived system problem in the history file. Therefore, it is important that users review the AUTOMON/CICS history file regularly.

There will be times that AUTOMON/CICS is able to avert performance problems before any end users even notice any degradation to the system. In these instances, AUTOMON/CICS is able to provide system programmers with additional time in which to correct these problems permanently, provided that the History log is reviewed. If the history log is not reviewed on a regular basis, the problem could recur and might eventually cause greater problems in the system.

Users can specify appropriate "*FROM*" and "*TO*" dates in the following job to print the reports for a period of time. Users may also specify a special date format, "\*\*\*\*/\*\*/\*\*", as illustrated in the following job. The user may then, schedule the following job to run every night 15-20 minutes prior to midnight. This job will print a summary report of all messages issued by AUTOMON/CICS for the day that this job is run.

```
//CSHLIST JOB (0,0000), 'AUTOMON/CICS BATCH', CLASS=0, MSGLEVEL=(1,1)
//*****
//*+-----+*
//*|          PRINT AUTOMON/CICS HISTORY DATABASE          |*
//*+-----+*
//*****
//CSHLIST EXEC PGM=CSHLIST, REGION=4096K
//STEPLIB DD DISP=SHR, DSN=AUTOMON.V420.CICS640.LOADLIB
//AMON001 DD DISP=SHR, DSN=AUTOMON.SYS001
//UMON001 DD DISP=SHR, DSN=UNIMON.SYS001
//SYSPRINT DD SYSOUT=*, DCB=BLKSIZE=133
//SYSOUT DD SYSOUT=*, DCB=BLKSIZE=133
//*SYSOUT DD DISP=(NEW,KEEP), DSN=CSH.AUTOMON.LOG, UNIT=CART,
//* DCB=BLKSIZE=133, LABEL=(1,SL,EXPDT=98000), VOL=SER=UNICOM,
//* TRTCH=NOCOMP
//SYSIN DD *
WTO(YES), - WRITE TO OPERATOR MESSAGES.....(YES|NO)
COMPANY(COMPANY NAME), - YOUR COMPANY NAME.....(UPTO 42)
APPLID(*), - APPLICATION ID(S).....(UPTO 8)
DETAIL(YES), - PRINT DETAIL REPORT.....(YES|NO)
SUMMARY(YES), - PRINT SUMMARY REPORT.....(YES|NO)
FROM(1997/01/01,00:00:00), - FROM.....(YYYY/MM/DD,HH:MM:SS)
TO(1999/12/31,24:00:00), - TO.....(YYYY/MM/DD,HH:MM:SS)
EXCLUDE(CSH0000,CSH0000), - MESSAGE EXCLUSION.....(UPTO 8)
PAGESIZE(50), - NUMBER OF LINES PER PAGE.....(10-999)
COUNT(999999), - MAX RECORD SELECTION.....(0-9999999)
SCAN(FORWARD), - DIRECTION.....(FORWARD|BACKWARD)
SKIP(0), - # OF RECORDS TO BE BYPASSED....(0-9999999)
TYPE(*) RECORD SELECTION(S).....(A,E,I,W)
/*
```

```

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-----
( DATE=1995/12/15, JDATE=1995/349) AUTOMON/CICS HISTORY DATABASE SUMMARY REPORT ( TIME=08:09:13, PAGE= 1)
( CPUID=FF170848) ( UNICOM ANONLA) ( MODEL=3090)
( REPORTING PERIOD=1995/12/15,00:00:00-1995/12/15,23:59:59)
APPLID DATE TIME TRAN PROGRAM TERM ABCD DESCRIPTION
-----
CICS330 1995/12/15 05:19:36 UMON CSHTCP R001 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R001,ABCD=AT
CICS321 1995/12/15 05:20:57 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 05:28:37 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS311 1995/12/15 06:13:35 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS321 1995/12/15 06:14:58 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 06:22:37 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 07:01:33 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 07:22:14 UMON CSHTCP R001 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R001,ABCD=AT
CICS330 1995/12/15 08:00:00 **** ***** **** **** CSH6106W-TIMER ADJUSTMENT TASK PENDING.
CICS330 1995/12/15 08:55:45 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 09:49:51 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 09:57:07 UMON CSHPCF0 R002 **** CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,TERM=R002
CICS330 1995/12/15 09:57:07 UMON CSHPCF0 R002 **** CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,TERM=R002
CICS330 1995/12/15 09:57:17 UMON CSHPCF0 R002 UAMA CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0 ,TERM=R002,ABCD=UAMA
CICS330 1995/12/15 09:57:20 UMON DPHUEH R002 UAMB CSH6205I-TASK ABENDED. TRAN=UMON,PGM=DPHUEH ,TERM=R002,ABCD=UAMA
CICS330 1995/12/15 10:30:41 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 10:41:03 **** ***** **** **** CSH6100I-A SHORT-ON-STORAGE CONDITION. MXT=135 ,MXTC= 15 ,TASKS= 7
CICS330 1995/12/15 10:41:03 **** ***** **** **** CSH6107I-CICS IS UNDER STRESS. AREA=CDSA
CICS330 1995/12/15 10:41:33 UMON ***** R002 **** CSH6300W-EXCESSIVE STORAGE USAGE. TRAN=UMON,TERM=R002,STOR=00734752
CICS330 1995/12/15 10:42:03 UMON ***** R002 **** CSH6300W-EXCESSIVE STORAGE USAGE. TRAN=UMON,TERM=R002,STOR=00734752
CICS330 1995/12/15 10:42:04 UMON ***** R002 UAMD CSH6103A-*ACTION* SOS. MXT= 32,AMXT= 29 ,TRAN=UMON,TERM=R002,ABCD=UAMD
CICS330 1995/12/15 10:42:04 UMON CSHPCF0 R002 UAMD CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHPCF0 ,TERM=R002,ABCD=UAMD
CICS330 1995/12/15 11:23:44 UMON CSHTCP R002 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R002,ABCD=ATNI
CICS330 1995/12/15 11:23:45 UMON CSHTCP R002 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R002,ABCD=ATNI
CICS330 1995/12/15 12:00:00 **** ***** **** **** CSH6106W-TIMER ADJUSTMENT TASK PENDING.
CICS330 1995/12/15 13:39:39 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 14:33:43 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 40,MAXIMUM= 40
CICS330 1995/12/15 14:58:30 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 14:58:34 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 14:58:36 U$SM CSH39SIP N/A ASRA CSH6205I-TASK ABENDED. TRAN=U$SM,PGM=CSH39SIP,TERM=N/A ,ABCD=ASRA
CICS330 1995/12/15 15:20:27 UMON CSHTCP R001 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R001,ABCD=AT
CICS330 1995/12/15 15:57:04 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 16:51:06 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 17:45:07 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 18:39:08 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 19:33:11 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 19:52:45 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 19:52:50 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 19:52:53 U$SM CSH39SIP N/A ASRA CSH6205I-TASK ABENDED. TRAN=U$SM,PGM=CSH39SIP,TERM=N/A ,ABCD=ASRA
CICS330 1995/12/15 20:11:51 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 20:11:55 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 20:11:58 U$SM CSH39SIP N/A ASRA CSH6205I-TASK ABENDED. TRAN=U$SM,PGM=CSH39SIP,TERM=N/A ,ABCD=ASRA
CICS330 1995/12/15 21:08:05 UMON CSHPCF0 R002 **** CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,TERM=R002
CICS330 1995/12/15 21:08:05 UMON CSHPCF0 R002 **** CSH6200W-LOOP/WAIT DETECTION. TRN=UMON,PGM=CSHPCF0 ,TERM=R002
CICS330 1995/12/15 21:10:47 UMON CSHPCF0 R002 UAMA CSH6201A-*ACTION* LOOP. TRAN=UMON,PGM=CSHPCF0 ,TERM=R002,ABCD=UAMA
CICS330 1995/12/15 21:10:49 UMON DPHUEH R002 UAMB CSH6205I-TASK ABENDED. TRAN=UMON,PGM=DPHUEH ,TERM=R002,ABCD=UAMB
CICS330 1995/12/15 21:44:26 UMON CSHTCP R001 ATNI CSH6205I-TASK ABENDED. TRAN=UMON,PGM=CSHTCP ,TERM=R001,ABCD=ATNI
CICS330 1995/12/15 22:30:49 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76
CICS330 1995/12/15 22:42:32 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 22:42:35 **** ***** **** **** CSH6610E-*(SRP)* PSW=00000000 00000000,ABCD=*SVD*,AREA=0C4/AKEA/+0648
CICS330 1995/12/15 22:42:38 U$SM CSH39SIP N/A ASRA CSH6205I-TASK ABENDED. TRAN=U$SM,PGM=CSH39SIP,TERM=N/A ,ABCD=AS
CICS330 1994/12/15 23:22:10 **** ***** **** **** CSH6691I-MAIN TS USAGE. CURRENT= 76,MAXIMUM= 76

```

If a particular problem is discovered in the review of the summary information provided in the previous report, users may review all the AUTOMON/CICS messages issued at the time of the problem. Analysis of all AUTOMON/CICS messages issued around the time of the problem will provide users with a clearer picture as to the cause of the problem. A detailed review of AUTOMON/CICS messages may be done in either of two ways.

1. The messages may be viewed online through the History file display of the "UMON" transaction(=E.1).
2. Users may print the History files messages around the time of the problem using the AUTOMON/CICS batch utility. To obtain all the AUTOMON/CICS messages users must specify the timeframe to be reported in the "FROM" and "TO" SYSIN parms. The "DETAIL" SYSIN parm should also be coded as YES.

### **3.b) AMON001 File Maintenance**

Users may wish to delete records from the AUTOMON/CICS History file to control the size of this file. The AUTOMON/CICS batch facility allows users to delete records from this file while both CICS and AUTOMON/CICS are running in your system and the file pointed to by the AMON001 DD card is open and enabled. It is recommended that the records to be deleted be backed up before this job is run.

The SYSIN parameter "RETAIN" allows users to specify which records in the AMON001 History file will be kept. The "RETAIN" parameter may be specified as either a date in YYYY/MM/DD format or as a number of days prior to the current date. Any records prior to the date specified in the "RETAIN" parameter will be deleted from the AMON001 History file.

The SYSIN parameter RETAIN is mutually exclusive with all other SYSIN parameters used with CSHLIST except for the WTO parameters. Do not attempt to code any other SYSIN parameters when the RETAIN parameter is coded as they will be ignored

```
//CSHLIST JOB (0,0000),'AUTOMON/CICS BATCH',CLASS=0,MSGLEVEL=(1,1)
//*****
//*+=====+*
//*] DELETE RECORDS FROM AUTOMON/CICS HISTORY DATABASE ]*
//*+=====+*
//*****
//CSHLIST EXEC PGM=CSHLIST,REGION=4096K
//STEPLIB DD DISP=SHR,DSN=AUTOMON.V420.CICS321.LOADLIB
//AMON001 DD DISP=SHR,DSN=AUTOMON.SYS001
//UMON001 DD DISP=SHR,DSN=UNIMON.SYS001
//SYSPRINT DD SYSOUT=*,DCB=BLKSIZE=133
//SYSOUT DD SYSOUT=*,DCB=BLKSIZE=133
//SYSIN DD *
WTO(YES), - WRITE TO OPERATOR MESSAGES.....(YES|NO)
RETAIN(1996/04/29)
/*
```

#### **4) Implementing AUTOMON/CICS in Additional Regions**

Once AUTOMON/CICS has been installed in one region, implementing AUTOMON/CICS to the other regions is a very simple process. There are only two steps involved in this process.

Step 1. Make the appropriate table definitions in the PPT, PCT, FCT and PLT tables.

Step 2. Modify the CICS startup JCL to include the AUTOMON/CICS load library and the AMON002 DD card for MVS users.

#### **Table Definitions**

##### **FCT Definition**

Both the UMON001 and AMON001 files defined during the initial installation may be shared by multiple CICS regions. However, It is recommended that the files be defined as a local FCT entry in the File Owning Region(FOR)-[or an AOR] and defined as remote FCT entries in all other regions that are running AUTOMON/CICS.

##### **PCT, PPT and PLT Definitions**

Follow the procedures outlined in the installation steps to install the necessary entries.

##### **Modify the CICS Startup JCL**

Add AUTOMON/CICS load library to the DFHRPL - A sample JCL is provided in UNICOM.INSTLIB member @38CICS.

Add AUTOMON/CICS file(s) to the CICS start-up JCL or incorporate the Data Set Names into the FCT definitions. These files include the UMON001 System File and AMON001 History File.

For MVS users, add the AMON 002 Snap Dump File DD card to the CICS start-up JCL.

## **AUTOMON/CICS User Exits**

Member @38EXITS of the UNICOM.INSTLIB contains a number of precoded sample user exit programs which may be migrated into member CSHXMGPB of the UNICOM.INSTLIB. CSHXMGPB is the AUTOMON/CICS sample user exit program supplied with the product.

Once the desired code has been migrated to CSHXMGPB, this member may be assembled with module ASSEMBLE which is also found in the UNICOM.INSTLIB. It will be necessary to change the SYSIN and SYSLMOD DD cards to match the naming conventions of your environment.

If the user exit assembles properly, the user exit will be enabled the next time that AUTOMON/CICS is recycled. Users will be informed of the enabling of the user exit with message CSH6023I. At this point the user should verify that the user exit is producing the desired results.



