



# ASG-TMON<sup>®</sup> for MVS Release Notes

## Version 3.2

September 16, 2006  
TMV1100-32  
SYSMOD ID: TD03767

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**Note:**

ASG encourages you to visit <http://www.asg.com/support/support.asp> and sign onto the Intelligent Support Portal (ISP) to verify whether any product or documentation revisions, new maintenance, or service packs apply to this release of the product or its accompanying documentation.

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This publication provides information relevant to Version 3.2 of ASG-TMON for MVS (herein called TMON for MVS). It describes:

- The common storage screen changes provided via PTF TD03767. The Unowned Common Storage screen, which had been removed previously from TMON for MVS, has been revised and restored in Version 3.2. Reinstatement of the screen affects two existing common storage screens, so they also have been updated via the PTF.
- The effects of local time changes on TMON for MVS and the TMON for MVS clock parameters you can use to control automatic shutdown of the product.

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## Common Storage Monitor Menu

```
JOBNAME:                T M O N   f o r   M V S                DATE:
SYSID  :                VERSION: 3.2                TIME:
                        COMMON STORAGE MONITOR MENU

COMMAND:

      1  COMMON STORAGE ACTIVITY          5  COMMON STORAGE SUMMARY
      2  CS SUBPOOL ACTIVITY             6  CSA SUBPOOL DETAIL
      3  COMMON STORAGE DETAIL           7  SQA SUBPOOL DETAIL
      4  COMMON STORAGE TREND            8  UNOWNED COMMON STORAGE

HELP INFORMATION = PF1                PF KEY ASSIGNMENTS = PA1
```

Option 8 has been added to the Common Storage Monitor Menu (Option 1.4.4) to let you display orphaned, or *unowned*, common storage. Select this option to display the Unowned Common Storage screen, described on [page 4](#).

## Common Storage Activity

```

JOBNAME:                COMMON STORAGE ACTIVITY                DATE:
SYSID  :                TIME:
COMMAND:                CYCLE: MMSS
SRM STATS: CPU=  7.00  UIC=2540  TPR=  0  SIO= 343.7
DATA TYPE  : _ GRAPHIC X NUMERIC  CSA:   3788K( 20%) ECSA:    488M( 15%)
DATA FORMAT: _ PERCENT X BYTES    SQA:   1164K( 24%) ESQA:   17008K( 95%)

SORT BY:  _ JOBNAME  _ ASID  _ S  _ CSA  _ SQA  _ ECSA  _ ESQA  X TOTAL/PCT
DISPLAY UNOWNED STORAGE _
JOBNAME   JOBID   ASID   S    CSA    SQA    ECSA    ESQA    TOTAL    PCT
*SYSTEM*           0    A    151K   207K  13278K   9309K  22946K   4.39%
NET                30    A     21K     0   8884K     5K   8910K   1.70%
TCP/IP   STC01635   36    A    136     0   5852K     5K   5857K   1.12%
*MASTER*           1    A   117K   41K  1324K   2907K   4391K   0.84%
TMDLX41T STC01691  122    A     4K     0   2535K    13K   2554K   0.48%
D8AHMSTR STC01736  151    A    32K    64   2142K     9K   2184K   0.41%
D81FMSTR STC01651   82    A    32K    64   2080K     5K   2118K   0.40%
D81FDIST STC01671  103    A    136    64   2063K     1K   2065K   0.39%
D8AQDIST STC01670  102    A    136    64   2063K     1K   2065K   0.39%
D8AQMSTR STC01649   80    A    32K    64   2021K     5K   2059K   0.39%
D8AHDIST STC01744  153    A    136    64   2035K     1K   2037K   0.39%
RMF        STC01610   27    A     0     0     584    1924K   1925K   0.36%

HELP INFORMATION = PF1                PF KEY ASSIGNMENTS = PA1

```

The DISPLAY UNOWNED STORAGE field has been added to this screen.  
 Cursor-select it to display the Unowned Common Storage screen, described on [page 4](#).

## Unowned Common Storage

```

JOBNAME:                UNOWNED COMMON STORAGE                DATE:
SYSID  :                TIME:
COMMAND:                CYCLE: MMSS
SRM STATS: CPU= 7.18  UIC=2540  TPR= 0  SIO= 66.8
ALLOCATED CSA: 821.9K  ALLOCATED ECSA: 77.95M  TOTAL COMMON : 96.19M
ALLOCATED SQA: 302.0K  ALLOCATED ESQA: 17.11M  TOTAL UNOWNED: 964.2K
DISPLAYED: 1 TO 14 OF 26                SORT COLUMN#: __ (1-9)  ORDER: _ (A/D)
JOBNAME  JOBID  ASID  CSA  ECSA  SQA  ESQA  TOTAL  PERCENT
*        *        *
DVMXLFSU JOB01885 0019  0    200  0    0    200    .00
JCPCSM31 STC01878 00E4  0    200  0    0    200    .00
TCE23FSU JOB01883 0019  0    328  0    0    328    .00
JCPCSM31 STC01876 00E2  0    200  0    0    200    .00
JCPCSM31 STC01875 007B  0    328  0    0    328    .00
JCPCSM31 STC01849 007B  0  47,576  0  4,136  51,712  .05
DVMXLFSU JOB01873 0033  0    328  0    0    328    .00
TMDBSK41 STC01853 00CC  0    200  0    0    200    .00
TVT22FSU JOB01854 0033  0    328  0    0    328    .00
TMOND946 STC01709 0086  0    528  0    0    528    .00
TMDBSK41 STC01848 00D7  0    232  0    0    232    .00
TMDBSK41 STC01830 00C0  0    200  0    0    200    .00
BER40HUB STC01803 00C0  0  4,424  0  4,096  8,520  .00
BER40MST STC01801 00BE  40  51,672  0  40  51,752  .05
HELP INFORMATION = PF1                PF KEY ASSIGNMENTS = PA1

```

This is a GRF screen. For a description of its characteristics, read about GRF screens in Chapter 2 in *ASG-TMON for MVS Reference Guide*.

The Unowned Common Storage screen displays statistics for unowned common storage, by job. *Unowned common storage* is storage that has been allocated but not yet released. Until it is explicitly released by the job or system, unowned common storage remains allocated until the system is IPLed.

For more information on a specific job, cursor-select its jobname to display the Common Storage Subpool Activity screen, described in Chapter 9 of *ASG-TMON for MVS Reference Guide*.

The Unowned Common Storage screen contains filter areas below several field headings in which you can enter criteria to limit the roster to specific entries. For information on filtering data, read about GRF screens in Chapter 2 in *ASG-TMON for MVS Reference Guide*.

**Note:**

You can use GRF's PROFILE command to save the sort order, sort column, and filtering criteria for this screen and apply them to subsequent screens. For more information, read about GRF commands in Chapter 2 in *ASG-TMON for MVS Reference Guide*.

## Accessing this Screen

### *To access this screen*

- ▶ Complete one of these actions:
  - On the command line, enter =1 . 4 . 4 . 8.
  - From the Common Storage Activity screen (see [page 3](#)), cursor-select the DISPLAY UNOWNED STORAGE field.

## Primary Commands

Enter this command on the command line:

Command	Description
PROFILE	For a description of this GRF command, read about GRF commands in Chapter 2 in <i>ASG-TMON for MVS Reference Guide</i> .

Use the DOWN and UP commands to scroll through this screen. To learn about the various ways to scroll using these commands and for syntax and descriptions of all commands, see Chapter 2 in *ASG-TMON for MVS Reference Guide*.

## Fields

The (filter area), DISPLAYED: *nnnnn* TO *nnnnn* OF *nnnnn*, ORDER, and SORT COLUMN# fields are GRF fields and are described in Chapter 2 in *ASG-TMON for MVS Reference Guide*.

Field	Description
ALLOCATED CSA	Displays the total amount of CSA storage allocated on the system.
ALLOCATED ECSA	Displays the total amount of extended CSA (ECSA) storage allocated on the system.
ALLOCATED ESQA	Displays the total amount of extended SQA (ESQA) storage allocated on the system.
ALLOCATED SQA	Displays the total amount of SQA storage allocated on the system.
ASID	Displays the address space identifier for the associated job.
CSA	Displays the amount of unowned CSA storage allocated for the job.

Field	Description
ECSA	Displays the amount of unowned ECSA storage allocated for the job.
ESQA	Displays the amount of unowned ESQA storage allocated for the job.
JOBID	Displays the unique job identifier for the associated job.
<u>JOBNAME</u>	Displays the name of the job.  Cursor-select this field to display the Common Storage Subpool Activity screen, described in Chapter 9 of <i>ASG-TMON for MVS Reference Guide</i> .
PERCENT	Displays the percentage of the total amount of unowned common storage allocated for the job.
SQA	Displays the amount of unowned SQA storage allocated for the job.
TOTAL	Displays the total amount of unowned storage allocated for the job.
TOTAL COMMON	Displays the total amount of CSA, ECSA, ESQA, and SQA storage allocated on the system.
TOTAL UNOWNED	Displays the total amount of unowned storage allocated on the system.

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## Changing Local Time

The *time-of-day (TOD) clock* is a facility used for measuring time that indicates both the date and time of day. When the TOD clock is running, the TOD register increases as time passes. In a multiprocessor configuration, only one TOD clock is maintained and used by all processors in the configuration. If multiple central processing complexes are joined in a parallel sysplex, a single TOD reference is set by an external time reference (ETR) provided by the sysplex timer, which can optionally use an external time source (ETS) for greater accuracy.

The TOD register value is interpreted when the TOD clock is set. MVS assigns the TOD clock to the standard epoch and establishes a zero value for the TOD register (i.e., January 1, 1900 at 00:00:00.000000). When the TOD clock is set, the amount of time elapsed since that date is placed in the TOD register.

IBM recommends that all MVS TOD clocks be set to the current Coordinated Universal Time (UTC). Historically, Greenwich mean time (GMT) has been used; however, as technology has advanced, GMT has been replaced with the more precise UTC. The value of the TOD clock is stored in memory when one of the forms of the store clock (STCK) instruction is executed. If you set the TOD clock as recommended by IBM, this value represents the current UTC. The local time is then derived by applying the local offset constant to the value returned by the STCK instruction(s).

In MVS, this offset is maintained in field CVTLDTO in the Communications Vector Table (CVT) and determined by one of these mechanisms:

- SYS1.PARMLIB(CLOCK<sub>xx</sub>) member TIMEZONE parameter
- The SET CLOCK, SET DATE, SET RESET, or SET TIMEZONE command
- The ETR (if ETRZONE=YES in SYS1.PARMLIB(CLOCK<sub>xx</sub>) and the SYSPLEX timer is active)

## TMON for MVS Data Considerations

When daylight saving time goes into effect or reverts back to standard time, the local time offset skips ahead or back. This change to the local time offset can cause problems for TMON for MVS, as it provides:

- Real-time data through its active screens
- Recent online data through its Collection Analysis components
- Long-time data from its Sysplex Analyzer components
- Batch historical analysis through the TMON Report Writer.

All the data is recorded in local time as well as UTC. The rate calculations are based on an elapsed time derived by subtracting local start time from local end time. When local time is changed, you can lose data or end up with unreliable data.

**Lost data.** Time stamps are used for keying data records. This allows you to request data from specific local date/time ranges without having to compute the resulting UTC time; however, contiguous records can have descending local time stamps, creating overlapping records. If records are logged with overlapping time stamps, the data in the TMON for MVS collection files might become inaccessible. If this occurs, the data files will be unusable and you will need to reinitialize them. During initialization, all data in the files is deleted.

**Unreliable data.** Another possible adverse effect when the local clock is set back is that TMON for MVS may report twice on the same time period. Although you could still access the report of data, reports for some time periods would combine data from two different intervals into one set of summary statistics. Rate data could be misleading since the elapsed time calculation could appear much larger than actual periods of time or indicate negative periods of time. These problems could cause divide exceptions.

## TMON for MVS Operational Considerations

If the current local time is changed, you must stop and restart TMON for MVS. If it is set back, TMON for MVS should remain shut down until the hour duplicated by the change has passed.

The method you use to modify the local time may involve one of these options:

**Re-IPLing the system during the time change.** Though this method is no longer necessary, it was often used in the past. Today, some installations plan their scheduled outages during the daylight saving time window. Before the time change occurs, the system(s) are shut down. For the time change to daylight saving time, you can immediately bring up the system(s) with the new established local offset. Reverting back to standard time usually involves a one-hour wait to ensure no time overlap occurs when the local time is set back one hour. If you plan to IPL, there are no special considerations for TMON for MVS other than ensuring that no time overlap occurs during this change.

**Continuous system operation during a local time change.** The local time can be changed without a system outage through operator commands or automation procedures that alter the local time offset in the CVT. These methods include:

- Issuing the SET CLOCK (SET DATE) command
- Issuing the SET TIMEZONE command (z/OS 1.7 and later)
- Automated alteration via the ETR.

Currently, you *must* bring down TMON for MVS when the local time changes. If you do not do so before you alter the local time, TMON for MVS will automatically shut down when a local time change is detected by TMVSMSTR. ASG plans to remove this restriction in the future, but currently it applies to all TMON for MVS releases.

- If you use automated operations (AutoOps) software to control TMON for MVS, you should initiate your commands or procedures to bring TMON for MVS down before the local time has been altered.
- If you do not use an automated procedure, you can manually stop TMON for MVS before the local time change occurs. You then can bring TMON for MVS back up after the time change is complete.

When moving forward to daylight saving time, you can immediately restart TMON for MVS. When reverting back to standard time, however, you should wait for the time overlap to clear before you restart it. If you do not want to wait for the overlap to clear, you should dump and reinitialize the TMON Log File Services (LFS) files before you restart TMON for MVS.

**Note:**

Keep in mind that the data integrity you achieve by reinitializing the files applies only to the usability of the collection data. You must segregate data collected before the local time change from data collected after the time change. This action prevents duplicate reporting of the time interval that occurred.

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## TMON for MVS Automatic Shutdown

If TMON for MVS is active when the local time is altered, it automatically shuts down, and all data collection and data logging are stopped. TMON for MVS immediately shuts down when one of these events occur:

- A SET CLOCK command is issued.
- A SET DATE command is issued.
- A SET RESET command is issued.
- A SET TIMEZONE command is issued.
- The ETR alters the local time offset in the CVT.

TMON for MVS provides these parameters that you can use to control automatic shutdown of the product:

- CLOCKQUIESCE
- CLOKCTMP
- CLOCKRESTART

You need to coordinate these parameters with any AutoOps procedures used at your site.

### The CLOCKQUIESCE Parameter

Use the CLOCKQUIESCE parameter to control the actions taken when TMVSMSTR shuts itself down after detecting a local time change. The syntax for this parameter is:

```
CLOCKQUIESCE=YES | NO
```

where:

YES indicates that TMON for MVS will *completely* shut down (i.e., a quiesce shutdown) when a local time change is detected.

NO indicates that TMON for MVS will begin but will not complete its automatic shutdown when the local time change is detected. It will wait until either an operator or AutoOps procedure issues the F TMONMSTR, QU command before completing the shutdown. Message TMVSMST41I - TMVSMSTR WAITING QUIESCE COMMAND is issued, which you can use to trigger the AutoOps procedure to complete the shutdown and set TMVSMSTR to the appropriate state. With CLOCKQUIESCE=NO, TMON for MVS suspends all data collection and logging and ends most of its tasks when the local time change is detected. Although TMON for MVS is still active, it will not perform any functions. It must complete the quiesce termination before a new copy of TMON for MVS is started.

**Note:**

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Specify CLOCKQUIESCE=NO if you have AutoOps software that automatically restarts a task if the task terminates without being instructed to do so by the AutoOps software. If you use this option, be sure to coordinate this setting in your AutoOps software.

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## Shutting Down the Terminal Monitor Program

TMVSMSTR always waits for the successful stop of the Terminal Monitor Program (TMP) before completing termination. You can configure it to automatically shut down the TMP as part of the local time event processing through either the CLOCKTMP or TMVSPROCTMONMVS parameter:

- Set the CLOCKTMP parameter to specify the name of the TMP started task that should be automatically shut down when a local time change is detected. This parameter is not used during normal autostart/stop processing. It affects only the detected local time event. (See [“The CLOCKTMP Parameter”](#) on page 11 for complete information.)

**Or**

- Set the TMVSPROCTMONMVS parameter to specify the name of the TMP started task for normal autostart/stop usage and local time event processing.

If you do not use either parameter, your operator or AutoOps software must manually shut down the TMP when message TMVSMST40I - TMVSMSTR DETECTED LOCAL CLOCK CHANGE is issued. Otherwise, TMVSMSTR will continue to wait for the termination of the TMP.

## The CLOCKTMP Parameter

If either of these situations exist, you do not need to specify the CLOCKTMP parameter:

- You use the TMVSPROCTMONMVS parameter to automatically control the starting and stopping of the TMP.

**Or**

- You have written an AutoOps rule to automatically shut down the TMP when the TMVSMST40I message is issued.

For all other situations, ASG recommends that you use the CLOCKTMP parameter. The syntax for this parameter is:

```
CLOCKTMP=jobname
```

where *jobname* is the name of the TMP started task.

If the CLOCKTMP parameter is not supplied, TMON for MVS uses the jobname supplied in the TMVSPROCTMONMVS parameter. If the TMP is not shut down after the local time change, TMVSMSTR is unable to terminate. If this occurs, you will receive the TMVSMSTR35W – TMVSMSTR WAITING FOR OTHER TASKS TO END message, indicating that you need to manually shut down the TMP. Once the TMP has terminated, TMVSMSTR will complete the quiesce.

## The CLOCKRESTART Parameter

Use the CLOCKRESTART parameter to control the automatic restart of TMON for MVS after a local time change occurs. The syntax for this parameter is:

```
CLOCKRESTART=YES | NO
```

where:

YES indicates that after a local time change event, in which TMVSMSTR was quiesced, TMON for MVS will restart automatically.

NO indicates that TMON for MVS will not restart automatically. It will remain down until started by an operator command or AutoOps procedure. This setting allows you to wait before restarting TMON for MVS after a local time change. It may be required when reverting back to standard time, during which a one-hour time overlap will exist.

