The MVS 3.8j Tur(n)key 4- System -- Version 1.00 -- Update 02

Installation

1. It is strongly recommended to create a backup copy of the system. Although the update process has been thoroughly tested a backup copy comes in handy if an unforeseen error occurs.

2. Update 01 is a prerequisite for Update 02. Make sure Update 01 has been installed successfully before trying to install Update 02.

3. Make sure that your tk4- folder does not contain a subfolder named update. If an update folder has been left over from the installation of a previous update (i.e. from Update 01) either delete it or rename it.

4. Unzip archive tk4-_v1.00_update_02.zip into the tk4- folder. Allow your unzip utility to overwrite existing files and to merge into existing folders while unzipping the archive.

   Note: This update changes the Hercules master configuration file tk4-.cnf in the tk4-/conf folder and script ipl.rc in the tk4-/scripts folder. If local changes have been applied to these files, please review the updated files carefully and merge the local changes back in if they are still necessary. However, when re-applying changes, it should be taken into consideration that the maintenance concept of TK4- provides dedicated locations for local modifications, allowing for almost every desirable customization to be done without needing to update any of these files.

5. a) Windows: Open folder tk4\update and click (or double click, depending on your settings) apply_update.bat.

   b) Linux: Open a shell, change directory to the tk4-/update folder and run ./apply_update.

6. You'll be prompted for the credentials of an administrative user (i.e. HERC01/CUL8TR), then the system will be IPLed, an update job will be executed and the system will be shut down. Because this update changes SYS1.LPALIB the system will then be IPLed a second time to rebuild the link pack area. This second IPL will be followed by an immediate shutdown concluding the update process.

   Note: Although lots of informational message are displayed during the update process most of the time, there are update steps that will not display any messages for a couple of minutes. This must not be misinterpreted as a stall of the update process. Please be patient during these pauses and refrain from manually interrupting the update process.

7. Once the update process has finished check listing.txt in the update folder for errors. One of the following outcomes is expected:

```
18.00.25 JOB    2  IEF403I UPDATER - STARTED - TIME=18.00.25
18.00.25 JOB    2  IEFACTRT - Stepname  Procstep  Program   Retcode
18.00.25 JOB    2  UPDATER    DELCAT               IEFBR14   RC= 0000
18.00.25 JOB    2  UPDATER    DELVOL               IEFBR14   RC= 0000
18.00.25 JOB    2  UPDATER    CLEANUP              IDCAMS    RC= 0000
18.00.26 JOB    2  UPDATER    DPRCHECK  HMASMP     HMASMP    RC= 0004
18.00.26 JOB    2 *IEC501A M 480,UPDATE,SL,6250 BPI,UPDATER,HMASMP
18.00.26 JOB    2  UPDATER    DPRRECV   HMASMP     HMASMP    RC= 0000
18.00.26 JOB    2  UPDATER    CREDITS              IEBGENER  RC= 0000
18.00.26 JOB    2  UPDATER    DYNPROC              IEBGENER  RC= 0000
18.00.27 JOB    2  UPDATER    TSOAPPLS             IEBGENER  RC= 0000
18.00.27 JOB    2  UPDATER    GCCMVS               IEBGENER  RC= 0000
18.00.27 JOB    2  UPDATER    SIMULA               IEBGENER  RC= 0000
18.00.34 JOB    2  UPDATER    ELEMENTS             IEBCOPY   RC= 0000
18.00.43 JOB    2  UPDATER    APPLY1    HMASMP     HMASMP    RC= 0000
18.00.49 JOB    2  UPDATER    APPLYDMY  HMASMP     HMASMP    RC= 0000
18.01.06 JOB    2  UPDATER    RESTDMY   HMASMP     HMASMP    RC= 0000
18.01.12 JOB    2  UPDATER    APPLY2    HMASMP     HMASMP    RC= 0000
18.01.18 JOB    2  UPDATER    ACCEPT    HMASMP     HMASMP    RC= 0004
18.02.58 JOB    2  UPDATER    COMPRESS             IEBCOPY   RC= 0000
18.02.58 JOB    2  IEF234E K 480,UPDATE,PVT,UPDATER
18.02.58 JOB    2  IEF404I UPDATER - ENDED - TIME=18.02.58
```

-- or --

```
18.17.32 JOB    3  IEF403I UPDATER - STARTED - TIME=18.17.32
18.17.32 JOB    3  IEFACTRT - Stepname  Procstep  Program   Retcode
18.17.32 JOB    3  UPDATER   DELCAT                IEFBR14   RC= 0000
18.17.32 JOB    3  UPDATER   DELVOL                IEFBR14   RC= 0000
18.17.32 JOB    3  UPDATER   CLEANUP               IDCAMS    RC= 0000
18.17.33 JOB    3  UPDATER   DPRCHECK   HMASMP     HMASMP    RC= 0000
18.17.33 JOB    3  UPDATER   DPRRECV    HMASMP     HMASMP    *FLUSH*
18.17.33 JOB    3 *IEC501A M 480,UPDATE,SL,6250 BPI,UPDATER,CREDITS
18.17.33 JOB    3  UPDATER   CREDITS               IEBGENER  RC= 0000
18.17.33 JOB    3  UPDATER   DYNPROC               IEBGENER  RC= 0000
18.17.33 JOB    3  UPDATER   TSOAPPLS              IEBGENER  RC= 0000
18.17.34 JOB    3  UPDATER   GCCMVS                IEBGENER  RC= 0000
18.17.34 JOB    3  UPDATER   SIMULA                IEBGENER  RC= 0000
18.17.41 JOB    3  UPDATER   ELEMENTS              IEBCOPY   RC= 0000
18.17.41 JOB    3  UPDATER   APPLY1     HMASMP     HMASMP    *FLUSH*
18.17.41 JOB    3  UPDATER   APPLYDMY   HMASMP     HMASMP    *FLUSH*
18.17.41 JOB    3  UPDATER   RESTDMY    HMASMP     HMASMP    *FLUSH*
18.17.41 JOB    3  UPDATER   APPLY2     HMASMP     HMASMP    *FLUSH*
18.17.41 JOB    3  UPDATER   ACCEPT     HMASMP     HMASMP    *FLUSH*
18.17.41 JOB    3  UPDATER   COMPRESS              IEBCOPY   *FLUSH*
18.17.41 JOB    3  IEF234E K 480,UPDATE,PVT,UPDATER
18.17.41 JOB    3  IEF404I UPDATER - ENDED - TIME=18.17.41
```

8. IPL the system and verify that your regularly used functionality still works as expected. If it does not, revert to your backup copy and report the problems to the author.

9. Folder `tk4-/update` is not needed to operate the system, once the update has been installed successfully. It is recommended to remove it to avoid interference with future updates.

Fixes

-   Improve reliability in unattended mode: The first reply console automation sends to MVS (usually an empty ENTER in reply to message IEA101A) does not always get recognized properly, thus hanging automated IPL processing. This has been fixed by issuing the reply timer *and* HAO driven. As an additional precaution a d t command is issued *always* in reply to message HHC00010A. A drawback of this change is that replies may get injected more often than needed, which constitutes a cosmetic problem only, however. Thanks to Tom Hall for reporting this issue.

-   Enhance clarity of the update process by pointing out that long waits are to be expected and should not be interpreted as stalls. Thanks to Shelby Beach for reporting this issue.

New or Changed Function

Compilers

-   GCC 3.2.3 for MVS 8.5 with PDPCLIB 3.10: Requested by Scott Cosel, Mike Noel and others. See TSO HELP member GCC for quick start information.
-   SIMULA 67 (Version 12.00): Requested by Peter Sylvester and Karel Babcicky. See TSO HELP member SIMULA for quick start information.

Dynamic PROCLIB Support

This introduces support for a

```
//JOBPROC  DD DISP=SHR,DSN=MY.PROC.LIBRARY,SYSPROC=YES
```

card before the first EXEC card of a job to use a private procedure library. The optional parameter SYSPROC can be YES (which is the default) to search the system PROCLIB after the private PROCLIB, or NO to search the private PROCLIB only. Dynamic PROCLIB support was requested by Mike Noel.

Use DYNAMNBR in TSOLOGON Procedure

The TSOLOGON procedure now uses DYNAMNBR instead of explicit DD DYNAM statements. This change was requested by Shelby Beach and Mike Noel.

TSOAPPLS Termination using X

The TSOAPPLS menu can now be terminated using option X in addition to PF3. This change was requested by Shelby Beach.

Extended Hercules Master Configuration File (tk4-.cnf) Parameterization

The size of the main storage available in the emulated mainframe has been parameterized using Hercules' environment variable substitution feature. This allows customization of the main storage size without needing to modify the master configuration file. The respective chapter in the TK4- Update 01 documentation describes how to set a parameter using environment variable substitution. This change was requested by Scott Cosel.

The following environment variable has been introduced:

Variable	Default	Description
MAINSIZE	16	Amount of main storage available in the emulated mainframe

The default value in the above table is identical to the hardcoded master configuration file setting in effect before installation of TK4- Update 02, so the system configuration will remain unchanged unless the MAINSIZE environment variable is set explicitly.

Jürgen Winkelmann, winkelmann@id.ethz.ch, January 5, 2014