MECAFF – tools

M**ultiline** E**xternal** C**onsole** A**nd** F**ullscreen** F**acility - Tools**

for VM/370 R6 SixPack 1.2

Installation Manual

Version 1.2.5

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WARNINGS:

This software is delivered as-is with no promise or commitment to be usable for any particular purpose.
Use it at your own risks!
The MECAFF software and documentation has been written by a hobbyist for hobbyists and should not be used for any important or even critical tasks.

MECAFF is work in progress and its current implementation may differ from this documentation.

Contents

1 Introduction

This document describes the installation of the MECAFF-tools on a VM/370R6 for DIAG58 or for the MECAFF-console.

Installing and using the MECAFF-console provides an alternative interaction to the page-oriented CP console:

- The MECAFF-console is optional if DIAG58 is installed on VM/370.
- If DIAG58 is not installed, the MECAFF-console is required to use the MECAFF-tools.

The same MECAFF-tools work both with 3270 terminals connected directly (using DIAG58) or indirectly (using the MECAFF-console) to VM/370.

This document specifically describes the installation of the MECAFF-tools. The optional installation of the MECAFF-console is described in a separate document.

2 Prerequisites

The MECAFF-tools require a VM/370R6 system with Bob Polmanter's Diagnose-58 modification installed (see the Files section of the H390-VM group) if they are to be used on directly connected 3270 terminal:

- The version of the DIAG58 modification must be at least V1.07, as the MECAFF-tools require the functionality to inquiry if DIAG58 is present, available since this version.
- Newer versions of the DIAG58 modification are of course preferred to take advantage of the latest features and bug fixes.
- The correct function of the installed DIAG58 modification should be verified with the samples tools (TEST MODULE and SAMPIO MODULE) delivered with the modification

3 Files in the package

Unpacking the MECAFF-tools and –console ZIP-archive copies the following files to the current directory:

- `mecaff-0.9.0-`*`version`*`-deinstallation.aws`
  → the AWS tape file in CMS TAPE format containing the deinstallation EXEC for all MECAFF CMS files that were available since version 0.9.0
- `mecaff-tools-`*`version`*`-dynamic.aws`
  → the AWS tape file in CMS TAPE format containing the MECAFF-tools linked against the memory resident GCCLIB (dynamically lined)
- `mecaff-tools-`*`version`*`-static.aws`
  → the AWS tape file in CMS TAPE format containing the MECAFF-tools as statically linked MODULEs
- `mecaff-help-`*`version`*`.aws`
  → the AWS tape file in CMS TAPE format containing the help files for MECAFF-tools

- MECAFF-Tools-Manual-*version*.pdf
  → the user manual for the MECAFF tools (common to the MECAFF-console and DIAG58 versions of the MECAFF tools)
- MECAFF-Tools-Installation-*version*.pdf
  → installation guide for the MECAFF-tools (this file)
- MECAFF-console-*version*.zip
  → installation files for the optional MECAFF-console
- MECAFF-Console-Manual+Installation-*version*.pdf
  → user and installation manual for the MECAFF console

(with *version* currently being 1.2.5)

4 Deinstalling old versions of MECAFF

If one or more previous versions of MECAFF or the MECAFF-tools were installed on the VM/370 system, it is highly recommended to deinstall all old MECAFF files to prevent undesired side effects if one of these old files is used inadvertently.

The CMS tape file `mecaff-0.9.0-`*`version`*`-deinstallation.aws` contains only the deinstallation script `MCFCLEAN EXEC`.

This EXEC can locate and optionally remove the installation files of all publicly available MECAFF versions, including the current version. It will not remove files intended to be customized (for example PROFILE EE) or some other files (like system profile extensions). MECAFF files are searched or erased on minidisks U to Z only, relevant files located on other minidisks are ignored.

To make this tool available:

- On the Hercules console enter:
  ```
  devinit 480 mecaff-0.9.0-version-deinstallation.aws
  ```
- Logon as MAINT
- Load the file:
  ```
  attach 480 to maint 181
  tape load * *
  ```

4.1 Locating MECAFF installation files

When invoked without parameters, MCFCLEAN will work in *find mode*, searching for MECAFF files and listing them along with their state, for example:

```
mcfclean

MECAFF CLEANUP UTILITY
Mode: find MECAFF files
Scanning disks: U V W X Y Z

FOUND: SAMPLE EE Y
FOUND: SYSPROF EE Y
R/O: EE HELPCMD U
R/O: FSHELP HELPCMD U
R/O: FSLIST HELPCMD U
R/O: FSVIEW HELPCMD U
FOUND: EBCDIC MEMO Y
FOUND: VISTA IND$MAP Y
FOUND: EE$S MODULE Y
FOUND: FSHELP$S MODULE Y
FOUND: IND$FILS MODULE Y
FOUND: FSQRY MODULE Y
FOUND: FSCTL MODULE Y
FOUND: MECAFF$S SYNONYM Y
FOUND: CKFSTYPE EXEC Y
R/O: $EE HELP$EE U
R/O: EE$CONFG HELPEE U
R/O: EE$CUST HELPEE U
R/O: EE$EDIT HELPEE U
R/O: EE$FILES HELPEE U
R/O: EE$MISC HELPEE U
R/O: EE$PREFX HELPEE U
R/O: FSCTL HELPCMD U
R/O: FSQRY HELPCMD U

MECAFF files count: TOTAL 24 , READ ONLY: 13

Ready; T=1.01/3.40 20:44:45
```

4.2 Deinstalling MECAFF files

To deinstall the MECAFF files, MCFCLEAN must be invoked with the parameter REMOVE, this will erase all files prefixed with FOUND: in *find mode* (see 4.1).

The files are deleted without confirmation, so if modified files are to be preserved (for example SYSPROF EE), these files must be copied manually to a safe place.

For the deinstallation of all files, the minidisks for the files marked R/O: in *find mode* should first be accessed with write access.

Example for removing the MECAFF installation found in the previous section and verifying that MECAFF is gone:

```
acc 19d u
'19D' REPLACES ' U (19D) '
Ready; T=0.01/0.02 21:06:56

mcfclean remove

MECAFF CLEANUP UTILITY
Mode: remove MECAFF files
Scanning disks: U V W X Y Z

WHIPING: SAMPLE EE Y
WHIPING: SYSPROF EE Y
WHIPING: EE HELPCMD U
WHIPING: FSHELP HELPCMD U
WHIPING: FSLIST HELPCMD U
WHIPING: FSVIEW HELPCMD U
WHIPING: EBCDIC MEMO Y
WHIPING: VISTA IND$MAP Y
WHIPING: EE$S MODULE Y
WHIPING: FSHELP$S MODULE Y
WHIPING: IND$FILS MODULE Y
WHIPING: FSQRY MODULE Y
WHIPING: FSCTL MODULE Y
WHIPING: MECAFF$S SYNONYM Y
WHIPING: CKFSTYPE EXEC Y
WHIPING: $EE HELP$EE U
WHIPING: EE$CONFG HELPEE U
WHIPING: EE$CUST HELPEE U
WHIPING: EE$EDIT HELPEE U
WHIPING: EE$FILES HELPEE U
WHIPING: EE$MISC HELPEE U
WHIPING: EE$PREFX HELPEE U
WHIPING: FSCTL HELPCMD U
WHIPING: FSQRY HELPCMD U

MECAFF files count: TOTAL 24 , READ ONLY: 0
ERASED files count: 24

Ready; T=1.04/3.56 21:09:03

mcfclean

MECAFF CLEANUP UTILITY
Mode: find MECAFF files
Scanning disks: U V W X Y Z


MECAFF not found on disks: U V W X Y Z

Ready(00028); T=1.01/3.37 21:09:54
```

5 Installing the MECAFF tools

5.1 Loading the installation tapes

The MECAFF tools are delivered in the 2 variants *dynamically linked* or *statically linked* against the GCCLIB (GCC native CMS runtime). The MODULEs and support files for each variant are completely contained in a separate AWS files written with the CMS TAPE utility.

Deciding whether to install the statically linked MECAFF tools depends on the environment resp. the expected usage of the VM/370 system:

If:

- the MECAFF-tools are used with VM/370 R6 or VM/380 in a version older than SixPack 1.2
- or loading of the GCCLIB into resident memory is not enabled in the system-wide SYSPROF EXEC or for users of the MECAFF tools (like user MAINT)
- or any DOS-related programs is to be used under CMS

then:

the statically linked version of the MECAFF tools must be installed, as the dynamically linked tools will not work at all or will provoke ABENDs after using DOS-related programs.
The tape file to use is: `mecaff-tools-`*`version`*`-`**`static`**`.aws`

else:

the dynamically linked version of the MECAFF tools can be installed.
The tape file to use is: `mecaff-tools-`*`version`*`-`**`dynamic`**`.aws`

Installing the statically linked variant is possible in any case, as these programs will always work (so these should be used if in doubt), however using more main memory in the VM than necessary if the memory resident GCCLIB is present (loaded into the main memory of the VM by the system profile) and usable (no DOS-related programs are used).

The MECAFF-tools files have the following content (here for the dynamically linked programs, the statically MODULEs and the SYNONYM file have the filename ending in *$S* instead of *$D*):

```
 EE$D      MODULE   F2
 FSHELP$D  MODULE   F2
 FSQRY     MODULE   F2
 FSCTL     MODULE   F2
 IND$FILD  MODULE   F2
 MECAFF$D  SYNONYM  F2
 SAMPLE    EE       F2
 SYSPROF   EE       F2
 XLIST     EXEC     F2
 XXLIST    EXEC     F2
 CKFSTYPE  EXEC     F2
 EBCDIC    MEMO     F2
 VISTA     IND$MAP  F2
tape-mark
 SYSPROFX  EXEC     F2
tape-mark
 SYSPROF   EXEC     F2
tape-mark
tape-mark
```

The files up to the first tape-mark are the MECAFF tools and the support files to use them. The 2 files after the first tape-mark are intended to be installed if the synonyms are to be automatically registered for all users logging on (see 5.2.3).

To make the tools available to all users, disk Y (19E) the target for installing the MECAFF files.

To install a MECAFF tape on the Y disk:

- On the Hercules console enter:
  ```
  devinit 480 mecaff-tools-version-dynamic.aws
  ```
  or:
  ```
  devinit 480 mecaff-tools-version-static.aws
  ```
- Logon as MAINT
- Access the Y disk in R/W mode:
  ```
  release y
  access 19E y
  ```
- Attach the tape device and load the files to disk Y:
  ```
  attach 480 to maint 181
  tape load * * y
  ```
- Re-access disk Y in R/O mode:
  ```
  release y
  access 19E y/s
  ```

Users logging on after the files have been installed on disk Y will have access to the MECAFF tools. However, to be able to use them as described in the MECAFF-Tools-Manual, a post-installation procedure is necessary (see 5.2).

The file SAMPLE EE is a sample EE profile, which can be copied to PROFILE EE A and adapted to the own needs (see the MECAFF-Tools-Manual, sections *Configuration commands* and *Customizing*).

The file CKFSTYPE EXEC allows to customize the VM session depending on the fullscreen infra-structure used for the MECAFF-tools. It installs the synonyms applicable (dynamic or static modules) and invokes one of the specific profiles (if present)
- DX58PROF EXEC for a directly connected 3270 terminal
- MCFFPROF EXEC for a MECAFF-console connected 3270 terminal

allowing for example to set PF functions either with CP SET PF or with FSCTL PF .

5.2 MECAFF -Tools post-installation options

To use the MECAFF-tools installed on disk Y, it is necessary to register the synonyms for the MODULEs loaded from the installation tape. This can be done individually by each user or for all users in the system profile.

5.2.1 Post-installation alternative: register synonyms in PROFILE EXEC

Each user wishing to use the MECAFF-tools can to extend the own PROFILE EXEC with one of the following commands:

```
synonym mecaff$d synonym *        (for the dynamically linked versions)
```
or
```
synonym mecaff$s synonym *        (for the statically linked versions)
```

5.2.2 Post-installation alternative: invoke CKFSTYPE in PROFILE EXEC

Users wishing to use the MECAFF-tools with a specific setup depending on the connection type of the 3270 terminal can to extend the own PROFILE EXEC by invoking CKFSTYPE:

```
exec ckfstype
```

This will check the connection type, register the MECAFF synonyms and invoke one of the EXECs DX58PROF or MCFFPROF, depending on the connection type and if the EXEC is present.

5.2.3 Post-installation alternative: modify SYSPROF EXEC

The system-wide profile SYSPROF EXEC, which is always executed before the user's PROFILE EXEC, is only available since VM/370 R6 SixPack 1.2. The following post-installation alternative cannot be implemented for VM/370 prior to this version.

WARNINGS:

- Modifying the SYSPROF EXEC is a small system-modification, as the CMSSEG and CMS shared segments must be regenerated.
- Before doing this modification, it is advisable to backup the system (for example by backing up the Hercules shadow-files for the disk packs of the VM/370 installation).
- The following command sequences are based on the file SYSPROG MEMO of user MAINT under SixPack 1.2. The exact commands to use for other systems with a SYSPROF-like functionality may differ.

If the file SYSPROF EXEC S is in the original state as delivered with SixPack 1.2, the replacement SYSPROF EXEC provided in the MECAFF-tools installation tapes can be used. This modified SYSPROF EXEC was derived from the version delivered with SixPack 1.2 and invokes an SYSPROFX EXEC if one is found on the Y disk. This allows extending or modifying the functionality of the system profile without having to regenerate the CMS shared segments each time. The delivered SYSPROFX EXEC checks the existence of one of the synonym files for the MECAFF-tools on disk Y and registers it if found, with the dynamic tools having priority if both synonym files are found (see Step 1a for the necessary commands, only needed on the *first* installation of the MECAFF tools).

If the file SYSPROF EXEC S has already been modified, the SYSPROF EXEC must be edited manually to add the SYNONYM command (see Step 1b for the necessary commands).

After setting up the system profile, the CMS shared segments have to be regenerated (see Step 2 for the necessary commands).

Adapting the system-wide SYSPROF EXEC can be done by the user MAINT with the following commands (only one of the steps 1a or 1b has to be executed, texts in italics are comments and are not to be entered):

Step 1a: install SYSPROFX EXEC Y and modified SYSPROF EXEC S from tape

On the Hercules console enter:

```
devinit 480 mecaff-tools-version-dynamic.aws
```

or:

```
devinit 480 mecaff-tools-version-static.aws
```

Logon as MAINT

Access the S and Y disks in R/W mode:

```
access 190 z          (access disk S in R/W mode, not possible via: acc 190 s)
release y
access 19E y
```

Attach the tape device and load the files to disk Y:

```
attach 480 to maint 181
tape scan             (skip the tools section of the tape)
tape load * * y       (load SYSPROFX EXEC to disk Y)
tape load * * z       (load SYSPROF EXEC to disk S)
```

Release R/W access to disk S:

```
release z
```

Step 1b: edit SYSPROF EXEC S

```
access 190 z          (access disk S in R/W mode, not possible via: acc 190 s)
ee$d sysprof exec z2  (attention: filemode must be Z2)
      (see 5.2.1 for the command to insert, alternatively use EDIT or ee$s)
release z
```

Step 2: regenerate the CMSSEG and CMS shared segments

```
define storage 16m
ipl 190
access ( noprof
      (ignore the message: CMSSEG system name 'CMSSEG' not available.)
access 093 b
access 193 c
cmsxgen f00000 cmsseg
ipl 190
savesys cms
#cp logoff
```

6 Installing the MECAFF-tools CMS help files

The help files for the MECAFF tools for DIAG-58 are contained in the AWS tape file `mecaff-help-`*`version`*`.aws` in CMS TAPE format. This tape contains the help files for the following items:

- Help files for the MECAFF CMS commands EE, FSLIST, XLIST, FSVIEW, FSHELP;
  these are standard CMS help filetype HELPCMD supported by (CMS-)HELP and FSHELP
- Help files for EE subcommands and a top-level help topic for EE's internal help;
  these are non-standard help filetypes HELPEE and HELP_EE supported by FSHELP only

The help files must be installed on the U disk. To install the MECAFF help on the U disk:

- On the Hercules console enter:
  `devinit 480 mecaff-help-`*`version`*`.aws`
- Logon as MAINT
- Access the U disk in R/W mode:

```
release u
access 19D u
```

- Attach the tape device and load the files to disk U:

```
attach 480 to maint 181
tape load * * u
```

- If the help menu for FSHELP (the MECAFF-Tools-Manual, section *FSHELP*) is to be made available globally to all users (instead of each user having an own menu file), this help topic can be supplied with:

```
fshelp ( rebuild
copy menu fshelp a2 = = u2 ( repl
```

  (for this, the user MAINT must be able to use the MECAFF tools either by installing the statically linked tools or by activating the resident memory GCCLIB, see 5)

- Re-access disk U in R/O mode:

```
release u
access 19D u/s
```