Department of Veterans Affairs
Decentralized Hospital Computer Program

# KERNEL TOOLKIT
# INSTALLATION GUIDE

Version 7.3

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# Table of Contents

# Introduction

The purpose of this guide is to provide instructions for installing Kernel Toolkit (also referred to as "Toolkit") Version 7.3.

The following minimum software versions are required to install this package:

Kernel V. 7.1
VA FileMan V. 20.0
MailMan V. 7.0
DSM for OpenVMS V. 6.2
MSM-PC V.4.0.n

Instructions are provided for three operating systems (OS):

DSM for OpenVMS
MSM-PC V.4.0.n
M/SQL

Toolkit Version 7.3 also supports MSM-UNIX and DataTree MUMPS (Massachusetts General Hospital Utility Multi-Programming System).

The installation steps provided in this guide apply to all the supported operating systems. (Global protection does not apply for DataTree systems.{ XE "Global Protection" })

NOTE:

- for M11+, operating system version 3.6 or above is required
- for M/VX, version 5B or above is required (the Kernel Toolkit init will not run if previous OS versions are present).

When using this manual, it is recommended that you highlight the commands corresponding to your operating system for easy summary viewing (e.g., highlight the box labeled DSM for OpenVMS, MSM, etc.). Also note that in these instructions, "VAH" refers to the Production account and "MGR" refers to the Library or Manager account. You may use different names at your site and should pencil them in to avoid confusion later on. Also note that for M/SQL systems, a volume set is a directory set. For MSM, a volume set is called a volume group.

## New Globals

The following global is new with Toolkit V. 7.3:

^XUCS The ^XUCS{ XE "New Global:^XUCS" }{ XE "^XUCS" } global houses the files for the MSM-PC Performance Monitor (MPM){ XE "MSM Performance Monitor (MPM)" }. This new global will not exist in non-MSM sites. Automatic purging can be enabled for this file.

The following globals were new with Toolkit V. 7.2 and must be in place for Toolkit V. 7.3:

^XT The ^XT global{ XE "^XT" } is the location for all files related to Multi-Term Look-Up (MTLU){ XE "Multi-Term Look-Up (MTLU)" }. This global should reside in the Production account (VAH).

^XUCM The ^XUCM global{ XE "^XUCM" } contains the files for the VAX/Alpha Performance Monitor (VPM){ XE "VAX/Alpha Performance Monitor (VPM)" } and can be expected to grow at approximately 80 kb/day/node until you purge. Automatic purging can be enabled for this file. This global should reside in the Production account (VAH) in a cluster-mounted volume set.

NOTE 1: During this installation, a VPM{ XE "VAX/Alpha Performance Monitor (VPM)" } pre-init converts the first subscript of ^XUCM{ XE "^XUCM" } to match the file number.

NOTE 2: With Toolkit V. 7.3 the ^XUCP{ XE "^XUCP" } global is no longer used for storage of Resource Usage data. DSM for OpenVMS sites can remove ^XUCP from their system. Data from the Resource Usage module now stores raw data in ^XTMP("XUCP"){ XE "^XTMP" }. Global growth is dependent on the amount of activity on your system and could be substantial. If running this module for the first time, we recommend running for brief periods (1-2 hour sessions) until you are more familiar with its behavior.

# Installing Toolkit V. 7.3

## Preliminary Considerations

1. Kernel V. 7.1 must be in place before installing Toolkit V. 7.3.

2. Your distribution media contains the following files:

   KTK7_3.RTN (Kernel Toolkit, version 7.3)**{** XE "KTK7_3.RTN file" **}**

   K71PAT40.RTN (Kernel 7.1 patch #40)**{** XE "K71PAT40.RTN file" **}**

3. This document assumes you have not yet installed Kernel V. 8. However, **for Kernel V. 8 sites the following information is important:**

   a. **Do not apply the Kernel 7.1 patch (#40)**. These are the routines contained in the file K71PAT40.RTN**{** XE "K71PAT40.RTN file" **}{** XE "Kernel 7.1 patch 40" **}**.

   b. Verify that you have cleaned up your Production account of the unused Kernel Manager Routines**{** XE "Unused Routines" **}**. In particular, remove ZTMGRSET**{** XE "ZTMGRSET" **}**, ZOSV***{** XE "%ZOSV" **}** and ZOSF***{** XE "^%ZOSF" **}**.

   c. When instructed to move the Z* routines from VAH to MGR, some routines will no longer exist. This is okay.

   d. When instructed to run TOOLKIT^ZTMGRSET**{** XE "ZTMGRSET" **}{** XE "TOOLKIT^ZTMGRSET" **}**, the version for Kernel V. 8 will not ask you for input. This entry point only renames Toolkit routines to their "%" names.

4. For all Kernel V. 7.1/Toolkit V. 7.2 sites, **excluding Kernel V. 8 sites**: Apply Kernel 7.1 patch #40**{** XE "Kernel 7.1 patch 40" **}** to your Production account of the appropriate CPUs.

```
NXT,KDE>D ^%RR


Routine Restore

Input Device ?  > K71PAT40.RTN


Restoring routines from USER$:[KERNEL.TK73BLD]K71PAT40.RTN;2

Saved by %RS from [NXT,KDE] on 22-FEB-1995 16:31:34.25
Header: Kernel 7.1 Patch #40

Restore All (A), Selected (S), or Confirm on overwrite (C) ?  <A> <RET>

XGF      XGFDEMO  XGFDEMO1 XGKB      XGS      XGSA      XGSBOX   XGSETUP
XGSW     XPDMENU  XPDUTL   ZOSV1DTM  ZOSV1GTM ZOSV1VXD  ZOSV2MSM ZOSV2VXD
ZOSVDTM  ZOSVGTM  ZOSVM11P ZOSVMSM   ZOSVMVX  ZOSVVXD   ZTBKC    ZTBKCDTM
ZTBKCMP  ZTBKCMSM ZTBKCMVX ZTBKCVXD  ZTMGRSET

    29 routines saved
```

   Copy the following routines to your corresponding Manager account(s):

   ZOSV*{ XE "ZOSV" }
   ZTBK*{ XE "ZTBK" }
   ZTMGRSET{ XE "ZTMGRSET" }

   These routines and others will be renamed to "%" routines later in the installation. Review and complete all other "preliminary" steps that apply to your platform, then begin the installation.

5. Skills required to perform the installation are listed below. Instructions for performing these functions are provided in Vendor-supplied operating system manuals as well as Decentralized Hospital Computer Program (DHCP) publications.

6. DSM for OpenVMS instruction is provided in the *VAX DSM Systems Guide (Cookbook )*

7. MSM-PC instruction is provided in the *486 Cookbook and MSM System Managers Guide*.

8. You need to know how to:

   - Log onto the system console.

- Shutdown and bring up (boot) the system.
- Load a magtape/diskpack and use the tape drive/disk drive.
- Enable/disable routine mapping and translate/implicit/replicate globals.
- Run a system status and restore a job.
- Copy routines using: diskettes, tapes, SDP space (PDP) or VMS files (VAX).
- Backup the system.
- Global management: enable/disable journaling, global placement, protection.
- Switch User Class Identification (UCI) from Manager (MGR) to Production (VAH).

## MSM Sites

Your MUMPS implementation includes a %INDEX utility{ XE "%INDEX" }. This utility is similar to the one by the same name that is distributed with the Kernel Toolkit. It is important to note that:

- When loading Kernel Toolkit onto an MSM system, you overwrite the MSM %INDEX utility with the Kernel Toolkit's %INDEX{ XE "%INDEX" } utility.
- Consequently, whenever you update your copy of MSM you overwrite the Kernel Toolkit's %INDEX utility with the MSM %INDEX{ XE "%INDEX" } utility.

If you prefer using the Kernel Toolkit's version of %INDEX{ XE "%INDEX" }, remember to reload it whenever you update your copy of MSM.

The Kernel Toolkit %INDEX{ XE "%INDEX" } utility is exported in the ZINDX* routines{ XE "ZINDX* Routines" } and can be restored as follows:

- **In MGR: Restore %INDEX{** XE "%INDEX" **}.**
  After loading a new version of MSM, restore the Kernel Toolkit's like-named utility if its functionality is preferred.

*MSM*

```
>D RESTORE^ZINDXH
```

NOTE: The Kernel Toolkit's %INDEX{ XE "%INDEX" } utility accommodates VA standards as well as the 1990 ANSI MUMPS Standard.

The XIND* routines have been supplied to perform %INDEX{ XE "%INDEX" } on applications requiring the Type A extension to the 1990 ANSI MUMPS Standard.

These routines can be run directly (D ^XINDEX){ XE "^XINDEX" } and should not be placed in your Manager's account.

# Advance Preparation

- **Back up your system as a safeguard before the installation.** Optionally, for future reference, you may also want to save a list of your Kernel routines by running a routine directory (D ^%RD{ XE "^%RD" }) for the Kernel namespaces (X*, Z* subtracting out ZZ*).

- **Load the routines into a test account** and run the NTEG routine{ XE "NTEG Routine" }{ XE "Integrity Checking" } listed below. If you have received a patched routine set, those patched routines are identified as being off by the number of bits that correspond to the patch and the affected routine(s) should have been noted in a cover letter. Exceptions to this should be reported to your ISC.

```
>D ^XTNTEG{ XE "XTNTEG" }
```

- **Global Placement{ XE "Global Placement" }:**

  **^XT**

  The ^XT global{ XE "^XT" } was new with Toolkit V. 7.2 and is the location for all files related to Multi-Term Look-Up (MTLU){ XE "Multi-Term Look-Up (MTLU)" }.

  **In VAH:** If ^XT{ XE "^XT" } is not already placed, it should be placed in the appropriate volume set. Translate ^XT across all CPUs.

  **^XUCM**

  For Alpha sites only, the ^XUCM global{ XE "^XUCM" } was new with Toolkit V. 7.2 and contains the files for the VAX/Alpha Performance Monitor (VPM){ XE "VAX/Alpha Performance Monitor (VPM)" }. It can be expected to grow at approximately 80 kb/day/node until you purge.

  **In VAH:** If ^XUCM{ XE "^XUCM" } is not already placed, it should be placed in the appropriate volume set. Translate ^XUCM across all CPUs.

  **^XUCS**

  For MSM sites only, Toolkit V. 7.3 brings in a *new* global, ^XUCS{ XE "New Global:^XUCS" }{ XE "^XUCS" }. This global houses the files for the MSM-PC Performance Monitor (MPM){ XE "MSM Performance Monitor (MPM)" }.

**In VAH:** MSM sites should place the ^XUCS**{** XE "New Global:^XUCS" **}{** XE "^XUCS" **}** global in an appropriate volume set. If your site has more than one volume set, translate ^XUCS across all CPUs.

Automatic purging can be enabled for the ^XUCM**{** XE "^XUCM" **}** and ^XUCS**{** XE "New Global:^XUCS" **}{** XE "^XUCS" **}** files.

- **Global Protection{** XE "Global Protection" **}:**

  The global ^XUCS**{** XE "^XUCS" **}{** XE "New Global:^XUCS" **}** is used only by the MSM performance monitor**{** XE "MSM Performance Monitor (MPM)" **}** and is new with Toolkit V. 7.3.

  For MSM, verify that protection on the globals**{** XE "Global Protection" **}** ^XT**{** XE "^XT" **}** and ^XUCS**{** XE "^XUCS" **}{** XE "New Global:^XUCS" **}** is:

  System: RWD
  World: RWD
  Group: RWD
  User: RWD

  For Alpha systems, the recommended protection for the ^XT**{** XE "^XT" **}** and ^XUCM**{** XE "^XUCM" **}** globals is**{** XE "Global Protection" **}**:

  System: RWP
  World: RW
  Group: RW
  UCI: RWP

# VAX/ALPHA Installations

NOTE: 486 sites may skip this topic and continue with the "MSM-PC Installations" topic that follows.

The following steps are required to support the VAX/Alpha Performance Monitor (VPM){ XE "VAX/Alpha Performance Monitor (VPM)" }:

- TaskMan{ XE "TaskMan" \r "bk5" } *must* be set up to run from a DCL context{ XE "DCL Context" }. When run from a DCL context TaskMan runs as a privileged VMS user. The manager runs in DSM as a job that originated in a node-specific VMS batch queue and, by default, submits new submanagers to the same queue as needed. When a program calls ^ZTLOAD{ XE "^ZTLOAD" } it is possible to request that the job be run on a *specific* CPU/Node in your cluster. The manager "submits" the job as a new submanager to that node-specific batch queue. This allows the programmer to control which CPU is to run a given job even though TaskMan is not running on that node. These principals are applied by VPM{ XE "VAX/Alpha Performance Monitor (VPM)" } to control the collection of performance data and manage the underlying DCL files{ XE "DCL files" }.

  To run from DCL, TaskMan requires the following:

  a. VMS Username: TASKMAN

  b. VMS Batch queues for each node in cluster named "TM$<nodename>"

  c. A VMS directory to hold a LOGIN.COM, ZTMWDCL.COM, and ZTMSWDCL.COM along with TaskMan-related log files and a system-wide logical name, "DHCP$TASKMAN," defined on all nodes pointing to this directory.

  d. Box:Volume pairs and a DSM Environment Manager defined for all nodes in the cluster (TASKMAN SITE PARAMETERS file (#14.7){ XE "TASKMAN SITE PARAMETERS file" }). Defining the DSM Environment, stopping and restarting TaskMan causes him to run from a DCL context{ XE "DCL Context" }. Deleting this entry, stopping and restarting TaskMan causes him to run in "normal" mode.

  This task can be accomplished at any point prior to configuring and enabling VPM{ XE "VAX/Alpha Performance Monitor (VPM)" }.

  Alternatively, to assist with setting up the components needed by TaskMan *after* installing Toolkit V. 7.3, we have included the routine ^XUCMTM{ XE "^XUCMTM" }. To execute the routine, you should be logged in with the VMS privileges OPER{ XE "OPER:VMS Privileges" } and SYSPRV{ XE "SYSPRV:VMS Privileges" }{ XE "VMS Privileges:OPER" }{ XE "VMS Privileges:SYSPRV" }. Log into your DSM Production account and execute the routine from programmer mode. Again, this step must be completed *prior* to configuring and enabling VPM{ XE "VAX/Alpha Performance Monitor (VPM)" }.

NOTE: For complete information on configuring TaskMan to run in a DCL context{ XE "Configuring TaskMan to run in a DCL Context" }{ XE "DCL Context" } see the topic entitled "Running TaskMan with a VMS DCL Context" under the "Task Manager" chapter in the *Kernel Systems Manual V. 7.1* (pp. 294-298).

## Sample Dialogue of Running ^XUCMTM

{ XE "^XUCMTM:Example" }

```
>D ^XUCMTM
This routine will assist you in configuring TASKMAN to run from a
DCL CONTEXT{ XE  "DCL Context" }.
This procedure begins on page 294 of the Kernel 7.1 SYSTEMS MANUAL.

First, select an HFS device for writing to Taskman's home directory.
Select a HOST FILE SERVER device: HFS  DISK FILE
HOST FILE NAME: TMP.TMP// <RET>              INPUT/OUTPUT OPERATION: N

Now, let's create Taskman's home directory.
Enter the drive/path: USER$:[TASKMAN] (this entry is site specific)
This step creates a new entry in UAF called TASKMAN.
You will need to provide the UIC code in the format '[#,#].'
Taskman will require at LEAST the following privileges:
CMKRNL, TMPMBX, OPER, NETMBX
Would you like to see a brief listing of UAF records? YES// NO
Assign TASKMAN to what UIC: [50,20] (this entry is site specific)
Would you like to copy an existing user over to TASKMAN? Y// NO

%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier TASKMAN value: [000050,000020] added to rights
data base
%CREATE-I-EXISTS, USER$:[TASKMAN] already exists

...WRITING OUT 'LOGIN.COM'
...WRITING OUT 'ZTMWDCL.COM'
...WRITING OUT 'ZTMSWDCL.COM'
The final step will be to define the TASKMAN batch queues for each node
in your cluster.
Enter the name of each node in your DHCP cluster. Press RETURN when finished.
Enter NODENAME: 612K01 (enter the nodenames at your site)
Enter NODENAME: 612K02
Enter NODENAME: <RET> (at this point, your queues have been created)
FINAL CHECKS:
1. Verify that you can log in as the user TASKMAN.
2. For each node that has the TM$ batch queue, define the system
   logical DHCP$TASKMAN=taskman's home directory. Be sure to place
   the command in your system startup procedure. (see page 295)
3. If you have implemented ACL security for your DSM environments
   log into your manager account and D ^ACL. Provide MANAGER access
   for the new user TASKMAN.
4. Using the option SITE PARAMETER EDIT, define a box-volume pair for
   each node containing the TM$NODENAME batch queue. Be sure to fill
   the field VAX/ALPHA DSM ENVIRONMENT FOR DCL.
5. STOP/RESTART TASKMAN TO ACTIVATE THE NEW SETTINGS.
```

## Review the New VMS User, TASKMAN

```
KRN,KDE>
612K01: MC AUTHORIZE
UAF> SHO TASKMAN

Username: TASKMAN                          Owner:
Account:                                   UIC:    [50,20] ([DEV,TASKMAN])
CLI:      DCL                              Tables: DCLTABLES
Default:  USER$:[TASKMAN]
LGICMD:   LOGIN.COM
Flags:  DisCtlY Restricted DisWelcome DisReport Captive
Primary days:   Mon Tue Wed Thu Fri
Secondary days:                     Sat Sun
No access restrictions
Expiration:            (none)    Pwdminimum:  6   Login Fails:     0
Pwdlifetime:        180 00:00    Pwdchange:      (pre-expired)
Last Login:            (none) (interactive),     (none) (non-interactive)
Maxjobs:         0      Fillm:       100  Bytlm:        40960
Maxacctjobs:     0      Shrfillm:      0  Pbytlm:           0
Maxdetach:       0      BIOlm:        18  JTquota:       1024
Prclm:           2      DIOlm:        18  WSdef:          300
Prio:            4      ASTlm:        24  WSquo:          500
Queprio:         0      TQElm:        10  WSextent:      2048
CPU:        (none)      Enqlm:       300  Pgflquo:      10240
Authorized Privileges:
  CMKRNL TMPMBX OPER NETMBX
Default Privileges:
  CMKRNL TMPMBX OPER NETMBX
UAF> EXIT
```

NOTE: Password protect your new user and log in to test the password protection. If you do not use ACL protection{ XE "ACL:Environment Access Utilities" } on your MUMPS accounts, TaskMan may need to have SYSPRV{ XE "SYSPRV:VMS Privileges" }{ XE "VMS Privileges:SYSPRV" } privilege as well.

## Grant the New User TASKMAN Manager Access to DSM

```
MGR,KDE>D ^ACL

Environment Access Utilities

    1.  ADD/MODIFY USER                 (ADD^ACL)
    2.  DELETE USER                     (DELETE^ACL)
    3.  MODIFY ACTIVE AUTHORIZATIONS    (^ACLSET)
    4.  PRINT AUTHORIZED USERS          (PRINT^ACL)

Select Option > 1. <RET>  ADD/MODIFY USER

OpenVMS User Name:   >   TASKMAN

ACCESS MODE    VOL       UCI       ROUTINE
-----------    ---       ---       -------

No access rights for this user.

Access Mode ([M]ANAGER, [P]ROGRAMMER, or [A]PPLICATION):   >   M

USER           ACCESS MODE    VOL       UCI       ROUTINE
----           -----------    ---       ---       -------

TASKMAN        MANAGER

OK to file?   <Y>   Y

Identifier DSM$MANAGER_KDAMGR granted to user TASKMAN.
Modifications have been made to the OpenVMS rights database.
These changes will take effect the next time TASKMAN logs in to
the OpenVMS system.

OpenVMS User Name:   >   <RET>


OK to activate changes now?   <Y>   Y


Creating access authorization file:  DSA0:[KDAMGR]DSM$ACCESS.DAT.
                                                  Press RETURN to continue
```

## Verify that your Batch Queues were Created

{ XE "Batch Queues, verify created" }{ XE "Verify Created Batch Queues" }

```
612K01: SHO QUE/FULL TM$*

Batch queue TM$612K01, idle, on 612K01::
  /BASE_PRIORITY=4 /JOB_LIMIT=50 /OWNER=[DEV,TASKMAN]
/PROTECTION=(S:E,O:D,G:R,W:W)

Batch queue TM$612K02, idle, on 612K02::
  /BASE_PRIORITY=4 /JOB_LIMIT=50 /OWNER=[DEV,TASKMAN]
/PROTECTION=(S:E,O:D,G:R,W:W)
```

- Set up *two* new mail groups{ XE "New Mail Groups:G.CMP@ISC-SF.VA.GOV" }{ XE "Mail Groups:G.CMP@ISC-SF.VA.GOV" }. The first should contain only local recipients for VAX/ALPHA Performance Monitor (VPM) messages and alerts{ XE "VAX/Alpha Performance Monitor (VPM)" }. The second should contain the remote recipient, G.CMP@ISC-SF.VA.GOV{ XE "G.CMP@ISC-SF.VA.GOV:Mail Group" }. If your local ISC wishes to collect and file site data, enter an appropriate recipient for your local ISC as well. You are asked to enter these new mail groups in the CM SITE PARAMETERS file{ XE "CM SITE PARAMETERS file" } (#8986.095) at the conclusion of the Toolkit init.

- ISCs wishing to collect performance data from a site may request server routines from ISC-SF to file the data.

## Verify an Entry Exists in the DEVICE file (#3.5) for the Following Devices:

NOTE: Some entries are site-specific.

{ XE "Devices" }{ XE "DEVICE file" }{ XE "HFS Device" }

```
NAME: HFS (name optional)                $I: TMP.TMP
  ASK DEVICE: YES                        ASK PARAMETERS: NO
  VOLUME SET(CPU): ISC                   LOCATION OF TERMINAL: HOST DISK FILE
  ASK HOST FILE: YES                     ASK HFS I/O OPERATION: YES
  MARGIN WIDTH: 132                      FORM FEED: #
  PAGE LENGTH: 64                        BACK SPACE: $C(8)
  SUBTYPE: P-OTHER                       TYPE: HOST FILE SERVER


NAME: SYS$INPUT{ XE  "SYS$INPUT Device" }                    $I:
SYS$INPUT:.;
  ASK DEVICE: NO                         ASK PARAMETERS: NO
  LOCATION OF TERMINAL: DISK FILE        MARGIN WIDTH: 80
  FORM FEED: #                           PAGE LENGTH: 64
  BACK SPACE: $C(8)                      SUBTYPE: P-OTHER80
  TYPE: TERMINAL
```

# MSM-PC Installations

MSM SITES should complete the following preliminary steps to enable performance monitoring{ XE "MSM Performance Monitor (MPM)" }:

1. Review the "Advance Preparation" topic in this manual for important information on Global Placement/Protection of the ^XT, ^XUCM, and ^XUCS globals.{ XE "^XT" }{ XE "^XUCM" }{ XE "^XUCS" }{ XE "New Global:^XUCS" }{ XE "Global Protection" }{ XE "Global Placement" }

2. If the ^RTHIST{ XE "RTHIST" } global was established prior to installing version 4.0 of MSM, it should be deleted and re-established. To do this, on the Compute/Print Servers in the Manager UCI, use ^%GDEL{ XE "^%GDEL" } and delete the ^RTHIST global and reset it to ^RTHIST="".

   NOTE: The NOKILL flag may have been set for all globals. This should be removed to avoid an ACCESS DENIED error.

3. Prepare your other CPUs for support of TaskMan{ XE "TaskMan" } jobs. Move the following Kernel V. 7.1 and FileMan V. 20 routines to the Manager UCI of both the File and Shadow Servers{ XE "File/Shadow Servers" }:

| | |
|---|---|
| DIDT* | ZI* |
| DIRCR | -ZISL* |
| XUCIMSM | ZISLVR |
| ZUA | ZISLDIS |
| ZT* | ZISLSIT |
| ZOS* | ZISLPC |

4. Setup the Global Translation{ XE "Global Translation{ XE "Global Translation" \r "bk1" }" } on the File Server.

```
>D ^SYSGEN
          MSM - System Generation Utility
Select SYSGEN Option: 3 - Edit Configuration Parameters
Select Configuration <FSA>: FSA
Select SYSGEN Option: 13 - Translation/Replication Table Maintenance
Available Functions:
    1 - Edit Translation Table
    2 - Enable Translation
    3 - Disable Translation
    4 - Edit Replication Table
    5 - Translation Table List
    6 - Replication Table List
Select Option: 1 - Edit Translation Table
Translation table is empty.
Enter Translation Table Index: 1
Global name: %ZOSF{ XE  "^%ZOSF" }
Collating sequence <NUMERIC>: NUMERIC
Global encoding [7=7-bit/8=8-bit] <8>: 8
```

```
UCI to translate from: MGR,FSA
```

4. Setup the Global Translation{ XE "Global Translation" } on the File Server (continued):

```
UCI to translate to: MGR,FSA
UCI for maintenance of locks <MGR,FSA>: MGR,FSA
Replication table index:
Enable translation <YES>: YES
Enable lock table translation <YES>: YES
Enter Translation Table Index: 2
Global name: %Z*
Collating sequence <NUMERIC>: NUMERIC
Global encoding [7=7-bit/8=8-bit] <8>: 8
UCI to translate from: MGR,FSA
UCI to translate to: MGR,PSA
UCI for maintenance of locks <MGR,PSA>: MGR,PSA
Replication table index:
Enable translation <YES>: YES
Enable lock table translation <YES>: YES
Enter Translation Table Index: ^L
Current Translation Table:
   Global         Translate        Lock    Repl   Functions     Coll Global
#  Name(s)     From UCI  To UCI   Master   Ind    Enabled       Seq  encode
   -------     ----------------   ------   ----   ---------     ---- ------
1* %ZOSF{ XE  "^%ZOSF" }       MGR,FSA  MGR,FSA   MGR,FSA         TRANSLATION
NUM   8-bit
                                                 LOCK MASTER
2* %Z*         MGR,FSA  MGR,PSA   MGR,PSA         TRANSLATION   NUM   8-bit
                                                 LOCK MASTER
Entries with a '*' have been modified since Translation was enabled.
The Translation Table in memory does not reflect these changes.
Translation is not enabled
Enter Translation Table Index:
Press <RETURN> to continue
Available Functions:
    1 - Edit Translation Table
    2 - Enable Translation
    3 - Disable Translation
    4 - Edit Replication Table
    5 - Translation Table List
    6 - Replication Table List
Select Option: 2 - Enable Translation
Enabling translation...
Press <RETURN> to continue
Available Functions:
    1 - Edit Translation Table
    2 - Enable Translation
    3 - Disable Translation
    4 - Edit Replication Table
    5 - Translation Table List
    6 - Replication Table List
Select Option: <RET>
```

5. Run ZTMGRSET{ XE "ZTMGRSET" } in the Manager's UCI of the File server.

6. In MGR, rename the following FileMan routines:

   **>ZL DIDT**
   **>ZS %DT**
   **>ZL DIDTC**
   **>ZS %DTC**
   **>ZL DIRCR**
   **>ZS %RCR**

7. Edit the File Servers for TASKMAN SITE PARAMETERS (#14.7), VOLUME SET (#14.5), and UCI ASSOCIATION (#14.6) files:**{** XE "TASKMAN SITE PARAMETERS file" \r "bk6" **}{** XE "VOLUME SET file" \r "bk7" **}{** XE "UCI ASSOCIATION file" \r "bk8" **}**

   NOTE: For additional information on this, please refer to page 246 of the *Kernel Systems Manual V. 7.1.*

```
Task Manager
Select Task Manager Option: Taskman Management Utilities
Select Taskman Management Utilities Option: Edit Taskman Parameters
Select Edit Taskman Parameters Option: SITE Parameters Edit
Select TASKMAN SITE PARAMETERS BOX-VOLUME PAIR: FSB
  ARE YOU ADDING 'FSB' AS A NEW TASKMAN SITE PARAMETERS (THE 4TH)? Y  (YES)
BOX-VOLUME PAIR: FSB//
LOG TASKS?: N  NO
DEFAULT TASK PRIORITY: 4
TASK PARTITION SIZE:
SUBMANAGER RETENTION TIME: 0
TASKMAN JOB LIMIT: 14
TASKMAN HANG BETWEEN NEW JOBS: 1
MODE OF TASKMAN: COMPUTE SERVER{ XE  "COMPUTE SERVER:Mode of TaskMan" }
<<<<<<<IMPORTANT!

NOTE: This setup differs to allow MPM to initiate and run tasks on your file
      servers.{ XE  "MSM Performance Monitor (MPM)" }

VAX DSM ENVIRONMENT FOR DCL
OUT OF SERVICE: NO
LOAD BALANCE ROUTINE:
Select TASKMAN SITE PARAMETERS BOX-VOLUME PAIR:
Select Edit Taskman Parameters Option: VOLume Set Edit
Select VOLUME SET: FSB
  ARE YOU ADDING 'FSB' AS A NEW VOLUME SET (THE 5TH)? Y  (YES)
VOLUME SET: FSB// <RET>
TYPE: COMPUTE SERVER
INHIBIT LOGONS?: N  NO
LINK ACCESS?: <RET>
OUT OF SERVICE?: N  NO
REQUIRED VOLUME SET?: N  NO  ← This field may be set to YES, if desired
TASKMAN FILES UCI: MGR
TASKMAN FILES VOLUME SET: PSA
REPLACEMENT VOLUME SET: <RET>
DAYS TO KEEP OLD TASKS: 4
Select VOLUME SET: <RET>
Select Edit Taskman Parameters Option: UCI Association Table Edit
```

7. Edit the File Servers for TASKMAN SITE PARAMETERS, VOLUME SET, and UCI ASSOCIATION files (continued):

```
Select UCI ASSOCIATION FROM UCI: VAH
     1   VAH         PSA
     2   VAH         CSA
     3   VAH         CSB
     4   VAH         FSA
CHOOSE 1-4:
  ARE YOU ADDING 'VAH' AS A NEW UCI ASSOCIATION (THE 9TH)? Y  (YES)
   UCI ASSOCIATION NUMBER: 9// <RET>
   UCI ASSOCIATION FROM VOLUME SET: FSB
   UCI ASSOCIATION TO VOLUME SET: <RET>
   UCI ASSOCIATION TO UCI: <RET>
FROM UCI: VAH// <RET>
FROM VOLUME SET: FSB// <RET>
TO VOLUME SET: <RET>
TO UCI:
Select UCI ASSOCIATION FROM UCI: MGR
     1   MGR         PSA
     2   MGR         CSA
     3   MGR         CSB
     4   MGR         FSA
CHOOSE 1-4:
  ARE YOU ADDING 'MGR' AS A NEW UCI ASSOCIATION (THE 10TH)? Y  (YES)
   UCI ASSOCIATION NUMBER: 10// <RET>
   UCI ASSOCIATION FROM VOLUME SET: FSB
   UCI ASSOCIATION TO VOLUME SET: <RET>
   UCI ASSOCIATION TO UCI: <RET>
FROM UCI: MGR// <RET>
FROM VOLUME SET: FSB// <RET>
TO VOLUME SET: <RET>
TO UCI: <RET>

Select UCI ASSOCIATION FROM UCI:
```

# Begin the Installation

**For VAX/ALPHA sites**: Copy the contents of the media into a VMS file if you have not already done so. Later on in the installation process, the routines may then be read into production from disk which, for most configurations, is faster than reading from tape or floppy media. Also, create a large symbol table{ XE "Symbol Table Size" } at sign-on, ($ DSM/SYM=100000) so there is enough space to work.

**For MSM sites**: Be sure to run the inits on the Print Server (e.g., Production account, not Manager account), where TaskMan{ XE "TaskMan" } resides, so that tasked post-inits run. Also, when logging on, increase the symbol table size{ XE "Symbol Table Size" } to 40K so that there is enough space to work:

```
UCI,VOL:ROU:40
```

**For other sites**: Be sure to run the inits with as large a partition as you can.

- **Logon using the console.**

  **VAX/ALPHA** sites: To maneuver without access restrictions, use a privileged VMS account.

  **MSM** sites: log onto the print server.

**Begin the installation in the Production account (e.g., VAH)**

*It is assumed that you have the capability to move back and forth from the Manager and Production accounts. After moving to another UCI, it is useful to verify your location as a safeguard (e.g., >W $ZU(0) or use another technique).*

- **In VAH: Logons are *not* inhibited.** Users may remain on the system during installation provided they are not running any options in the following menus:

[XUPROG]**{** XE "XUPROG" **}** Programmer Options

[XUSITEMGR]**{** XE "XUSITEMGR" **}** Operations Management

- **VMS sites should unschedule the options, XUCM TASK VPM and XUCM TASK NIT{** XE "XUCM TASK VPM" **}{** XE "XUCM TASK NIT" **} for the duration of the installation.**

- **If files have been configured for version 7.2 of Multi-Term Look-Up, users of MTLU{** XE "Multi-Term Look-Up (MTLU)" **} may experience errors while new ^XTLK* routines are being installed. Since installation time is brief and MTLU look-ups are infrequent, any inconvenience to users may be minimal. They should simply repeat their look-up at a later time.**

**Move over to the Manager (Library) account (e.g., MGR)**

- **In MGR: Disable routine mapping{** XE "Mapping Routines" **}** (if applicable) for Library and Production accounts.

DSM for OpenVMS

```
>D ^RMAP
```

*MSM and M/SQL*

```
Not Applicable
```

**Move back to the Production account (e.g., VAH)**

# Read the Routines into Production

- **In VAH: Read Routines into Production.** Load routines from the tape or, for VAX/ALPHA sites, from the VMS file created earlier from the tape.

  *(It is assumed that you are familiar with your operating system utilities for loading, saving, and restoring routines.)*

*M/SQL*

```
>D ^%RI
```

*ALL OTHER SYSTEMS*

```
>D ^%RR
```

- **In VAH:** Optionally run the NTEG routines**{** XE "NTEG Routine" **}{** XE "Integrity Checking" **}** in the Production account if you have not already done so in a test account. Report any "off-by" results to your local ISC. Discrepancies may simply indicate that your tape includes patched routines.

```
>D ^XTNTEG{ XE  "XTNTEG" }
```

**Example of Routine Restore done at the San Francisco ISC**. **{** XE "Routine Restore:Example done at the San Francisco ISC" \r "bk9" **}**

```
KRN,KDE>D ^%RR


Routine Restore

Input Device ?  > KTK7_3.RTN


Restoring routines from USER$:[KERNEL.TK73BLD]KTK7_3.RTN;1

Saved by %RS from [NXT,KDE] on  3-APR-1995 12:00:53.50
Header: Kernel Toolkit 7.3 created by JIC at ISC-SF

Restore All (A), Selected (S), or Confirm on overwrite (C) ? <A> <RET>

XDRCNT    XDRDADD   XDRDADJ   XDRDCOMP  XDRDFPD   XDRDLIST  XDRDMAIN  XDRDOC
XDRDOC1   XDRDOC2   XDRDPDTI  XDRDPRGE  XDRDQUE   XDRDSCOR  XDRDSTAT  XDRDUP
XDREMSG   XDRERR    XDRHLP    XDRMADD   XDRMAIN   XDRMAINI  XDRMPACK  XDRMRG
XDRMRG1   XDRMSG    XDRMVFY   XDRPREI   XDRU1     XINDEX    XINDX1    XINDX10
XINDX11   XINDX2    XINDX3    XINDX4    XINDX5    XINDX51   XINDX52   XINDX53
XINDX6    XINDX7    XINDX8    XINDX9    XTBASE    XTCMFILN  XTEDTVXD  XTFC0
XTFC1     XTFCE     XTFCE1    XTFCR     XTFCR1    XTINEND   XTINI001  XTINI002
XTINI003  XTINI004  XTINI005  XTINI006  XTINI007  XTINI008  XTINI009  XTINI00A
XTINI00B  XTINI00C  XTINI00D  XTINI00E  XTINI00F  XTINI00G  XTINI00H  XTINI00I
XTINI00J  XTINI00K  XTINI00L  XTINI00M  XTINI00N  XTINI00O  XTINI00P  XTINI00Q
XTINI00R  XTINI00S  XTINI00T  XTINI00U  XTINI00V  XTINI00W  XTINI00X  XTINI00Y
XTINI00Z  XTINI010  XTINI011  XTINI012  XTINI013  XTINI014  XTINI015  XTINI016
XTINI017  XTINI018  XTINI019  XTINI01A  XTINI01B  XTINI01C  XTINI01D  XTINI01E
XTINI01F  XTINI01G  XTINI01H  XTINI01I  XTINI01J  XTINI01K  XTINI01L  XTINI01M
XTINI01N  XTINI01O  XTINI01P  XTINI01Q  XTINI01R  XTINI01S  XTINI01T  XTINI01U
XTINI01V  XTINI01W  XTINI01X  XTINI01Y  XTINI01Z  XTINI020  XTINI021  XTINI022
XTINI023  XTINI024  XTINI025  XTINI026  XTINI027  XTINI028  XTINI029  XTINI02A
XTINI02B  XTINI02C  XTINI02D  XTINI02E  XTINI02F  XTINIS    XTINIT    XTINIT1
XTINIT2   XTINIT3   XTINIT4   XTINIT5   XTINITY   XTINOK    XTKERM1   XTKERM2
XTKERM3   XTKERM4   XTKERMIT  XTLATSET  XTLKDICL  XTLKEFOP  XTLKKSCH  XTLKKWL
XTLKKWL1  XTLKKWL2  XTLKKWLD  XTLKMGR   XTLKPRT   XTLKPST   XTLKTICD  XTLKTOKN
XTLKWIC   XTNTEG    XTNTEG0   XTNTEG01  XTRCMP    XTRGRPE   XTRTHV    XTSPING
XTSUMBLD  XTVCHG    XTVGC1    XTVGC1A   XTVGC2    XTVGC2A   XTVGC2A1  XTVNUM
XTVRC1    XTVRC1A   XTVRC1Z   XTVRC2    XTVRCRES  XUCIN001  XUCIN002  XUCIN003
XUCIN004  XUCIN005  XUCIN006  XUCIN007  XUCIN008  XUCIN009  XUCIN00A  XUCIN00B
XUCIN00C  XUCIN00D  XUCIN00E  XUCIN00F  XUCIN00G  XUCIN00H  XUCIN00I  XUCIN00J
XUCIN00K  XUCIN00L  XUCIN00M  XUCIN00N  XUCIN00O  XUCIN00P  XUCIN00Q  XUCIN00R
XUCIN00S  XUCIN00T  XUCIN00U  XUCIN00V  XUCIN00W  XUCIN00X  XUCIN00Y  XUCIN00Z
XUCIN010  XUCIN011  XUCINIS   XUCINIT   XUCINIT1  XUCINIT2  XUCINIT3  XUCINIT4
XUCINIT5  XUCMBR1   XUCMBR2   XUCMBR3   XUCMBRTL  XUCMDSL   XUCMFGI   XUCMFIL
XUCMGRAF  XUCMNI2A  XUCMNIT   XUCMNIT1  XUCMNIT2  XUCMNIT3  XUCMNIT4  XUCMNIT5
XUCMNT3A  XUCMPA    XUCMPA1   XUCMPA2   XUCMPA2A  XUCMPA2B  XUCMPOST  XUCMPRE
XUCMTM    XUCMTM1   XUCMVPG   XUCMVPG1  XUCMVPI   XUCMVPM   XUCMVPM1  XUCMVPS
XUCMVPU   XUCPCLCT  XUCPFRMT  XUCPRAW   XUCS1E    XUCS1R    XUCS1RA   XUCS1RB
XUCS1RBA  XUCS2E    XUCS2R    XUCS2RA   XUCS2RB   XUCS2RBA  XUCS4E    XUCS4R
```

Example of Routine Restore done at the San Francisco ISC (continued) **{** XE "Routine Restore:Example done at the San Francisco ISC" **}**:

```
XUCS4RB   XUCS5E    XUCS5EA   XUCS6E    XUCS6R    XUCS8E    XUCS8R    XUCS8RB
XUCS8RG   XUCS8RGA  XUCSCDE   XUCSCDG   XUCSCDGA  XUCSCDR   XUCSCDRB  XUCSI001
XUCSI002  XUCSI003  XUCSI004  XUCSI005  XUCSI006  XUCSI007  XUCSI008  XUCSI009
XUCSI00A  XUCSI00B  XUCSI00C  XUCSI00D  XUCSI00E  XUCSI00F  XUCSI00G  XUCSI00H
XUCSI00I  XUCSI00J  XUCSI00K  XUCSI00L  XUCSINI1  XUCSINI2  XUCSINI3  XUCSINI4
XUCSINI5  XUCSINIS  XUCSINIT  XUCSLOAD  XUCSPRG   XUCSRV    XUCSTM    XUCSTME
XUCSUTL   XUCSUTL2  XUCSUTL3  XURTL     XURTL1    XURTL2    XURTL3    XURTL4
XURTLC    XURTLK    ZINDEX    ZINDX1    ZINDX10   ZINDX11   ZINDX2    ZINDX3
ZINDX4    ZINDX5    ZINDX51   ZINDX52   ZINDX53   ZINDX6    ZINDX8    ZINDX9
ZINDXH    ZTEDIT    ZTEDIT1   ZTEDIT2   ZTEDIT3   ZTEDIT4   ZTGS      ZTP1
ZTPP      ZTRDEL    ZTRTHV

    363 routines restored
```

**Continue working in the Production account (e.g., VAH)**

## Move Routines to the Manager Account

- **<u>In VAH</u>: Move routines out to a host file.**

*M/SQL*

```
>D ^%RO
```

*ALL OTHER SYSTEMS*

```
>D ^%RS  (or use ^%RCOPY)
```

**Example of Routine Save done at the San Francisco ISC{** XE "Routine Save:Example done at the San Francisco ISC" **}**

```
NXT,KDE>D ^%RS


Routine Save

Output Device ?  > TKMGR.RTN

Header comment...

routine(s) ?   >   ZT*
searching directory ...
routine(s) ?   >   -ZTM*
routine(s) ?   >   -ZTL*
routine(s) ?   >   -ZTER*
routine(s) ?   >   ZOS*
searching directory ...
routine(s) ?   >   ZIND*
searching directory ...
routine(s) ?   >   ZTMGRSET{ XE  "ZTMGRSET" }
routine(s) ?   >   <RET>


Saving routines on USER$:[BETA]TKMGR.RTN;3

ZINDEX    ZINDX1    ZINDX10   ZINDX11   ZINDX2    ZINDX3    ZINDX4    ZINDX5
ZINDX51   ZINDX52   ZINDX53   ZINDX6    ZINDX8    ZINDX9    ZINDXH    ZOSFDTM
ZOSFGTM   ZOSFM11P  ZOSFMSM   ZOSFMVX   ZOSFVXD   ZOSV1DTM  ZOSV1GTM  ZOSV1VXD
ZOSV2MSM  ZOSV2VXD  ZOSVDTM   ZOSVGTM   ZOSVM11P  ZOSVMSM   ZOSVMVX   ZOSVVXD
ZTBKC     ZTBKCDSM  ZTBKCDTM  ZTBKCMP   ZTBKCMSM  ZTBKCMVX  ZTBKCVXD  ZTEDIT
ZTEDIT1   ZTEDIT2   ZTEDIT3   ZTEDIT4   ZTGS      ZTMGRSET  ZTP1      ZTPP
ZTRDEL    ZTRTHV

    50 routines saved
```

**Move over to the Manager (Library) account (e.g., MGR)**

- **<u>In MGR</u>: Restore routines from the host file** to your MGR account**.**

*M/SQL*

```
>D ^%RI
```

*ALL OTHER SYSTEMS*

```
>D ^%RR
```

# Run the Manager Setup Routine

- **<u>In MGR</u>: Run the Manager Setup Routine.**

  Run this routine so that operating system-specific routines can be identified and renamed as "%" routines for proper functioning in the Manager account. After responding to the prompts as illustrated on the following page, ZTMGRSET**{** XE "ZTMGRSET" **}** loads the routines which are common to all systems and saves them as percent routines (e.g., ZINDEX is saved as %INDEX**{** XE "%INDEX" **}**). It then installs the ^%Z editor**{** XE "^%Z editor" **}** and checks that ^%ZIS("C") only holds a call to the ^%ZISC routine. Finally, it sets up two files stored in ^%ZUA**{** XE "^%ZUA" **}**, the FAILED ACCESS ATTEMPT LOG (#3.05) and the PROGRAMMER MODE LOG (#3.07) files**{** XE "FAILED ACCESS ATTEMPT LOG file" **}{** XE "PROGRAMMER MODE LOG file" **}**.

  Enter the name of the MUMPS implementation you are running. This sets the first piece of ^%ZOSF("OS").**{** XE "^%ZOSF" **}**

  Indicate the name of your Manager account.

  Indicate the name of your sign-on Production account.

  Enter the name of the current volume or directory set. Notice that ^ZTMGRSET**{** XE "ZTMGRSET" **}** no longer asks you about the location of the ^XMB global**{** XE "^XMB Global" **}**. Instead, it deletes the obsolete ^%ZOSF("MASTER") and ^%ZOSF("SIGNOFF") nodes**{** XE "^%ZOSF" **}**.

```
>D TOOLKIT^ZTMGRSET{ XE
  "ZTMGRSET" }{ XE
  "TOOLKIT^ZTMGRSET" }
```

*DSM for OpenVMS*

```
SYSTEM:  VAX DSM(V6)
NAME OF MANAGER'S UCI:  MGR,ROU
PRODUCTION (SIGN-ON) UCI:  VAH,ROU
NAME OF VOLUME SET:  ROU
```

*MSM*

```
SYSTEM:  MSM
NAME OF MANAGER'S UCI:  MGR,PSA
PRODUCTION (SIGN-ON) UCI:  VAH,PSA
NAME OF VOLUME SET:  PSA
```

*If you haven't already done so, then at this point you may load the Toolkit Manager account routines (Z*) from disk to all other CPU/volume groups for performance monitoring. Be sure to run TOOLKIT^ZTMGRSET in the MGR UCI of each CPU.*

*M/SQL*

```
SYSTEM:  M/SQL
NAME OF MANAGER'S UCI:  MG,BLUE
PRODUCTION (SIGN-ON) UCI:  VA,BLUE
NAME OF VOLUME SET:  BLUE
```

**Continue working in the Manager (Library) account (e.g., MGR)**

### Example of Manager Setup Routine done at the San Francisco ISC

{ XE "Manager Setup Routine:Example done at the San Francisco ISC" \r "bk4" }

```
>D TOOLKIT^ZTMGRSET{ XE  "ZTMGRSET" }{ XE  "TOOLKIT^ZTMGRSET" }


ZTMGRSET Version 7.3
HELLO! I exist to assist you in correctly initializing the MGR account
or to update the current account.
I think you are using VAX DSM(V6)
Which MUMPS system should I install?

1 = NOT SUPPORTED
2 = M/SQL-PDP
3 = M/SQL-VAX
4 = DSM V4.1
5 = VAX DSM(V6)
6 = MSM
7 = Datatree
System: 5// <RET>

Removing obsolete ^%ZOSF{ XE  "^%ZOSF" } nodes...

I will now rename a group of routines specific to your operating system.
Loading ZOSVVXD     Saved as %ZOSV{ XE  "%ZOSV" }
Loading ZTBKC       Saved as %ZTBKC
Loading ZTBKCVXD    Saved as %ZTBKC1
Loading ZOSV1VXD    Saved as %ZOSV1
Loading ZOSV2VXD    Saved as %ZOSV2
NAME OF MANAGER'S UCI,VOLUME SET: MGR,KDE// <RET>
PRODUCTION (SIGN-ON) UCI,VOLUME SET: KRN,KDE// <RET>
NAME OF VOLUME SET: KDE// <RET>
```

Example of Manager Setup Routine done at the San Francisco ISC (continued) **{** XE "Manager Setup Routine:Example done at the San Francisco ISC"**}**:

```
Now to load routines common to all systems.
Loaded ZINDEX       Saved as %INDEX{ XE  "%INDEX" }
Loaded ZINDX1       Saved as %INDX1
Loaded ZINDX10      Saved as %INDX10
Loaded ZINDX11      Saved as %INDX11
Loaded ZINDX2       Saved as %INDX2
Loaded ZINDX3       Saved as %INDX3
Loaded ZINDX4       Saved as %INDX4
Loaded ZINDX5       Saved as %INDX5
Loaded ZINDX51      Saved as %INDX51
Loaded ZINDX52      Saved as %INDX52
Loaded ZINDX53      Saved as %INDX53
Loaded ZINDX6       Saved as %INDX6
Loaded ZINDX8       Saved as %INDX8
Loaded ZINDX9       Saved as %INDX9
Loading ZTPP        Saved as %ZTPP
Loading ZTP1        Saved as %ZTP1
Loading ZTRDEL      Saved as %ZTRDEL
Installing ^%Z editor{ XE  "^%Z editor" }
ALL DONE
```

**Continue working in the Manager (Library) account (e.g., MGR)**

# Review Global Protection for ^%ZRTL

{ XE "Global Protection" }

- **In MGR:** Confirm that the ^%ZRTL global{ XE "^%ZRTL" } is defined in the Manager account and set with appropriate protections. (The ^%ZRTL global holds response time monitors.)

  ^%ZRTL is common to all processors.

*DSM for OpenVMS*

```
>D ^%GLOMAN

(Manage globals in which UCI?: MGR)

^%ZRTL
System) RWP   World) RW  Group) RW   UCI) RWP
```

*MSM*

```
>D ^%GCH

(Set protection)

^%ZRTL
System) RWD  World) RWD  Group) RWD USER) RWD
```

*M/SQL*

```
>D ^%PROTECT

(Manage globals in which UCI?: MGR)

^%ZRTL
Network) RWD World) RW  Group) RW  Owner) RWD
```

# Establish Global Translation

- **In MGR:** Review translation for ^XT and ^XUCM on DSM systems, ^XT and ^XUCS on MSM systems{ XE "^XUCM" }{ XE "^XUCS" }{ XE "New Global:^XUCS" }{ XE "^XT" }.

*DSM for OpenVMS*

```
>D ^TRANTAB  (for DSM V4.0 or later)

(Be sure that ^XT and ^XUCM are translated to
a cluster mounted volume set.)
```

*MSM*

```
>D ^TRANSLAT

(Be sure that ^XT and ^XUCS are translated
across VAH UCIs.)
```

*M/SQL*

```
Not Applicable
```

**Move back to the Production account (e.g., VAH)**

# Do the First Part of the Installation

- **<u>In VAH</u>: Run the Toolkit inits.**

  **For DSM for OpenVMS**: Create a large symbol table at sign-on, ($ DSM/UCI=VAH/SYM=100000)**{** XE "Symbol Table Size" **}**.

  **For MSM**: Increase the symbol table size to 40K by responding to the UCI prompt as follows**{** XE "Symbol Table Size" **}**: UCI,VOL:ROU:40. Otherwise, type D ^%PARTSIZ**{** XE "^%PARTSIZ" **}** to set the partion size**{** XE "Partition Size" **}**.

  **For M/SQL**: Be sure you have at least a 16K partition. W $S to see the current size.

*ALL OPERATING SYSTEMS*

```
>D ^XUP  (To set DUZ when
  responding to the Access Code
  prompt. Press return at the
  OPTION prompt.)

>D Q^DI  (To set DUZ(0)="@".
  Press return at the OPTION
  prompt.)
```

XTINITs take approximately 7-15 minutes.

If you have multiple CPUs, turn to the topic "On the Other Toolkit V. 7.2 CPUs (MSM and M/SQL)".

NOTE: The text of the init dialogue may not be an exact match of what you see when running the installation. It is provided as a best approximation of a typical install. Explanatory notes are provided along with the dialogue that should give some indication why your experience may differ from the example presented here.

**From the Production account**
**(e.g., VAH)**

# Example of an Init done at the San Francisco ISC

NOTE: This is an example of an installation from the San Francisco development account. The messages at your site may look slightly different.

{ XE "Init:Example done at the San Francisco ISC" \r "bk3" }

```
VAH,MTL>D ^XTINIT

This version (#7.3) of 'XTINIT' was created on 03-APR-1995
         (at NXT, by VA FileMan V.20.0)

I HAVE TO RUN AN ENVIRONMENT CHECK ROUTINE.
I'm checking to see if it is OK to install Toolkit v7.3
 in this account.


Everything looks OK, Lets continue.

I AM GOING TO SET UP THE FOLLOWING FILES:

   3.091     RESPONSE TIME
Note:  You already have the 'RESPONSE TIME' File.
Shall I write over the existing Data Definition? YES// <RET>

   3.092     RT DATE_UCI,VOL
Note:  You already have the 'RT DATE_UCI,VOL' File.
Shall I write over the existing Data Definition? YES// <RET>

   3.094     RT RAWDATA
Note:  You already have the 'RT RAWDATA' File.
Shall I write over the existing Data Definition? YES// <RET>

   15        DUPLICATE RECORD
Note:  You already have the 'DUPLICATE RECORD' File.

   15.1      DUPLICATE RESOLUTION
Note:  You already have the 'DUPLICATE RESOLUTION' File.

   8980      KERMIT HOLDING
Note:  You already have the 'KERMIT HOLDING' File.
Shall I write over the existing Data Definition? YES// <RET>

   8984.1    LOCAL KEYWORD
Note:  You already have the 'LOCAL KEYWORD' File.
Shall I write over the existing Data Definition? YES// <RET>
```

Example of an Init done at the San Francisco ISC (continued):

```
   8984.2    LOCAL SHORTCUT
Note:  You already have the 'LOCAL SHORTCUT' File.
Shall I write over the existing Data Definition? YES// <RET>

   8984.3    LOCAL SYNONYM
Note:  You already have the 'LOCAL SYNONYM' File.
Shall I write over the existing Data Definition? YES// <RET>

   8984.4    LOCAL LOOKUP
Note:  You already have the 'LOCAL LOOKUP' File.
Shall I write over the existing Data Definition? YES// <RET>

   8991      XTV ROUTINE CHANGES
Note:  You already have the 'XTV ROUTINE CHANGES' File.
Shall I write over the existing Data Definition? YES// <RET>

   8991.19   XTV VERIFICATION PACKAGE
Note:  You already have the 'XTV VERIFICATION PACKAGE' File.
Shall I write over the existing Data Definition? YES// <RET>

   8991.2    XTV GLOBAL CHANGES
Note:  You already have the 'XTV GLOBAL CHANGES' File.
Shall I write over the existing Data Definition? YES// <RET>

SHALL I WRITE OVER FILE SECURITY CODES? NO// Y <RET> (YES)
NOTE: This package also contains BULLETINS
      SHALL I WRITE OVER EXISTING BULLETINS OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains SORT TEMPLATES
      SHALL I WRITE OVER EXISTING SORT TEMPLATES OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains INPUT TEMPLATES
      SHALL I WRITE OVER EXISTING INPUT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
NOTE: This package also contains PRINT TEMPLATES
      SHALL I WRITE OVER EXISTING PRINT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
NOTE: This package also contains FUNCTIONS
SHALL I WRITE OVER EXISTING FUNCTIONS OF THE SAME NAME? YES// <RET>  (YES)
NOTE: This package also contains HELP FRAMES
      SHALL I WRITE OVER EXISTING HELP FRAMES OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains SECURITY KEYS
      SHALL I WRITE OVER EXISTING SECURITY KEYS OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains OPTIONS
      SHALL I WRITE OVER EXISTING OPTIONS OF THE SAME NAME? YES// <RET>  (YES)

ARE YOU SURE EVERYTHING'S OK? NO// Y <RET> (YES)
```

Example of an Init done at the San Francisco ISC (continued):

```
...HMMM, LET ME THINK ABOUT THAT A
MOMENT.................................
.
.........................................................................
.
.
.....................
'XDR ADD VERIFIED' Help Frame filed.
'XDR AUTO MERGE' Help Frame filed.
'XDR CHECK PAIR' Help Frame filed.
'XDR DUP ALGORITHM' Help Frame filed.
'XDR DUP RESOLUTION FILE CONT' Help Frame filed.
'XDR DUPLICATE RECORD LISTINGS' Help Frame filed.
'XDR DUPLICATE RESOLUTION FILE' Help Frame filed.
'XDR EDIT DUP RESOLUTION FILE' Help Frame filed.
'XDR IDENTIFY' Help Frame filed.
'XDR IDENTIFY CONTINUE' Help Frame filed.
'XDR IDENTIFY METHODS' Help Frame filed.
'XDR MERGE PROCESS' Help Frame filed.
'XDR MERGE SELECTED PAIR' Help Frame filed.
'XDR MERGE VERIFIED DUPLICATES' Help Frame filed.
'XDR PRINTLIST' Help Frame filed.
'XDR PURGE' Help Frame filed.
'XDR VERIFY ALL' Help Frame filed.
'XDR VERIFY SELECTED PAIR' Help Frame filed.
'XURTL RESPONSE TIME LOG' Help Frame filed....
'XDR ERROR' BULLETIN FILED -- Remember to add mail groups for new bulletins.
'XDR MERGED' BULLETIN FILED -- Remember to add mail groups for new bulletins.
'XDR VERIFIED' BULLETIN FILED -- Remember to add mail groups for new
bulletins.
.
.........................................................................
.
.
.
'XDR ADD VERIFIED DUPS' Option Filed
'XDR AUTO MERGE' Option Filed
'XDR CHECK PAIR' Option Filed
'XDR DISPLAY SEARCH STATUS' Option Filed
'XDR EDIT DUP RECORD STATUS' Option Filed
'XDR EDIT DUP RESOLUTION FILE' Option Filed
'XDR FIND POTENTIAL DUPLICATES' Option Filed
'XDR MAIN MENU' Option Filed
'XDR MANAGER UTILITIES' Option Filed
'XDR MERGE READY DUPLICATES' Option Filed
'XDR MERGE SELECTED PAIR' Option Filed
'XDR OPERATIONS MENU' Option Filed
'XDR PRINT LIST' Option Filed
'XDR PURGE' Option Filed
'XDR SEARCH ALL' Option Filed
'XDR TALLY STATUS FIELDS' Option Filed
```

Example of an Init done at the San Francisco ISC (continued):

```
'XDR UTILITIES MENU' Option Filed
'XDR VERIFY ALL' Option Filed
'XDR VERIFY SELECTED PAIR' Option Filed
'XDR VIEW DUPLICATE RECORD' Option Filed
'XT-KERMIT EDIT' Option Filed
'XT-KERMIT MENU' Option Filed
'XT-KERMIT RECEIVE' Option Filed
'XT-KERMIT SEND' Option Filed
'XT-NUMBER BASE CHANGER' Option Filed
'XT-OPTION TEST' Option Filed
'XT-ROUTINE COMPARE' Option Filed
'XT-VARIABLE CHANGER' Option Filed
'XT-VERSION NUMBER' Option Filed
'XTCM DISK2MAIL' Option Filed
'XTCM MAIN' Option Filed
'XTFCE' Option Filed
'XTFCR' Option Filed
'XTLKLKUP' Option Filed
'XTLKMODKY' Option Filed
'XTLKMODPARK' Option Filed
'XTLKMODPARS' Option Filed
'XTLKMODSH' Option Filed
'XTLKMODSY' Option Filed
'XTLKMODUTL' Option Filed
'XTLKPRTUTL' Option Filed
'XTLKUSER2' Option Filed
'XTLKUTILITIES' Option Filed
'XTMENU' Option Filed
'XTMOVE' Option Filed
'XTMOVE-IN' Option Filed
'XTOOLS' Option Filed
'XTQUEUABLE OPTIONS' Option Filed
'XTRDEL' Option Filed
'XTRGRPE' Option Filed
'XTSUMBLD' Option Filed
'XTSUMBLD-CHECK' Option Filed
'XTV EDIT VERIF PACKAGE' Option Filed
'XTV MENU' Option Filed
'XTVG COMPARE' Option Filed
'XTVG UPDATE' Option Filed
'XTVR COMPARE' Option Filed
'XTVR MENU' Option Filed
'XTVR MOST RECENT CHANGE DATE' Option Filed
'XTVR RESTORE PREV ROUTINE' Option Filed
'XTVR UPDATE' Option Filed
'XU FIRST LINE PRINT' Option Filed
'XUINDEX' Option Filed
'XUINDEX2' Option Filed
'XUPR RTN EDIT' Option Filed
'XUPR-ROUTINE-TOOLS' Option Filed
'XUPR-RTN-TAPE-CMP' Option Filed
```

Example of an Init done at the San Francisco ISC (continued):

```
'XUPRGL' Option Filed
'XUPRROU' Option Filed
'XUROUTINE IN' Option Filed
'XUROUTINE OUT' Option Filed
'XUROUTINES' Option Filed
'XURTL' Option Filed
'XURTLC' Option Filed
'XURTLCK' Option Filed
'XURTLK' Option Filed
'XURTLM' Option Filed
'XURTLMA' Option Filed
'XURTLP' Option Filed
'XURTLPG' Option Filed
'XURTLPL' Option Filed.....................................
NOTE THAT FILE SECURITY-CODE PROTECTION HAS BEEN MADE
```

## Installing/Configuring the VAX/Alpha Performance Monitor (VPM)

NOTE: At this point, **VAX/Alpha Sites** only see the following (**MSM sites** may skip this portion of the dialogue): **{** XE "VAX/Alpha Performance Monitor (VPM)" \r "bk2" **}**

```
Will now install the VAX/Alpha Performance Monitor (VPM)


This version (#7.3) of 'XUCINIT' was created on 03-APR-1995
         (at NXT, by VA FileMan V.20.0)

I AM GOING TO SET UP THE FOLLOWING FILES:

   8986.095  CM SITE PARAMETERS
Note:  You already have the 'CM SITE PARAMETERS' File.

   8986.098  CM BERNSTEIN DATA
Note:  You already have the 'CM BERNSTEIN DATA' File.

   8986.3    CM SITE NODENAMES
Note:  You already have the 'CM SITE NODENAMES' File.

   8986.35   CM SITE DISKDRIVES
Note:  You already have the 'CM SITE DISKDRIVES' File.

8986.4    CM METRICS  (including data)
Note:  You already have the 'CM METRICS' File.
I will OVERWRITE your data with mine.

   8986.5    CM DISK DRIVE RAW DATA
Note:  You already have the 'CM DISK DRIVE RAW DATA' File.

   8986.51   CM NODENAME RAW DATA
Note:  You already have the 'CM NODENAME RAW DATA' File.

   8986.6    CM DAILY STATISTICS
Note:  You already have the 'CM DAILY STATISTICS' File.

SHALL I WRITE OVER FILE SECURITY CODES? NO// Y <RET> (YES)
NOTE: This package also contains BULLETINS
      SHALL I WRITE OVER EXISTING BULLETINS OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains SORT TEMPLATES
      SHALL I WRITE OVER EXISTING SORT TEMPLATES OF THE SAME NAME? YES// <RET>
(YES)
NOTE: This package also contains INPUT TEMPLATES
      SHALL I WRITE OVER EXISTING INPUT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
NOTE: This package also contains PRINT TEMPLATES
      SHALL I WRITE OVER EXISTING PRINT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
```

Installing/Configuring the VPM (continued):

```
NOTE: This package also contains OPTIONS
      SHALL I WRITE OVER EXISTING OPTIONS OF THE SAME NAME? YES// <RET>  (YES)

ARE YOU SURE EVERYTHING'S OK? NO// Y <RET> (YES)
Starting pre-init...
The ^XUCM global will now be synchronized with VPM file numbers


8986.095...DONE
8986.098...DONE
8986.3...DONE
8986.35...DONE
8986.4...DONE
8986.5...DONE
8986.51...DONE
8986.6...DONE

...HMMM, LET ME THINK ABOUT THAT A
MOMENT.....................................
.
...................
'XUCMBRTL' BULLETIN FILED -- Remember to add mail groups for new
bulletins.....
.
.....................................
'XUCM ANALYSE' Option Filed
'XUCM COMPUTE LOCAL REFERENCES' Option Filed
'XUCM DISK' Option Filed
'XUCM DISK RAW' Option Filed
'XUCM DSK IO' Option Filed
'XUCM DSK QUE' Option Filed
'XUCM EDIT DISK THRESHOLD' Option Filed
'XUCM EDIT REF THRESH' Option Filed
'XUCM EDIT VOL SET THRESH' Option Filed
'XUCM GRAF DSK IO' Option Filed
'XUCM GRAF DSK QUE' Option Filed
'XUCM GRAF MET AVE' Option Filed
'XUCM LIST DAILY STATS' Option Filed
'XUCM LIST RAW' Option Filed
'XUCM LIST VOL SET INFO' Option Filed
'XUCM LOCKS' Option Filed
'XUCM MAIN' Option Filed
'XUCM MODES' Option Filed
'XUCM ON/OFF' Option Filed
'XUCM PA' Option Filed
'XUCM PAGE' Option Filed
'XUCM PERFORMANCE MONITOR' Option Filed
'XUCM PURGE' Option Filed
'XUCM RAW RTHIST DATA' Option Filed
'XUCM REPORTS' Option Filed
```

Installing/Configuring the VPM (continued):

```
'XUCM SERVER' Option Filed
'XUCM SET ALERTS' Option Filed
'XUCM SETUP' Option Filed
'XUCM TASK MAIN' Option Filed
'XUCM TASK NIT' Option Filed
'XUCM TASK VPM' Option Filed
'XUCMBR MENU' Option Filed
'XUCMBR2' Option Filed
'XUCMBR2A' Option Filed
'XUCMBR2B' Option Filed
'XUCMBR2C' Option Filed
'XUCPFORMATTED' Option Filed
'XUCPKILL' Option Filed
'XUCPMENU' Option Filed
'XUCPRAWPRINT' Option Filed
'XUCPSORT' Option Filed
'XUCPTOGGLE' Option Filed.................................
NOTE THAT FILE SECURITY-CODE PROTECTION HAS BEEN MADE
```

The CM METRICS file (#8986.4)**{** XE "CM METRICS file" **}** is shipped with data. The metric names should not be modified.

The post-init allows you to configure the performance monitor for alpha systems.

Do not attempt to configure VPM at this point if you have not yet set up TaskMan**{** XE "TaskMan" **}** to run in DCL mode. The option, Setup Performance Monitor
allows you to configure VPM later.

```
<<BEGINNING VPM POST-INIT>>
This post-init will allow you to review and update your
VPM site file entries. Taskman will also install new VMS com files
in your VPM host directory.

TASKMAN MUST BE RUNNING FROM A DCL CONTEXT TO COMPLETE THIS STEP.
YOU CAN '^' OUT NOW IF THIS IS NOT THE CASE.

Note that VPM also requires a HFS device, SYS$INPUT, and XUCM RESOURCE.
IF YOU EXIT NOW, RUN THE OPTION, 'SETUP PERFORMANCE MONITOR'
LATER.

The routine ^XUCMTM was written to assist with setting up Taskman
to run from DCL. Make sure you have SYSPRV and OPER before attempting
to run this routine.
This routine allows you to define the site file parameters
needed to run VPM, then instructs taskman to create the
host system directories for data files and system-specific
command procedures.
```

Installing/Configuring the VPM (continued):

```
Select CM SITE PARAMETERS:
 ANSWER WITH CM SITE PARAMETERS:
   ISC SAN FRANCISCO

     YOU MAY ENTER A NEW CM SITE PARAMETERS, IF YOU WISH

 ANSWER WITH INSTITUTION NAME
Select CM SITE PARAMETERS: ISC SAN FRANCISCO      CALIFORNIA       16000
         ...OK? YES// <RET>  (YES)
SITE: ISC SAN FRANCISCO// <RET>
CMP HOST FILE PATH: USER$:[CMP]// <RET>
MONITOR ENABLED/DISABLED: ENABLED// <RET>
HFS DEVICE: HFS// <RET>
DAYS TO KEEP RAW DATA: 90// <RET>
DAYS FOR COMPUTING REFERENCES: ??

     This field is used to control your local reference mean and standard
deviation. For example, if 90 is entered, then each evening your reference
range will be re-computed based on the previous 90 days. This 90-day
moving average is maintained by hardware-type in the CM METRICS file{ XE  "CM
METRICS file" }. In
this scenario, current data will always be compared with the last 90 days,
regardless of how well the system performed during that period. If this
field is blank, no updating will occur. If you enter '999', ALL data will
be used. Suggested usage: If your system appears to be functioning
normally, enter 999 to include all data until the standard deviation
appears to be stable and you are within 2 standard deviations of the VA
reference mean. After a reasonable period of monitoring, set this field to
null to 'fix' your reference ranges on a period that you consider 'normal'
for that hardware. Your local standard deviation should be considerably
smaller than those published by the VA and should be particularly useful
for monitoring the affect of tuning or capacity changes.

DAYS FOR COMPUTING REFERENCES: 999
MAILGROUP FOR REPORTS/ALERTS: VPM// <RET>
MAILGROUP FOR REMOTE XMITS: VPM// <RET>
DAYS TO KEEP DAILY AVERAGES: 999// <RET>
DAYS TO KEEP BRTL DATA: 365// <RET>
THRESHOLD (%) DSM BLOCKS FREE: 5// ??

     This field will be referenced each evening to determine if there is
sufficient space remaining in your volume sets. If the PERCENTAGE of DSM
blocks free drops below this threshold  for a VOLUME SET an alert will be
fired.

THRESHOLD (%) DSM BLOCKS FREE: 5// <RET>
CONFIGURATION: LAVC// <RET>
CRT's IN SERVICE: 3// <RET>
PRINTERS IN SERVICE: 15// <RET>
NETWORKED WORKSTATIONS: 38// <RET>
STANDALONE WORKSTATIONS: 20// <RET>
HSC NAME(S): <RET>
```

Installing/Configuring the VPM (continued):

```
NETWORK TOPOLOGY: <RET>
Edit? NO// <RET>
Select CM SITE NODENAMES: ISC
     1   ISC6V0
     2   ISC6V2
     3   ISC6V4
CHOOSE 1-3: 1
NODENAME: ISC6V0// <RET>

NOTE: If you have already defined all nodes in version 7.2, be sure to update
      the new fields{ XE  " New Fields" } under this multiple for each node.
      The following information is required:

NODE-SPECIFIC BATCH QUEUE: ISC6V0$BATCH// ??

          Enter a node-specific batch queue for each node in this
     configuration. You must be running the 'SETUP...' option when defining
     this entry. If batch queues are defined for ALL nodes, com files will be
     built that submit jobs to these queues rather than using SYSMAN. An
     example of such a queue would be DSM$BATCH_<nodename>. For example:

     ISC6V0: sho que/full dsm$batch_isc6v0
     Batch queue DSM$BATCH_ISC6V0, idle, on ISC6V0::
       /BASE_PRIORITY=4 /JOB_LIMIT=1 /OWNER=[SYSTEM]
     /PROTECTION=(S:E,O:D,G:R,W:W)

     or

     ISC6V0: sho que/full sys$batch
     Batch queue ISC6V0$BATCH, available, on ISC6V0::
       /BASE_PRIORITY=4 /JOB_LIMIT=15 /OWNER=[SYSTEM]
     /PROTECTION=(S:E,O:D,G:R,W:RW)

     If Taskman is configured to run from a dcl context{ XE  "DCL Context" },
you may enter the
     queue TM$nodename.

NODE-SPECIFIC BATCH QUEUE: ISC6V0$BATCH// <RET>
USERNAME: TASKMAN// ??

           Enter the name of a VMS user, such as TASKMAN, which has been
      previously added to UAF with sufficient privileges.

USERNAME: TASKMAN// <RET>
```

Installing/Configuring the VPM (continued):

```
DSM ENVIRONMENT MANAGER: ISCMGR// ??

            The DSM ENVIRONMENT name will be that which is entered when
      logging into DSM. The name itself follows 'DSM/ENVIRONMENT=', ie,

      $ dsm/environment=ABCMGR

            If running taskman from a DCL context{ XE  "DCL Context" }, this
was defined in the
      TASKMAN SITE PARAMETERS as well. This field will be used by taskman when
      starting new RTHIST sessions.

DSM ENVIRONMENT MANAGER: ISCMGR// <RET>
Select CM SITE NODENAMES: <RET>

Requested Start Time: NOW// <RET>

One moment while I check/clean up MTLU variable pointers.
Done...

TO PROTECT THE SECURITY OF DHCP SYSTEMS, DISTRIBUTION OF THIS
SOFTWARE FOR USE ON ANY OTHER COMPUTER SYSTEM IS PROHIBITED.
ALL REQUESTS FOR COPIES OF THE KERNEL FOR NON-DHCP USE SHOULD
BE REFERRED TO YOUR LOCAL ISC.
VAH,MTL>
```

If the VPM global conversion fails for any reason, it can be re-started by executing the routine, ^XUCINIT{ XE  "^XUCINIT" }.

Using the TaskMan{ XE  "TaskMan" } option, Schedule/Unschedule Options [ZTMSCHEDULE]{ XE  "ZTMSCHEDULE" }, queue XUCM TASK VPM{ XE "XUCM TASK VPM" } to run hourly{ XE  "Schedule/Unschedule options" }{ XE "VAX/Alpha Performance Monitor (VPM)" }. This option is the data collection driver for the VMS monitor and checks for and loads new data into the CM DISK DRIVE RAW DATA (#8986.5) and CM NODENAME RAW DATA (#8986.51) files.{ XE  "CM DISK DRIVE RAW DATA file" }{ XE  "CM NODENAME RAW DATA file" }. Each data collection runs for 15 minutes. Queue the option XUCM TASK NIT{ XE "XUCM TASK NIT" } to run in the early AM, (e.g., 0001 hours). This option compiles workday averages, mail server messages, and collects "static" information such as node and hardware types. Finally, this option files selected RTHIST{ XE "RTHIST" } data and restarts RTHIST data collections for the next 24 hours.

## Installing/Configuring the MSM Performance Monitor (MPM)

NOTE: **MSM Sites** see the following dialogue as the MSM Performance Monitor is installed: **{** XE "MSM Performance Monitor (MPM):Sample Install" \r "bk10" **}**

```
This version (#7.3) of 'XUCSINIT' was created on 18-MAY-1994
         (at CLARKSBURG 998, by VA FileMan V.20.0)

I AM GOING TO SET UP THE FOLLOWING FILES:

   8987.1    MSM RTHIST SITE
Note:  You already have the 'MSM RTHIST SITE' File.

   8987.2    MSM RTHIST REPORT DATA
Note:  You already have the 'MSM RTHIST REPORT DATA' File.

SHALL I WRITE OVER FILE SECURITY CODES? NO// <RET>  (NO)
NOTE: This package also contains INPUT TEMPLATES
      SHALL I WRITE OVER EXISTING INPUT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
NOTE: This package also contains PRINT TEMPLATES
      SHALL I WRITE OVER EXISTING PRINT TEMPLATES OF THE SAME NAME? YES//
<RET>  (YES)
NOTE: This package also contains OPTIONS
      SHALL I WRITE OVER EXISTING OPTIONS OF THE SAME NAME? YES// <RET>  (YES)

ARE YOU SURE EVERYTHING'S OK? NO// Y <RET>  (YES)

...EXCUSE ME, HOLD
ON.....................................................
'XUCS MANAGER MENU' Option Filed
'XUCS MANUAL PURGE OF DATA' Option Filed
'XUCS REPORTS BY (DATE,VG)' Option Filed
'XUCS SITE EDIT' Option Filed
'XUCS SITE EDIT MENU' Option Filed
'XUCS SYS CONFIG PARMS DISPLAY' Option Filed
'XUCS VOL GROUP EDIT' Option Filed
'XUCSR REPORTS MENU' Option Filed
'XUCSRA CPU/DISK REPORT' Option Filed
'XUCSRA GREF REPORT' Option Filed
'XUCSRA REPORTS BY (VG,DATE)' Option Filed
'XUCSRA RESPONSE REPORT' Option Filed
'XUCSRA ROU CMNDS/GREF REPORT' Option Filed
'XUCSRA SYS STAT REPORT' Option Filed
'XUCSRB CPU/DISK REPORT' Option Filed
'XUCSRB GREF REPORT' Option Filed
'XUCSRB REPORTS BY (DATE,VG)' Option Filed
'XUCSRB RESPONSE REPORT' Option Filed
'XUCSRB ROU CMNDS/GREF REPORT' Option Filed
'XUCSRB SYS STAT REPORT' Option Filed
'XUCSRG CPU-DISK GRAPH' Option Filed
'XUCSRG GRAPHS MENU' Option Filed
'XUCSRG RESPONSE TIME GRAPH' Option Filed
'XUCSTASK AM RTHIST' Option Filed
```

Installing/Configuring the MPM (continued):

```
'XUCSTASK FILE UPDATE AUTO' Option Filed
'XUCSTASK PM RTHIST' Option Filed
'XUCSTASK PURGE CM DATA' Option Filed...
OK, I'M DONE.
NO SECURITY-CODE PROTECTION HAS BEEN MADE

One moment while I check/clean up MTLU variable pointers{ XE  "Multi-Term
Look-Up (MTLU)" }.
Done...

TO PROTECT THE SECURITY OF DHCP SYSTEMS, DISTRIBUTION OF THIS
SOFTWARE FOR USE ON ANY OTHER COMPUTER SYSTEM IS PROHIBITED.
ALL REQUESTS FOR COPIES OF THE KERNEL FOR NON-DHCP USE SHOULD
BE REFERRED TO YOUR LOCAL ISC.
NXT,KDE>
```

## Configuration of the MSM Performance Monitor

The following steps are needed to complete configuration of the MSM performance monitor**{** XE "Configuration of the MSM Performance Monitor (MPM)" \r "bk11" **}**:

1. Distribute the following routines to the remaining COMPUTE and PRINT SERVERS:

   XUCS*
   -XUCSI*
   ZOSV2MSM
   Rename ZOSV2MSM to %ZOSV2

2. Move ZOSV2MSM to the MGR UCI of the **File** Server(s) and rename it to %ZOSV2.

3. Edit the MSM Site Parameters using the MSM Site Parameters Enter/Edit Menu option:

   a. **Edit MSM CM Site Parameters**

```
Select MSM Capacity Management Manager's Menu Option: ?

          CM Reports Menu ...
          Manually Purge CM Data
          MSM Site Parameters Enter/Edit Menu ...

Select MSM Capacity Management Manager's Menu Option: MSM Site Parameters
Enter/Edit Menu

Select MSM Site Parameters Enter/Edit Menu Option: ?

   1      Edit MSM CM Site Parameters
   2      Enter/Edit Volume Group (Node)
   3      Print/Display System Configuration Parameters

Select MSM Site Parameters Enter/Edit Menu Option: 1  Edit MSM CM Site
                                                      Parameters

Select MSM RTHIST SITE SITE NAME: ???

            This is the name of your site.  For example: SAN FRANCISCO VAMC
Select MSM RTHIST SITE SITE NAME: CLARKSBURG VAMC
  ARE YOU ADDING 'CLARKSBURG VAMC' AS A NEW MSM RTHIST SITE (THE 1ST)? Y
<RET>  (YES)
SITE NAME: CLARKSBURG VAMC// <RET>
SITE NUMBER: 540   ???
            This is your station number.  For example, 662
SITE NUMBER: 540   <RET>
```

MSM Site Parameters Enter/Edit Menu (continued):

```
DFLT ROU NAME LENGTH: ???
            This is a required field that is used by the Routine Report so
     that routines can be grouped by name.  For example, if you enter a
     "3", then routine commands and routine global accesses will be grouped
     together by the first 3 characters of their name.

DFLT ROU NAME LENGTH: 4
DFLT GBL NAME LENGTH: ???
            This is a required field that is used by the Global Report so
     that global accesses can be grouped.  For example, if you enter a "3",
     then the global names will be grouped together by the first 3
     characters of their name.

DFLT GBL NAME LENGTH: 4
 <thresh ROU CMDS/SEC: ???
            Some DHCP routines are executed very briefly.  Therefore, the
     number of commands they execute are relativity very small for a RTHIST
     session.  A "bucket" called '<thresh' in the Routine command report is
     where all command counts for these types of routine(s) will be
     collected.  For example, if routine ABC executes 976 commands for a
     RTHIST session and you specify 1000 as the thresh hold value, then
     ABC's command count will be placed in the '<thresh' bucket.

<thresh ROU CMDS/SEC: 100

<thresh GBL GREFS/SEC: ???
            Some DHCP routines reference global(s) very little.  Therefore,
     the number of global references are relativity very small for a RTHIST
     session.  A "bucket" called '<thresh' in the Global Access report is
     where all these type of global(s) will get placed.  For example, if
     global ABC is referenced 109 times for a RTHIST session and you
     specify 300 as the threshold, the ABC's reference count will be placed
     in the '<thresh' bucket.

<thresh GBL GREFS/SEC: ?
     Type a Number between 0 and 999999, 0 Decimal Digits
<thresh GBL GREFS/SEC: 100
DAYS TO KEEP DATA: ???
            This field represents the number of days data will be kept in
      File #8987.2.  If NULL, then 45 days is the used for the default.
DAYS TO KEEP DATA: <RET>
Select LOCAL CMP RECIPIENTS: DOE,JOHN
Select LOCAL CMP RECIPIENTS: <RET>
Select REMOTE CMP RECIPIENTS:        (NOTE: Optional. You may be requested
                                            to send data to your ISC. If
                                            so, enter a mail group
                                            containing at least your ISC
                                            as a remote recipient.)

Select MSM RTHIST SITE SITE NAME: <RET>
```

b. **Enter/Edit Volume Group (Node)**{ XE "Enter/Edit Volume Group (Node)" }

```
Select MSM Site Parameters Enter/Edit Menu Option: 2  Enter/Edit Volume
Group (Node)

Select MSM RTHIST SITE SITE NAME: `1  CLARKSBURG VAMC
Select VOL GROUP (NODE): PSA
  ARE YOU ADDING 'PSA' AS A NEW VOL GROUP (NODE) (THE 1ST FOR THIS MSM
RTHIST SITE)? Y <RET> (YES)
  SERVER TYPE: Print
  NAME OF MANAGER UCI: MGR
  NAME OF PRODUCTION UCI: VAH
  AUTO ADJUST RTHIST TABLE SIZE: ???
           Leave this field blank to AUTOMATICALLY ADJUST THE RTHIST TABLE
      SIZE.  When the RTHIST job is started, it requires the number of
      table entries to be specified.  If the entry for table size is too
      small, then a ~TABLE,FULL~ condition will occur. If you define this
      field (i.e. Not Null), then I will use this value for the MAXIMUM
      RTHIST table size.  On the other hand, if you leave this field Null,
      then I will use the MAX AM TABLE SIZE field (#6) to adjust the AM
      RTHIST table size for the morning RTHIST session, or the MAX PM TABLE
      SIZE field (#7) to adjust the PM RTHIST table size for the afternoon
      RTHIST session.

  AUTO ADJUST RTHIST TABLE SIZE: <RET>
Select MSM RTHIST SITE SITE NAME:    CLARKSBURG VAMC  <RET>
Select VOL GROUP (NODE): PSA// CSA
 ARE YOU ADDING 'CSA' AS A NEW VOL GROUP (NODE) (THE 2ND FOR THIS MSM
RTHIST SITE)? Y <RET> (YES)
 SERVER TYPE: Compute
 NAME OF MANAGER UCI: MGR
 NAME OF PRODUCTION UCI: VAH
 AUTO ADJUST RTHIST TABLE SIZE: <RET>
```

NOTE: Repeat this procedure for all other CPUs except the shadow servers.

4. Using the TaskMan{ XE "TaskMan" } option, Schedule/Unschedule Options [ZTMSCHEDULE],{ XE "Schedule/Unschedule options" }{ XE "MSM Performance Monitor (MPM)" } schedule the following options:

   **XUCSTASK AM RTHIST**

   **XUCSTASK PM RTHIST**

   **XUCSTASK FILE UPDATE AUTO**

   **XUCSTASK PURGE CM DATA**

**AM MSM RTHIST Task Option{** XE "TaskMan" **}{** XE "AM MSM RTHIST Task Option" **}**

```
NAME: XUCSTASK AM RTHIST{ XE  "XUCSTASK AM RTHIST" }                MENU
TEXT: AM MSM RTHIST Task Option
  TYPE: run routine                     CREATOR: POSTMASTER
  PACKAGE: MSM CAPACITY MANAGEMENT
 DESCRIPTION:   This option is scheduled thru TaskMan's [ZTMSCHEDULE]
for the morning RTHIST data capture{ XE  "Morning RTHIST Data Capture"
}.  It should be setup for a 1D rescheduling frequency.  NO output
device is necessary.
  ROUTINE: XUCSTM
  QUEUED TO RUN AT WHAT TIME: MAY  3, 1994@08:30
  RESCHEDULING FREQUENCY: 1D            SCHEDULING RECOMMENDED: YES
  UPPERCASE MENU TEXT: AM MSM RTHIST TASK OPTION
```

**PM MSM RTHIST Task Option{** XE "TaskMan" **}{** XE "PM MSM RTHIST Task Option" **}**

```
NAME: XUCSTASK PM RTHIST{ XE  "XUCSTASK PM RTHIST" }                MENU
TEXT: PM MSM RTHIST Task Option
  TYPE: run routine                     CREATOR: POSTMASTER
  PACKAGE: MSM CAPACITY MANAGEMENT
 DESCRIPTION:   This option is scheduled thru TaskMan's [ZTMSCHEDULE]
for the afternoon RTHIST data capture.  It should be setup as 1D
rescheduling frequency.  No output device is necessary.
  ROUTINE: XUCSTM
  QUEUED TO RUN AT WHAT TIME: MAY  2, 1994@14:30
  RESCHEDULING FREQUENCY: 1D            SCHEDULING RECOMMENDED: YES
  UPPERCASE MENU TEXT: PM MSM RTHIST TASK OPTION
```

**Tasked CM File Update{** XE "TaskMan" **}{** XE "Tasked CM File Update Option" **}**

```
NAME: XUCSTASK FILE UPDATE AUTO{ XE  "XUCSTASK FILE UPDATE AUTO" }
MENU TEXT: Tasked CM File Update
  TYPE: run routine                     CREATOR: POSTMASTER
  PACKAGE: MSM CAPACITY MANAGEMENT
 DESCRIPTION:   This option is scheduled thru TaskMan's [ZTMSCHEDULE].
It gathers the data from each Vol. Group defined in the MSM Site
Parameters file. It first transfers the PREVIOUS day's ^RTHIST data to
the %ZRTL("XUCS", nodes{ XE  "^%ZRTL" }. It then formats the data into
FileMan compatible data, moving the data into the MSM RTHIST Data file.
Finally, it creates a server message to transmit a summary of the
PREVIOUS day's data to the National Data Base.  It should be setup with
a 1 DAY rescheduling frequency.  No output device is necessary, but you
might want to consider using a RESOURCE device, so that option XUCSTASK
PURGE CM DATA falls after this option.
  ROUTINE: XUCSTME
  QUEUED TO RUN AT WHAT TIME: MAY  3, 1994@01:00
  DEVICE FOR QUEUED JOB OUTPUT: ZZRES;;132;66
  RESCHEDULING FREQUENCY: 1D            SCHEDULING RECOMMENDED: YES
  UPPERCASE MENU TEXT: TASKED CM FILE UPDATE
```

**Auto Purge of CM Data**;**{** XE "TaskMan" **}{** XE "Auto Purge of CM Data Option" **}**

```
NAME: XUCSTASK PURGE CM DATA{ XE  "XUCSTASK PURGE CM DATA" }
MENU TEXT: Auto Purge of CM Data
  TYPE: run routine                     CREATOR: POSTMASTER
  PACKAGE: MSM CAPACITY MANAGEMENT
 DESCRIPTION:

 This is the schedulable TaskMan option to purge data from the MSM
RTHIST Data file .  A selectable range of days to keep old data is in
the SITE file.  If this is not filled in 45 days is the default.  It is
recommended to schedule this option so that it is run AFTER the option
XUCSTASK FILE UPDATE AUTO.  No output device is necessary, but might
want to consider using a RESOURCE device for ease of scheduling.

  ROUTINE: DEQUE^XUCSPRG
  QUEUED TO RUN AT WHAT TIME: MAY  3, 1994@03:00
  DEVICE FOR QUEUED JOB OUTPUT: ZZRES;;132;66
  RESCHEDULING FREQUENCY: 1D            SCHEDULING RECOMMENDED: YES
  UPPERCASE MENU TEXT: AUTO PURGE OF CM DATA
```

NOTE: Any RTHIST that is *running* when either the AM or PM RTHIST is started will be stopped, as if it were stopped using the RTHIST - TERMINATE (SAVE)**{** XE "RTHIST" **}**.

Any RTHIST that is *scheduled* during the time period (1 hour) that is a scheduled AM or PM RTHIST will be unscheduled.

- **In MGR: Map routines in the Manager account{** XE "Mapping Routines" **}.**

  The recommended set is listed below:

  %ZOSV{ XE "%ZOSV" }
  %ZOSV1
  %ZOSV2

  The following advisory is recommended:

  - At a future time, you should review RTHIST data{ XE "RTHIST" } to identify the set of routines that are used most frequently at your site. The set provided here is only a "best guess" of which routines might be worth mapping{ XE "Mapping Routines" }.
  - To avoid potential problems, do not map %ZOSV{ XE "%ZOSV" } if you are running a version of VAX DSM less than V6.

*DSM FOR OpenVMS*

```
Edit your command file for
building mapped routine sets,
then run it.
```

*MSM and M/SQL*

```
Not Applicable
```

# Shutdown DSM and Restart to Activate Mapped Sets

- **Shutdown and restart DSM**

  Restart the configuration to activate the new set of mapped routines{ XE "Mapping Routines" }.

*DSM for OpenVMS*

```
Shut down and restart the
configuration:

$  DSM/MAN  ^SHUTDWN

 and then

$  DSM/MAN  ^STU
```

*MSM and M/SQL*

```
(Routine mapping is not
applicable)
```

# On the Other Toolkit V. 7.2 CPUs (MSM and M/SQL)

## Steps that can be taken while inits run on the first CPU

- **Review the steps taken on the first CPU** and repeat those that apply.
- **In VAH:** Load all Toolkit V. 7.3 routines on this CPU, as you did on the first CPU.

  Save the ZU routine corresponding to the current operating system. Move the relevant (Z*) routines to the Manager's account as on the first CPU. **Recall that MANAGER (%) routines for Kernel and FileMan were moved to *all* MSM CPUs in preparation for the MSM Performance Monitor.**
- **In MGR:** Run TOOLKIT^ZTMGRSET{ XE "ZTMGRSET" }{ XE "TOOLKIT^ZTMGRSET" } as on the first CPU.
- **In VAH:** If the CPU runs a different MUMPS operating system, use the Reinitialize option on the VA FileMan Management Menu to identify the CPU's operating system, and thus, set the second piece of ^%ZOSF("OS"){ XE "^%ZOSF" } correctly. (NOTE: This menu is locked with the XUMGR key{ XE "XUMGR key" }.) This step is necessary since, if ^DD is translated, ^DD("OS", a pointer to the MUMPS OPERATING SYSTEM file (#.7){ XE "MUMPS OPERATING SYSTEM file" }, indicates the operating system of the CPU where the DINIT was run.

## After the inits have finished (VAX/Alpha)

- **Map routines{ XE "Mapping Routines" }:** For DSM for OpenVMS systems, rebuild the mapped routine set. Map routines in the Manager and Production accounts as on the first CPU. Remember to activate the new mapped routine sets.

## Delete Inits

- **In VAH:** Optionally, delete the Toolkit init routines XUCIN*, XUCSI*, XTIN* using the ^%ZTRDEL utility{ XE "^%ZTRDEL" } to delete groups of routines.

## Clear Obsolete Routines

The following routines have been identified as obsolete{ XE "Obsolete Routines" } (no longer exported by the Toolkit). Please review against your own records and confirm that they are obsolete at your site before deleting them:

| | |
|---|---|
| ZOSFM11 | ZTCPU{ XE |
| ZOSVM11 | "ZTMGRSET" } |
| ZTBKCM11 | ZTRTHM |
| | ZTRTHT |

## Clear Unused Routines from the Production Account

After running the Toolkit installation, the following routines may be deleted from the Production account where they were initially loaded (or any other Production account where they may have been loaded in the past)**{** XE "Unused Routines" **}**:

| | | |
|---|---|---|
| ZO* | ZTMGRSET**{** XE | ZTSYINIT |
| ZTBK*{ XE | "ZTMGRSET" **}** | |
| "ZTBK" **}** | ZTP1 | |
| ZTEDIT* | ZTPP | |
| ZTGBL | ZTRDEL | |

These routines may be deleted since, during the initialization process, they were saved to the Manager account where they become operative.

# Install the VAX/ALPHA VMS EDT or TPU Text Editor (Optional)

Sites running DSM for OpenVMS may choose to install the VMS EDT and/or TPU text editors. This is accomplished by making an entry in the ALTERNATE EDITOR file (#1.2)**{** XE "ALTERNATE EDITOR file" **}** as shown here.**{** XE "Alternate Editor" **}{** XE "VMS EDT Text Editor" **}{** XE "TPU Text Editor" **}{** XE "Text Editor:VMS EDT" **}{** XE "Text Editor:TPU" **}**

```
>D Q^DI  This entry point may be used to maintain device handler
  variables.

VA FileMan 20

Select OPTION: ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: 1.2  ALTERNATE EDITOR            (2 entries)
EDIT WHICH FIELD: ALL//  <RET>

Select ALTERNATE EDITOR: VMSEDT
  ARE YOU ADDING 'VMSEDT' AS A NEW ALTERNATE EDITOR (THE 3RD)? Y  (YES)
ACTIVATION CODE FROM DIWE: G ^XTEDTVXD       (for the EDT editor)
ACTIVATION CODE FROM DIWE: G TPU^XTEDTVXD      (for the TPU editor)
OK TO RUN TEST: I ^%ZOSF("OS")["VAX"{ XE  "^%ZOSF" }
RETURN TO CALLING EDITOR:  <RET>
DESCRIPTION:
  1> Call to VAX/ALPHA VMS EDT editor to process VA FileMan word-processing
fields.<RET>
  2> Creates a temporary VMS file in the default directory with a name <RET>
  3> of 'DIWE$'_$JOB_'.TMP'.  This version will remove the two copies <RET>
  4> of the file that EDT leaves behind. <RET>
  5> <RET>
EDIT Option:  <RET>

Select ALTERNATE EDITOR:  <RET>
```

# Install the Kermit Protocol (Optional)

Kermit may be added to the ALTERNATE EDITOR file (#1.2)**{** XE "ALTERNATE EDITOR file" **}** as shown. This allows the transfer of files from a PC, or other system, into a mail message or other VA FileMan word-processing field. Be sure that the file to be sent is in text-only format. Be sure that if a DEC server is involved, its break character is not a printable character, like ~, since Kermit uses all the printable characters when processing.

The benefit of using the Kermit file transfer protocol**{** XE "Kermit file transfer protocol" **}** is that large files can be sent faster and more easily due to the efficient Kermit error checking mechanism.

```
>D Q^DI  This entry point may be used to maintain device handler variables.

VA FileMan 20

Select OPTION: ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: 1.2 <RET> ALTERNATE EDITOR            (3 entries)
EDIT WHICH FIELD: ALL//  <RET>

Select ALTERNATE EDITOR: KERMIT LOAD
  ARE YOU ADDING 'KERMIT LOAD' AS A NEW ALTERNATE EDITOR (THE 4TH)? Y  (YES)
ACTIVATION CODE FROM DIWE: S XTKDIC=DIC D RECEIVE^XTKERMIT
OK TO RUN TEST:  <RET>
RETURN TO CALLING EDITOR: K XTKDIC
DESCRIPTION:
  1> This option uses the KERMIT protocol to load the word-processing field
<RET>
  2> from another system. <RET>
```

# Bulletins Exported with Toolkit V. 7.3 (Not Associated with Mail Groups)

The following three Bulletins{ XE "Bulletins" } are a part of the Duplicate Resolution Utilities{ XE "Duplicate Resolution Utilities" } exported with Toolkit V. 7.3. They do *not* come with a mail group. You may associate them with any mail group you like. They are listed as follows:

### XDR ERROR

This bulletin is sent to a mail group of your choice when something in the merge process errors out, is missing, or simply did not complete. The following is a list of all reasons that can trigger the sending of XDR ERROR bulletins{ XE "XDR ERROR bulletins" }:

- The Candidate Collection Routine is undefined.
- The Candidate Collection Routine is not present.
- The Potential Duplicate Threshold is undefined.
- There are no Duplicate Tests entered for this Duplicate Resolution entry.
- The Global root node in DIC is undefined.
- No entry in DUPLICATE RESOLUTION (#15.1) file{ XE "DUPLICATE RESOLUTION file" } for this file.
- The From and To Record are undefined.
- The test routine is not present.
- The routine defined as the Pre-Merge routine is not present.
- The routine defined as the Post-Merge routine is not present.
- The routine defined as the Verified Msg routine is not present.
- The routine defined as the Merged Msg routine is not present.
- You cannot have a "Non-Interactive" merge style with entries in the DINUM files multiple{ XE "DINUM files:multiple" }.
- The file for checking duplicates is not defined (XDRFL).
- The entry for checking duplicates is not defined (XDRCD).

- The routine defined as the Merge Direction Input Transform routine is not present.
- The *new* cross-reference has not been entered for this Duplicate Resolution entry.

### XDR MERGED

This bulletin is a notification that all verified duplicate record pairs have been merged{ XE "XDR MERGED bulletins" }.

### XDR VERIFIED

This bulletin is a notification that a pair of records have been verified as duplicates and are ready to be merged{ XE "XDR VERIFIED bulletins" }.

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