



**CAPACITY MANAGEMENT TOOLS**  
**RELEASE NOTES &**  
**INSTALLATION GUIDE**

Version 2.0

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Department of Veterans Affairs  
VistA Health Systems Design & Development (HSD&D)  
Capacity Planning (CP) Service



# Revision History

## Documentation Revisions

The following table displays the revision history for this document. Revisions to the documentation are based on patches and new versions released to the field.

Date	Revision	Description	Author
03/23/04	1.0	Initial Capacity Management Tools V. 2.0 software documentation creation.	Robert Kamarowski, Bay Pines, FL Office of Information Field Office (OIFO) and Thom Blom, Oakland, CA OIFO
04/15/04	1.1	Corrected references to CPRS and OE/RR software versions with regard to Patch OR*3.0*209 in Chapter 2, "Preliminary Consideration."	Robert Kamarowski, Bay Pines, FL Office of Information Field Office (OIFO) and Thom Blom, Oakland, CA OIFO
12/20/04	1.2	<p>Reviewed document and edited for the "Data Scrubbing" and the "PDF 508 Compliance" projects.</p> <p><b>Data Scrubbing</b>—Changed all patient/user TEST data to conform to HSD&amp;D standards and conventions as indicated below:</p> <ul style="list-style-type: none"><li>• The first three digits (prefix) of any Social Security Numbers (SSN) start with "000" or "666."</li><li>• Patient or user names are formatted as follows: MMPDPATIENT,[N] or KMPDUSER,[N] respectively, where the N is a number written out and incremented with each new entry (e.g., KMPDPATIENT, ONE, KMPDPATIENT, TWO, etc.).</li><li>• Other personal demographic-related data (e.g., addresses, phones, IP addresses, etc.) were also changed to be generic.</li></ul> <p><b>PDF 508 Compliance</b>—The final PDF document was recreated and now supports the minimum requirements to be 508 compliant (i.e., accessibility tags, language selection, alternate text for all images/icons, fully functional Web links, successfully passed Adobe Acrobat Quick Check).</p>	Thom Blom, Oakland, CA OIFO

Date	Revision	Description	Author
05/12/05	1.3	Updated Release Notes section and any references to the CP Environment Check [KMPD STATUS] option based on changes introduced with Capacity Management Tools Patch KMPD*2.0*3.	Robert Kamarowski, Bay Pines, FL OIFO and Thom Blom, Oakland, CA OIFO
05/23/06	1.4	Updated the Edit CP Parameters File option [KMPD PARAM EDIT] and added references to the VistA Monitor program based on changes introduced with Capacity Management Tools Patch KMPD*2.0*05.	Capacity Planning Development Team <ul style="list-style-type: none"> <li>• Kornel Krechoweckyj—Project Manager</li> <li>• Robert Kamarowski—Lead Developer</li> <li>• Gurbir Singh—SQA</li> <li>• Thom Blom—Technical Writer</li> </ul>

**Table i: Documentation revision history**

## Patch Revisions

For the current patch history related to this software, please refer to the Patch Module on FORUM.

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- DaIS Program Director—Catherine Pfeil
- DaIS Resource Project Manager—John Kupecki
- Developers—Robert Kamarowski and Kornel Krechoweckyj
- Software Quality Assurance (SQA)—Gurbir Singh
- Enterprise VistA Support (EVS) Release Manager—Lewis Tillis
- Technical Writer—Thom Blom

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- West Haven, CT

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# Orientation

## How to Use this Manual

Throughout this manual, advice and instructions are offered regarding the use of Capacity Management Tools software and the functionality it provides for Veterans Health Information Systems and Technology Architecture (VistA) software products.

This manual uses several methods to highlight different aspects of the material:

- Various symbols are used throughout the documentation to alert the reader to special information. The following table gives a description of each of these symbols:

Symbol	Description
	<b>NOTE/REF:</b> Used to inform the reader of general information including references to additional reading material.
	<b>CAUTION:</b> Used to caution the reader to take special notice of critical information.
	Used to denote special installation instructions only (e.g. platform-specific steps).

**Table ii: Documentation symbol descriptions**

- Descriptive text is presented in a proportional font (as represented by this font).
- Conventions for displaying TEST data in this document are as follows:
  - The first three digits (prefix) of any Social Security Numbers (SSN) will begin with either "000" or "666".
  - Patient and user names will be formatted as follows: [Application Name]PATIENT,[N] and [Application Name]USER,[N] respectively, where "Application Name" is defined in the Approved Application Abbreviations document and "N" represents the first name as a number spelled out and incremented with each new entry. For example, in Kernel (KRN) test patient and user names would be documented as follows: KRNPATIENT,ONE; KRNPATIENT,TWO; KRNPATIENT,THREE; etc.
- Sample HL7 messages, "snapshots" of computer online displays (i.e., character-based screen captures/dialogues) and computer source code are shown in a *non*-proportional font and enclosed within a box. Also included are Graphical User Interface (GUI) Microsoft Windows images (i.e., dialogues or forms).
  - User's responses to online prompts will be boldface.
  - The "<Enter>" found within these snapshots indicate that the user should press the Enter key on their keyboard. Other special keys are represented within angle brackets (< >). For example, pressing the PF1 key can be represented as pressing <PF1>.

- Author's comments, if any, are displayed in italics or as "callout" boxes.



**NOTE:** Callout boxes refer to labels or descriptions usually enclosed within a box, which point to specific areas of a displayed image.

- All uppercase is reserved for the representation of M code, variable names, or the formal name of options, field and file names, and security keys (e.g., the XUPROGMODE key).

## How to Obtain Technical Information Online

Exported file, routine, and global documentation can be generated through the use of Kernel, MailMan, and VA FileMan utilities.



**NOTE:** Methods of obtaining specific technical information online will be indicated where applicable under the appropriate topic.

**REF:** Please refer to the *Capacity Management Tools Technical Manual* for further information.

### Help at Prompts

VistA software provides online help and commonly used system default prompts. Users are encouraged to enter question marks at any response prompt. At the end of the help display, you are immediately returned to the point from which you started. This is an easy way to learn about any aspect of VistA software.

To retrieve online documentation in the form of Help in any VistA character-based product:

- Enter a single question mark ("?") at a field/prompt to obtain a brief description. If a field is a pointer, entering one question mark ("?") displays the HELP PROMPT field contents and a list of choices, if the list is short. If the list is long, the user will be asked if the entire list should be displayed. A YES response will invoke the display. The display can be given a starting point by prefacing the starting point with an up-arrow ("^") as a response. For example, **^M** would start an alphabetic listing at the letter M instead of the letter A while **^127** would start any listing at the 127th entry.
- Enter two question marks ("??") at a field/prompt for a more detailed description. Also, if a field is a pointer, entering two question marks displays the HELP PROMPT field contents and the list of choices.
- Enter three question marks ("???" ) at a field/prompt to invoke any additional Help text stored in Help Frames.

The Help Frames themselves are grouped according to function. The lead frame for a function contains the "keywords" or reference words, highlighted in reverse video, for linking to related frames. For example, while in a Help Frame, enter the desired keyword at the "Select HELP SYSTEM action or <return>:" prompt. The user can return to the previous Help frame simply by pressing the <Enter> key at the message prompt.

## Obtaining Data Dictionary Listings

Technical information about files and the fields in files is stored in data dictionaries. You can use the List File Attributes option on the Data Dictionary Utilities submenu in VA FileMan to print formatted data dictionaries.



**REF:** For details about obtaining data dictionaries and about the formats available, please refer to the "List File Attributes" chapter in the "File Management" section of the *VA FileMan Advanced User Manual*.

## Assumptions About the Reader

This manual is written with the assumption that the reader is familiar with the following:

- VistA computing environment
  - Kernel—VistA M Server software
  - VA FileMan data structures and terminology—VistA M Server software
- Microsoft Windows
- M programming language

This manual provides an overall explanation of configuring the Capacity Management Tools interface and the changes contained in Capacity Management Tools Version 2.0. However, no attempt is made to explain how the overall VistA programming system is integrated and maintained. Such methods and procedures are documented elsewhere. We suggest you look at the various VA home pages on the World Wide Web (WWW) and VA Intranet for a general orientation to VistA. For example, go to the Veterans Health Administration (VHA) Office of Information (OI) Health Systems Design & Development (HSD&D) Home Page at the following Intranet Web address:

<http://vista.med.va.gov/>

## Reference Materials

Readers who wish to learn more about the Capacity Management Tools software should consult the following:

- *Capacity Management Tools User Manual*
- *Capacity Management Tools Technical Manual*
- The Capacity Planning (CP) Service's Home Page at the following Web address:

<http://vista.med.va.gov/capman/default.htm>

This site contains additional information and documentation.

VistA documentation is made available online in Microsoft Word format and Adobe Acrobat Portable Document Format (PDF). The PDF documents *must* be read using the Adobe Acrobat Reader (i.e., ACROREAD.EXE), which is freely distributed by Adobe Systems Incorporated at the following Web address:

<http://www.adobe.com/>



**REF:** For more information on the use of the Adobe Acrobat Reader, please refer to the *Adobe Acrobat Quick Guide* at the following Web address:

<http://vista.med.va.gov/iss/acrobat/index.asp>

VistA documentation can be downloaded from the Health Systems Design and Development (HSD&D) VistA Documentation Library (VDL) Web site:

<http://www.va.gov/vdl/>

VistA documentation and software can also be downloaded from the Enterprise VistA Support (EVS) anonymous directories:

- Albany OIFO <ftp.fo-albany.med.va.gov>
- Hines OIFO <ftp.fo-hines.med.va.gov>
- Salt Lake City OIFO <ftp.fo-slc.med.va.gov>
- Preferred Method <download.vista.med.va.gov>

This method transmits the files from the first available FTP server.



**DISCLAIMER:** The appearance of any external hyperlink references in this manual does not constitute endorsement by the Department of Veterans Affairs (VA) of this Web site or the information, products, or services contained therein. The VA does not exercise any editorial control over the information you may find at these locations. Such links are provided and are consistent with the stated purpose of this VA Intranet Service.

# 1. Release Notes

The Veterans Health Information Systems and Technology Architecture (VistA) Capacity Management (CM) Tools Version 2.0 software is now available. As of the original release of CM Tools V. 2.0 and subsequent patches, this enhanced software has the following features:

- **VistA Monitor Program**—As of CM Tools Patch KMPD\*2.0\*5, a VistA Monitor program was added to allow Health Systems Implementation Training and Enterprise Support (HSITES) to determine if a site is down (not operating). Every 20 minutes a message is sent from the Capacity Planning (CP) National Database to each site. This message is received at the site via the KMPD ECHO server option. If after a certain period of time a site has an unscheduled down time, a mail group is notified to take appropriate action.
- **Options Added:**

The following options were added to the CM Tools V. 2.0 software:

- **CP Echo Server server-type option [KMPD ECHO]**—This option was added with CM Tools Patch KMPD\*2.0\*5. It provides functionality for the VistA Monitor program. It receives messages from the Capacity Planning National Database and sends a turn-around message back to the Capacity Planning National Database and provides any scheduled down time information.
- **Edit CP Parameters File option [KMPD PARAM EDIT]**—This option was added with the original release of the CM Tools V. 2.0 software. It allows editing of the Capacity Planning (CP) parameters in the newly added CP PARAMETERS file (#8973).
- **Timing Monitor option [KMPD TMG MONITOR]**—This option was added with the original release of the CM Tools V. 2.0 software. It can be left running on a terminal. It updates itself and displays the number of seconds it takes a Computerized Patient record System (CPRS) coversheet to load. It displays data for each hour of the day and each new hour as it comes up. It updates itself according to the entry in the MONITOR UPDATE RATE - MINUTES field (#19.01) in the CP PARAMETERS file (#8973). If there is no entry in Field #19.01, the default is every 10 minutes.

It also displays an Alert Message on the screen if the number of seconds to load a CPRS coversheet exceeds the value of the MONITOR ALERT - SECONDS field (#19.02) in the CP PARAMETERS file (#8973). If there is no entry in Field #19.02, the default is 30 seconds. Both of these parameters can be edited using the Edit CP Parameters File option [KMPD PARAM EDIT].



**REF:** For more information on these options, please refer to Chapter 3, "CM Tools Options," in the *Capacity Management User Manual*.

- **Expanded Options:**

- As of CM Tools Patch KMPD\*2.0\*5, the existing Edit CP Parameters File option [KMPD PARAM EDIT] was expanded to include the following parameters:
  - Scheduled Down Time Start (VistA Monitor Program)—This is the date and time that the system scheduled down time is to begin.
  - Scheduled Down Time Stop (VistA Monitor Program)—This is the date and time that the system scheduled down time is to end.
  - Reason for Down Time (VistA Monitor Program)—This is the reason for the scheduled down time.
- As of CM Tools Patch KMPD\*2.0\*3, the existing Check CM Tools Environment option [KMPD STATUS] has been renamed to CP Environment Check and its functionality was enhanced and expanded.



**REF:** For more information on these options, please refer to Chapter 3, "CM Tools Options," in the *Capacity Management Tools User Manual*.

- **Fields Added**

As of CM Tools Patch KMPD\*2.0\*5, the following fields were added to the CP PARAMETERS file (#8973):

- SCHEDULED DOWN TIME START field (#5.01)—This field stores the date and time that the system scheduled down time is to begin.
- SCHEDULED DOWN TIME STOP field (#5.02)—This field stores the date and time that the system scheduled down time is to end.
- REASON FOR DOWN TIME field (#5.03)—This field stores the reason for the scheduled down time.

- **Files Added (original release):**

As of the original release of CM Tools V. 2.0 software, the following files were added:

- CP CODE EVALUATOR file (#8972.1)—This file was added for the future implementation of the Code Evaluator, which will allow programmers to test the efficiency of M code changes.
- CP PARAMETERS file (#8973)—This file was created to contain the parameters and data for the following:
  1. Current versions/patches of Capacity Planning applications: Resource Usage Monitor (RUM), Statistical Analysis of Global Growth (SAGG), and Capacity Management (CM) Tools.
  2. Start, stop, and delta times for all daily/weekly background jobs.
  3. The number of weeks to keep data: RUM, HL7, and Timing.
  4. Current facility CPU data:
    - Node
    - Type of CPU



- Number of processors
- Processor speed
- Amount of memory



**REF:** For more information on these files, please refer to Chapter 3, "Files," in the *Capacity Management Technical Manual*.

- **Increased Data Transmission**—As of the original release of CM Tools V. 2.0, the Timing data is automatically transmitted daily and weekly to the Capacity Planning National Database.
- **Improved Data Display**—As of the original release of CM Tools V. 2.0, timing data is displayed graphically on the Capacity Planning Statistics Web Page:

<http://vista.med.va.gov/capman/Statistics/Default.htm>



## 2. Preliminary Consideration

### Purpose

The purpose of this guide is to provide instructions for installing the Veterans Health Information Systems and Technology Architecture (VistA) Capacity Planning (CP) Service's Capacity Management Tools software, Version 2.0.

### About the Installation Procedures

Separate installation procedures are provided in this guide based on the installation type:

- Version 2.0 Installation—Previous version of software installed.
- Version 2.0 *Virgin* Installation—Software never installed.

We recommend sites take the following approach to installing the CM Tools software:

1. Obtain the CM Tools V. 2.0 documentation.



**REF:** For more information on the CM Tools documentation, please refer to the "Reference Materials" topic in the "Orientation" section in this manual.

2. Install the CM Tools V. 2.0 server software in a Test account prior to installing it in a Production account.
3. Obtain and install all released patches for the CM Tools V. 2.0 software.



**REF:** For the current patch history related to this software, please refer to the Patch Module on FORUM.

There are no special legal requirements involved in the use of the CM Tools' interface.




## Capacity Management Tools Distribution Files

File Name	Type	Description
KMPD2_0IG.PDF (documentation)	Binary	<b>Installation Guide.</b>
KMPD2_0UM.PDF (documentation)	Binary	<b>User Manual.</b>
KMPD2_0TM.PDF (documentation)	Binary	<b>Technical Manual.</b>
KMPD2_0.KID (release)	ASCII	<p><b>KIDS Distribution.</b> Required for all installations. Contains the Capacity Management (CM) Tools V. 2.0 server software:</p> <ul style="list-style-type: none"> <li>• Global (^KMPD) and VA FileMan files.</li> <li>• Server Routines.</li> <li>• Capacity Management Tools Options.</li> </ul>
CM Tools Vista M Server Patches	ASCII	<p><b>CM Tools Patches.</b> KIDS builds for CM Tools patches. Follow normal procedures to obtain and install all CM Tools patches (see FORUM).</p>

**Table 2-1: CM Tools-related software distribution files**

## VistA M Server Requirements

The following minimum software tools and network configuration are required on the VistA M Server in order to install and use the Capacity Management Tools software:

Minimum Software/Configuration	Description
Operating System Software	InterSystems Caché operating system  <b>NOTE:</b> The VistA M Server need not be an NT system.
Fully Patched M Accounts	<p>You should have both a development Test account and a Production account for the 4 CM Tools software.</p> <p>The account(s) <i>must</i> contain the <i>fully</i> patched versions of the following software (listed alphabetically):</p> <ul style="list-style-type: none"> <li>• Computerized Patient Record System (CPRS) GUI V. 23.0 and Order Entry/Results Reporting (OE/RR) V. 3.0</li> </ul> <p> <b>CAUTION:</b> The CM Tools software loads without CPRS GUI V. 23 and OE/RR V. 3.0; however, in order to start collecting timing data and enable the data collection and report-related CM Tools software options, Patch OR*3.0*209 must also be installed.</p> <ul style="list-style-type: none"> <li>• Health Level Seven (HL7) V. 1.6</li> </ul> <p> <b>CAUTION:</b> The CM Tools software loads without HL7 Patch #79 (i.e., HL*1.6*79); however, in order to start collecting HL7 statistics, HL7 Patch #79 must also be installed.</p> <p><b>HL7 Patch #79 installs the \$\$CM^HLUCM API. The \$\$CM^HLUCM API contains code that enables the collection of HL7 information from the VistA environment.</b></p> <ul style="list-style-type: none"> <li>• Kernel V. 8.0</li> <li>• Kernel Toolkit V. 7.3</li> <li>• MailMan V. 8.0</li> <li>• VA FileMan V. 22.0</li> </ul>




Minimum Software/Configuration	Description
	 <b>NOTE:</b> These software packages <i>must</i> be properly installed and <i>fully</i> patched prior to installing the CM Tools V. 2.0 software distribution. You can obtain all released VistA M server-side patches (including patch description and installation instructions) from the Patch module on FORUM or through normal procedures. Patches must be installed in published sequence.
Network Communications Software   <b>REF:</b> For more information on telecommunications support, please visit the VHA Communication Services Office (CSO) Home Page:  <a href="http://vaww.va.gov/cso/">http://vaww.va.gov/cso/</a>	The VistA M Server needs to have TCP/IP running.

Table 2-2. VistA M Server minimum software/network tools/utilities required for CM Tools V. 2.0

## Skills Needed for Installation

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 VistA publications.

 **REF:** Caché for NT and OpenVMS sites should refer to the AVANTI How-To Web site currently located at:

<http://vaww.va.gov/custsvc/cssupp/avanti/How-to.HTM>

### You need to know how to do the following:

- Back up the system
- Copy files using commands of the host file system
- Run a Kernel Installation & Distribution System (KIDS) installation
- Switch User Class Identification (UCI) accounts
- Enable/Disable routine mapping and journaling
- Manage globals, including global placement, protection, and translation
- Run a system status and restore a job

### 3. VistA M Server Installation Instructions

The installation of Capacity Management Tools Version 2.0 only affects the CM Tools options. Therefore, this installation can be performed at any time of the day with minimal disruption. Aside from implementing any of the applicable items that are listed below, installation should not take longer than 10-15 minutes.

The instructions in this section are applicable for the Test/Production accounts in the Caché environment. Any unique instructions for a specific environment will be notated within the procedure.



**NOTE:** All Caché for Windows NT or Caché for OpenVMS sites should install this software.

The Capacity Management Tools V. 2.0 software installation creates the ^KMPD global to store the CM HL7 DATA (#8973.1) and CP TIMING (#8973.2) files. This global will automatically be trimmed (records deleted) by the CM Tools Background Driver option to contain the maximum amount of data as prescribed by the CP parameters.



**REF:** For more information on the CM Tools Background Driver option and CP parameters, please refer to Chapter 3, "CM Tools: Options," in the *Capacity Management Tools User Manual*.

This installation will automatically set up the CM Tools Background Driver [KMPD BACKGROUND DRIVER] option within the OPTION SCHEDULING file (#19.2). This option will be scheduled to run tomorrow at 1:30 a.m. with a reschedule frequency of every day (i.e., 1D).



**CAUTION:** All sites should ensure that the CM Tools Background Driver [KMPD BACKGROUND DRIVER] option is *not* currently running during the installation.

## Version 2.0 Installation

### 1. Retrieve the KMPD2\_0.KID File (*required*)

Obtain the **KMPD2\_0.KID** file, which contains the Capacity Management Tools V. 2.0 software, from the Enterprise VistA Support (EVS) ANONYMOUS.SOFTWARE directory located at:

- Albany OIFO <ftp.fo-albany.med.va.gov>
- Hines OIFO <ftp.fo-hines.med.va.gov>
- Salt Lake City OIFO <ftp.fo-slc.med.va.gov>
- VistA Download Site <download.vista.med.va.gov>

### 2. Verify KIDS Install Platform (*required*)

Verify that the Kernel Installation and Distribution System (KIDS) platform on your system is ready to install VistA M Server patches.



**REF:** For more information on KIDS, please refer to the KIDS section in the *Kernel Systems Manual* located on the VDL at the following Web address:

<http://www.va.gov/vdl/Infrastructure.asp?appID=10>

- a. Verify Host File Server (HFS) Device in the DEVICE File (#3.5)—Verify that you have a Host File Server (HFS) device in the DEVICE file (#3.5) named "**HFS**". If you have performed KIDS installations on the VistA M Server before, you probably already have an appropriate HFS device set up. If you don't have an entry for this device, you *must* create one.



**REF:** For information on how to create an HFS device, please refer to Chapter 18, "Host Files," in the *Kernel Systems Manual*.

- b. Verify Null Device in the DEVICE File (#3.5)—Verify that you have a Null device in the DEVICE file (#3.5) named "NULL" (or whose mnemonic is named "NULL").

You can have other devices with similar names, but one device is needed whose name or mnemonic is "NULL." The subtype should be a "P-" subtype (e.g., P-OTHER), the margin should be a minimum of 80, and the page length should be a minimum of 60.

Sample setups:

#### Caché for OpenVMS Null Device Setup Example

```
NAME: NULL                                $I: _NLA0:
ASK DEVICE: NO                            ASK PARAMETERS: NO
SIGN-ON/SYSTEM DEVICE: NO                LOCATION OF TERMINAL: Bit Bucket
SUBTYPE: P-OTHER                          TYPE: TERMINAL
```



**Caché/NT Null Device Setup Example**

```

NAME: NULL                               $I: //./nul
  ASK DEVICE: NO                          ASK PARAMETERS: NO
  SIGN-ON/SYSTEM DEVICE: NO              LOCATION OF TERMINAL: BIT BUCKIT
  SUBTYPE: P-OTHER                        TYPE: TERMINAL

```

**P-OTHER Terminal Type Setup Example**

```

NAME: P-OTHER                             RIGHT MARGIN: 132
  FORM FEED: #                             PAGE LENGTH: 64
  BACK SPACE: $C(8)                       DESCRIPTION: General prntr (132)

```

**3. Load KMPD2\_0.KID File (*required*)**

Use Kernel Installation & Distribution System (KIDS) to load the distribution. From the KIDS menu, select the Installation menu option. Invoke the Load a Distribution option to load the following software:

KMPD2\_0.KID

The following is sample dialogue of a load of the CM Tools V. 2.0 software done at the Oakland OIFO:

```
Select Kernel Installation & Distribution System Option: Installation

1      Load a Distribution
2      Verify Checksums in Transport Global
3      Print Transport Global
4      Compare Transport Global to Current System
5      Backup a Transport Global
6      Install Package(s)
       Restart Install of Package(s)
       Unload a Distribution

Select Installation Option: 1 <Enter> Load a Distribution
Enter a Host File: USR$:[ANONYMOUS]KMPD2_0.KID;1

KIDS Distribution saved on Mar 22, 2004@08:01:12
Comment: CAPACITY MANAGEMENT TOOLS 2.0

This Distribution contains Transport Globals for the following Package(s):
Build CAPACITY MANAGEMENT TOOLS 2.0 has been loaded before, here is when:
  CAPACITY MANAGEMENT TOOLS 2.0   Install Completed
                                   was loaded on Mar 16, 2004@09:15:33

OK to continue with Load? NO// YES

Distribution OK!

Want to Continue with Load? YES// <Enter>
Loading Distribution...

CAPACITY MANAGEMENT TOOLS 2.0
Use INSTALL NAME: CAPACITY MANAGEMENT TOOLS 2.0 to install this Distribution.
```

**Figure 3-1: Sample CM Tools V. 2.0 distribution load**



**NOTE:** If you are prompted with "Want to RUN the Environment Check Routine? YES//", you should respond with **YES**.

#### **4. Install Capacity Management Tools V. 2.0 Software (required)**

Use KIDS to Install the CM Tools V. 2.0 software. Follow the KIDS installation prompts as you would any other KIDS installation. Specific prompts and suggested responses are notated below:

- a. Users may be on the system during installation of this patch and software. However, this software should be installed during off-hours, when a minimal number of users are on the system.
- b. You do not need to stop TaskMan.

- c. You may elect to use any of the following options within the KIDS Installation menu:
- Verify Checksums in Transport Global—This option allows you to ensure the integrity of the routines that are in the transport global.
  - Print Transport Global.
  - Compare Transport Global to Current System—This option allows you to view all changes that will be made when the release is installed. It compares all components of the release (routines, DDs, templates, etc.).
  - Backup a Transport Global—This option creates a backup message of any routines exported with this release. It will *not* back up any other changes such as DDs or templates.
  - Install Package(s).
- d. When prompted for the INSTALL NAME, enter the following:
- CAPACITY MANAGEMENT TOOLS 2.0
- e. When prompted to rebuild menu trees:
- Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES//
- You can respond with **NO** and not rebuild the menus until the normal scheduled menu rebuild takes place or **YES** to rebuild the menus immediately after the installation.
- f. When prompted to inhibit logons:
- Want KIDS to INHIBIT LOGONS during the install? YES//
- You can respond with **NO**.
- g. When prompted to disable options and protocols:
- Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES//
- You can respond with **NO**.
- h. If the Timing Collection background job is not turned on, you will get the following prompt:
- I will start the Timing Collection background job when the install is complete? Yes// YES
- You should respond with **YES**.

## CM Tools V. 2.0 Software Installation Sample

The following is sample dialogue of an installation of the CM Tools V. 2.0 software done at the Oakland OIFO

```
1      Load a Distribution
2      Verify Checksums in Transport Global
3      Print Transport Global
4      Compare Transport Global to Current System
5      Backup a Transport Global
6      Install Package(s)
      Restart Install of Package(s)
      Unload a Distribution

Select Installation Option: Install Package(s)
Select INSTALL NAME:      CAPACITY MANAGEMENT TOOLS 2.0 <Enter>      Loaded from
Distribution 3/22/04@09:49:09
      => CAPACITY MANAGEMENT TOOLS 2.0 ;Created on Mar 22, 2004@08:01:12

This Distribution was loaded on Mar 22, 2004@09:49:09 with header of
CAPACITY MANAGEMENT TOOLS 2.0 ;Created on Mar 22, 2004@08:01:12
It consisted of the following Install(s):
CAPACITY MANAGEMENT TOOLS 2.0
Checking Install for Package CAPACITY MANAGEMENT TOOLS 2.0

Install Questions for CAPACITY MANAGEMENT TOOLS 2.0

Incoming Files:

      8972.1      CP CODE EVALUATOR
Note: You already have the 'CP CODE EVALUATOR' File.

      8973      CP PARAMETERS
Note: You already have the 'CP PARAMETERS' File.

      8973.1      CM HL7 DATA
Note: You already have the 'CM HL7 DATA' File.

      8973.2      CP TIMING
Note: You already have the 'CP TIMING' File.

Incoming Mail Groups:

Enter the Coordinator for Mail Group 'KMP-CAPMAN':      KMPDUSER,ONE <Enter>
GS      COMPUTER SPECIALIST

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// <Enter>

Want KIDS to INHIBIT LOGONS during the install? YES// NO
Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.
```

```

DEVICE: HOME// <Enter> Telnet terminal

Install Started for CAPACITY MANAGEMENT TOOLS 2.0 :
      Mar 22, 2004@09:52:31

Build Distribution Date: Mar 22, 2004

Installing Routines:
      Mar 22, 2004@09:52:31

Installing Data Dictionaries: ...
      Mar 22, 2004@09:52:32

Installing PACKAGE COMPONENTS:

Installing FORM

Installing MAIL GROUP

Installing REMOTE PROCEDURE

Installing OPTION
      Mar 22, 2004@09:52:34

Running Post-Install Routine: EN^KMPDPOST

Updating Routine file...

Updating KIDS files...

CAPACITY MANAGEMENT TOOLS 2.0 Installed.
      Mar 22, 2004@09:52:34

Install Message sent #1486094

Call MENU rebuild

Starting Menu Rebuild: Mar 22, 2004@09:52:36

Collecting primary menus in the New Person file...

                Primary menus found in the New Person file
                -----

OPTION NAME          MENU TEXT                      # OF      LAST      LAST
                        USERS              USED      BUILT

                        Rebuilding Menus
-----
XMUSER              MailMan Menu                    67        03/22/04 03/21/04
EVE                 Systems Manager Menu            16        03/22/04 03/21/04
ISCSTAFF            ISC OFFICE MENU OPTIONS         4         02/10/04 03/21/04
ISCUSER2            ISC OFFICE AUTOMATION/STA...    2         07/23/03 03/21/04
ISCMGR              ISC MANAGER'S OPTION            6         03/18/04 03/21/04
A6A FIL MENU        A Menu                          1         03/16/04 03/21/04
ISCSTAFF2           Office Automation               5         07/16/03 03/21/04
ISCUSER3            ISC Menu                        1         08/28/00 03/21/04
DIZUSER            VA FileMan (Limited)            1         10/14/03 03/21/04
PRCSCP OFFICIAL    Control Point Official's ...    1         03/21/04
PRAPUSER            Facility ADP User Menu           5         03/21/04
A6A 98EIR           1998 EIR Edit Menu             1         07/13/98 03/21/04
    
```

```

Building secondary menu trees....
Merging.... done.
Menu Rebuild Complete: Mar 22, 2004@09:52:43
-----
100% Complete [ 25 50 75 ]
Install Completed
    
```

**Figure 3-2: Sample CM Tools V. 2.0 installation**

## 5. Post Installation Routine (*required*)

The following is an example of the informational message that you may receive while the post-installation routine is running:

```

Running Post-Install Routine: ^KMPDPOST
Queueing [KMPD BACKGROUND DRIVER] to run each day at 1:30am...
Complete!
    
```

**Figure 3-3: Informational Message—Queueing background job**

This informational message indicates that the post-installation routine is updating the schedule frequency of the KMPD BACKGROUND DRIVER background task to run nightly at 1:30 a.m.

## 6. Install All Released Patches (*required*)

At the time of publication of this manual, several Vista M Server-side patches have been released with the CM Tools V. 2.0 software.

- a. Obtain all released CM Tool patches. Follow the normal procedures to obtain released patches from the Patch Module on FORUM.
- b. All Vista M Server patches are distributed in Kernel V. 8.0 KIDS format. Using KIDS, load and install the CM Tools-related Vista M Server patches.
- c. Follow the instructions under the "Installation Instructions" section in the patch description in order to install each patch.

## 7. Review Capacity Management Tools Settings (*recommended*)

Use the CP Tools Manager Menu [KMPD CM TOOLS MANAGER MENU] under the Capacity Planning menu [XTCM MAIN] located on the Operations Management menu [XUSITEMGR] on Kernel's Systems Manager Menu [Eve] to review CM HL7 data collection.

Invoke the CP Environment Check option [KMPD STATUS] and select either the HL7 or Timing report options to ensure that the CM Tools Background Driver [KMPD BACKGROUND DRIVER] is scheduled to run every day at 1:30 a.m. Review the other items in the status display for information regarding the CM HL7 DATA (#8973.1) and CP TIMING (#8973.2) files. Specifically:

- QUEUED TO RUN AT = **01:30 a.m.** (or the appropriate time for your site)
- CM TOOLS BACKGROUND DRIVER = **KMPD BACKGROUND DRIVER**
- RESCHEDULING FREQUENCY = **1D**
- TASK ID = **TaskMan ID number is present**
- QUEUED BY = **An active user**
- CM Tools routines displays no problems



**REF:** For more information on the CP Environment Check option [KMPD STATUS] and the CM Tools Background Driver [KMPD BACKGROUND DRIVER], please refer to "CM Tools Options" chapter in the *Capacity Management Tools User Manual*.

If the CM Tools Background Driver [KMPD BACKGROUND DRIVER] is not shown as being scheduled to run in the future, use the Schedule/Unschedule Options option [XUTM SCHEDULE] located under the Taskman Management menu [XUTM MGR] to schedule the KMPD BACKGROUND DRIVER option [KMPR BACKGROUND DRIVER] to run every day at 1:30 a.m.



**CAUTION:** Capacity Planning Service *strongly* recommends that the CM Tools Background Driver option [KMPD BACKGROUND DRIVER] be scheduled to run every day at 1:30 a.m., because this background driver is the main mechanism by which the following sub-globals are purged nightly:

- ^KMPD(8973.1)—CM HL7 DATA file (#8973.1): Records are purged as prescribed by the Purge HL7 Data After CP parameter, which is stored in the HL7 WEEKS TO KEEP DATA field (#3.11) in the CP PARAMETERS file (#8973). This parameter is edited via the Edit CP Parameters File option [KMPD PARAM EDIT].
- ^KMPD(8973.2)—CP TIMING file (#8973.2): Records are purged as prescribed by the Purge Timing Data After CP parameter, which is stored in the TIMING WEEKS TO KEEP DATA field (#4.11) in the CP PARAMETERS file (#8973). This parameter is edited via the Edit CP Parameters File option [KMPD PARAM EDIT].

Modification of the frequency and time may have adverse effects on the size of the temporary ^KMPD(8973.1) and ^KMPD(8973.2) sub-globals and on the number of entries within the CM HL7 DATA file (#8973.1) and CP TIMING (#8973.2) files.



**REF:** For more information on the CP parameters, please refer to the "Edit CP Parameters File" topic in Chapter 3, "CM Tools: Options," in the *Capacity Management Tools User Manual*.

## Version 2.0 *Virgin* Installation

### 1. Review Translation Table Settings (*required*)

Capacity Planning Service has been given the KMP\* namespace for both routines and global(s). Therefore, you should review your translation table setting(s) to determine the proper placement for the KMP\* global namespace.

Capacity Planning Service advises that sites should locate this global on a volume set that has a lesser overall level of activity. There are a couple of approaches by which the degree of activity can be ascertained:

- **Monitor Global Growth**—All sites can review CM's Top Globals Display option under the SAGG Trending menu options via FORUM. This option displays the top 10 globals in terms of growth over a selected time period. There is a very high correlation between the activity rate of a global and the corresponding rate of growth. This approach will yield many of the usual highly accessed globals. These highly accessed globals include: ^OR, ^TIU, ^XMB, ^ECX, ^LRO, ^PSB, ^PSRX, ^HL, ^LR, ^PRCA, and DIA.
- **Monitor Global Accesses**—Review the number of global accesses for *all* globals across *all* volume sets. The benefit of this approach is that global placements are not just tied to global growth but also help prevent locating other highly accessed globals on the same volume set (e.g., DIC and ^DD).

### 2. Follow Steps #1-7 under "Version 2.0 Installation" (*required*)



