



Patchman (VistA Auto Patch Utility and VistA Remote Patching)

Supplement to Patch Description

Kernel Patch XU*8.0*345

May 2006

Draft (Never Released)

VistA Health Systems Design & Development (HSD&D)
Infrastructure and Security Services (ISS)

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Revision History

Documentation History

The following table displays the revision history for this document. Revisions to the documentation are based on continuous dialog with Infrastructure and Security Services (ISS) Technical Writers and evolving industry standards and styles.

Date	Description	Author
May 2006	Patchman (VistA Auto Patch Utility and VistA Remote Patching) documentation, Kernel Patch XU*8.0*345 Draft -- Never Released	Susan Strack, Jose Garcia, Raul Mendoza, all from Oakland, CA OIFO

Table i: Documentation History

Patch History

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

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- Software Quality Assurance (SQA)—Gurbir Singh
- Technical Writer—Susan Strack

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- Thomas Ash—Developer of the VistA Auto Patch Utility (VAPU)
- Dennis Follensbee—Developer of the VistA Remote Patching system

Health Systems Design & Development (HSD&D) Infrastructure & Security Services (ISS) is reclassifying this software as Class I and releasing it nationally in Kernel Patch XU*8*345.

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Orientation

This supplemental documentation is intended for use in conjunction with the release of Patchman (VistA Auto Patch Utility and VistA Remote Patching), Kernel Patch XU*8*345. It outlines the details of the work involved in this patch for VA facilities. It is organized into the following major parts:

1. Introduction
2. Site Setup Overview
 - VistA Auto Patch Utility Menus and Options
 - VistA Remote Patching Menus and Options
3. Implementation and Maintenance (Technical Manual Information)
4. Software Security
5. Appendix A: Updating Out-of-Date Accounts Using Remote Patching

How to Use this Manual

This manual uses several methods to highlight different aspects of the material. The following symbols are used in the manual to alert the reader about special information:

- Various symbols are used throughout the documentation to alert the reader to special information. The following table describes these symbols:



Symbol	Description
	Used to inform the reader of general information including references to additional reading material
	Used to caution the reader to take special notice of critical information

Table ii: Documentation symbol descriptions

- Descriptive text is presented in a proportional font (as represented by this font). "Snapshots" of computer online displays (i.e., character-based screen captures/dialogs) and computer source code are shown in a non-proportional font.
 - User's responses to online prompts are highlighted in bold typeface.
 - The "<Enter>" found within these snapshots indicates that the user should press the Enter key on their keyboard.
 - Author's comments are displayed in italics or as "callout" boxes.



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).
- 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, located on the [web site] and where "N" represents the first name as a number spelled out and incremented with each new entry.



The list of Approved Application Abbreviations can be found at the following Web site:

[DOMAIN.EXT](#)

Who Should Read this Manual?

The intended audience for this documentation is all key stakeholders. The primary stakeholder is Health Systems Implementation Training and Enterprise Support (HSITES). Additional stakeholders include Infrastructure & Security Service (ISS), Development & Infrastructure Support (DaIS), Health Systems Design and Development (HSD&D), all Veterans Health Information Systems and Technology Architecture (VistA) sites, and Veterans Affairs Medical Centers (VAMC). This documentation is written with the assumption that the reader is familiar with the following:

- VistA computing environment
- VA FileMan data structures and terminology
- M programming language

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) 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 web address:

[DOMAIN.EXT](#)

How to Obtain Technical Information Online

Exported file, routine, and global documentation can be generated using Kernel, MailMan, and VA FileMan utilities.



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

Help at Prompts

VistA software has online help and commonly used system default prompts. In character-based mode, users are encouraged to enter question marks at any response prompt. Help messages are often provided showing lists of acceptable responses or format requirements. 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 VistA character-based software:

- 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 that may be stored in Help Frames.



Help messages may not be available for every prompt. If you enter "?" or "??", at a prompt and it does not have a Help message, the system will simply repeat the prompt.

Obtaining Data Dictionary Listings

Technical information about files and their associated fields 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.



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."

Reference Materials

Readers who wish to learn more about the VistA Challenge project software should consult the following:

- Automated VistA Maintenance, The VistA Auto Patch Utility (VAPU)—Documentation by Thomas Ash, Washington Veterans Affairs Medical Center (VAMC)
- VistA Patch Slammer—Documentation by Dennis Follensbee, Health Systems Implementation, Training and Enterprise Support (HSITES)

- VistA Challenge—Initial Assessment and Briefing
- VistA Challenge—Project Management Plan (PMP)
- VistA Challenge—Software Requirement Specification (SRS)
- VistA Challenge—Software Design Document (SDD)

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/>



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

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

[DOMAIN.EXT](#)

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

- | | |
|---------------------------|----------------------------|
| • Preferred Method | download.DOMAIN.EXT |
| • Albany OIFO | ftp.DOMAIN.EXT |
| • Hines OIFO | ftp.DOMAIN.EXT |
| • Salt Lake City OIFO | ftp.DOMAIN.EXT |



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.

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Chapter 1: Introduction

This documentation is intended for use in conjunction with the release of the Patchman (i.e., VistA Auto Patch Utility and VistA Remote Patching) software, Kernel Patch XU*8*345. It is a supplemental document to the patch description, outlining the details of the work involved in this patch for VA facilities. The menus and options exported in this software release are installed as part of the Kernel Installation and Distribution System (KIDS). The information contained in this supplement will be incorporated into the *Kernel Systems Manual* at a later date.

Purpose

This Class III software application has been delivered to Health Systems Design and Development (HSD&D) for reclassification and incorporation into the Class I Veterans Health Information Systems and Technology Architecture (VistA) Infrastructure & Security Services (ISS) suite of applications, releasing it nationally via Kernel Patch XU*8*345.

The intended audience for this documentation is all key stakeholders. The primary stakeholder is Health Systems Implementation Training and Enterprise Support (HSITES). Additional stakeholders include Infrastructure & Security Service (ISS), Development & Infrastructure Support (DaIS), Health Systems Design and Development (HSD&D), and all Veterans Affairs Medical Centers (VAMC).

Background

The Veteran Health Administration (VHA) VistA Maintenance Challenge was a contest presented by HSITES via FORUM to all Department of Veterans Affairs (VA) field facilities. Its goal was to solicit functionality for streamlining and increasing efficiency in maintaining VistA systems at VAMCs. The following two proposals were initially selected as VistA Maintenance Challenge winners for implementation:

1. The VistA Auto Patch Utility (VAPU) was created as Class III software to automate the Kernel Installation and Distribution System (KIDS) installation steps. This software gives VAMCs the ability to automate patch installations.
2. The VistA Remote Patching system was also created as Class III software. This software allows site support personnel the ability to patch multiple sites remotely

As work progressed on the VistA Auto Patch Utility, the proposal submitters continued their discussions and it became clear that they wanted to advance not only VAPU and the VistA Remote Patching system, but an enhanced version of that combination. This documentation addresses the enhanced combination of both VistA Challenge proposals. Health Systems Design & Development (HSD&D) Infrastructure & Security Services (ISS) is reclassifying this software as Class I.

Product Description

The VistA Auto Patch Utility and VistA Remote Patching software introduces significant revisions to the software distribution and installation process. Both have been designed with the intent to streamline and increase efficiency in maintaining VistA systems at VAMCs. Kernel Patch XU*8.0*345 exports the following two functional software components, described as follows:

- VistA Auto Patch Utility (VAPU)—Automates the Kernel Installation and Distribution System (KIDS) installation steps. This gives VAMCs the ability to automate patch installations for both single and integrated sites.
- VistA Remote Patching—Offers functionality to patch single and multiple test accounts remotely. A site designated as the Master sends patches and patch installation orders to registered Servant sites. Patches can be sent to Servant sites one by one, or in a single batch sent at one time. VistA Remote Patching software uses VAPU to automatically install patches, updating test accounts.

NOTE: VistA Remote Patching is not recommended for installation and implementation in productions accounts. This software is intended to be used to update out-of-date VistA accounts (e.g., test accounts).

VistA Auto Patch Utility

Currently, multiple system patching is a manual process that is inefficient, unable to satisfactorily maintain co-located systems, and is vulnerable to human error. The VistA Auto Patch Utility (VAPU) software has the following characteristics

- Standardized on all VistA systems
- Performs all required steps in patch installation
- Maintains a historical database
- Operates regardless of site size
- Capable of the co-location of many systems on one or more computer systems

The following functions are automated:

- Tests to determine if the MailMan message containing the patch is from FORUM
- Tests to determine if the patch is a KIDS message
- Tests to determine if the previous patch message sequence is installed. If the test fails, it automatically re-queues and installs the patch once conditions are met.
- Tests to inhibit user logons.
- Tests to take MailMan off-line.
- Tests to take TaskMan off-line
- Tests to take Health Level 7 (HL7) off-line
- Tests to take RPC Broker off-line

- Tests to disable options and protocols
- Loads the KIDS mail distributions
- Verifies checksums
- Performs backups
- Installs patches
- Restores any software taken offline prior to automatic installation, back online after installation is completed
- FTP file retrieval of KIDS distributions
- Flags patches released in error
- Provides developer tool to edit the installation process per patch before its release to Enterprise VistA Support (EVS)
- Provides site installer tool to control automatic patch installation
- Logs installation activity

Use the VistA Auto Patch Utility (VAPU) to setup automatic installation of patches (also referred to in this documentation as *auto-patching*). VAPU offers the functionality to verify the package and back up routines into a MailMan message. In addition to the baseline site parameter setup necessary for the correct functioning of this software, you can also use it to set up parameters to turn off TaskMan and lock the system by package. VAPU installs a new field, AUTOPATCH ENABLE/DISABLE field (#24), in the VistA PACKAGE file (#9.4) that allows you to turn on or off automatic installation of patches per VistA package. This field is exported with a default value of Disabled. This software is activated by a server option, S.XPDAUTO, to which you add to the G.PATCHES mail group as a remote member at site set up. When a patch comes in, the server validates that it's coming from FORUM and set up for automatic installation. It then installs the patch according to parameters set up in the files exported with Kernel Patch XU*8.0*345.

VAPU depends on rigid sequencing of patch installations. This increases efficiency for the KIDS distribution of informational patches as a sequence entry is created under File Comments.



VAPU assumes Class I software has *not* been modified by the site. Sites with modified VistA software that choose not to automatically install patches must disable automatic installation by the particular VistA package in the PACKAGE file (#9.4).

Safeguards

Inherent safeguards in the VistA Auto Patch Utility include:


- Two levels of control over the automated installation of VistA packages.
 1. Package-specific—Automatic installation of patches is enabled for all VistA packages in the initial site parameter setup. However, sites can enable or disable auto-patching by VistA package in the PACKAGE file (#9.4), offering sites the ability to control auto-patching per package.

2. Patch-specific—Developers and/or site personnel can create modifications to an installation for any given patch within a VistA package using the Edit VAPU Install Modifiers option. This offers further control over automatic installation per patch.
- Parameters are defined in a new file, VAPU SITE PARAMETERS file (#9.72), which include the following fields:
 - number of days from receipt in which to install patch
 - time to install patch
 - host file directory that includes install log files
 - the ability to enable/disable the automatic patch installation
 - Patches that error out generate a MailMan message as well as a record of the error in the host file log.

The simplicity of VAPU requires minimal training for the end user (e.g., IRM). All actions are detailed in Alert messages and install log files; no additional support or backup is required. Functionality is available, such that sites can implement incrementally until a level of confidence is attained.

Limitations

Limitations inherent in the VistA Auto Patch Utility (VAPU) include:

- Inability to install patches that prompt for questions during the pre- or post-installation (i.e. interactive installations), because the answers are unknown. These patches must be flagged as a status of Manual [install] by the developers prior to sending the patch to Enterprise VistA Support (EVS) for release to the field.
 - The G.PATCHES mail group must:
 - Be in the parent domain remote member list for any sub-domains designated to be auto-patched. If this mail group does not exist, it must be created.
-  For a definition of the term *remote members*, see the section titled "Glossary" in this documentation.
- Exist on each system in order for automatic patching to occur.
- An Information Resources Management (IRM) mail group (i.e., G.PATCHES) must exist on each system in order for automatic patching to occur.

VistA Remote Patching Overview

VistA Remote Patching offers functionality for patching multiple sites (e.g., out-of-date VistA test accounts) remotely. This software is recommended for use with routine VistA installations and/or VA FileMan Data Dictionary changes when a software installation doesn't involve populating mail groups or setting up TaskMan to run a background job. It will not automate processes such as moving routines to the MGR account and running ZTMGRSET.



If files need to be populated or conversions need to be run, do not use VistA Remote Patching.

VistA Remote Patching is one of two functional components released with Kernel Patch XU*8.0*345 as part of the new Patchman [XPD AUTOMATIC PATCHING MENU] menu. It sets up the Master and Servant relationship between Veterans Affairs Medical Center (VAMC) Information Resource Management (IRM) sites (e.g., out-of-date VistA test accounts) and passes packages to the VistA Auto Patch Utility (VAPU) component of Patchman.

A site designated as the Master sends patches and patch installation orders to registered Servant sites. Patches can be sent to Servant sites one by one, or in a single batch sent at one time. A Master site can have multiple Servant sites; however, a Servant can have only one Master site.

This relationship is established through the Master site sending a mastership request to a potential Servant site. However, before this can happen, a new option, VISTA PATCH SERVER [XPD PATCH SERVER], exported with Kernel Patch XU*8.0*345 must be run at any potential Servant site at least once. This ensures that the MailMan message sent by the Master site is transferred to the XPD MAIL MESSAGES file (#9.79). The Servant site receives the message and accepts or declines servitude.



During site setup, the VISTA PATCH SERVER [XPD PATCH SERVER] option needs to be scheduled to run periodically using TaskMan, recommendation every 15 minutes, in order to transfer MailMan messages and activate the remote patching functionality. This can also be done manually, for example, by using the TaskMan option One-time Option Queue.

The flow of messages and entries into the files involved in establishing the Master/Servant site configuration are outlined below:

1. The Master site uses the Establish Mastership Over a Site option to send a MailMan message to a potential Servant site.
2. The MailMan message is delivered to the XPD VISTA PATCH mail group at the Servant site.
3. The option XPD PATCH SERVER is run to transfer the data from the MailMan message into the XPD MAIL MESSAGES file (#9.79).
4. The user at the Servant site is instructed to use the Respond to a Mastership Request option to accept or decline; then the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) is populated at the Servant site and a response notification is sent back to the Master site.
5. The Servants response message at the Master site triggers the population of the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77), registering the relationship.

Once this relationship is registered in File #9.77, the Master site can send patches to be installed without intervention from the Servant site.

The server option S.XPDAUTO is exported as part of the VistA Auto Patch Utility (VAPU). It is added to the G.PATCHES mail group as a remote member during site setup. S.XPDAUTO verifies that the MailMan message containing the patch is from FORUM and activates patches and patch orders for automatic installation. In the Master/Servant site configuration, once a patch request is received, the Master site sends copy of the patch over to the Servant site(s). Once this occurs, all transferring of MailMan messages and the activation the remote patching functionality is processed by the VISTA PATCH SERVER option.

VistA Remote Patching allows older patches to be installed (e.g., patches that were developed before there were mandatory install dates in the patch). Unlike VAPU, VistA Remote Patching does *not* depend on the rigid sequencing of patch installations. A patch sequence cross-reference is used to process patches that do not have their sequence numbers prominently displayed in the INSTALL file (#9.7). Thus, this software can be used to update out-of-date VistA accounts with back-dated patches.

Chapter 2: Site Setup Overview

Kernel Patch XU*8.0*345 is a Kernel Installation and Distribution System (KIDS) software release. Installation instructions can be found in the description for Kernel Patch XU*8.0*345, located on the Patch Module (i.e., Patch User Menu [A1AE USER]) on FORUM.

Site Setup at Your Veterans Affairs Medical Facility

This overview is a guide to follow when using this documentation to set up Kernel Patch XU*8.0*345 at your Veterans Affairs medical facility. Kernel Patch XU*8.0*345 is an implementation of software designed to:

- a. automate the installation of VistA packages
- b. patch single and multiple VistA accounts remotely

Most steps reference the corresponding section in this documentation for detailed information particular to the procedure or option.



All site parameters *must* be set up correctly for the VistA Auto Patch Utility to work properly. Perform each of the following steps in the order in which it appears in order to properly set up and implement this software at your site.

Step 1. Set Up Site Parameters

Use the Edit VAPU Site Parameters option to enter or edit the site-specific VAPU parameters in the VAPU SITE PARAMETERS file (#9.72). This initial setup is required as a part of the installation of VAPU.



For information on setting up the VAPU site parameters, see the option: “Edit VAPU Site Parameters” in this documentation.

Step 2. Edit Your Site's Host File Server Directory

A VMS host file server (HFS) directory (e.g., HFS DIRECTORY: USER\$:[TEMP]/) must already exist at your site.



For information on setting editing your site's host file server directory, see the section: “Edit Your Site's Host File Server Directory” in this documentation.

Step 3. Set Up Server and Remote Domain(s)

The server option S.XPDAUTO is exported with Kernel Patch XU*8.0*345. At setup, it must be entered as a remote member for each MailMan domain you wish to auto-patch using the VAPU. Additionally, you must enter G.PATCHES@<REMOTE DOMAIN> for each MailMan domain to which your production server relays messages.



For information on setting up the server option S.XPDAUTO and remote domains, see the option: “Edit G.PATCH Remote Members” in this documentation.

Step 4. Enable Automatic Installation in PACKAGE file (#9.4)

In order to control auto-patching per VistA package, sites must edit the PACKAGE file (#9.4), enabling each VistA package for automatic installation.



For information on enabling automatic installation in PACKAGE file (#9.4), see the option: “Enable/Disable Auto Patching By Package” in this documentation.

Step 5. Set Up Default Parameters in VAPU PACKAGE MODIFIERS file (#9.75)



For information on setting up the default site parameters in VAPU PACKAGE MODIFIERS file (#9.75), see the option: “Edit VAPU Package Modifiers” in this documentation.

Step 6. Use TaskMan to Schedule the XPD PATCH SERVER Option to Run at Regular Intervals

The VISTA PATCH SERVER [XPD PATCH SERVER] option is exported with Kernel Patch XU*8.0*345. It needs to be scheduled using TaskMan to run periodically in order to transfer MailMan messages and activate the remote patching functionality. The recommended scheduling frequency is every 15 minutes (i.e., 900S). For example, the initial MailMan message request establishing a Master and Servant relationship between sites for remote patch installations is propagated from MailMan to the XPD MAIL MESSAGES #9.79 and XPD PATCHING SERVITUDE/MASTERSHIP (#9.77) files.

Figure 2-1 shows an example of using TaskMan to schedule the VISTA PATCH SERVER [XPD PATCH SERVER] option to run every 15 minutes.

```

Select Taskman Management Utilities Option:

    Schedule/Unschedule Options
    One-time Option Queue
    Taskman Management Utilities ...
    List Tasks
    Dequeue Tasks
    Requeue Tasks
    Delete Tasks
    Print Options that are Scheduled to run
    VPD Cleanup Task List
    Print Options Recommended for Queueing

Select Taskman Management Option: Schedule/Unschedule Options

Select OPTION to schedule or reschedule: XPD PATCH SERVER      Vista Patch
Server
Are you adding 'XPD PATCH SERVER' as
a new OPTION SCHEDULING (the 23RD)? No// Y <Enter> (Yes)

COMMAND:                                     Press <PF1>H for help   Insert

                                Edit Option Schedule
    Option Name: XPD PATCH SERVER
    Menu Text: Vista Patch Server                                TASK ID:
    _____

    QUEUED TO RUN AT WHAT TIME:

    DEVICE FOR QUEUED JOB OUTPUT:

    QUEUED TO RUN ON VOLUME SET:

    RESCHEDULING FREQUENCY: 900s

    TASK PARAMETERS:

    SPECIAL QUEUEING: Startup Persistent
    _____

Exit      Save      Next Page      Refresh

Enter a command or '^' followed by a caption to jump to a specific field.

COMMAND: Exit                                     Press <PF1>H for help   Insert

```

Figure 2-1: Use TaskMan to schedule the XPD PATCH SERVER option to run every 15 minutes

Step 7. Set Up/Register Master and Servant Sites

Use the Establish Mastership Over a Site option to send a request, establishing a Master and Servant relationship with a selected site(s) for remote patch installations.



For information on setting up and registering the Master and Servant Sites for patching single and multiple VistA accounts remotely, see the option: “Establish Mastership Over a Site” in this documentation.

Software Dependencies

The VistA Auto Patch Utility and VistA Remote Patching software are compatible with the VMS/Cache system configuration. This software requires that both Test and Production accounts exist in a standard VistA operating environment in order to function correctly. The account(s) must contain the *fully* patched versions of the following VistA software:

- Kernel V. 8.0
- Kernel Toolkit V. 7.3
- VA MailMan V. 8.0
- VA FileMan V. 22.0

In addition to a standard VistA operating environment, the following patches must be installed before running this patch:

VistA Software and Version	Associated Patch Designation(s)	Brief Patch Description
Kernel V. 8.0	XU*8.0*275	Kernel GT.M Support—This patch adds support for the GT.M Mumps implementation and provides support for the BCMA backup plan that is running on GT.M over Linux. The approach of GT.M is different than other MUMPS vendors. Support is provided for both GT.M on VMS and GT.M on Linux. Like Cache, GT.M does not have UCI's. Unlike other MUMPS implementations, each routine is a separate file on the host OS. GT.M does not have a ZLOAD or ZSAVE, so several utilities had to be fixed.

Table 2-1: Software dependencies prior to installation of Kernel Patch XU*8*345

Chapter 3: Patchman Menus and Options

Figure 3-1 and Figure 3-2 shows the Kernel Installation & Distribution System (KIDS) menu with the new Patchman [XPD AUTOMATIC PATCHING MENU] menu, exported with Kernel Patch XU*8.0*345. Patchman comprises two functional components, listed below, that work together to automate the installation of VistA packages for single and integrated sites:

1. VistA Auto Patch Utility Menu [XPD VAPU MAIN MENU]
2. VistA Remote Patching Menu [XPD PATCHING MENU]

```
Select Kernel Installation & Distribution System

Edits and Distribution ...           [XPD DISTRIBUTION MENU]
Utilities ...                       [XPD UTILITY]
Installation ...                     [XPD INSTALLATION MENU]
**> Locked with XUPROGMODE
Patchman ...                         [XPD AUTOMATIC PATCHING MENU]

Select Kernel Installation & Distribution System Option: Patchman

1 VistA Auto Patch Utility Menu ... [XPD VAPU MAIN MENU]
2 VistA Remote Patching Menu ...    [XPD PATCHING MENU]

Select Patchman Option: 1 <Enter> VistA Auto Patch Utility Menu

1 Edit VAPU Site Parameters          [XPD VAPU SITE PARAMETERS]
2 Edit G.PATCH Remote Members        [XPD VAPU ADD SERVER TO GROUP]
3 Edit VAPU Package Modifiers        [XPD VAPU EDIT PKG MODS]
4 Edit VAPU Install Modifiers        [XPD VAPU EDIT INSTALL MODS]
5 Send Install Modifiers             [XPD VAPU SEND MODIFIERS]
6 Enable/Disable Autopatching by Package [XPD VAPU ENABLE/DISABLE PKG]
7 Install a Patch Manually           [XPD VAPU MANUAL INSTALL]
8 Edit EXE Location                  [XPD VAPU EDIT EXE LOCATION]
10 Manage Installation Queues ...     [XPD VAPU MNG PATCH INST QUE]
    1 List VAPU's Installation Tasks [XPD VAPU LIST TASKS]
    2 Requeue VAPU's Install Tasks  [XPD VAPU REQUEUE TASKS]
    3 Delete a Task in VAPU's Install Queues [XPD VAPU DELETE TASKS]
11 Create Cache/NT Batch File for FTP [XPD VAPU CREATE CACHE/NT FILE]
13 Patch Monitor Menu ...            [XPD VAPU PATCH MONITOR MENU]
    1 Print Patch Report            [XPD VAPU PRINT PATCH REPORT]
    2 Complete Patch Install Documentation [XPD VAPU COMPLETE PATCH]
    3 Delete Patch from Monitor      [XPD VAPU DELETE PATCH]

Select VistA Auto Patch Utility Menu Option:
```

Figure 3-1: VistA Auto Patch Utility exported options

```

Select Kernel Installation & Distribution System: ?

Edits and Distribution ...                [XPD DISTRIBUTION MENU]
Utilities ...                          [XPD UTILITY]
Installation ...                        [XPD INSTALLATION MENU]
    **> Locked with XUPROGMODE
Patchman ...                            [XPD AUTOMATIC PATCHING MENU]

Select Kernel Installation & Distribution System Option: Patchman

1  Vista Auto Patch Utility Menu ...    [XPD VAPU MAIN MENU]
2  Vista Remote Patching Menu ...      [XPD PATCHING MENU]

Select Patchman Option: 2 <Enter> Vista Remote Patching Menu

*****
WELCOME TO THE REMOTE PATCHING PACKAGE
VISTA REMOTE PATCHING MENU
*****

M  Vista Patching System Master ...    [XPD PATCHING MASTER]
S  Vista Patching System Servant ...   [XPD PATCHING SERVANT]

Select Vista Remote Patching Menu Option: M <Enter> Vista Patching System Master

1  Establish Mastership Over a Site    [XPD MASTER - SERVANT ESTABLISH]
2  Send Patch(es) to Servant(s)       [XPD SEND PATCH TO SERVANT]
3  Report of Patches Installed (Master Sites) [XPD PATCH REPORT]
5  Designate a Patch Informational     [XPD DESIGNATE INFORMATIONAL]

Select Vista Patching System Master Option: ?

*****
WELCOME TO THE REMOTE PATCHING PACKAGE
VISTA REMOTE PATCHING MENU
*****

M  Vista Patching System Master ...    [XPD PATCHING MASTER]
S  Vista Patching System Servant ...   [XPD PATCHING SERVANT]

Select Vista Remote Patching Menu Option: S <Enter> Vista Patching System Servant

1  Respond to a Mastership Request     [XPD MASTER - SERVANT RESPOND]
2  Check Patch Install Status (for Servant Sites) [XPD PATCH STATUS]
3  Install File Patch Listing Dump     [XPD PATCH LISTING]
4  Un-stick The Processing Queue (Servants Only) [XPD UNSTICK QUEUE]
5  Designate a Patch Informational     [XPD DESIGNATE INFORMATIONAL]

Select Vista Patching System Servant Option:

```

Figure 3-2: Vista Remote Patching exported options

VistA Auto Patch Utility Menus and Options

The menus and options exported with the release of Kernel Patch XU*8*345, which comprise the VistA Auto Patch Utility (VAPU) are listed and described in detail in this section. Instructions are provided on how to use this software in the daily operations of a Veterans Affairs Medical facility to automate the installation of VistA packages.



For information on the menus and options comprising VistA Remote Patching, also released as part of Kernel Patch XU*8.0*345, see the section titled: “VistA Remote Patching Menus and Options” in this documentation.

VistA Auto Patch Utility Menu

[XPD VAPU MAIN MENU]

This is the main menu comprising all the options for the VistA Auto Patch Utility.

```
Select Patchman Option: 1 <Enter> VistA Auto Patch Utility Menu
```

- 1 Edit VAPU Site Parameters
- 2 Edit G.PATCH Remote Members
- 3 Edit VAPU Package Modifiers
- 4 Edit VAPU Install Modifiers
- 5 Send Install Modifiers
- 6 Enable/Disable Autopatching by Package
- 7 Install a Patch Manually
- 8 Edit EXE Location
- 10 Manage Installation Queues ...
 - 1 List VAPU's Installation Tasks
 - 2 Requeue VAPU's Install Tasks
 - 3 Delete a Task in VAPU's Install Queues
- 11 Create Cache/NT Batch File for FTP
- 13 Patch Monitor Menu ...
 - 1 Print Patch Report
 - 2 Complete Patch Install Documentation
 - 3 Delete Patch from Monitor

```
Select VistA Auto Patch Utility Menu Option:
```

Figure 3-3: VistA Auto Patch Utility Menu

Edit VAPU Site Parameters

[XPD VAPU SITE PARAMETERS]



All site parameters must be set up correctly for the VistA Auto Patch Utility to work properly.

Use the Edit VAPU Site Parameters option to enter or edit the site-specific VAPU parameters in the VAPU SITE PARAMETERS file (#9.72). This initial setup is required as a part of the installation of

VAPU. It is the first of three files that you can edit to adjust your baseline parameters. The other two files: PACKAGE (#9.4) and VAPU PACKAGE MODIFIERS (#9.75) are provided to allow the site to modify install parameters to suit their specific needs. For example:

1. Sites enable automatic installation of patches for all VistA packages in the VAPU SITE PARAMETERS file (#9.72) by using the Edit VAPU Site Parameters option, Figure 3-4, and entering the value Enabled at the prompt "ENABLE/DISABLE AUTOPATCH: DISABLE//."
2. In order to control auto-patching per package, as a second step sites must edit the PACKAGE (#9.4) using the Enable/Disable Autopatching by Package option to change the AUTOPATCH ENABLE/DISABLE field (#24) to Enabled. This field is exported with a default value of Disabled.



For information on editing Field #24 in the PACKAGE file (#9.4), to enable auto-patching per package, see the section titled: "Enable/Disable Auto Patching By Package".

3. The VAPU PACKAGE MODIFIERS file (#9.75) can be edited using the Edit VAPU Package Modifiers to notify the VistA Auto Patch Utility which (if any) background processes need to be stopped prior to the installation of patches for a given package, by default.



For information on the modifying VistA packages for automatic installation, see the option "Edit VAPU Package Modifiers" in this documentation.



The name of your site must be entered in the format in which it exists in the DOMAIN file (#4.2) (e.g., IMAGE-DOMAIN.EXT). Take care, to enter your site name correctly. This field is not editable. If a correction is necessary, the contents of the field must be deleted and the name of your site re-entered.

Figure 3-4 shows a screen capture of the Edit VAPU Site Parameters option.

```

Select VistA Auto Patch Utility Menu Option: EDIT VAPU SITE
SITE NAME: // IMAGE-DOMAIN.EXT
ENABLE/DISABLE AUTOPATCH: ENABLE//
PATCH INSTALL USER: [LAST NAME],[FIRST NAME]//
DAYS TO INSTALL: 7//
SITE INSTALL TIME: 1//
REBUILD MENUS: NO//
FTP FIELD OFFICE NAME: DOWNLOAD.DOMAIN.EXT//
FTP FILE DIRECTORY: USER$:[TEMP]//
INFORMATIONAL MAIL GROUP: XPD VISTA PATCH//
        
```

Enables auto-patching for all VistA packages. In addition to this, Field #24, PACKAGE file (#9.4), needs to be set for each VistA package your site wants to enable for auto-patching.

Pointer to FTP files retrieved from DOWNLOAD.DOMAIN.EXT are place

Exported mail group.

Figure 3-4: Edit the VAPU SITE PARAMETERS file (#9.72)

Table 3-1 lists the prompts generated by the Edit VAPU Site Parameters option and provides a description of the field value(s) for each.

Prompt	Description
SITE NAME: // IMAGE-DOMAIN.EXT	Required field—Your site name. This is a free text field. Set up the domain for the Servant site first.
ENABLE/DISABLE AUTOPATCH: ENABLE//	When enabled, allows automatically installing of selected VistA packages. NOTE: For information on enabling and disabling auto-patching per VistA package, see the option titled: "Enable/Disable Auto Patching By Package" in this documentation.
PATCH INSTALL USER: [LAST NAME],[FIRST NAME]//	Site support personnel must have G.PATCHES, DUZ(0)="@", XUPROG, and XUPROGMODE.
DAYS TO INSTALL: 7//	Install occurs this many days from receipt of patch in MailMan. A value of 0 installs patches immediately.
SITE INSTALL TIME: 100//	Military time (leading zeros truncated). Starts at 0100 or later.
REBUILD MENUS: NO//	If your site has a nightly TaskMan job set up that rebuilds menus and if this job runs after the site install time, you probably should enter no.
FTP FIELD OFFICE NAME: DOWNLOAD.DOMAIN.EXT//	Enter FTP sites from which to retrieve your sites' KIDS FTP distributions. This field is a pointer to the VAPU FTP SITES file (#9.73), which is exported with Kernel Patch XU*8.0*345 and pre-populated with the following values: <ul style="list-style-type: none"> • DOWNLOAD.DOMAIN.EXT • DOMAIN.EXT • DOMAIN.EXT • DOMAIN.EXT NOTE: The directory at the FTP location on each server is: ANONYMOUS.SOFTWARE
FTP FILE DIRECTORY: USER\$:[TEMP]//	This is a VMS temp directory. It must be publicly accessible so the VistA Auto-Patch Utility can access it. This location is used for the sites' local KIDS downloads. When an FTP file is retrieved from DOWNLOAD.DOMAIN.EXT or any one of the servers Anonymous directories, it is placed

Prompt	Description
	<p>in this directory.</p> <p>Users will need to access this directory because it is also the storage location for the .TXT outputs providing information on patch installations.</p> <p>Enter the appropriate directory name for your site.</p>
INFORMATIONAL MAIL GROUP: XPD VISTA PATCH//	<p>Receives install messages. Master sites send requests to selected site(s) for remote patch installations in MailMan messages to the XPD VISTA PATCH mail group, exported with Kernel Patch XU*8.0*345. These selected site(s) must be members of this mail group in order to receive this request.</p> <p>Points to MAIL GROUP file (#3.8).</p>

Table 3-1: Prompts and descriptions for the Edit VAPU Site Parameters option

The VistA Auto Patch Utility offers sites' two levels of control over the automated installation of VistA packages.

1. Package-specific—Sites enable automatic installation of patches for all VistA packages in the initial site parameter set up. This is done by entering the value Enabled at the prompt "ENABLE/DISABLE AUTOPATCH: DISABLE//" using the Edit VAPU Site Parameters option. In order to control auto-patching for each package, sites must use the Enable/Disable Autopatching by Package option and change the AUTOPATCH ENABLE/DISABLE field (#24) to Enabled. This field is exported with a default value of Disabled.
2. Patch-specific—Developers and/or site personnel can create installation modifications for any given patch within a VistA package. To do this, use the Edit VAPU Install Modifiers option. This option can also flag a patch as a status of Entered In Error, and gives you the opportunity to specifically designate the installation as automatic or manual (i.e., "AUTO/MANUAL: //").



For information on the installation modification (Install Modifier) process, see the option "Edit VAPU Install Modifiers" in this documentation.



The FTP FILE DIRECTORY and EXECUTABLE LOCATION at your site must be valid and site personnel performing automatic patch installations must have the correct privileges to access both. At a minimum, site personnel performing auto-patching must have the following access to the system:

- must be a member of the G.PATCHES mail group
- must have programmer access (DUZ(0)=" @")
- must have been assigned the security keys: XUPROG, and XUPROGMODE



Programmer access in VistA is defined as DUZ(0)="@". It grants the privilege to become a programmer in VistA. Programmer access allows you to work outside many of the security controls enforced by VA FileMan, enables access to all VA FileMan files, access to modify data dictionaries, etc. It is important to proceed with caution when having access to the system in this way.

Edit Your Site's Host File Server Directory

A VMS host file server (HFS) directory (e.g., HFS DIRECTORY: USER\$:[TEMP]/) must already exist at your site. Site temp directories are publicly accessible. Because of this, it is recommended that you use it as your HFS directory. Regardless, the HFS directory needs to be made publicly accessible so the VistA Auto-Patch Utility can access it. Users will need to access it as well, because the log file location is defined in the HFS directory.

Use VA FileMan to edit the HFS directory. The HFS DIRECTORY field (#5) is located in the VAPU SITE PARAMETERS file (#9.72). Set the file up as public so anyone can write to it. This field is the storage directory for automatic installation .TXT outputs providing information on patch installations.

The following is the data dictionary definition for the HFS DIRECTORY field (#5) in the VAPU SITE PARAMETERS file (#9.72):

9.72,5	HFS DIRECTORY	0;6 FREE TEXT (Required)
	INPUT TRANSFORM:	K:\$L(X)>100!(\$L(X)<3) X
	LAST EDITED:	SEP 09, 2003
	HELP-PROMPT:	Answer must be 3-100 characters in length. This field is the storage Directory for Autoinstall .TXT outputs when a patch is installed. e.g. USER\$:[TEMP]
	DESCRIPTION:	This field defines the FTP Source for downloading KIDS file distributions.

Figure 3-5: HFS DIRECTORY field (#5) in the VAPU SITE PARAMETERS file (#9.72)

Edit G.PATCH Remote Members	[XPD VAPU ADD SERVER TO GROUP]
------------------------------------	---------------------------------------

The server option S.XPDAUTO is exported with Kernel Patch XU*8.0*345. At setup, it must be entered as a remote member for each MailMan domain you wish to auto-patch using the VAPU. Additionally, you must enter G.PATCHES@<REMOTE DOMAIN> for each MailMan domain to which your production server relays messages.



The following instructions use the Central Alabama, Tuskegee, and Test systems as examples of systems, which have been combined as an integrated facility, where Central Alabama represents a Production system, Tuskegee represents a Legacy system, and Test represents a Test system

For example, Central Alabama is a merged (or integrated) facility. The production domain serves (or relays) messages for the Tuskegee and Test domains. The following is an example of a production domain and its relationship to Tuskegee and Test domains through the G.PATCHES mail group, Figure 3-8.

Use the Edit G.PATCH Remote Members option to activate the VistA Auto Patch Utility. Enter the remote members, as shown below:

1. Add the server option S.XPDAUTO to your sites' production domain mail group (e.g., G.PATCHES@DOMAIN.EXT) as a remote member, Figure 3-6.
2. Add the G.PATCHES mail group of any sub-domains (e.g., [G.PATCHES@DOMAIN.EXT](#) and G.PATCHES@DOMAIN.EXT) to the production domain mail group as remote members, Figure 3-6.

```

Select VistA Auto Patch Utility Menu Option: 2 <Enter> Edit G.PATCH Remote
Members
EDITING PATCHES Mail Group - REMOTE MEMBERS:
Select REMOTE MEMBER: ?
    '^' TO STOP:

    You may enter a new MEMBERS - REMOTE, if you wish
    Enter a remote address (name@domain) or local
    H.device) or local server (S.server).

Select REMOTE MEMBER: S.XPDAUTO
Are you adding 'S.XPDAUTO@DOMAIN.EXT' as
a new REMOTE MEMBER (the 1ST for this MAIL GROUP)? No// Y <Enter> (Yes)
Select REMOTE MEMBER: G.PATCHES@DOMAIN.EXT
Are you adding 'G.PATCHES@TEST.DOMAIN.EXT' as
a new MEMBERS - REMOTE (the 2ND for this MAIL GROUP)? No// Y <Enter> (Yes)
Select REMOTE MEMBER: G.PATCHES@DOMAIN.EXT
Are you adding 'G.PATCHES@DOMAIN.EXT' as
a new MEMBERS - REMOTE (the 3RD for this MAIL GROUP)? No// Y <Enter> (Yes)
Select REMOTE MEMBER:
  
```

Figure 3-6: Add S.XPDAUTO and sub-domain G.PATCHES to production domain G.PATCHES as remote members

Figure 3-7 illustrates adding the server option S.XPDAUTO to the Test domain G.PATCHES mail group (G.PATCHES@DOMAIN.EXT). Sub-domains of the Production system only have to add their own server option to themselves as a remote member; however, this must be done from within the account itself. It *cannot* be done remotely from another account.

```

Select VistA Auto Patch Utility Menu Option: 2 <Enter> Edit G.PATCH Remote
Members
EDITING PATCHES Mail Group - REMOTE MEMBERS:
Select REMOTE MEMBER: ?
    '^' TO STOP:

    You may enter a new MEMBERS - REMOTE, if you wish
    Enter a remote address (name@domain) or local device (D.device or
    H.device) or local server (S.server).

Select REMOTE MEMBER: S.XPDAUTO
Are you adding 'S.XPDAUTO@TEST.DOMAIN.EXT' as
a new REMOTE MEMBER (the 1ST for this MAIL GROUP)? No// Y <Enter> (Yes)
Select REMOTE MEMBER:

```

Add server option to the Test domain G.PATCHES mail group as a remote member.

Figure 3-7: Sub-domain G.PATCHES adds S.XPDAUTO to itself as a remote member



The G.PATCHES mail group must be in the parent domain remote member list for any sub-domain designated to be auto-patched. If this mail group does not exist, it must be created.

Figure 3-8 shows the resulting remote member lists for the sample integrated facility (e.g., Central Alabama).

```

DOMAIN.EXT
REMOTE MEMBER: G.PATCHES@TEST.DOMAIN.EXT
REMOTE MEMBER: G.PATCHES@DOMAIN.EXT
REMOTE MEMBER: S.XPDAUTO@DOMAIN.EXT

TEST. DOMAIN.EXT
REMOTE MEMBER: S.XPDAUTO@TEST.DOMAIN.EXT

DOMAIN.EXT REMOTE MEMBER: S.XPDAUTO@ DOMAIN.EXT

```

Production system G.PATCHES remote members.

Test system G.PATCHES remote member.

Legacy system G.PATCHES remote member.

Figure 3-8: Remote member lists for the example integrated facility.



To activate the VistA Auto Patch Utility, you must add the S.XPDAUTO server option as a remote member.



For a definition of the term *remote members*, see the "Glossary" in this documentation.

Edit VAPU Package Modifiers**[XPD VAPU EDIT PKG MODS]**

Site support personnel can use this option to edit the VAPU PACKAGE MODIFIERS file (#9.75), setting parameters to:

- stop VistA packages (i.e., TaskMan, HL7, MailMan, RPC Broker) running background processes during installations
- inhibit logons
- disable options or protocols

This option allows sites to set default Package Modifier parameters for any VistA package which has been set up for automatic installation.



Editing the VAPU PACKAGE MODIFIERS file (#9.75) will have no effect over patch installations unless the VistA package is enabled for automatic installation in the PACKAGE file (#9.4), field AUTOPATCH ENABLE/DISABLE (#24). For more information on enabling each VistA package for automatic installation, see the documented option titled "Enable/Disable Auto Patching By Package" in this documentation.



For more information on modifying installation parameters (Install Modifiers), see the option titled "Edit VAPU Install Modifiers" in the *Patchman, Supplement To Patch Description, Kernel Patch XU*8.0*345*.



For a definition of the terms *Package Modifier* and *Install Modifier*, see the "Glossary" in this documentation.

By answering Yes to stopping TaskMan, HL7, MailMan, and/or Broker, Figure 3-9, the respective task will be performed prior to the automatic installation of the patch. Once the install is complete, the task is reversed. For example, if you set the prompt "STOP TASKMAN" to Yes, TaskMan will be stopped prior to the automatic installation of the patch. Once the installation is complete, TaskMan will be restarted.

Setting the prompt "TAKE OPTIONS/PROTOCOLS OFFLINE" to Yes disables options and protocols, taking them offline prior to the installation. Once completed, VAPU restores them back online.

Figure 3-9 shows the tasks that the Package Modifier, set in the VAPU PACKAGE MODIFIERS file (#9.75), controls.

```
Select VistA Auto Patch Utility Menu Option: 3 <Enter> Edit VAPU Package
Modifiers
Select VAPU PACKAGE MODIFIERS PACKAGE NAME: HL
    1   HL7 PERFORMANCE ENHANCMENTS           HL7
    2   HL HEALTH LEVEL SEVEN                  HL
CHOOSE 1-2: 2 <Enter> HEALTH LEVEL SEVEN      HL
Are you adding 'HEALTH LEVEL SEVEN' as
a new VAPU PACKAGE MODIFIERS (the 2ND)? No// y <Enter> (Yes)
PACKAGE NAME: HEALTH LEVEL SEVEN//
STOP TASKMAN: NO <Enter> NO
STOP HL7: Y <Enter> YES
STOP MAILMAN: NO <Enter> NO
STOP BROKER: NO <Enter> NO
INHIBIT LOGONS: NO <Enter> NO
Select PROTOCOLS TO DISABLE:
Select OPTIONS TO DISABLE:
TAKE OPTIONS/PROTOCOLS OFFLINE: ?
    Choose from:
        0          NO
        1          YES
TAKE OPTIONS/PROTOCOLS OFFLINE: 0 <Enter> No
```

Figure 3-9: Edit the VAPU PACKAGE MODIFIERS file (#9.75)

Table 3-2 lists the prompts generated by the Edit VAPU Package Modifiers option and provides a description of the field value(s) for each.

Prompt	Description
Select VAPU PACKAGE MODIFIERS PACKAGE NAME: HEALTH LEVEL SEVEN	This is the PACKAGE NAME field (#.01), located in the VAPU PACKAGE MODIFIERS file (#9.74), which points to the PACKAGE file (#9.4).
PACKAGE NAME: HEALTH LEVEL SEVEN //	Required field—This value echoes back as the default based on the value entered at the Select prompt. Points to PACKAGE file (9.4).
STOP TASKMAN (Yes/No): //	Enter 0 or No, 1 or Yes. The Installer can use this field to modify VAPU install parameters to stop TaskMan prior to automatically installing a KIDS Patch. Once the installation is complete, TaskManager will be restarted.
STOP HL7: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but apply it to HL7.
STOP MAILMAN: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but

Prompt	Description
	apply it to MailMan.
STOP BROKER: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but apply it to the RPC Broker.
INHIBIT LOGONS: NO//	Enter 0 or No, 1 or Yes. Tests to inhibit user logons.
Select PROTOCOLS TO DISABLE:	Optionally, enter additional protocol(s) you want to disable.
Select OPTIONS TO DISABLE:	Optionally, enter additional option(s) you want to disable.
TAKE OPTIONS/PROTOCOLS OFFLINE: NO//	Enter 0 or No, 1 or Yes. Tests to disable options and protocols. If set to 1 or Yes, VAPU takes the options and protocols offline prior to the automatic installation. Once the automatic installation is complete, the VAPU automatically brings the options and protocols back online.

Table 3-2: Prompts and descriptions for the Edit VAPU Package Modifiers option



For a definition of the term *Autoinstall*, see the "Glossary" in this documentation.



With the exception of OPTION/PROTOCOL handling, the install modification (Install Modifier) process takes precedence over the package modification set if an Install Modifier is received prior to the automatic installation of the patch.

Edit VAPU Install Modifiers	[XPD VAPU EDIT INSTALL MODS]
------------------------------------	-------------------------------------

The VistA Auto Patch Utility employs an installation modification (Install Modifier) concept that works in conjunction with KIDS. Receipt of an Install Modifier sets up the site parameters for installations. Any VistA patch installation can be modified using this option. Modifications to installations take precedence over package modifications, with the exception of options and protocols defined as needing to be taken offline. This is done during the automatic installation. The installation modification process is patch-specific, whereas package modification is more general and applies to all VistA patches for a package.



For more information on modifying package installations (Package Modifiers), see the option titled "Edit VAPU Package Modifiers" in this documentation.

The significant differences between the VAPU Install and Package Modification processes are as follows:

- Installation modification can be used to flag a patch as either Entered in Error (i.e., "ENTERED IN ERROR FLAG: //") or give you the opportunity to specifically designate the installation as

automatic or manual (i.e., "AUTO/MANUAL: //"). For instance, there are times when issues arise after a patch has been released that warrant its recall. This type of situation would necessitate that the site use the Edit VAPU Install Modifiers option to set the prompt "ENTERED IN ERROR FLAG: //" to a value of Yes. VAPU will not automatically install patches when this field set to Yes.



Although VAPU won't install a patch flagged as Entered in Error, it doesn't prevent someone from installing it manually.

- Installation modification allows site support personnel to flag an installation as Manual. Patch installations flagged as Manual will not be installed automatically. VAPU records the MailMan message IEN and, if applicable, the name of the KIDS host file in the Install Modifier to assist site support personnel in performing a manual installation.



For more information on Manual installations, see the option titled "

Install A Patch Manually

[XPD VAPU MANUAL INSTALL

a Patch Manually" in this document.

For KIDS host file distributions, site support personnel must ensure that the name of the host file is entered in the FTP DISTRIBUTION FILENAME field (#6), prompt "FTP DISTRIBUTION FILENAME:" Figure 3-10.



For information on using VAPU to auto-install KIDS host files, see the section titled "KIDS Host File Installation Retrieved Via FTP" in this documentation.

Figure 3-10 shows the tasks that the Install Modifier, set in the VAPU INSTALL MODIFIERS file (#9.74), controls:

```

Select VistA Auto Patch Utility Menu Option: 4 <Enter> Edit VAPU Install
Modifiers
Select VAPU INSTALL MODIFIERS INSTALL NAME: HL*1.6*117
Are you adding 'HL*1.6*117' as a new VAPU INSTALL MODIFIERS (the 1ST)? No// Y
<Enter> (Yes)
INSTALL NAME: HL*1.6*117//
SEQUENCE #: 97
AUTO/MANUAL: ?
    Answer AUTO or MANUAL to this REQUIRED field.
    Choose from:
        0      AUTO
        1      MANUAL
AUTO/MANUAL: 1 <Enter> Manual
STOP TASKMAN (Yes/No): N <Enter> NO
STOP HL7: Y <Enter> YES
STOP MAILMAN: N <Enter> NO
STOP BROKER: N <Enter> NO
INHIBIT LOGONS: N <Enter> NO
TAKE OPTIONS/PROTOCOLS OFFLINE: N <Enter> NO
Select PROTOCOLS TO DISABLE:
Select OPTIONS TO DISABLE:
FTP DISTRIBUTION FILENAME: HL_1_6_117.KID
ENTERED IN ERROR FLAG: 0// ?
    Choose from:
        0      NO
        1      YES
ENTERED IN ERROR FLAG: 0// 1 <Enter> YES

```

Figure 3-10: Edit the VAPU INSTALL MODIFIERS file (#9.74)

Table 3-3 lists the prompts generated by the Edit VAPU Install Modifiers option and provides a description of the field value(s) for each.

Prompt	Description
Select VAPU INSTALL MODIFIERS INSTALL NAME: HL*1.6*117	This field is the install name as it should appear in the INSTALL file (9.7) once it arrives. Example: HL*1.6*107 Optionally, you can enter a new VAPU INSTALL MODIFIER
INSTALL NAME: HL*1.6*117//	Required field—This value echoes back as the default based on the value entered at the Select prompt.
SEQUENCE #: //	Required field—Patch sequence number.
AUTO/MANUAL: //	Required field—Required field. Enter 0 or AUTO to install the patch Automatically. This field also provides for some interaction between the Patch Release messages, so the VAPU knows

Prompt	Description
	<p>when a TASK is ready to process.</p> <p>For FTP distributions, the patch requires an Install Modifier and the Patch Release message before it can begin processing. The Patch Release message creates a record stub; however, determines the message is not installable and waits for the Install Modifier. Conversely, if the Install Modifier is received first, the FTP distribution will not be installed until the Patch Release Notification has been received.</p> <p>Enter 1 or MANUAL to install patch manually.</p>
STOP TASKMAN (Yes/No): //	<p>Enter 0 or No, 1 or Yes. Developers can use this field to modify VAPU install parameters outside of KIDS. It can be used to stop TaskMan prior to automatically installing a KIDS Patch. Once the installation is complete, TaskManager will be restarted.</p> <p>If set to 1 or Yes, the VAPU waits to receive an Install Modifier from FORUM before proceeding with the Installation.</p>
STOP HL7: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but apply it to HL7.
STOP MAILMAN: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but apply it to MailMan.
STOP BROKER: //	Enter 0 or No, 1 or Yes. See the description for the prompt "STOP TASKMAN (Yes/No): //," but apply it to the RPC Broker.
INHIBIT LOGONS: NO//	Enter 0 or No, 1 or Yes. Tests to inhibit user logons.
TAKE OPTIONS/PROTOCOLS OFFLINE: NO//	Enter 0 or No, 1 or Yes. Tests to disable options and protocols. If set to 1 or Yes, VAPU takes the options and protocols offline prior to the automatic installation. Once the automatic installation is complete, the VAPU automatically brings the options and protocols back online.
Select PROTOCOLS TO DISABLE:	Optionally, enter additional protocol(s) you want to disable.
Select OPTIONS TO DISABLE:	Optionally, enter additional option(s) you want to disable.
FTP DISTRIBUTION FILENAME:	For host file distributions, the Edit VAPU Install Modifiers option passes VAPU the KIDS host file distribution name. VAPU uses this name to retrieve the .KID file from National FTP software

Prompt	Description
	sites (anonymous directories).
ENTERED IN ERROR FLAG: //	Enter 0 or No, 1 or Yes. A new code, Patch 'IN ERROR', has been added to the existing set of codes in the INSTALL file (#9.7), STATUS field (#.02), and exported with Kernel Patch XU*8.0*345. This new code indicates if the patch was entered in error. For instance, there are times when issues arise after a patch has been released that warrant its recall. This type of situation would necessitate that the site use this option, Edit VAPU Install Modifiers, to edit the prompt "ENTERED IN ERROR FLAG: //" to a value of Yes. VAPU will not auto-install patches in which this install modifier prompt is set to Yes.

Table 3-3: Prompts and descriptions for the Edit VAPU Install Modifiers option

Install Modifier Workflow Scenarios

The following scenarios depict four different workflows involving the use of Install Modifiers.



Scenario three and four are the only ones using the Send Install Modifiers option in order to send the Install Modifiers to the G,PATCHES mail group.

I. The VistA package (Patch PSX*2.0*57) is Disabled (the default value of Disabled was not changed to Enabled in the PACKAGE file [#9.4]).

When a KIDS PackMan message arrives at the site from Forum, the server option S.XPDAUTO determines that the VistA package (Patch PSX*2.0*57) is *Disabled* for automatic installation and sends the following Alert message:

```
1.I Install PSX*2.0*57 MM: 1679902 This PACKAGE doesn't appear to be installed
```



The server option S.XPDAUTO does not create an Install Modifier for Patch PSX*2.0*57 in VAPU INSTALL MODIFIER file (#9.74), because the VistA package is not Enabled for automatic installation in the PACKAGE file (#9.4), field (#24).

II. The VistA package (Patch XU*8*299) is enabled for automatic installation in the PACKAGE file [#9.4], field (#24); however, there is *no* existing (stub) entry in the VAPU INSTALL MODIFIER file (#9.74) for the patch.

When a KIDS PackMan message arrives at the site from Forum, if the server option S.XPDAUTO determines that the package is enabled for automatic installation, it sends the following Alert messages:

1. DOCS FOR: Released XU*8*299 SEQ #307
- 2.I 1679920 Released XU*8*299 SEQ #307 TSK: 2290763 Has been queued for IN

When a VistA package is Enabled for automatic installation in the PACKAGE file (#9.4), Install Modifiers are automatically created by the server option S.XPDAUTO for the related patches in VAPU INSTALL MODIFIER file (#9.74), populating the following fields:

```

NUMBER: 22                                INSTALL NAME: XU*8.0*299
SEQUENCE #: 307
KIDS MailMan Distribution IEN: Released XU*8*299 SEQ #307
TASK #: 2290763                          COMPLIANCE DATE: JUN 17, 2005
SUBJECT: MFS Enhancement                  RECPT DATE: MAY 17, 2005
PRIORITY: Mandatory

```



Stub entries in VAPU INSTALL MODIFIER file (#9.74) are created only to populate the Compliance and Receipt (RECPT) date fields to be displayed as output on the Patch Monitor, Figure 3-11.

```

Select VistA Auto Patch Utility Menu Option: Patch Monitor Menu

1      Print Patch Report
2      Complete Patch Install Documentation
3      Delete Patch from Monitor

Select Patch Monitor Menu Option: 1 <Enter> Print Patch Report
DEVICE: HOME// <Enter> Telnet terminal

The following patches are not installed and COMPLIANCE date has passed!

Patch #      Description      Priority      Received      Compliance
=====
XU*8.0*268    Fix SAGG Collection    Mandatory    OCT 6,2004    NOV 6,2004

COUNT: 1

The following patches are not installed.

Patch #      Description      Priority      Received      Compliance
=====
XU*8.0*299    MFS Enhancement      Mandatory    MAY 17, 2005    JUN 17, 2005
DG*5.3*618    Clean Up Pointers in  Mandatory    MAY 2,2005     JUN 2,2005
DG*5.3*638    PREVENTING CATASTROP  Mandatory    APR 25,2005    MAY 26,2005
PRC*5.1*75    NATIONAL ITEM FILE -  Mandatory    MAY 11,2005    JUN 11,2005
TEST
XU*8.0*268    Fix SAGG Collection    Mandatory    OCT 6,2004    NOV 6,2004

COUNT: 6

```

Figure 3-11: Print Patch Report showing the patch Compliance and Recpt date fields



For information on the Patch Report and the Patch Monitor, see the option "Patch Monitor Menu" in this documentation.

At a later time, the queued task will install the patch based on the settings in the Package Modifier (VAPU PACKAGE MODIFIER file [#9.75]), and not based on the Install Modifier (VAPU INSTALL MODIFIERS file [#9.74]), because no Install Modifier was actually sent using the Send Install Modifier option. A successful installation results in an Alert message shown as follows:

```
I  XU*8.0*299 Has an Install Status INSTALLED SUCCESSFULLY!!!
```

III. KIDS Host File Installation Retrieved Via FTP. The VistA package is Enabled for automatic installation in the PACKAGE file [#9.4]); however, there is *no* existing entry in the VAPU INSTALL MODIFIER file (#9.74), and the patch requires VAPU to download the KIDS host file using FTP.

Sequence of events:

- a. MailMan release message arrives at the G.PATCHES mail group and activates the server option S.XPDAUTO, making a stub entry for the patch in the VAPU INSTALL MODIFIERS file (#9.74).
- b. Server option S.XPDAUTO generates the following Alert messages:

```
1. DOCS FOR: Released XU*8*268 SEQ #307
I  MM: 1498903 FOR XU*8.0*268 VAPU NEEDS AN INSTALL MODIFIER TO CONTINUE
```

- c. Intervention by site personnel is required at this point, to read the Alert message and patch description in order to obtain the correct KIDS host file name. This host file name needs to be entered at the "FTP DISTRIBUTION FILENAME: //" prompt, Figure 3-10.

Once created, the Install Modifier must be sent to the G.PATCHES mail group using the Send Install Modifiers option. VAPU uses the KIDS host file name, which is now recorded in the Install Modifier in File #9.74, to retrieve the .KID file from National FTP software sites (Enterprise VistA Support anonymous directories).



For KIDS host file distributions, the Install Modifier must be sent to G.PATCHES after the Patch release message has arrived (i.e., The patch must be sent to G.PATCHES first, before the Install Modifier.).

- d. Server option S.XPDAUTO processes the retrieved KIDS host file from the remote Enterprise VistA Support anonymous directories and it is saved in the FTP FILE DIRECTORY field #9 (e.g., USER\$:[TEMP]).

IV. An integrated site sends Install Modifiers from the Production domain to its subdomains using G.PATCHES.

A production domain can send Install Modifiers to its subdomain accounts (e.g., test, legacy) to take precedence over the Package Modifiers at the subdomain level.

When the actual patch message is sent to the subdomain accounts, the installation will behave according to the settings described in scenarios I through III, above.



For information on sending Install Modifiers to the G.PATCHES mail group, see the option "Send Install Modifiers" in this documentation.



Table 3-3 lists the prompts generated by the Edit VAPU Install Modifiers option and provides a description of the field value(s) for each.

Create Site's Executable Location

Before any of this can happen, careful attention is required to obtain the executable location in which to enter your batch file. Use the Edit Exe Location option to enter the batch file at the prompt "EXECUTABLE LOCATION: //," Figure 3-14.



For information on creating the site's executable location, see the option "Edit Exe Location" in this documentation.

KIDS Host File Installation Retrieved Via FTP



For information on retrieving and installing KIDS host file distribution using VAPU, see "Install Modifier Workflow Scenarios," scenario number three.

Send Install Modifiers	[XPD VAPU SEND MODIFIERS]
-------------------------------	----------------------------------

Once an Install Modifier has been created for a patch, the next step is to send it to the G.PATCHES mail group using the Send Install Modifiers option. This option encapsulates and sends Install Modifiers in a MailMan message to sites for distribution such that VAPU receives these instructions automatically.

In order for Install Modifiers, as defined in the VAPU INSTALL MODIFIERS file (#9.74), to trigger automatic control over patch installations at your site, the following conditions must be met:

- For KIDS host file distributions sent via FTP, the Install Modifier must be sent to the sites' G.PATCHES mail group using this option subsequent to the patch release (i.e., The patch must be sent to G.PATCHES first, before the Install Modifier.). The patch must be in the queue first in order for the Install Modifier to locate and process it. The Install Modifier retrieves the .KID file from the Enterprise VistA Support anonymous directories.
- For patch releases sent via PackMan messages, the Install Modifier must be sent to the sites' G.PATCHES mail group using this option prior to the patch release (i.e., The Install Modifier must be sent to G.PATCHES first, before the patch.). For patches sent via PackMan messages,

the server option S.XPDAUTO checks File #9.74 first, checking if an Install Modifier exists. Then it looks for the default Package Modifier in File #9.75.



For information on entering the server option S.XPDAUTO as a remote member for each MailMan domain you wish to auto-patch, see the section titled: "Edit G.PATCH Remote Members" in this documentation.



For information on site setup for Kernel Patch XU*8*345, see the section titled: "Site Setup" in the *Patchman (VistA Auto Patch Utility and VistA Remote Patching) Installation and Setup Guide*.

Enable/Disable Auto Patching By Package	[XPD VAPU ENABLE/DISABLE PKG]
---	----------------------------------

In order to control auto-patching per VistA package, sites must edit the PACKAGE file (#9.4), enabling each VistA package for automatic installation. Use the Enable/Disable Autopatching by Package option to set the AUTOPATCH ENABLE/DISABLE field (#24) to either of the following values:

- 1—Enabled
- 0—Disabled

Kernel Patch XU*8.0*345 exports this field with a default value of Disabled. The VAPU checks this field prior to installing each patch. This option offers sites' more control over the automatic installation of patches by package.

```
Select VistA Auto Patch Utility Menu Option: 6 <Enter> Enable/Disable
Autopatching by Package

Select PACKAGE NAME: KERNEL <Enter> XU
AUTOPATCH ENABLE/DISABLE: DISABLED//
```

Figure 3-12: Enable or disable auto-patching in PACKAGE file (#9.4)

Field #24 in the PACKAGE file (9.4) is exported as Disabled. Both this field, and the VAPU SITE PARAMETERS file (#9.72), Field #4, need to be set to Enabled for automatic patching to work.



By default, all packages are exported with the AUTOPATCH ENABLE/DISABLE field (#24) set to Disabled for auto-patching.



Sites must take two steps to enable a package for automatic installation by using the following two options:

1. Edit VAPU Site Parameters option; enter Enable the prompt "ENABLE/DISABLE AUTOPATCH: DISABLE//."
2. Enable/Disable Autopatching by Package option; change the AUTOPATCH ENABLE/DISABLE field (#24) to a value of Enabled. This field is exported in Kernel Patch XU*8.0*345 with a default value of Disabled.

Install A Patch Manually**[XPD VAPU MANUAL INSTALL]**

This option allows sites to install a patch manually by consolidating the interactive installation tasks into one function. Just follow the prompts in this option and answer the questions.



It is not necessary to create and send an Install Modifier to G.PATCHES for a manual installation of a patch.

Figure 3-13 shows a capture of a sample manual installation.

```

Select VistA Auto Patch Utility Menu Option: 7 <Enter> Install a Patch Manually
Select VAPU INSTALL MODIFIERS INSTALL NAME: DI
  1  DI*22.0*130
  2  DI*22.0*143
CHOOSE 1-2: 1 <Enter> DI*22.0*130
INSTALL NAME: DI*22.0*130// <Enter>
SEQUENCE #: 126// <Enter>
AUTO/MANUAL: AUTO// ?
  Answer AUTO or MANUAL to this REQUIRED field.
  Choose from:
    0      AUTO
    1      MANUAL
AUTO/MANUAL: AUTO// MAN <Enter> MANUAL
STOP TASKMAN (Yes/No): NO// <Enter> NO
STOP HL7: YES// <Enter> yes
STOP MAILMAN: NO// <Enter> NO
STOP BROKER: NO// <Enter> NO
INHIBIT LOGONS: NO// <Enter> NO
TAKE OPTIONS/PROTOCOLS OFFLINE: NO// ?
  Choose from:
    0      NO
    1      YES
Select PROTOCOLS TO DISABLE: NO// <Enter> NO
Select OPTIONS TO DISABLE: NO// <Enter> NO
FTP DISTRIBUTION FILENAME: <Enter>
ENTERED IN ERROR FLAG: 0// <Enter> NO

THIS INSTALL HAS A STATUS OF 3 Install Completed
Do you want to continue? (Y/N) ? N// YES

Line 219 Message #1674133  Unloading KIDS Distribution  DI*22.0*130
Build DI*22.0*130 has been loaded before, here is when:
  DI*22.0*130  Install Completed
                was loaded on Mar 07, 2005@13:58:07
  DI*22.0*130  Install Completed
                was loaded on Mar 07, 2005@14:57:01
OK to continue with Load? NO// YES

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

DI*22.0*130

```

STATUS field (#.02) from the INSTALL file (#9.7). Possible values are:

- '0' Loaded from Distribution
- '1' Queued for Install
- '2' Start of Install
- '3' Install Completed
- '4' De-Installed
- '5' Patch 'IN ERROR'
- '6' Informational

```

NOW LET'S LOOK AT THOSE KIDS CHECKSUMS
Select INSTALL NAME: DI*22.0*130 <Enter> Loaded from Distribution
4/12/05@13:07:02
=> Released DI*22*130 SEQ #126

This Distribution was loaded on Apr 12, 2005@13:07:02 with header of
Released DI*22*130 SEQ #126
It consisted of the following Install(s):
DI*22.0*130
DEVICE: HOME// <Enter> Telnet terminal

PACKAGE: DI*22.0*130      Apr 12, 2005 1:08 pm      PAGE 1
-----

6 Routine checked, 0 failed.

WERE CHECKSUMS OK? ? Y// <Enter> YES

Okay then let's back up the ROUTINES!!
Select INSTALL NAME: DI*22.0*130 <Enter> Loaded from Distribution
4/12/05@13:07:02
=> Released DI*22*130 SEQ #126

This Distribution was loaded on Apr 12, 2005@13:07:02 with header of
Released DI*22*130 SEQ #126
It consisted of the following Install(s):
DI*22.0*130
Subject: Backup of DI*22.0*130 install on Apr 12, 2005
Replace
Loading Routines for DI*22.0*130.....
Send mail to: [LAST NAME],[FIRST NAME]// <Enter> [LAST NAME],[FIRST NAME]
Select basket to send to: IN// PATCHES
And Send to: <Enter>

BACKING UP ROUTINES

OKAY!! It's time to INSTALL!! This is your last chance to ABORT!!!
Is everything OK and shall I continue? ? Y// YES
STOP HL7 BACKGROUND PROCESSES COMMAND HAS BEEN ISSUED!
Select INSTALL NAME: DI*22.0*130 <Enter> Loaded from Distribution
4/12/05@13:07:02
=> Released DI*22*130 SEQ #126

This Distribution was loaded on Apr 12, 2005@13:07:02 with header of
Released DI*22*130 SEQ #126
It consisted of the following Install(s):
DI*22.0*130
Checking Install for Package DI*22.0*130

Install Questions for DI*22.0*130

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

                                DI*22.0*130
-----

Install Started for DI*22.0*130 :
      Apr 12, 2005@13:10:37

Build Distribution Date: Dec 30, 2004

Installing Routines:
      Apr 12, 2005@13:10:38

Updating Routine file...

Updating KIDS files...

DI*22.0*130 Installed.
      Apr 12, 2005@13:10:38

Install Message sent #1677283
-----

100%  [ 25      50      75 ]
Complete

Install Completed

RESTART HL7 BACKGROUND JOBS COMMAND HAS BEEN ISSUED!

1      EDIT VAPU SITE PARAMETERS
2      EDIT G.PATCH REMOTE MEMBERS
3      EDIT VAPU PACKAGE MODIFIERS
4      EDIT VAPU INSTALL MODIFIERS
5      SEND INSTALL MODIFIERS
6      ENABLE/DISABLE AUTOPATCHING BY PACKAGE
7      INSTALL A PATCH MANUALLY
8      EDIT EXE LOCATION
9      MANAGE INSTALLATION QUEUES ...
10     CREATE CACHE/NT BATCH FILE FOR FTP

DI*22.0*130 Has an Install Status INSTALLED SUCCESSFULLY!!!
Enter "VA to jump to VIEW ALERTS option

Select VistA Auto Patch Utility Menu Option: VA <Enter> View Alerts

1.I DI*22.0*130 Has an Install Status INSTALLED SUCCESSFULLY!!!
   Select from 1 to 1
   or enter ?, A, I, D, F, S, P, M, R, or ^ to exit
   or RETURN to continue: 1

Processed Alert Number 1
   DI*22.0*130 Has an Install Status INSTALLED SUCCESSFULLY!!!

Continue (Y/N) or F(orward) or R(enew) YES// <Enter>

```

Alert indicating
the Patch was
installed
successfully.

Figure 3-13: Example manual installation using the Install a Patch Manually option



The prompts used in this option, Install a Patch Manually, are the same as the prompts generated by the Edit VAPU Install Modifiers option. Both options edit the VAPU INSTALL MODIFIERS file (#9.74). See Table 3-3 for a description of the field value(s) for each.

Edit Exe Location	[XPD VAPU EDIT EXE LOCATION]
-------------------	------------------------------

VAPU performs operating system (OS) level commands to execute an FTP service and retrieve files. In order to do this VAPU needs the following information:

- For VMS sites, VAPU needs the batch queue name. For example, Charleston's test system batch queue is 534T02\$BATCH. Each site and each system will have a different name in order to be patched. If you do not have a batch queue, your VMS manager will need to set one up for this portion of VAPU to work.

```
Select VistA Auto Patch Utility Menu Option: 8 <Enter> Edit Exe Location
EXECUTABLE LOCATION: ?
      CACHE Enter full path to primary volume :VMS Enter your BATCH QUEUE Name.
EXECUTABLE LOCATION: ISC6A1$BATCH
```

Figure 3-14: Execute an FTP service and retrieve files

Sample VMS batch queue.
For Caché, enter directory
path from which to execute
FTP from M environment.



The EXECUTABLE LOCATION and FTP FILE DIRECTORY at your site must be valid and site personnel performing automatic patch installations must have the correct privileges to access both. At a minimum, site personnel performing auto-patching must have the following access to the system:

- must be a member of the G.PATCHES mail group
- must have programmer access (DUZ(0)="@")
- must have been assigned the security keys: XUPROG, and XUPROGMODE

Manage Installation Queues	[XPD VAPU MNG PATCH INST QUE]
----------------------------	-------------------------------

This is the main menu for managing the install queues, providing tools to:

- Delete user-specified TaskMan tasks
- List VAPU TaskMan tasks
- Requeue TaskMan install tasks

```

Select VistA Auto Patch Utility Menu Option: 10 <Enter> Manage Installation
Queues

1      List VAPU's Installation Tasks
2      Requeue VAPU's Install Tasks
3      Delete a Task in VAPU's Install Queues

Select Manage Installation Queues Option:

```

Figure 3-15: Manage Installation Queues main menu

List VAPU'S Installation Tasks	[XPD VAPU LIST TASKS]
---------------------------------------	------------------------------

This option uses TaskMan to list tasks related to the VAPU.

```

Select Manage Installation Queues Option: 1 <Enter> List VAPU's Installation
Tasks

DI*22.0*130  2285475   1674133 Check For Dupli   APR 10, 2005 APR 21, 2005@14:00
DI*22.0*143  2285320   1677135 DUZ Authenticat  MAY 12, 2005 APR 20, 2005@14:00
DI*22.0*143  2285449   1677135 DUZ Authenticat  MAY 12, 2005 APR 21, 2005@14:00

```

Figure 3-16: List VAPU's Installation Tasks

Requeue VAPU's Install Tasks	[XPD VAPU REQUEUE TASKS]
-------------------------------------	---------------------------------

This option uses TaskMan to re-queue install tasks.

Delete A Task In VAPU'S Install Queues	[XPD VAPU DELETE TASKS]
---	--------------------------------

This option uses TaskMan to delete user-specified tasks in VAPU's install queues.

Create Cache/NT Batch File For FTP	[XPD VAPU CREATE CACHE/NT FILE]
---	--

Use this menu option to create the batch (COM) file that is used to retrieve KIDS FTP file distributions. The location of the COM file is determined by the EXECUTABLE LOCATION field (#11) in the VAPU SITE PARAMETERS file (#9.72).



This location or Directory must have a path to the VMS Environment in order to execute. On most Caché/VMS Production Systems this is USER\$:[TEMP].



In order for this option to work correctly, the file location used to retrieve the KIDS FTP file distributions must be entered in the FTP SITE NAME field (#.01), located in the VAPU FTP SITE file (#973). This file is exported with Kernel Patch XU*8.0*345, and is pre-populated with the following FTP sites:

- DOMAIN.EXT
- DOMAIN.EXT
- DOMAIN.EXT
- DOMAIN.EXT

Manage The Patch Install User Baskets	[XPD VAPU MNG BSKTS]
--	-----------------------------

Use this option to manage user's patch baskets.

VAPU Server	[XPDAUTO]
--------------------	------------------

This is the VAPU server option.

Patch Monitor Menu	[XPD VAPU PATCH MONITOR MENU]
---------------------------	--------------------------------------

This is the main menu for the Patch Monitor. It comprises the following options that are used to:

- Print a list of patches that have not been installed, including those that are delinquent.
- Identify installed patches that do not automatically resolve themselves, which appear as uninstalled and/or delinquent in the Patch Monitor (e.g., GUI Client, Informational, DBA patches).
- Delete patches that erroneously appear in the Patch Monitor (e.g., patches to an uninstalled software at your site, test patches, etc.)

```
Select VistA Auto Patch Utility Menu Option: 13 <Enter> Patch Monitor Menu
```

- ```

1 Print Patch Report
2 Complete Patch Install Documentation
3 Delete Patch from Monitor

```

```
Select Patch Monitor Menu Option:
```

**Figure 3-17: Patch Monitor Menu**



**Print Patch Report****[XPD VAPU PRINT PATCH REPORT]**

This option is used to print a list of patches that have not been installed, including those that are delinquent. The fields displayed on this report are extracted from the FORUM patch release message and placed in the VAPU INSTALL MODIFIERS file (#9.74).

```

Select Patch Monitor Menu Option: 1 <Enter> Print Patch Report
DEVICE: HOME// ??
The following information is available:
 All Printers
 Printers only on 'KDE'
 Complete Device Listing
 Devices only on 'KDE'
 New Format for Device Specification
 Extended Help

 Select one (A,P,C,D,N, or E):
DEVICE: HOME// <Enter> SYSTEM Right Margin: 80// <Enter>

The following patches are not installed and COMPLIANCE date has passed!

Patch # Description Priority Received Compliance
=====
OOPS*2.0*10 DECOMMISSION ROLL AN Mandatory MAR 23,2005 APR 01,2005
PX*1.0*163 PCE/SD DEBUGGER DISP Mandatory MAR 22,2005 APR 19,2005

COUNT: 2

The following patches are not installed.

Patch # Description Priority Received Compliance
=====
DG*5.3*629 VIC CARD AND MAG REA Mandatory APR 13,2005 MAY 14,2005
EC*2.0*65 RSC - ECS RESTRICTIN Mandatory APR 11,2005 MAY 12,2005
ECX*3.0*72 RSC - ECX RESTRICTIN Mandatory APR 11,2005 MAY 12,2005
FB*3.5*80 CORRECT PHARMACY REV Mandatory APR 12,2005 MAY 13,2005
ICD*18.0*16 SYSTEM ERROR WHEN CA Mandatory APR 13,2005 MAY 14,2005
OOPS*2.0*10 DECOMMISSION ROLL AN Mandatory MAR 23,2005 APR 23,2005
OOPS*2.0*7 OSHA 300 LOG WITH EN Mandatory FEB 28,2005 OCT 1,2005
PSJ*5.0*125 PRE-EXCHANGE & PICK Mandatory MAR 29,2005 APR 29,2005
PSJ*5.0*128 TWO LEADING ZERO ISS Mandatory MAR 24,2005 APR 24,2005
PSJ*5.0*132 INP MEDS INTERVENTIO Mandatory MAR 28,2005 APR 28,2005

COUNT: 10

```

**Figure 3-18: Patch installation report listing delinquent and uninstalled patches**

**Complete Patch Install Documentation****[XPD VAPU COMPLETE PATCH]**

This option allows you to add an entry in the INSTALL file (#9.7) for patches that have been installed, but still appear as uninstalled and/or delinquent in the Patch Monitor. This functionality is needed because some patches don't automatically resolve themselves. For example:

- GUI Client patches
- Informational patches
- DBA patches
- Patches that are actually for other systems or platforms (e.g., VistA imaging or platform-specific patches)

Enter the data in each field when prompted.

```
Select PATCH MONITOR MENU Option: 2 <Enter> COMPLETE PATCH INSTALL DOCUMENTATION
Select INSTALL NAME: XWB*1.1*42
Are you adding 'XWB*1.1*42' as a new INSTALL (the 2093RD)? No// Y <Enter> (Yes)
NAME: XWB*1.1*42// <Enter>
STATUS: 3 <Enter> Install Completed
FILE COMMENT [Enter the string SEQ #+Actual #][e.g. SEQ #30]: SEQ #32 Released
patch XWB*1.1*42 ;Created on Mar 03, 2005@14:59:29
INSTALLED BY: [LAST NAME],[FIRST NAME] <Enter> [INITIALS] [TITLE]
INSTALL COMPLETE TIME: T-1@12:00 <Enter> (APR 12, 2005@12:00:00)
```

**Figure 3-19: Complete Patch Install Documentation option**

Table 3-4 lists the prompts generated by the Complete Patch Install Documentation option and provides a description of the field values for each.

| Prompt                             | Description                                                                                                                                                                                                                                                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Select INSTALL NAME: DI*22.0*130   | This is the NAME field (#.01) from the INSTALL file (#9.7).                                                                                                                                                                                                                                                             |
| NAME: DI*22.0*130//                | This value echoes back as the default based on the value entered at the Select prompt.                                                                                                                                                                                                                                  |
| STATUS: Install Completed//        | This is the install status at your site. The value is extracted from the INSTALL file (#9.7), STATUS field (#.02). Possible values are:<br><br>'0' Loaded from Distribution<br>'1' Queued for Install<br>'2' Start of Install<br>'3' Install Completed<br>'4' De-Installed<br>'5' Patch 'IN ERROR'<br>'6' Informational |
| FILE COMMENT [Enter the string SEQ | Enter patch sequence number, patch                                                                                                                                                                                                                                                                                      |

| Prompt                     | Description                                      |
|----------------------------|--------------------------------------------------|
| #+Actual #][e.g. SEQ #30]: | designation, and date/time created               |
| INSTALLED BY:              | Name of employee who installed the patch.        |
| INSTALL COMPLETE TIME:     | Enter the time the patch installation completed. |

**Table 3-4: Prompts and descriptions for the Complete Patch Install Documentation option**

|                                  |                                |
|----------------------------------|--------------------------------|
| <b>Delete Patch From Monitor</b> | <b>[XPD VAPU DELETE PATCH]</b> |
|----------------------------------|--------------------------------|

Use this option to delete patches that incorrectly appear in the Patch Monitor. Occasionally, patches are received that are not necessary to track. A couple of examples are:

- Patches to a package that is not installed and is not used at this site
- Test patches that shouldn't be tracked

Use this option to delete patches falling under this category from the VAPU INSTALL MODIFIER file (#9.74). Therefore, they will not be tracked by the Patch Monitor.

# VistA Remote Patching Menus and Options

The menus and options exported with Kernel Patch XU\*8\*345, comprising the VistA Remote Patching software, are listed and described in this section. Instructions are given on how to use this software in the daily operations of a Department of Veterans Affairs Medical facility to patch single and multiple VistA accounts remotely. A site designated as the Master sends patches and patch installation orders to registered Servant sites. Patches can be sent to Servant sites one by one, or in a single batch sent at one time.



**VistA Remote Patching is not recommended for installation and implementation in productions accounts.**

For information on the menus and options comprising the VistA Auto Patch Utility, also released as part of Kernel Patch XU\*8.0\*345, see the section titled: "VistA Auto Patch Utility Menus and Options" in this documentation.

```
Select Patchman Option: 2 <Enter> VistA Remote Patching Menu

 M VistA Patching System Master ...
 S VistA Patching System Servant ...

Select VistA Remote Patching Menu Option: M <Enter> VistA Patching System Master

 1 Establish Mastership Over a Site
 2 Send Patch(es) to Servant(s)
 3 Report of Patches Installed (Master Sites)
 5 Designate a Patch Informational

Select VistA Remote Patching Menu Option: S <Enter> VistA Patching System Servant

 1 Respond to a Mastership Request
 2 Check Patch Install Status (for Servant Sites)
 3 Install File Patch Listing Dump
 4 Un-stick The Processing Queue (Servants Only)
 5 Designate a Patch Informational

Select VistA Patching System Servant Option:
```

## VistA Remote Patching Menu

## [XPD PATCHING MENU]

This is the main menu for VistA remote patching. It comprises the following menu options:

- VistA Patching System Master
- VistA Patching System Servant

```

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA REMOTE PATCHING MENU

M VistA Patching System Master ...
S VistA Patching System Servant ...

Select VistA Remote Patching Menu Option: M <Enter> VistA Patching System Master

```

Figure 3-20: VistA Remote Patching Menu



For a definition of the terms *Servant site* and *Master site*, see the "Glossary" in this documentation.

## VistA Patching System Master Menu

|                                     |                              |
|-------------------------------------|------------------------------|
| <b>VistA Patching System Master</b> | <b>[XPD PATCHING MASTER]</b> |
|-------------------------------------|------------------------------|

This main menu is for the Master side of the patching options (Master servers).

```

Select VistA Remote Patching Menu Option: M <Enter> VistA Patching System Master

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE MASTER MENU

1 Establish Mastership Over a Site
2 Send Patch(es) to Servant(s)
3 Report of Patches Installed (Master Sites)
5 Designate a Patch Informational

Select VistA Patching System Master Option:

```

Figure 3-21: VistA Patching System Master menu

VistA Patching System Master menu is comprised of the following five options:

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| <b>Establish Mastership Over a Site</b> | <b>[XPD MASTER - SERVANT ESTABLISH]</b> |
|-----------------------------------------|-----------------------------------------|



The XPD VISTA PATCH mail group is exported with Kernel Patch XU\*8.0\*345. The mail group coordinator is assigned during the installation of this patch for each site. This mail group receives install messages. Servant sites must be added to this mail group before a Master site can send a request establishing and registering a relationship with a Servant site. These mail

messages will be delivered to the coordinator and any members of the mail group at the Servant site.

Use the Establish Mastership Over a Site option to send a request, establishing a Master and Servant relationship with a selected site(s) for remote patch installations. This relationship is created one-time-only. A potential Servant sites' acceptance allows the potential Master site to control installations of all patches remotely. The designated Master site sends the request in a MailMan message to the XPD VISTA PATCH mail group. The site(s) in question must be a member of this mail group in order to receive the request. The message instructs the site to use the Respond to a Mastership Request option to accept or decline. If the site accepts, an entry is made into the Servant site's XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77), which shows the following:

- States it is a Servant site
- Identifies the Master site
- Indicates the date servitude was established
- Indicates the time of day to remotely install patches.

A MailMan message is returned and an entry is made in the Master site's XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) registering it the Master and adding the Servant to it's list of Servant sites.

The following outlines the flow of messages and entries into the files involved in establishing the master/servant site configuration:

1. The Master site uses the Establish Mastership Over a Site [XPD MASTER - SERVANT ESTABLISH] option to send a MailMan message to a potential Servant site.
2. The MailMan message is delivered to the XPD VISTA PATCH mail group at the Servant site.
3. The option XPD PATCH SERVER is run to transfer the data from the MailMan message into the XPD MAIL MESSAGES file (#9.79).
4. The user at the Servant site is instructed to use the Respond to a Mastership Request [XPD MASTER - SERVANT RESPOND] option to accept or decline; then the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) is populated at the Servant site and a response notification is sent back to the Master site.
5. The Servants response message at the Master site triggers the population of the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77), registering the relationship.

Once this relationship is registered in File (#9.77), the Master site can send patches to be installed without intervention from the Servant site.

## Establishing Master/Servant Relationship

The following procedures show the workflow involved with establishing a Master/Servant configuration between two different accounts or sites.

## Step 1. Master Site (ACCOUNT\_1.DOMAIN.EXT)

Figure 3-22 shows the option sequence involved with the request process establishing the Master/Servant site configuration.

```

1 VistA Auto Patch Utility Menu ...
2 VistA Remote Patching Menu ...

Select Patchman Option: 2 <Enter> VistA Remote Patching Menu

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA REMOTE PATCHING MENU

M VistA Patching System Master ...
S VistA Patching System Servant ...

Select VistA Remote Patching Menu Option: M <Enter> VistA Patching System Master

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE MASTER MENU

1 Establish Mastership Over a Site
2 Send Patch(es) to Servant(s)
3 Report of Patches Installed (Master Sites)
5 Designate a Patch Informational

Select VistA Patching System Master Option: 1 <Enter> Establish Mastership Over a
Site

 WELCOME TO THE REMOTE PATCHING PACKAGE
 MASTER-SERVANT ESTABLISHMENT OPTION

Please select a site to establish mastership over: ACCOUNT_2.DOMAIN.EXT

Please select a site to establish mastership over: ^
You have these Domains selected to establish mastership over:
1. ACCOUNT_2.DOMAIN.EXT
Do you wish to continue? NO// Y <Enter> YES

1 Establish Mastership Over a Site
2 Send Patch(es) to Servant(s)
3 Report of Patches Installed (Master Sites)
5 Designate a Patch Informational

Select VistA Patching System Master Option:

```

Entering Yes at this prompt sends the MailMan message to the G.XPD VISTA PATCH mail group.

**Figure 3-22: Request to establish master/servant relationship between two accounts or sites**

## Step 2. Servant Site (ACCOUNT\_2.DOMAIN.EXT)

The MailMan message containing the request arrives at the Servant site in the mail group G.XPD VISTA PATCH. The user must following the instructions in the MailMan message, indicating that they are to use the Respond to a Mastership Request option to accept or decline the mastership request, Figure 3-23.

```

Subj: ~~#~~ REQUEST TO ESTABLISH PATCHING MASTERSHIP OVER A REMOTE
[#67614] 26 Apr 2005 13:06:36 -0700 (PDT) 9 lines
From: <[LAST NAME].[FIRST NAME]@ACCOUNT_1.DOMAIN.EXT > In 'IN' basket. Page 1
New

~~#1~~
~~#2~~1~~#~~ REQUEST TO ESTABLISH PATCHING MASTERSHIP OVER A REMOTE
SITE~ACCOUNT_1.DOMAIN.EXT ~ACCOUNT_2.DOMAIN.EXT
TO THE RECEIVING SITE:
The site (listed above) is requesting to be your Master patching site.
Please use the Respond to a Mastership Request [XPD MASTER - SERVANT
RESPOND] option to accept or decline this request. Your acceptance will
allow this site control to install your patches remotely. This should
make patching automatic for all but a few types of patches.
Date and time of transaction: 4/26/2005@130659

Enter message action (in IN basket): Ignore//

```

**Figure 3-23: Request to establish patching mastership arrives at the Servant site in the mail group G.XPD VISTA PATCH**



The XPD PATCH SERVER option *must* be scheduled to run using TaskMan (recommended every 15 minutes) in order to transfer MailMan messages and activate the remote patching functionality, such as:

- Propagating the initial MailMan message request establishing a Master and Servant relationship between sites for remote patch installations from MailMan to the XPD MAIL MESSAGES (#9.79) and XPD PATCHING SERVITUDE/MASTERSHIP (#9.77) files
- Transferring the received patch requests from the XPD MAIL MESSAGES file (#9.79) into the XPD PATCHING file (#9.76)
- Populating the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) registering the Master/Servant site agreement

Figure 3-24 shows the users' acceptance of the mastership request by using the Respond to a Mastership Request option.



```

Select Kernel Installation & Distribution System Option:

 1 VistA Auto Patch Utility Menu ...
 2 VistA Remote Patching Menu ...

Select Patchman Option: 2 <Enter> VistA Remote Patching Menu

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA REMOTE PATCHING MENU

M VistA Patching System Master ...
S VistA Patching System Servant ...

Select VistA Remote Patching Menu Option: S <Enter> VistA Patching System Servant

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE SERVANT MENU

 1 Respond to a Mastership Request
 2 Check Patch Install Status (for Servant Sites)
 3 Install File Patch Listing Dump
 4 Unstick The Processing Queue (Servants Only)
 5 Designate a Patch Informational

Select VistA Patching System Servant Option: 1 <Enter> Respond to a Mastership
Request

 WELCOME TO THE REMOTE PATCHING PACKAGE
 Servant Request Response Option

ACCOUNT_1.DOMAIN.EXT wishes to be your patching Master site.
Do you agree to this? NO// YES
INSTALL PATCHES ONLY AT NIGHT?: <Enter>
WHAT TIME?: 1400??
 Answer must be 5 characters in length. Enter time like 14:30.
WHAT TIME?: 14:00
Mastership filed...
Response message sent to accepted Master site
Message processed...

```

**Figure 3-24: User accepts mastership request through the Respond to a Mastership Request option**



The user must following the instructions in the MailMan message, indicating that they are to use the Respond to a Mastership Request option to accept or decline the mastership request.

The Servant site's XPD PATCHING SERVITUDE/MASTERSHIP file #9.77 is updated, indicating that it is a Servant, including the IEN of the Master sites INSTITUTION file (#4) .01 entry.

**Step 3. MASTER (ACCOUNT\_1.DOMAIN.EXT)**

The scheduled XPD PATCH SERVER option transfers the MailMan message response back to the Master site through the mail group G.XPD VISTA PATCH. Figure 3-25 shows a sample message notifying the Master site that the Servant site has accepted servitude.

```

Subj: ~~#~~ THE RESPONSE TO YOUR MASTERSHIP REQUEST OVER ACCOUNT_2.DOMAIN.EXT
[#67606] 04/26/05@14:07 3 lines
From: [LAST NAME],[FIRST NAME] In 'IN' basket. Page 1

~~#1~~
~~#2~~2~~#~~ THE RESPONSE TO YOUR MASTERSHIP REQUEST OVER ACCOUNT_2.DOMAIN.EXT
WAS ACCEPTED~ACCOUNT_2.~DOMAIN.EXT ~ACCOUNT_2.DOMAIN.EXT ~21
426.140702~0~14:00
Date and time of transaction: 4/26/2005@140739
Enter message action (in IN basket): Ignore//

```

**Figure 3-25: MailMan message sent to Master site from Servant site accepting servitude**

The XPD PATCH SERVER populates the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) with the following information:

- This site (ACCOUNT\_1.DOMAIN.EXT) is now a Master site of the Servant site ACCOUNT\_2.DOMAIN.EXT
- Date servitude was established
- Yes/No answer to whether patches should only be installed only at night
- Time designated to install patches

|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>Send Patch(es) to Servant(s)</b> | <b>[XPD SEND PATCH TO SERVANT]</b> |
|-------------------------------------|------------------------------------|

The Master site uses this option to send patches to Servant site(s).



Enter the MailMan message number of the patch to be sent to the Servant site at the prompt "Enter a patch to be loaded at a remote site:," shown in Figure 3-26.



**The XPD PATCH SERVER option must be scheduled to run at the Servant site using TaskMan (recommended every 15 minutes) in order to populate patch request messages into the XPD PATCHING file (#9.76), and activate the remote patching functionality.**

```

Select Vista Remote Patching Menu Option: M <Enter> Vista Patching System Master
Options

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE MASTER MENU

1 Establish Mastership Over a Site
2 Send Patch(es) to Servant(s)
3 Report of Patches Installed (Master Sites)
4 Send For Patch Install Status at a Remote Site
5 Designate a Patch Informational

Select Vista Patching System Master Options Option: 2 <Enter> Send Patch(es) to
Servant(s)

 WELCOME TO THE REMOTE PATCHING PACKAGE
 Send Patches to Servant Site(s) Option

Enter a patch to be loaded at a remote site: 15558571 <Enter> Released
DVBA*2.7*93 SEQ #81
Enter a patch to be loaded at a remote site: 15568381 <Enter> Released GMRC*3*40
SEQ #36
Enter a patch to be loaded at a remote site: 15573381 <Enter> Released PSD*3*55
SEQ #43
Enter a patch to be loaded at a remote site: 15576618 <Enter> Released DG*5.3*618
SEQ #569
Enter a patch to be loaded at a remote site: ^

 Select one of the following:

 1 IMG-DOMAIN.EXT
 2 TEST.DOMAIN.EXT
 3 All of the above

Which site(s) do you want to send this (these) patch(es) to: 3// 1 <Enter> IMG-
DOMAIN.EXT

OK, Let me get this straight, you wish to have these patches:
1. Released DVBA*2.7*93 SEQ #81
2. Released GMRC*3*40 SEQ #36
3. Released PSD*3*55 SEQ #43
4. Released DG*5.3*618 SEQ #569
5. Copy of: Released MAG*3*47 SEQ #30 (Will be sent as informational patch)
6. Copy of: Released MAG*3*48 SEQ #29 (Will be sent as informational patch)
installed on these servants:
1. IMG-DOMAIN.EXT
Do you wish to continue? NO// YES

```

MailMan message number.

These entries are this Master site's Servant sites. They were created using the Establish Mastership Over a Site option to set up the Master/Servant site, or account configuration.

Entering Yes at the prompt sends these patches to be installed at the Servant site.

**Figure 3-26: Use Send Patch(es) to Servant(s) option to send patches to Servant site for batch installation**

**Report of Patches Installed (Master Sites)****[XPD PATCH REPORT]**

This option is used to generate a report of all patches sent to the Servant site(s) that have been installed to date. The report shows the following information:

- Date and time the patch request was sent
- Patch designation
- Servant site where patch was installed
- Date and time it was installed.

It also lists if a patch is "informational," hence, not a software installation.

```
Select Vista Patching System Master Options Option: 3 <Enter> Report of Patches
Install
ed (Master Sites)

 WELCOME TO THE REMOTE PATCHING PACKAGE
 Report of Remote Patch Status in My Database

Enter the Start date of the report: T-30
Enter the Stop date of the report: T
DEVICE: 0;80;9999 <Enter>

REMOTE PATCH INSTALL REPORT MAY 3,2005 12:57 PAGE 1

DATE PATCH INSTALL PATCH
REQUESTED DESIGNATION FROM SERVANT DATE PATCHED

APR 4,2005 09:13 SD*5.3*422 IMG-WHITE-RIVER.MED.VA.GO 4/4/2005@091614
APR 4,2005 09:14 ECX*3.0*76 IMG-WHITE-RIVER.MED.VA.GO 4/4/2005@091614
APR 4,2005 09:14 GMTS*2.7*72 IMG-WHITE-RIVER.MED.VA.GO 4/4/2005@092111
APR 4,2005 09:14 PX*1.0*156 IMG-WHITE-RIVER.MED.VA.GO 4/4/2005@091614
APR 11,2005 09:21 RMIM*1.0*4 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@092638
APR 11,2005 09:21 DG*5.3*642 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@092638
APR 11,2005 09:22 PXR*2.0*2 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@09392
APR 11,2005 09:22 XWB*1.1*42 (Sent as an informational patch only)
APR 11,2005 09:23 SD*5.3*370 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@092639
APR 11,2005 09:23 FSC*1.1*2
<=====this package is not loaded in test
APR 11,2005 09:23 SR*3.0*143 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@092639
APR 11,2005 09:23 RMPR*3.0*106 IMG-WHITE-RIVER.MED.VA.GO 4/11/2005@094154
APR 12,2005 08:27 SD*5.3*380 (Sent as an informational patch only)
APR 12,2005 08:32 ECX*3.0*72 (Sent as an informational patch only)
APR 12,2005 08:33 EC*2.0*65 (Sent as an informational patch only)
APR 12,2005 08:33 PX*1.0*151 (Sent as an informational patch only)
APR 12,2005 08:33 PSS*1.0*87 IMG-WHITE-RIVER.MED.VA.GO 4/12/2005@083539
APR 12,2005 08:33 PSO*7.0*161 IMG-WHITE-RIVER.MED.VA.GO 4/12/2005@083921
APR 12,2005 08:33 DI*22.0*143 IMG-WHITE-RIVER.MED.VA.GO 4/12/2005@083539
APR 13,2005 13:32 FB*3.5*80 IMG-WHITE-RIVER.MED.VA.GO 4/13/2005@13344
APR 13,2005 13:32 ICD*18.0*16 IMG-WHITE-RIVER.MED.VA.GO 4/13/2005@134125
APR 13,2005 13:32 TIU*1.0*180 IMG-WHITE-RIVER.MED.VA.GO 4/13/2005@13344
APR 13,2005 13:32 RG*1.0*39 IMG-WHITE-RIVER.MED.VA.GO 4/13/2005@13344
APR 15,2005 16:27 DG*5.3*629 IMG-WHITE-RIVER.MED.VA.GO 4/15/2005@163045
APR 15,2005 16:28 SD*5.3*412 IMG-WHITE-RIVER.MED.VA.GO 4/15/2005@163045
APR 15,2005 16:28 MAG*3.0*47 (Sent as an informational patch only)
APR 15,2005 16:28 SD*5.3*414 IMG-WHITE-RIVER.MED.VA.GO 4/15/2005@163045
```

|              |       |             |                                       |                  |
|--------------|-------|-------------|---------------------------------------|------------------|
| APR 15, 2005 | 16:28 | SD*5.3*434  | IMG-WHITE-RIVER.MED.VA.GO             | 4/15/2005@163045 |
| APR 15, 2005 | 16:28 | TIU*1.0*173 | IMG-WHITE-RIVER.MED.VA.GO             | 4/15/2005@163045 |
| APR 20, 2005 | 10:51 | PX*1.0*165  | IMG-WHITE-RIVER.MED.VA.GO             | 4/20/2005@105627 |
| APR 22, 2005 | 12:50 | GMRC*3.0*41 | IMG-WHITE-RIVER.MED.VA.GO             | 4/22/2005@125118 |
| APR 27, 2005 | 08:21 | DVB*4.0*53  | IMG-WHITE-RIVER.MED.VA.GO             | 4/27/2005@082527 |
| APR 27, 2005 | 08:21 | DG*5.3*638  | IMG-WHITE-RIVER.MED.VA.GO             | 4/27/2005@082527 |
| APR 27, 2005 | 08:21 | PSB*3.0*12  | IMG-WHITE-RIVER.MED.VA.GO             | 4/27/2005@082527 |
| APR 27, 2005 | 08:22 | DVBA*2.7*89 | (Sent as an informational patch only) |                  |
| MAY 3, 2005  | 12:44 | DVBA*2.7*93 |                                       |                  |
| MAY 3, 2005  | 12:45 | DG*5.3*640  |                                       |                  |
| MAY 3, 2005  | 12:45 | EC*2.0*71   |                                       |                  |
| MAY 3, 2005  | 12:45 | ROR*1.0*8   |                                       |                  |
| MAY 3, 2005  | 12:45 | GMRC*3.0*40 |                                       |                  |
| MAY 3, 2005  | 12:46 | PSD*3.0*55  |                                       |                  |
| MAY 3, 2005  | 12:46 | DG*5.3*618  |                                       |                  |
| MAY 3, 2005  | 12:46 | MAG*3.0*47  |                                       |                  |
| MAY 3, 2005  | 12:47 | MAG*3.0*48  |                                       |                  |

This list of nine patches have not yet been installed the test account.

**Figure 3-27: Remote Patch Install Report**

The last nine patches listed in Figure 3-27, show that no message was sent back from the Servant site indicating the sites domain name(s) and the date and time that the patches were installed. This indicates that these patches have not yet been installed in the Servant site.

In this way, patches that do not show up on this report may require that some contingency work be done at the Servant site. It is possible that the break in the remote installation process could be due to the absence of a patch sequence number from the previous patch. In this type of situation, the Servant site can use option 5 to designate a patch informational so that the break in the patch numbering sequence will not stop the remote installation process. Another problem scenario might be that the XPD PATCH SERVER option is not scheduled to run at the Servant site as frequently as it needs to in order to transfer the response messages, which populate this report, back from the Servant site quickly enough. The recommended frequency to schedule this option using TaskMan is every 15 minutes.

#### Designate a Patch Informational

#### [XPD DESIGNATE INFORMATIONAL]



This option is exported and deployed on both the Master site and Servant site(s) Remote Patching Menus with Kernel Patch XU\*8.0\*345; however, it is currently only used by the Servant. It allows a Servant site to flag Informational patches so that the break in the patch numbering sequence will not stop the remote installation process.

## VistA Patching System Servant Menu

|                                      |                               |
|--------------------------------------|-------------------------------|
| <b>VistA Patching System Servant</b> | <b>[XPD PATCHING SERVANT]</b> |
|--------------------------------------|-------------------------------|

This main menu is for the Servant side of the patching options (Servant servers).

```

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE SERVANT MENU

1 Respond to a Mastership Request
2 Check Patch Install Status (for Servant Sites)
3 Install File Patch Listing Dump
4 Un-stick The Processing Queue (Servants Only)
5 Designate a Patch Informational

Select VistA Patching System Servant Option:

```

**Figure 3-28: VistA Patching System Servant menu**

VistA Patching System Servant menu is comprised of the following five options:

|                                        |                                       |
|----------------------------------------|---------------------------------------|
| <b>Respond to a Mastership Request</b> | <b>[XPD MASTER - SERVANT RESPOND]</b> |
|----------------------------------------|---------------------------------------|

Use this option, Figure 3-29, to respond to a request from another site soliciting to be your patching Master site. The potential Servant site accepts or declines a request. Members of the XPD VISTA PATCH mail group receive a mastership request message instructing them to use this option to accept or decline. Either way, a MailMan message is sent back to the prospective Master site, Figure 3-25. If the potential Servant site accepts the request, the new parameters file exported with Kernel Patch XU\*1.\*345, XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77), is updated to reflect that the local site is a Servant and which site is the Master site.

This relationship is created one-time-only.



For information on the detailed flow of messages and entries into the files involved in establishing the Master/Servant site configuration, see the documentation option "Establish Mastership Over a Site" in this documentation.

```

 WELCOME TO THE REMOTE PATCHING PACKAGE
 VISTA PATCHING PACKAGE SERVANT MENU

1 Respond to a Mastership Request
2 Check Patch Install Status (for Servant Sites)
3 Install File Patch Listing Dump
4 Un-stick The Processing Queue (Servants Only)
5 Designate a Patch Informational

Select VistA Patching System Servant Option: 1 <Enter> Respond to a Mastership
Request

 WELCOME TO THE REMOTE PATCHING PACKAGE
 Servant Request Response Option

ACCOUNT_1.DOMAIN.EXT wishes to be your patching Master site.
Do you agree to this? NO// YES
INSTALL PATCHES ONLY AT NIGHT?: ?
 Choose from:
 1 YES
 0 NO
INSTALL PATCHES ONLY AT NIGHT?: N <Enter> NO
WHAT TIME?: 14:00
Mastership filed...
Response message sent to accepted Master site
Message processed...

```

**Figure 3-29: Servant sites' response message sent back to Master site accepting servitude**



For a definition of the terms *Servant site* and *Master site*, see the "Glossary" in this documentation.

### Check Patch Install Status (for Servant Sites)

**[XPD PATCH STATUS]**

The Check Patch Install Status option (for Servant sites) is used to generate a local (Master site) status report of patch installations.

### Install File Patch Listing Dump

**[XPD PATCH LISTING]**

Use this option to display all patches listed in the INSTALL file (#9.7) in order to view the installation status of each. This is a summary report used to determine which patches have not been installed so a Master site can start the patch "slamming" or "catch up" process. This report can only be run at the local (Master) site; therefore, Servant site(s) would have to be sent to the Master site to obtain a patch listing. Otherwise, Master site personnel can run this report at the Servant site and store the results in the sites USER\$:[TEMP] directory. This directory can then be consulted remotely to see which patches need to be installed at the Servant site.



The **USER\$:[TEMP]** directory is a VMS directory defined in the VAPU SITE PARAMETERS file (#9.72), field FTP FILE DIRECTORY (#9). It must be publicly accessible so the VistA Auto-Patch Utility can access it.

Users will need to access this directory because it is the storage location for the .TXT outputs providing information on patch installations.

This is also the location for the sites' local KIDS downloads. When an FTP file is retrieved from DOMAIN.EXT or any one of the servers Anonymous directories, it is place in this directory.

Enter the appropriate directory name for your site.

|                                                      |
|------------------------------------------------------|
| <b>Un-stick The Processing Queue (Servants Only)</b> |
|------------------------------------------------------|

|                            |
|----------------------------|
| <b>[XPD UNSTICK QUEUE]</b> |
|----------------------------|

When a problem is discovered that halts the installation of patches, use this option to restart the patch sequence when processing for a single patch is interrupted. Problems such as a particular package may not be activated in the PACKAGE file (#9.4) for auto-patching, or a patch sequence may not be included stopping several patches from installing. Once the problem is resolved, this option will re-queue all patches stuck in the queue. This option is run on the Servant because patches that are not documented as having successfully installed in the Report of Patches Installed (Master Sites) create the need to inspect the remote site (i.e., Servant site). Master site personnel are required to sign on at the remote Servant site to check the status and resolve any problems. The Servant site can "un-stick" the queue, releasing the patches to install when the next TaskMan job is run.

|                                        |
|----------------------------------------|
| <b>Designate a Patch Informational</b> |
|----------------------------------------|

|                                      |
|--------------------------------------|
| <b>[XPD DESIGNATE INFORMATIONAL]</b> |
|--------------------------------------|

This option allows a Servant site to flag Informational patches so that the break in the patch numbering sequence will not stop the remote installation process.

|                           |
|---------------------------|
| <b>VistA Patch Server</b> |
|---------------------------|

|                           |
|---------------------------|
| <b>[XPD PATCH SERVER]</b> |
|---------------------------|

The VISTA PATCH SERVER [XPD PATCH SERVER] option needs to be scheduled using TaskMan to run periodically in order to transfer MailMan messages and activate the remote patching functionality, such as:

- Propagating the initial MailMan message request establishing a Master and Servant relationship between sites for remote patch installations from MailMan to the XPD MAIL MESSAGES(#9.79) and XPD PATCHING SERVITUDE/MASTERSHIP (#9.77) files
- Transferring the received patch requests from the XPD MAIL MESSAGES file (#9.79) into the XPD PATCHING file (#9.76)
- Populating the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) registering the Master/Servant site agreement



The scheduling frequency recommendation is every 15 minutes (i.e., 900S).

Figure 3-30 shows an example of using TaskMan to schedule the XPD PATCH SERVER option to run every 15 minutes.

```

Select Taskman Management Utilities Option:

 Schedule/Unschedule Options
 One-time Option Queue
 Taskman Management Utilities ...
 List Tasks
 Dequeue Tasks
 Requeue Tasks
 Delete Tasks
 Print Options that are Scheduled to run
 VPD Cleanup Task List
 Print Options Recommended for Queueing

Select Taskman Management Option: Schedule/Unschedule Options

Select OPTION to schedule or reschedule: XPD PATCH SERVER <Enter> Vista Patch
Server
Are you adding 'XPD PATCH SERVER' as
a new OPTION SCHEDULING (the 23RD)? No// Y <Enter> (Yes)

COMMAND: Press <PF1>H for help Insert
 Edit Option Schedule
 Option Name: XPD PATCH SERVER
 Menu Text: Vista Patch Server TASK ID:

QUEUED TO RUN AT WHAT TIME:
DEVICE FOR QUEUED JOB OUTPUT:
QUEUED TO RUN ON VOLUME SET:
RESCHEDULING FREQUENCY: 900S

TASK PARAMETERS:
SPECIAL QUEUEING: Startup Persistent

Exit Save Next Page Refresh

Enter a command or '^' followed by a caption to jump to a specific field.

COMMAND: Exit Press <PF1>H for help Insert

```

**Figure 3-30: Use TaskMan to schedule the XPD PATCH SERVER option to run every 15 minutes**

DRAFT

# Chapter 4: Implementation and Maintenance (Technical Manual Information)

Kernel Patch XU\*8.0\*345 is a Kernel Installation and Distribution System (KIDS) software release.



For complete installation and site setup instructions, see the *Patchman (VistA Auto Patch Utility and VistA Remote Patching) Installation and Setup Guide, Kernel Patch XU\*8.0\*345*, located on the VistA Documentation Library at:

DOMAIN.EXT

## Software Dependencies



For information on software requirements for Kernel Patch XU\*8\*345, see the section titled: **“Error! Reference source not found.”** in this documentation.

## Background Jobs

### XPDAUTO—VAPU server

S.XPDAUTO is server option triggers automatic control over patch installations at a site. At setup, it must be entered as a remote member for each MailMan domain users wish to auto-patch using the VAPU. Additionally, users must enter G.PATCHES@<REMOTE DOMAIN> for each MailMan domain to which the production server relays messages.



For more information on adding S.XPDAUTO as a remote member for each MailMan domain you wish to auto-patch using the VAPU, see the option titled "Edit G.PATCH Remote Members" in this documentation.



During site setup, the VISTA PATCH SERVER [XPD PATCH SERVER] option needs to be scheduled to run periodically using TaskMan, recommendation every 15 minutes, in order to transfer MailMan messages and activate the remote patching functionality. For more information, see the documented option titled "VistA Patch Server" in this documentation

## New Routines

The following new routines are exported with Kernel Patch XU\*8.0\*345 in the XPD namespace:

- XPDAFTP

- XPDAFTP2
- XPDAMENU
- XPDAMSTR
- XPDAPMES
- XPDAPROC
- XPDAPSVR
- XPDAPUTL
- XPDAUTL
- XPDAUTL2
- XPDAUTO
- XPDAUTO2
- XPDAUTOM

## Modified Routines

The following Kernel routines are exported with minimal modifications in the XPD namespace:

- XPDDCS
- XPDI
- XPDI1
- XPDIB
- XPDIL
- XPDIL1
- XPDIPM
- XPDIQ
- XQOO

## Data Dictionaries Exported with XU\*8\*345 for New VistA Files

| VistA File and Number                                                                                                                                                                    |                          | Global Location                                                                                                                  | Data?        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------|
| VAPU SITE PARAMETERS (#9.72)                                                                                                                                                             |                          | ^XPD(9.72                                                                                                                        | No           |
| <b>STANDARD DATA DICTIONARY #9.72 -- VAPU SITE PARAMETERS FILE</b><br>MAY 13,2005@17:03:53 PAGE 1<br>STORED IN ^XPD(9.72, (1 ENTRY) SITE: SF CIOFO, KERNEL PATCH ACCOUNT UCI:<br>VCH,VCH |                          |                                                                                                                                  |              |
| DATA<br>ELEMENT                                                                                                                                                                          | NAME<br>TITLE            | GLOBAL<br>LOCATION                                                                                                               | DATA<br>TYPE |
| -----                                                                                                                                                                                    |                          |                                                                                                                                  |              |
|                                                                                                                                                                                          | DD ACCESS: @             |                                                                                                                                  |              |
|                                                                                                                                                                                          | RD ACCESS: @             |                                                                                                                                  |              |
|                                                                                                                                                                                          | WR ACCESS: @             |                                                                                                                                  |              |
|                                                                                                                                                                                          | DEL ACCESS: @            |                                                                                                                                  |              |
|                                                                                                                                                                                          | LAYGO ACCESS: @          |                                                                                                                                  |              |
|                                                                                                                                                                                          | AUDIT ACCESS: @          |                                                                                                                                  |              |
| CROSS<br>REFERENCED BY: SITE NAME(B)                                                                                                                                                     |                          |                                                                                                                                  |              |
| 9.72,.01                                                                                                                                                                                 | SITE NAME                | 0;1 FREE TEXT (Required)                                                                                                         |              |
|                                                                                                                                                                                          | INPUT TRANSFORM:         | K:\$L(X)>60!(X?.N)!(\$L(X)<3)!'(X'?1P.E) X S:\$D(X<br>) DINUM=1                                                                  |              |
|                                                                                                                                                                                          | LAST EDITED:             | SEP 11, 2003                                                                                                                     |              |
|                                                                                                                                                                                          | HELP-PROMPT:             | NAME MUST BE 3-60 CHARACTERS, NOT NUMERIC OR<br>STARTING WITH PUNCTUATION                                                        |              |
|                                                                                                                                                                                          | NOTES:                   | XXXX--CAN'T BE ALTERED EXCEPT BY PROGRAMMER                                                                                      |              |
|                                                                                                                                                                                          | CROSS-REFERENCE:         | 9.72^B<br>1)= S ^XPD(9.72,"B",\$E(X,1,30),DA)=""<br>2)= K ^XPD(9.72,"B",\$E(X,1,30),DA)                                          |              |
| 9.72,2                                                                                                                                                                                   | DAYS TO INSTALL          | 0;3 NUMBER                                                                                                                       |              |
|                                                                                                                                                                                          | INPUT TRANSFORM:         | K:+X'=X!(X>60)!(X<0)!(X?.E1"."1.N) X                                                                                             |              |
|                                                                                                                                                                                          | LAST EDITED:             | AUG 26, 2003                                                                                                                     |              |
|                                                                                                                                                                                          | HELP-PROMPT:             | Type a number between 0 and 60, 0 Decimal<br>Digits, The Install will occur this many days<br>from receipt in Mailman.           |              |
| 9.72,3                                                                                                                                                                                   | SITE INSTALL TIME        | 0;4 NUMBER                                                                                                                       |              |
|                                                                                                                                                                                          | INPUT TRANSFORM:         | K:+X'=X!(X>2400)!(X<1)!(X?.E1"."1.N) X                                                                                           |              |
|                                                                                                                                                                                          | LAST EDITED:             | AUG 26, 2003                                                                                                                     |              |
|                                                                                                                                                                                          | HELP-PROMPT:             | Type a number between 1 and 2400, 0 Decimal<br>Digits Use Military time 0001 to 2400                                             |              |
| 9.72,4                                                                                                                                                                                   | ENABLE/DISABLE AUTOPATCH | 0;5 SET                                                                                                                          |              |
|                                                                                                                                                                                          |                          | '0' FOR DISABLE;<br>'1' FOR ENABLE;                                                                                              |              |
|                                                                                                                                                                                          | LAST EDITED:             | MAR 02, 2005                                                                                                                     |              |
|                                                                                                                                                                                          | HELP-PROMPT:             | This is a toggle. 0=Disable, 1=Enable When<br>enabled the Autopatcher will attempt to<br>automatically install incoming patches. |              |

| VistA File and Number |                          | Global Location                                                                                                                                            | Data? |
|-----------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 9.72,5                | HFS DIRECTORY            | 0;6 FREE TEXT (Required)                                                                                                                                   |       |
|                       | INPUT TRANSFORM:         | K:\$L(X)>100!(\$L(X)<3) X                                                                                                                                  |       |
|                       | LAST EDITED:             | SEP 09, 2003                                                                                                                                               |       |
|                       | HELP-PROMPT:             | Answer must be 3-100 characters in length. This field is the storage Directory for Autoinstall .TXT outputs when a patch is installed. e.g. USER\$:[TEMP]  |       |
|                       | DESCRIPTION:             | This field defines the FTP Source for downloading KIDS file distributions.                                                                                 |       |
| 9.72,6                | PATCH INSTALL USER       | 0;7 POINTER TO NEW PERSON FILE (#200)                                                                                                                      |       |
|                       | LAST EDITED:             | MAR 02, 2005                                                                                                                                               |       |
|                       | HELP-PROMPT:             | Enter the NEW PERSON staff member designated to AUTOINSTALL patches. User should have G.PATCHES Mail Group and @ Programmer Access, XUPROG and XUPROGMODE. |       |
|                       | DESCRIPTION:             | This is the USER that will perform Autopatching. TASKMAN PATCH queues will be under this user.                                                             |       |
| 9.72,7                | REBUILD MENUS            | 0;8 SET                                                                                                                                                    |       |
|                       |                          | '0' FOR NO;<br>'1' FOR YES;                                                                                                                                |       |
|                       | LAST EDITED:             | SEP 02, 2003                                                                                                                                               |       |
|                       | HELP-PROMPT:             | If you have a nightly TASK to rebuild menus and it runs after PATCH Install time, you probably want to say no.                                             |       |
| 9.72,8                | FTP FIELD OFFICE NAME    | 0;9 POINTER TO VAPU FTP SITES FILE (#9.73)                                                                                                                 |       |
|                       | LAST EDITED:             | MAY 12, 2004                                                                                                                                               |       |
|                       | DESCRIPTION:             | This field is for entering the Field Office FTP site from which you retrieve KIDS Distribution Patches. An example would be FO-DOMAIN.EXT                  |       |
| 9.72,9                | FTP FILE DIRECTORY       | 0;10 FREE TEXT                                                                                                                                             |       |
|                       | INPUT TRANSFORM:         | K:\$L(X)>50!(\$L(X)<3) X                                                                                                                                   |       |
|                       | LAST EDITED:             | MAR 02, 2005                                                                                                                                               |       |
|                       | HELP-PROMPT:             | LEN 3-50 - Directory Name without trailing \. FTP KIDS downloads stored here.                                                                              |       |
|                       | DESCRIPTION:             | This is the directory where FTP KIDS downloads are stored.                                                                                                 |       |
| 9.72,10               | INFORMATIONAL MAIL GROUP | 0;2 POINTER TO MAIL GROUP FILE (#3.8)                                                                                                                      |       |
|                       | LAST EDITED:             | SEP 09, 2003                                                                                                                                               |       |
|                       | HELP-PROMPT:             | This Mail Group receives informational output from VAPU                                                                                                    |       |
|                       | DESCRIPTION:             | This mail group receives informational output from VAPU.                                                                                                   |       |
| 9.72,11               | EXECUTABLE LOCATION      | 1;1 FREE TEXT                                                                                                                                              |       |

| VistA File and Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Global Location | Data? |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<3) X<br>LAST EDITED: SEP 12, 2003<br>HELP-PROMPT: CACHE Enter full path to primary volume :VMS<br>Enter your BATCH QUEUE Name.<br>DESCRIPTION: This field is used to tell the Autopatcher a<br>valid Directory path to execute the FTP from<br>within the MUMPS environment.<br><br>VMS BATCH QUEUE: On VMS it is necessary to<br>specify your BATCH QUEUE area in order to<br>execute the FTP command. An example taken from<br>Columbia, SC looks like: 544a03\$batch<br><br><div> <div>FILES POINTED TO</div> <div>MAIL GROUP (#3.8)</div> <div>NEW PERSON (#200)</div> <div>VAPU FTP SITES (#9.73)</div> <div>INPUT TEMPLATE(S):</div> <div>PRINT TEMPLATE(S):</div> <div>SORT TEMPLATE(S):</div> <div>FORM(S)/BLOCK(S):</div> </div> <div> <div>FIELDS</div> <div>INFORMATIONAL MAIL GROUP (#10)</div> <div>PATCH INSTALL USER (#6)</div> <div>FTP FIELD OFFICE NAME (#8)</div> </div> |                 |       |

Table 4-1: Data dictionary (new VAPU SITE PARAMETERS file #9.72)

| VistA File and Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Global Location | Data? |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| VAPU FTP SITES (#9.73)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ^XPD(9.73       | No    |
| <b>STANDARD DATA DICTIONARY #9.73 -- VAPU FTP SITES FILE</b><br><div> <div></div> <div>MAY 13,2005@17:04:03</div> <div>PAGE 1</div> </div> STORED IN ^XPD(9.73, (4 ENTRIES) SITE: SF CIOFO, KERNEL PATCH ACCOUNT UCI:<br>VCH,VCH<br><br><div> <div>DATA</div> <div>NAME</div> <div>GLOBAL</div> <div>DATA</div> </div> <div> <div>ELEMENT</div> <div>TITLE</div> <div>LOCATION</div> <div>TYPE</div> </div> <div>-----</div> <div> <div>DD ACCESS: @</div> <div>RD ACCESS: @</div> <div>WR ACCESS: @</div> <div>DEL ACCESS: @</div> <div>LAYGO ACCESS: @</div> <div>AUDIT ACCESS: @</div> </div> <div>POINTED TO BY: FTP FIELD OFFICE NAME field (#8) of the VAPU SITE PARAMETERS<br/>File (#9.72)</div> <div>CROSS</div> <div>REFERENCED BY: FTP SITE NAME(B)</div> |                 |       |

| VistA File and Number                                                                                                                                                                                                                                     | Global Location | Data?                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|
| 9.73,.01                                                                                                                                                                                                                                                  | FTP SITE NAME   | 0;1 FREE TEXT (Required) |
| INPUT TRANSFORM: K:\$L(X)>30!(\$L(X)<12)!'(X'?1P.E) X<br>LAST EDITED: SEP 02, 2003<br>HELP-PROMPT: Answer must be 12-30 characters in length<br>CROSS-REFERENCE: 9.73^B<br>1)= S ^XPD(9.73,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.73,"B",\$E(X,1,30),DA) |                 |                          |
| INPUT TEMPLATE(S):                                                                                                                                                                                                                                        |                 |                          |
| PRINT TEMPLATE(S):                                                                                                                                                                                                                                        |                 |                          |
| SORT TEMPLATE(S):                                                                                                                                                                                                                                         |                 |                          |
| FORM(S)/BLOCK(S):                                                                                                                                                                                                                                         |                 |                          |

Table 4-2: Data dictionary (new VAPU FTP SITES file #9.73)

| VistA File and Number                                                                                                                                                                                                                                                                                            | Global Location | Data?                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|
| VAPU INSTALL MODIFIERS (#9.74)                                                                                                                                                                                                                                                                                   | ^XPD(9.74       | No                       |
| <b>STANDARD DATA DICTIONARY #9.74 -- VAPU INSTALL MODIFIERS FILE</b><br>MAY 13,2005@17:04:20 PAGE 1<br>STORED IN ^XPD(9.74, (7 ENTRIES) SITE: SF CIOFO, KERNEL PATCH ACCOUNT UCI:<br>VCH,VCH                                                                                                                     |                 |                          |
| DATA<br>ELEMENT                                                                                                                                                                                                                                                                                                  | NAME<br>TITLE   | GLOBAL<br>LOCATION       |
|                                                                                                                                                                                                                                                                                                                  | DATA<br>TYPE    |                          |
| -----                                                                                                                                                                                                                                                                                                            |                 |                          |
| DD ACCESS: @<br>RD ACCESS: @<br>WR ACCESS: @<br>DEL ACCESS: @<br>LAYGO ACCESS: @<br>AUDIT ACCESS: @                                                                                                                                                                                                              |                 |                          |
| CROSS<br>REFERENCED BY: INSTALL NAME(AC), INSTALL NAME(ACD), INSTALL NAME(B)                                                                                                                                                                                                                                     |                 |                          |
| 9.74,.01                                                                                                                                                                                                                                                                                                         | INSTALL NAME    | 0;1 FREE TEXT (Required) |
| INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<3)!'(X'?1P.E) X<br>LAST EDITED: MAR 26, 2004<br>HELP-PROMPT: Enter the INSTALL NAME just as it would appear<br>in the INSTALL file (len 3-50)<br>DESCRIPTION: This field is the install name as it should<br>appear in the INSTALL file once it arrives.<br>e.g. HL*1.6*107 |                 |                          |
| CROSS-REFERENCE: 9.74^B<br>1)= S ^XPD(9.74,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.74,"B",\$E(X,1,30),DA)                                                                                                                                                                                                        |                 |                          |
| CROSS-REFERENCE: 9.74^AC^MUMPS<br>1)= S ^XPD(9.74,"AC",X)=" "<br>2)= K ^XPD(9.74,"AC",X)                                                                                                                                                                                                                         |                 |                          |



| VistA File and Number          | Global Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Data? |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| VAPU INSTALL MODIFIERS (#9.74) | ^XPD(9.74                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No    |
|                                | 3)= THIS X-REF IS USED FOR MONITORING PATCHES<br>This X-Ref is used to monitor patch installation. It is set when the record is first created and before the patch is installed. A monitor routine checks for install of the patch and if the install is complete, deletes the X-Ref entry.                                                                                                                                                                                               |       |
|                                | CROSS-REFERENCE: 9.74^ACD^MUMPS                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |
|                                | 1)= Q                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |
|                                | 2)= K ^XPD(9.74,"ACD",X)                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |
|                                | 3)= THIS X-REF TRACKS DELINQUENT PATCHES.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
|                                | This X-Ref is set when a patch is not installed by it's compliance date as defined in the FORUM Patch module.                                                                                                                                                                                                                                                                                                                                                                             |       |
| 9.74,.02                       | SEQUENCE # 0;11 NUMBER (Required)                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |
|                                | INPUT TRANSFORM: K:+X'=X!(X>999)!(X<1)!(X?.E1"."1N.N) X                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
|                                | LAST EDITED: SEP 06, 2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
|                                | HELP-PROMPT: Type a Number between 1 and 999, 0 Decimal Digits                                                                                                                                                                                                                                                                                                                                                                                                                            |       |
| 9.74,1                         | STOP TASKMAN (Yes/No) 0;2 SET                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |
|                                | '0' FOR NO;                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |
|                                | '1' FOR YES;                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |
|                                | LAST EDITED: SEP 04, 2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
|                                | HELP-PROMPT: Enter 1 or YES to STOP TASKMAN prior to Patch Install.                                                                                                                                                                                                                                                                                                                                                                                                                       |       |
|                                | DESCRIPTION: This field allows the VISTA Autopatcher to modify INSTALL Parameters outside of KIDS. Setting this field to 1 or YES will allow developers to Stop Taskman prior to Autoinstalling their KIDS Patch through the Autoinstaller. The VAPU SITE PARAMETERS (9.72) field WAIT FOR INSTALL MODIFIERS must be set to 1 or YES to activate this tool at the site. If set to 1 the Autopatcher will wait to receive INSTALL MODIFIERS from FORUM before proceeding with the Install. |       |
| 9.74,2                         | STOP HL7 0;3 SET                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
|                                | '0' FOR NO;                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |
|                                | '1' FOR YES;                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |
|                                | LAST EDITED: SEP 04, 2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| 9.74,3                         | STOP MAILMAN 0;4 SET                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |
|                                | '0' FOR NO;                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |
|                                | '1' FOR YES;                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |
|                                | LAST EDITED: SEP 04, 2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| 9.74,4                         | STOP BROKER 0;5 SET                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |
|                                | '0' FOR NO;                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |
|                                | '1' FOR YES;                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |

| VistA File and Number                                                              | Global Location | Data? |
|------------------------------------------------------------------------------------|-----------------|-------|
| VAPU INSTALL MODIFIERS (#9.74)                                                     | ^XPD(9.74       | No    |
| LAST EDITED: SEP 04, 2003                                                          |                 |       |
| 9.74,5 INHIBIT LOGONS 0;6 SET                                                      |                 |       |
| '0' FOR NO;<br>'1' FOR YES;                                                        |                 |       |
| LAST EDITED: SEP 04, 2003                                                          |                 |       |
| 9.74,6 FTP DISTRIBUTION FILENAME 0;7 FREE TEXT                                     |                 |       |
| INPUT TRANSFORM: K:\$L(X)>30!(\$L(X)<3) X                                          |                 |       |
| LAST EDITED: SEP 04, 2003                                                          |                 |       |
| HELP-PROMPT: Answer must be 3-30 characters in length.                             |                 |       |
| 9.74,7 PROTOCOLS TO DISABLE 2;0 Multiple #9.7407<br>(Add New Entry without Asking) |                 |       |
| 9.7407,.01 PROTOCOLS TO DISABLE 0;1 FREE TEXT (Multiply asked)                     |                 |       |
| INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<3) X                                          |                 |       |
| LAST EDITED: SEP 04, 2003                                                          |                 |       |
| HELP-PROMPT: Answer must be 3-50 characters in length.                             |                 |       |
| CROSS-REFERENCE: 9.7407^B                                                          |                 |       |
| 1)= S ^XPD(9.74,DA(1),2,"B",\$E(X,1,30),DA)=" "                                    |                 |       |
| 2)= K ^XPD(9.74,DA(1),2,"B",\$E(X,1,30),DA)                                        |                 |       |
| 9.74,8 OPTIONS TO DISABLE 3;0 Multiple #9.7408<br>(Add New Entry without Asking)   |                 |       |
| 9.7408,.01 OPTIONS TO DISABLE 0;1 FREE TEXT (Multiply asked)                       |                 |       |
| INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<3) X                                          |                 |       |
| LAST EDITED: SEP 04, 2003                                                          |                 |       |
| HELP-PROMPT: Answer must be 3-50 characters in length.                             |                 |       |
| CROSS-REFERENCE: 9.7408^B                                                          |                 |       |
| 1)= S ^XPD(9.74,DA(1),3,"B",\$E(X,1,30),DA)=" "                                    |                 |       |
| 2)= K ^XPD(9.74,DA(1),3,"B",\$E(X,1,30),DA)                                        |                 |       |
| 9.74,9 AUTO/MANUAL 0;9 SET (Required)                                              |                 |       |
| '0' FOR AUTO;                                                                      |                 |       |
| '1' FOR MANUAL;                                                                    |                 |       |
| LAST EDITED: MAY 05, 2005                                                          |                 |       |
| HELP-PROMPT: Answer AUTO or MANUAL to this REQUIRED field.                         |                 |       |
| DESCRIPTION: This required field tells the VAPU whether or                         |                 |       |
| not a patch can be processed Automatically. It                                     |                 |       |
| also provides for some interaction between the                                     |                 |       |
| Patch Release message so the VAPU knows when a                                     |                 |       |
| TASK is ready to process. An FTP Distribution                                      |                 |       |
| patch requires an INSTALL MODIFIER and the                                         |                 |       |
| Patch Release message before it can begin                                          |                 |       |
| processing. The Patch Distribution Message                                         |                 |       |
| will create a record stub but will determine                                       |                 |       |
| the message is not installable and wait for an                                     |                 |       |

| VistA File and Number                                                               | Global Location                                                                                                                                                                               | Data?                                                            |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| VAPU INSTALL MODIFIERS (#9.74)                                                      | ^XPD(9.74                                                                                                                                                                                     | No                                                               |
|                                                                                     | INSTALL MODIFIER. Conversely if the INSTALL MODIFIER is received first the DISTRIBUTION will not be installed until the Patch Release Notification has been received.                         |                                                                  |
| 9.74,10                                                                             | ENTERED IN ERROR FLAG 0;8 SET<br><br>'0' FOR NO;<br>'1' FOR YES;<br>LAST EDITED: SEP 05, 2003                                                                                                 |                                                                  |
| 9.74,11                                                                             | TAKE OPTIONS/PROTOCOLS OFFLINE 0;10 SET<br><br>'0' FOR NO;<br>'1' FOR YES;<br>LAST EDITED: SEP 05, 2003                                                                                       |                                                                  |
| 9.74,12                                                                             | KIDS MailMan Distribution IEN 0;12 POINTER TO MESSAGE FILE (#3.9)<br><br>LAST EDITED: SEP 10, 2003                                                                                            |                                                                  |
| 9.74,13                                                                             | TASK # 4;1 NUMBER<br><br>INPUT TRANSFORM: K:+X'=X!(X>999999999)!(X<1)!(X?.E1"."1.N) X<br>LAST EDITED: MAR 22, 2004<br>HELP-PROMPT: Type a number between 1 and 999999999, 0<br>Decimal Digits |                                                                  |
| 9.74,14                                                                             | COMPLIANCE DATE 4;2 DATE<br><br>INPUT TRANSFORM: S %DT="E" D ^%DT S X=Y K:X<1 X<br>LAST EDITED: MAR 22, 2004<br>HELP-PROMPT: (No range limit on date)                                         |                                                                  |
| 9.74,15                                                                             | SUBJECT 4;3 FREE TEXT<br><br>INPUT TRANSFORM: K:\$L(X)>60!(\$L(X)<1) X<br>LAST EDITED: MAR 22, 2004<br>HELP-PROMPT: Answer must be 1-60 characters in length                                  |                                                                  |
| 9.74,16                                                                             | RECPT DATE 4;4 DATE<br><br>INPUT TRANSFORM: S %DT="E" D ^%DT S X=Y K:X<1 X<br>LAST EDITED: MAR 22, 2004<br>HELP-PROMPT: (No range limit on date)                                              |                                                                  |
| 9.74,17                                                                             | PRIORITY 4;5 FREE TEXT<br><br>INPUT TRANSFORM: K:\$L(X)>30!(\$L(X)<1) X<br>LAST EDITED: MAR 19, 2004<br>HELP-PROMPT: Answer must be 1-30 characters in length                                 |                                                                  |
| <div>FILES POINTED TO</div> <div>MESSAGE (#3.9)</div> <div>INPUT TEMPLATE(S):</div> |                                                                                                                                                                                               |                                                                  |
|                                                                                     |                                                                                                                                                                                               | <div>FIELDS</div> <div>KIDS MailMan Distribution IEN (#12)</div> |

| VistA File and Number                                                                                       | Global Location | Data? |
|-------------------------------------------------------------------------------------------------------------|-----------------|-------|
| VAPU INSTALL MODIFIERS (#9.74)<br>PRINT TEMPLATE(S) :<br><br>SORT TEMPLATE(S) :<br><br>FORM(S) / BLOCK(S) : | ^XPD(9.74       | No    |

**Table 4-3: Data dictionary (new VAPU INSTALL MODIFIERS file #9.74)**

| VistA File and Number                                                                                                                                                                        |                  | Global Location                                                                            | Data?        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------|--------------|
| VAPU PACKAGE MODIFIERS (#9.75)                                                                                                                                                               |                  | ^XPD(9.75                                                                                  | No           |
| <b>STANDARD DATA DICTIONARY #9.75 -- VAPU PACKAGE MODIFIERS FILE</b><br>MAY 13,2005@17:04:31 PAGE 1<br>STORED IN ^XPD(9.75, (4 ENTRIES) SITE: SF CIOFO, KERNEL PATCH ACCOUNT UCI:<br>VCH,VCH |                  |                                                                                            |              |
| DATA<br>ELEMENT                                                                                                                                                                              | NAME<br>TITLE    | GLOBAL<br>LOCATION                                                                         | DATA<br>TYPE |
| -----                                                                                                                                                                                        |                  |                                                                                            |              |
|                                                                                                                                                                                              | DD ACCESS: @     |                                                                                            |              |
|                                                                                                                                                                                              | RD ACCESS: @     |                                                                                            |              |
|                                                                                                                                                                                              | WR ACCESS: @     |                                                                                            |              |
|                                                                                                                                                                                              | DEL ACCESS: @    |                                                                                            |              |
|                                                                                                                                                                                              | LAYGO ACCESS: @  |                                                                                            |              |
|                                                                                                                                                                                              | AUDIT ACCESS: @  |                                                                                            |              |
| CROSS<br>REFERENCED BY: PACKAGE NAME(B)                                                                                                                                                      |                  |                                                                                            |              |
| 9.75,.01                                                                                                                                                                                     | PACKAGE NAME     | 0;1 POINTER TO PACKAGE FILE (#9.4)<br>(Required)                                           |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |
|                                                                                                                                                                                              | HELP-PROMPT:     | This field points to the Package File (9.4)                                                |              |
|                                                                                                                                                                                              | CROSS-REFERENCE: | 9.75^B<br>1)= S ^XPD(9.75,"B", \$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.75,"B", \$E(X,1,30),DA) |              |
| 9.75,1                                                                                                                                                                                       | STOP TASKMAN     | 0;2 SET                                                                                    |              |
|                                                                                                                                                                                              |                  | '0' FOR NO;<br>'1' FOR YES;                                                                |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |
| 9.75,2                                                                                                                                                                                       | STOP HL7         | 0;3 SET                                                                                    |              |
|                                                                                                                                                                                              |                  | '0' FOR NO;<br>'1' FOR YES;                                                                |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |
| 9.75,3                                                                                                                                                                                       | STOP MAILMAN     | 0;4 SET                                                                                    |              |
|                                                                                                                                                                                              |                  | '0' FOR NO;<br>'1' FOR YES;                                                                |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |
| 9.75,4                                                                                                                                                                                       | STOP BROKER      | 0;5 SET                                                                                    |              |
|                                                                                                                                                                                              |                  | '0' FOR NO;<br>'1' FOR YES;                                                                |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |
| 9.75,5                                                                                                                                                                                       | INHIBIT LOGONS   | 0;6 SET                                                                                    |              |
|                                                                                                                                                                                              |                  | '0' FOR NO;<br>'1' FOR YES;                                                                |              |
|                                                                                                                                                                                              | LAST EDITED:     | SEP 05, 2003                                                                               |              |

| VistA File and Number                                               | Global Location                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Data? |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 9.75,7                                                              | PROTOCOLS TO DISABLE 1;0 Multiple #9.7507<br>(Add New Entry without Asking)                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| 9.7507,.01                                                          | PROTOCOLS TO DISABLE 0;1 FREE TEXT (Multiply asked)<br><br>INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<2) X<br>LAST EDITED: SEP 06, 2003<br>HELP-PROMPT: Answer must be 2-50 characters in length.<br>CROSS-REFERENCE: 9.7507^B<br>1)= S ^XPD(9.75,DA(1),1,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.75,DA(1),1,"B",\$E(X,1,30),DA)                                                                                                                                                    |       |
| 9.75,8                                                              | OPTIONS TO DISABLE 2;0 Multiple #9.7508<br>(Add New Entry without Asking)                                                                                                                                                                                                                                                                                                                                                                                                     |       |
| 9.7508,.01                                                          | OPTIONS TO DISABLE 0;1 FREE TEXT (Multiply asked)<br><br>INPUT TRANSFORM: K:\$L(X)>50!(\$L(X)<2) X<br>LAST EDITED: SEP 06, 2003<br>HELP-PROMPT: Answer must be 2-50 characters in length.<br>CROSS-REFERENCE: 9.7508^B<br>1)= S ^XPD(9.75,DA(1),2,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.75,DA(1),2,"B",\$E(X,1,30),DA)                                                                                                                                                      |       |
| 9.75,11                                                             | TAKE OPTIONS/PROTOCOLS OFFLINE 0;10 SET<br><br>'0' FOR NO;<br>'1' FOR YES;<br>LAST EDITED: SEP 05, 2003                                                                                                                                                                                                                                                                                                                                                                       |       |
| 9.75,12                                                             | PATCH DOCUMENTATION RECIPIENTS 3;0 POINTER Multiple #9.75012<br>(Add New Entry without Asking)                                                                                                                                                                                                                                                                                                                                                                                |       |
| 9.75012,.01                                                         | PATCH DOCUMENTATION RECIPIENTS 0;1 POINTER TO NEW PERSON FILE ( #200) (Multiply asked)<br><br>LAST EDITED: MAR 03, 2005<br>HELP-PROMPT: Enter Staff that should receive Patch Documentation for this Package.<br>DESCRIPTION: Staff entered here will receive patch documentation for this package when a patch arrives through an alert.<br><br>CROSS-REFERENCE: 9.75012^B<br>1)= S ^XPD(9.75,DA(1),3,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.75,DA(1),3,"B",\$E(X,1,30),DA) |       |
| FILES POINTED TO<br><br>NEW PERSON (#200)<br>TION RECIPIENTS (#.01) | FIELDS<br><br>PATCH DOCUMENTATION RECIPIENTS:PATCH DOCUMENTA                                                                                                                                                                                                                                                                                                                                                                                                                  |       |

| VistA File and Number | Global Location     | Data? |
|-----------------------|---------------------|-------|
| PACKAGE (#9.4)        | PACKAGE NAME (#.01) |       |
| INPUT TEMPLATE(S):    |                     |       |
| PRINT TEMPLATE(S):    |                     |       |
| SORT TEMPLATE(S):     |                     |       |
| FORM(S)/BLOCK(S):     |                     |       |

Table 4-4: Data dictionary (new VAPU PACKAGE MODIFIERS file #9.75)

| VistA File and Number                                                                                                                                                                             | Global Location         | Data?                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------|
| XPD PATCHING (#9.76)                                                                                                                                                                              | ^XPD(9.76               | No                                        |
| <b>STANDARD DATA DICTIONARY #9.76 -- XPD PATCHING FILE</b><br>MAY 13,2005@17:04:41 PAGE 1<br>STORED IN ^XPD(9.76, *** NO DATA STORED YET *** SITE: SF CIOFO, KERNEL PATCH<br>ACCOUNT UCI: VCH,VCH |                         |                                           |
| DATA<br>ELEMENT                                                                                                                                                                                   | NAME<br>TITLE           | GLOBAL<br>LOCATION                        |
|                                                                                                                                                                                                   |                         | DATA<br>TYPE                              |
| -----                                                                                                                                                                                             |                         |                                           |
| DD ACCESS: @<br>RD ACCESS: @<br>WR ACCESS: @<br>DEL ACCESS: @<br>LAYGO ACCESS: @<br>AUDIT ACCESS: @                                                                                               |                         |                                           |
| CROSS                                                                                                                                                                                             |                         |                                           |
| REFERENCED BY: NAME(B), PATCH DESIGNATION(C),<br>DATE PATCH INSTALL REQUESTED(D), PATCH SEQUENCE NUMBER(E)                                                                                        |                         |                                           |
| 9.76,.01                                                                                                                                                                                          | NAME                    | 0;1 VARIABLE POINTER (Required)           |
|                                                                                                                                                                                                   | FILE ORDER PREFIX       | LAYGO MESSAGE                             |
|                                                                                                                                                                                                   | 3.9 2 #2                | n MESSAGE FILE                            |
|                                                                                                                                                                                                   | LAST EDITED:            | APR 09, 2004                              |
|                                                                                                                                                                                                   | CROSS-REFERENCE:        | 9.76^B                                    |
|                                                                                                                                                                                                   |                         | 1)= S ^XPD(9.76,"B", \$E(X,1,30),DA)=""   |
|                                                                                                                                                                                                   |                         | 2)= K ^XPD(9.76,"B", \$E(X,1,30),DA)      |
| 9.76,.5                                                                                                                                                                                           | PATCH DESIGNATION       | 0;3 FREE TEXT                             |
|                                                                                                                                                                                                   | INPUT TRANSFORM:        | K:\$L(X)>30!(\$L(X)<1) X                  |
|                                                                                                                                                                                                   | LAST EDITED:            | APR 08, 2004                              |
|                                                                                                                                                                                                   | HELP-PROMPT:            | Answer must be 1-30 characters in length. |
|                                                                                                                                                                                                   | CROSS-REFERENCE:        | 9.76^C                                    |
|                                                                                                                                                                                                   |                         | 1)= S ^XPD(9.76,"C", \$E(X,1,30),DA)=""   |
|                                                                                                                                                                                                   |                         | 2)= K ^XPD(9.76,"C", \$E(X,1,30),DA)      |
| 9.76,1                                                                                                                                                                                            | USER TRIGGERING INSTALL | 0;2 POINTER TO NEW PERSON FILE (#200)     |

| VistA File and Number                                                                                                                                                                                                                                                                          | Global Location                           | Data?                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------|
| 9.76,2<br>LAST EDITED: APR 08, 2004<br>DATE PATCH INSTALL REQUESTED 0;4 DATE<br>INPUT TRANSFORM: S %DT="EST" D ^%DT S X=Y K:Y<1 X<br>LAST EDITED: APR 22, 2004<br>CROSS-REFERENCE: 9.76^D<br>1)= S ^XPD(9.76,"D",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.76,"D",\$E(X,1,30),DA)                    |                                           |                           |
| 9.76,3<br>PATCH SEQUENCE NUMBER 0;5 FREE TEXT<br>INPUT TRANSFORM: K:\$L(X)>15!(\$L(X)<1) X<br>LAST EDITED: APR 23, 2004<br>HELP-PROMPT: Answer must be 1-15 characters in length.<br>CROSS-REFERENCE: 9.76^E<br>1)= S ^XPD(9.76,"E",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.76,"E",\$E(X,1,30),DA) |                                           |                           |
| 9.76,100                                                                                                                                                                                                                                                                                       | COMMUNICATION FROM MASTER 100;0           | WORD-PROCESSING #9.7601   |
| 9.76,125                                                                                                                                                                                                                                                                                       | COMMUNICATIONS TO MY MASTER 125;0         | WORD-PROCESSING #9.760125 |
| 9.76,150                                                                                                                                                                                                                                                                                       | COMMUNICATIONS TO SERVANT 150;0 POINTER   | Multiple #9.7602          |
| 9.7602,.01<br>TO SERVANT<br>0;1 POINTER TO DOMAIN FILE (#4.2)<br>(Multiply asked)<br>LAST EDITED: APR 13, 2004<br>CROSS-REFERENCE: 9.7602^B<br>1)= S ^XPD(9.76,DA(1),150,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.76,DA(1),150,"B",\$E(X,1,30),DA)                                              |                                           |                           |
| 9.7602,1                                                                                                                                                                                                                                                                                       | COMMUNICATION 1;0                         | WORD-PROCESSING #9.7621   |
| 9.76,200                                                                                                                                                                                                                                                                                       | COMMUNICATIONS FROM SERVANT 200;0 POINTER | Multiple #9.7603          |
| 9.7603,.01<br>FROM SERVANT<br>0;1 POINTER TO DOMAIN FILE (#4.2)<br>(Multiply asked)<br>LAST EDITED: APR 13, 2004<br>CROSS-REFERENCE: 9.7603^B<br>1)= S ^XPD(9.76,DA(1),200,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.76,DA(1),200,"B",\$E(X,1,30),DA)                                            |                                           |                           |
| 9.7603,1                                                                                                                                                                                                                                                                                       | COMMUNICATION 1;0                         | WORD-PROCESSING #9.7631   |
| FILES POINTED TO                                                                                                                                                                                                                                                                               |                                           | FIELDS                    |



| VistA File and Number                                             | Global Location                                                                                | Data? |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------|
| DOMAIN (#4.2)                                                     | COMMUNICATIONS TO SERVANT:TO SERVANT (#.01)<br>COMMUNICATIONS FROM SERVANT:FROM SERVANT (#.01) |       |
| MESSAGE (#3.9)                                                    | NAME (#.01)                                                                                    |       |
| NEW PERSON (#200)                                                 | USER TRIGGERING INSTALL (#1)                                                                   |       |
| INPUT TEMPLATE(S):                                                |                                                                                                |       |
| PRINT TEMPLATE(S):                                                |                                                                                                |       |
| CAPTIONED                                                         | USER #0                                                                                        |       |
| XPD PATCH CHECK                                                   | APR 27, 2004@11:27 USER #0<br>REMOTE PATCH INSTALL REPORT                                      |       |
| SORT TEMPLATE(S):                                                 |                                                                                                |       |
| XPD PATCH CHECK                                                   | APR 22, 2004@13:34 USER #0                                                                     |       |
| SORT BY: DATE PATCH INSTALL REQUESTED//                           | (User is asked range)                                                                          |       |
| WITHIN DATE PATCH INSTALL REQUESTED, SORT BY: PATCH DESIGNATION// | (PATCH DESIGNATION not null)                                                                   |       |
| FORM(S)/BLOCK(S):                                                 |                                                                                                |       |

Table 4-5: Data dictionary (new XPD PATCHING file #9.76)

| VistA File and Number                                                                                                                                                                                  | Global Location  | Data?                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------|
| XPD PATCHING SERVITUDE/MASTERSHIP (#9.77)                                                                                                                                                              | ^XPD(9.77        | No                                                                                     |
| <b>STANDARD DATA DICTIONARY #9.77 -- XPD PATCHING SERVITUDE/MASTERSHIP FILE</b><br>MAY 13,2005@17:04:57 PAGE 1<br>STORED IN ^XPD(9.77, (1 ENTRY) SITE: SF CIOFO, KERNEL PATCH ACCOUNT UCI: VC<br>H,VCH |                  |                                                                                        |
| DATA<br>ELEMENT                                                                                                                                                                                        | NAME<br>TITLE    | GLOBAL<br>LOCATION                                                                     |
|                                                                                                                                                                                                        |                  | DATA<br>TYPE                                                                           |
| -----                                                                                                                                                                                                  |                  |                                                                                        |
|                                                                                                                                                                                                        | DD ACCESS: @     |                                                                                        |
|                                                                                                                                                                                                        | RD ACCESS: @     |                                                                                        |
|                                                                                                                                                                                                        | WR ACCESS: @     |                                                                                        |
|                                                                                                                                                                                                        | DEL ACCESS: @    |                                                                                        |
|                                                                                                                                                                                                        | LAYGO ACCESS: @  |                                                                                        |
|                                                                                                                                                                                                        | AUDIT ACCESS: @  |                                                                                        |
| CROSS<br>REFERENCED BY: NAME(B)                                                                                                                                                                        |                  |                                                                                        |
| 9.77,.01                                                                                                                                                                                               | NAME             | 0;1 POINTER TO INSTITUTION FILE (#4)<br>(Required)                                     |
|                                                                                                                                                                                                        | LAST EDITED:     | JUL 18, 2003                                                                           |
|                                                                                                                                                                                                        | CROSS-REFERENCE: | 9.77^B<br>1)= S ^XPD(9.77,"B",\$(X,1,30),DA)=" "<br>2)= K ^XPD(9.77,"B",\$(X,1,30),DA) |
| 9.77,1                                                                                                                                                                                                 | TYPE OF SERVER   | 0;2 SET                                                                                |

| VistA File and Number |                                | Global Location                                                                                          | Data? |
|-----------------------|--------------------------------|----------------------------------------------------------------------------------------------------------|-------|
|                       |                                | 'M' FOR MASTER;<br>'S' FOR SERVANT;<br>LAST EDITED: JUL 18, 2003                                         |       |
| 9.77,2                | CLIENT OF WHO?                 | 0;3 POINTER TO INSTITUTION FILE (#4)                                                                     |       |
|                       | LAST EDITED:                   | JUL 18, 2003                                                                                             |       |
| 9.77,3                | SERVANT OF WHICH DOMAIN?       | 0;4 POINTER TO DOMAIN FILE (#4.2)                                                                        |       |
|                       | LAST EDITED:                   | JUL 18, 2003                                                                                             |       |
| 9.77,4                | DATE SERVITUDE ESTABLISHED     | 0;5 DATE                                                                                                 |       |
|                       | INPUT TRANSFORM:               | S %DT="EST" D ^%DT S X=Y K:Y<1 X                                                                         |       |
|                       | LAST EDITED:                   | JUL 18, 2003                                                                                             |       |
| 9.77,4.5              | INSTALL PATCHES ONLY AT NIGHT? | 0;6 SET                                                                                                  |       |
|                       |                                | '1' FOR YES;<br>'0' FOR NO;<br>LAST EDITED: APR 02, 2004                                                 |       |
| 9.77,4.6              | WHAT TIME?                     | 0;7 FREE TEXT                                                                                            |       |
|                       | INPUT TRANSFORM:               | K:\$L(X)>5!(\$L(X)<5)!'(X?2N1":"2N) X                                                                    |       |
|                       | LAST EDITED:                   | APR 02, 2004                                                                                             |       |
|                       | HELP-PROMPT:                   | Answer must be 5 characters in length. Enter time like 14:30.                                            |       |
| 9.77,5                | MASTERSHIP                     | 1;0 POINTER Multiple #9.7705                                                                             |       |
| 9.7705,.01            | MASTER OF                      | 0;1 POINTER TO INSTITUTION FILE (#4)<br>(Multiply asked)                                                 |       |
|                       | LAST EDITED:                   | MAR 29, 2004                                                                                             |       |
|                       | CROSS-REFERENCE:               | 9.7705^B<br>1)= S ^XPD(9.77,DA(1),1,"B",SE(X,1,30),DA)=" "<br>2)= K ^XPD(9.77,DA(1),1,"B",SE(X,1,30),DA) |       |
| 9.7705,1              | DATE MASTERSHIP ESTABLISHED    | 0;2 DATE                                                                                                 |       |
|                       | INPUT TRANSFORM:               | S %DT="EST" D ^%DT S X=Y K:Y<1 X                                                                         |       |
|                       | LAST EDITED:                   | MAR 29, 2004                                                                                             |       |
| 9.7705,2              | DOMAIN?                        | 0;3 POINTER TO DOMAIN FILE (#4.2)                                                                        |       |
|                       | LAST EDITED:                   | MAR 29, 2004                                                                                             |       |
| 9.7705,3              | INSTALL PATCHES AT NIGHT?      | 0;4 SET                                                                                                  |       |
|                       |                                | '1' FOR YES;<br>'0' FOR NO;<br>LAST EDITED: MAR 29, 2004                                                 |       |
| 9.7705,4              | WHAT TIME?                     | 0;5 FREE TEXT                                                                                            |       |
|                       | INPUT TRANSFORM:               | K:\$L(X)>5!(\$L(X)<5)!'(X?2N1":"2N) X                                                                    |       |
|                       | LAST EDITED:                   | MAR 29, 2004                                                                                             |       |
|                       | HELP-PROMPT:                   | Answer must be 5 characters in length.                                                                   |       |

| ViewA File and Number | Global Location               | Data?                                                         |
|-----------------------|-------------------------------|---------------------------------------------------------------|
| 9.77,100              | LAST MAIL MESSAGE             | 100;1 NUMBER                                                  |
|                       | INPUT TRANSFORM:              | K:+X'=X!(X>999999999999)!(X<1)!(X?.E1"."1N.N) X               |
|                       | LAST EDITED:                  | APR 08, 2004                                                  |
|                       | HELP-PROMPT:                  | Type a Number between 1 and 999999999999, 0<br>Decimal Digits |
| FILES POINTED TO      | FIELDS                        |                                                               |
| DOMAIN (#4.2)         | SERVANT OF WHICH DOMAIN? (#3) |                                                               |
|                       | MASTERSHIP:DOMAIN? (#2)       |                                                               |
| INSTITUTION (#4)      | NAME (#.01)                   |                                                               |
|                       | CLIENT OF WHO? (#2)           |                                                               |
|                       | MASTERSHIP:MASTER OF (#.01)   |                                                               |
| INPUT TEMPLATE(S):    |                               |                                                               |
| PRINT TEMPLATE(S):    |                               |                                                               |
| SORT TEMPLATE(S):     |                               |                                                               |
| FORM(S)/BLOCK(S):     |                               |                                                               |

**Table 4-6: Data dictionary (new XPD PATCHING SERVITUDE/MASTERSHIP file #9.77)**

| Vista File and Number                                                                                                                          | Global Location | Data?                    |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|
| XPD PATCH BULLETIN TYPES (#9.78)                                                                                                               | ^XPD(9.78       | Yes                      |
| <b>STANDARD DATA DICTIONARY #9.78 -- XPD PATCH BULLETIN TYPES FILE</b><br><div style="text-align: right;">MAY 13,2005@17:05:09    PAGE 1</div> |                 |                          |
| STORED IN ^XPD(9.78,    (7 ENTRIES)    SITE: SF CIOFO, KERNEL PATCH ACCOUNT    UCI:<br>VCH,VCH                                                 |                 |                          |
| DATA<br>ELEMENT                                                                                                                                | NAME<br>TITLE   | GLOBAL<br>LOCATION       |
| -----                                                                                                                                          |                 |                          |
| DD ACCESS: @<br>RD ACCESS: @<br>WR ACCESS: @<br>DEL ACCESS: @<br>LAYGO ACCESS: @<br>AUDIT ACCESS: @                                            |                 |                          |
| POINTED TO BY: TYPE OF MESSAGE field (#2) of the XPD MAIL MESSAGES File (#9.79)                                                                |                 |                          |
| CROSS<br>REFERENCED BY: TYPE(B)                                                                                                                |                 |                          |
| 9.78,.01                                                                                                                                       | TYPE            | 0;1 FREE TEXT (Required) |
| INPUT TRANSFORM: K:\$L(X)>30!(\$L(X)<3)!'(X'?1P.E) X<br>LAST EDITED: MAR 30, 2004                                                              |                 |                          |

**Table 4-7: Data dictionary (new XPD PATCH BULLETIN TYPES file #9.78)**

Patchman (VistA Auto Patch Utility and VistA Remote Patching)  
Supplement to Patch Description  
Kernel Patch XU\*8.0\*345

| VistA File and Number               |                  | Global Location                                                                                                                                       | Data? |
|-------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|                                     | LAST EDITED:     | APR 05, 2004                                                                                                                                          |       |
|                                     | HELP-PROMPT:     | Type a Number between 1 and 999999999999, 0<br>Decimal Digits                                                                                         |       |
|                                     | CROSS-REFERENCE: | 9.79^B<br>1)= S ^XPD(9.79,"B",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.79,"B",\$E(X,1,30),DA)                                                              |       |
|                                     | CROSS-REFERENCE: | 9.79^XPD^MUMPS<br>1)= S ^XPD(9.79,"XPD",\$E(X,1,30),DA)=" "<br>2)= K ^XPD(9.79,"XPD",\$E(X,1,30),DA)                                                  |       |
| 9.79,1                              | PROCESSED?       | 0;2 SET<br><br>'0' FOR NO;<br>'1' FOR YES;                                                                                                            |       |
|                                     | LAST EDITED:     | APR 05, 2004                                                                                                                                          |       |
|                                     | CROSS-REFERENCE: | 9.79^AC^MUMPS<br>1)= K ^XPD(9.79,"XPD",\$E(\$P(^XPD(9.79,DA,0),"^",1),1,30),DA)<br><br>2)= K ^XPD(9.79,"XPD",\$E(\$P(^XPD(9.79,DA,0),"^",1),1,30),DA) |       |
| 9.79,1.5                            | DATE PROCESSED   | 0;5 DATE                                                                                                                                              |       |
|                                     | INPUT TRANSFORM: | S %DT="EST" D ^%DT S X=Y K:Y<1 X                                                                                                                      |       |
|                                     | LAST EDITED:     | MAR 31, 2004                                                                                                                                          |       |
| 9.79,2                              | TYPE OF MESSAGE  | 0;3 POINTER TO XPD PATCH BULLETIN TYPES FI<br>LE (#9.78)                                                                                              |       |
|                                     | LAST EDITED:     | MAR 30, 2005                                                                                                                                          |       |
| 9.79,3                              | DATA LINE        | 0;4 FREE TEXT                                                                                                                                         |       |
|                                     | INPUT TRANSFORM: | K:\$L(X)>150!(\$L(X)<1) X                                                                                                                             |       |
|                                     | LAST EDITED:     | MAR 31, 2004                                                                                                                                          |       |
|                                     | HELP-PROMPT:     | Answer must be 1-150 characters in length.                                                                                                            |       |
| FILES POINTED TO                    |                  | FIELDS                                                                                                                                                |       |
| XPD PATCH BULLETIN TYPES<br>(#9.78) |                  | TYPE OF MESSAGE (#2)                                                                                                                                  |       |
| INPUT TEMPLATE(S):                  |                  |                                                                                                                                                       |       |
| PRINT TEMPLATE(S):                  |                  |                                                                                                                                                       |       |
| SORT TEMPLATE(S):                   |                  |                                                                                                                                                       |       |
| FORM(S)/BLOCK(S):                   |                  |                                                                                                                                                       |       |

**Table 4-8: Data dictionary (new XPD MAIL MESSAGES file #9.79)**

## Data Exported with XPD PATCH BULLETIN TYPES File (#9.78)

The XPD PATCH BULLETIN TYPES file (#9.78) is exported via Kernel Patch XU\*8.0\*345 with the following data. This data is used to propagate MailMan messages exchanged between the Master and Servant sites through the VistA Remote Patching options.

```

TYPE: CHANGE PATCH TO INFORMATIONAL
VARIABLE: TYPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
VARIABLE: PATCH
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE~PATCH This message is sent from a Master
site to a Servant site, requesting to change a specific patch status to
Informational. This is done so as not to halt the automatic installation of
subsequent patches because the patch sequence number could not be found. This
message inserts a sequence number in the VistA XPD PATCHING file (#9.76) for
the application to find, thereby continuing the installation.

TYPE: MASTER REQUEST ACCEPTED
VARIABLE: TPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
VARIABLE: DACCEPT
VARIABLE: NIGHT
VARIABLE: TIME
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE~DACCEPT~NIGHT~TIME

TYPE: MASTER REQUEST DENIED
VARIABLE: TYPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
VARIABLE: REASON
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE~REASON TO THE PROPOSED MASTER SITE: This
site has denied your request to be its Master site for the reason(s) listed
above.

TYPE: PATCH INSTALL
VARIABLE: TYPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
VARIABLE: XMNAME
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE~XMNAME This message communicates one of
two things. It is either a:
- request sent from the Master site (first entry listed above) to the Servant
site (second entry listed above), to load the patch (also listed above)
- reply sent back to the Master site from the Servant site, stating that the
patch has been installed to include an output from the INSTALL file (#9.7).
~~#5~~

TYPE: PATCH STATUS REQUEST
VARIABLE: TYPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE

```

```

TYPE: REQUEST TO BE MASTER
VARIABLE: TPE
VARIABLE: HEADER
VARIABLE: SSITE
VARIABLE: RSITE
TEXT: ~~#1~~ ~~#2~~TPE~SSITE~RSITE TO THE RECEIVING SITE: The site (listed
above) is requesting to be your Master patching site. Please use the Respond
to a Mastership Request [XPD MASTER - SERVANT RESPOND] option to accept or
decline this request. Your acceptance will allow this site control to install
your patches remotely. This should make patching automatic for all but a few
types of patches.

TYPE: STARTER MESSAGE
VARIABLE: TYPE
VARIABLE: HEADER
VARIABLE: SSITE
TEXT: ~~#1~~ This is a test to establish a new message in the XPD MAIL
MESSAGES file (#9.79).
~~#2~~99~~#~~ THIS IS ONLY A TEST.

```

**Figure 4-1: Data exported with file XPD PATCH BULLETIN TYPES (#9.78)**

## Data Dictionaries exported with XU\*8\*345 for Existing VistA Files

| VistA File and Number | Global    | Data? | Field Information                                                                                                                                                                                                                                                                                                                              |
|-----------------------|-----------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PACKAGE file (#9.4)   | ^DIC(9.4, |       | A new field, AUTOPATCH ENABLE/DISABLE field (#24), has been added to the PACKAGE file (#9.4) indicating if the patch can be automatically installed for a particular package for a site. The default field value is "Disabled" installation for backwards compatibility.                                                                       |
| INSTALL File (#9.7)   | ^XPD(9.7, |       | Two new sets of codes: <ul style="list-style-type: none"> <li>'5' Patch 'IN ERROR'</li> <li>'6' Informational</li> </ul> have been added to the existing set of codes in the INSTALL file (#9.7), STATUS field (#.02), and exported with Kernel Patch XU*8.0*345. These codes indicate the status of a patch installation. INSTALL File (#9.7) |

**Table 4-9: Data dictionaries exported with Kernel XU\*8\*345 for existing VistA files**

## Options

### New Patchman Menu Options Exported with Patch XU\*8\*345

The following options comprising Patchman are exported as part of Kernel Patch XU\*8\*345:

| Option and Menu Text                      | Description                                                                                                                                                                                                   |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [XPD AUTOMATIC PATCHING MENU]<br>Patchman | Main menu comprising the following menu options: <ul style="list-style-type: none"> <li>VistA Auto Patch Utility Menu [XPD VAPU MAIN MENU]</li> <li>VistA Remote Patching Menu [XPD PATCHING MENU]</li> </ul> |

**Table 4-10: New Patchman menu options exported with Kernel Patch XU\*8\*345**

### New VistA Auto Patch Utility Options Exported with Patch XU\*8\*345

The following options comprising the VistA Auto Patch Utility (VAPU) are exported as part of Kernel Patch XU\*8\*345:

| Option and Menu Text                                          | Description                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [XPD VAPU MAIN MENU]<br>VistA Auto Patch Utility Menu         | Main menu for the VistA Auto Patch Utility.                                                                                                                                                                                                                                                                    |
| [XPD VAPU SITE PARAMETERS]<br>Edit VAPU Site Parameters       | Sites use the Edit VAPU Site Parameters option to enter or edit the site-specific VAPU parameters in the VAPU SITE PARAMETERS file (#9.72). This initial setup is required as a part of the installation of VAPU.                                                                                              |
| [XPD VAPU ADD SERVER TO GROUP]<br>Edit G.PATCH Remote Members | This Edit G.PATCH Remote Members option allows sites to update the remote members of the G.PATCHES mail group.<br><br>NOTE: For a definition of the term "remote members," see the "Glossary" in this documentation.                                                                                           |
| [XPD VAPU EDIT PKG MODS]<br>Edit VAPU Package Modifiers       | This option allows sites to set default Install or Package Modifier parameters for any VistA package that will be used in the event an Install Modifier has not been received.<br><br>NOTE: For a definition of the terms "Package Modifier" and "Install Modifier," see the "Glossary" in this documentation. |



| Option and Menu Text                                                    | Description                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [XPD VAPU EDIT INSTALL MODS]<br>Edit VAPU Install Modifiers             | Office of Information Field Office (OIFO) personnel (e.g., developers) make the necessary edits to the VAPU INSTALL MODIFIERS file (#9.74), creating installation modifications for patches as necessary. Based on the contents of File #9.74, once the VistA Auto Patch Utility receives the installation modification, it sets up the parameters for the installation. |
| [XPD VAPU SEND MODIFIERS]<br>Send Install Modifiers                     | This option encapsulates and sends Install Modifiers in a MailMan message to sites for distribution such that the VAPU receives Office of Information Field Office (OIFO) instructions automatically, similar to if it were a patch.                                                                                                                                     |
| [XPD VAPU ENABLE/DISABLE PKG]<br>Enable/Disable Autopatching by Package | This option edits the PACKAGE file (#9.4), setting the AUTOPATCH ENABLE/DISABLE field (#24) to either of the following values based on user input: <ul style="list-style-type: none"> <li>• 1—ENABLED</li> <li>• 0—DISABLED</li> </ul> The VAPU checks this field prior to installing each patch.                                                                        |
| [XPD VAPU MANUAL INSTALL]<br>Install a Patch Manually                   | This option allows sites to install a patch manually by consolidating the interactive installation tasks into one function.                                                                                                                                                                                                                                              |
| [XPD VAPU EDIT EXE LOCATION]<br>Edit EXE Location                       | VAPU performs operating system (OS)-level commands to execute and FTP service and retrieve files.                                                                                                                                                                                                                                                                        |
| [XPD VAPU MNG PATCH INST QUE]<br>Manage Installation Queues ...         | This option provides tools for you to manage the install queues.                                                                                                                                                                                                                                                                                                         |
| [XPD VAPU LIST TASKS]<br>List VAPU's Installation Tasks                 | This option uses the TaskMan routine ^XUTMQ to list tasks related to VAPU.                                                                                                                                                                                                                                                                                               |
| [XPD VAPU REQUEUE TASKS]<br>Requeue VAPU's Install Tasks                | This option uses the TaskMan routine ^XUTMR to re-queue install tasks.                                                                                                                                                                                                                                                                                                   |
| [XPD VAPU DELETE TASKS]<br>Delete a Task in VAPU's Install Queues       | This option uses code already available in the TaskMan routine ^XUTMD to delete user-specified tasks in VAPU's install queues.                                                                                                                                                                                                                                           |
| [XPD VAPU CREATE CACHE/NT FILE]<br>Create Cache/NT Batch File for FTP   | This menu option creates the batch (BAT) file that is used to retrieve KIDS FTP file distributions. The location the BAT file is determined by the EXECUTABLE LOCATION field (#11) in the VAPU SITE PARAMETERS file (#9.72).                                                                                                                                             |
| [XPDAUTO]<br>VAPU SERVER                                                | This is the VAPU server option.                                                                                                                                                                                                                                                                                                                                          |
| [XPD VAPU MNG BSKTS]<br>MANAGE THE PATCH INSTALL USER                   | This option manages user's patch baskets.                                                                                                                                                                                                                                                                                                                                |

| Option and Menu Text                                              | Description                                                                                                                                                                                 |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BASKETS                                                           |                                                                                                                                                                                             |
| [XPD VAPU PATCH MONITOR MENU]<br>Patch Monitor Menu               | Main menu for the Patch Monitor.                                                                                                                                                            |
| [XPD VAPU PRINT PATCH REPORT]<br>Print Patch Report               | Print a list of patches that have not been installed, including those that are delinquent.                                                                                                  |
| [XPD VAPU COMPLETE PATCH]<br>Complete Patch Install Documentation | Identify installed patches that do not automatically resolve themselves, which appear as uninstalled and/or delinquent in the Patch Monitor (e.g., GUI Client, Informational, DBA patches). |
| [XPD VAPU DELETE PATCH]<br>Delete Patch from Monitor              | Delete patches that erroneously appear in the Patch Monitor (e.g., patches to an uninstalled software at your site, test patches, etc.)                                                     |

Table 4-11: New VistA Auto Patch Utility options exported with Kernel Patch XU\*8\*345

## New VistA Remote Patching Options Exported with Patch XU\*8\*345

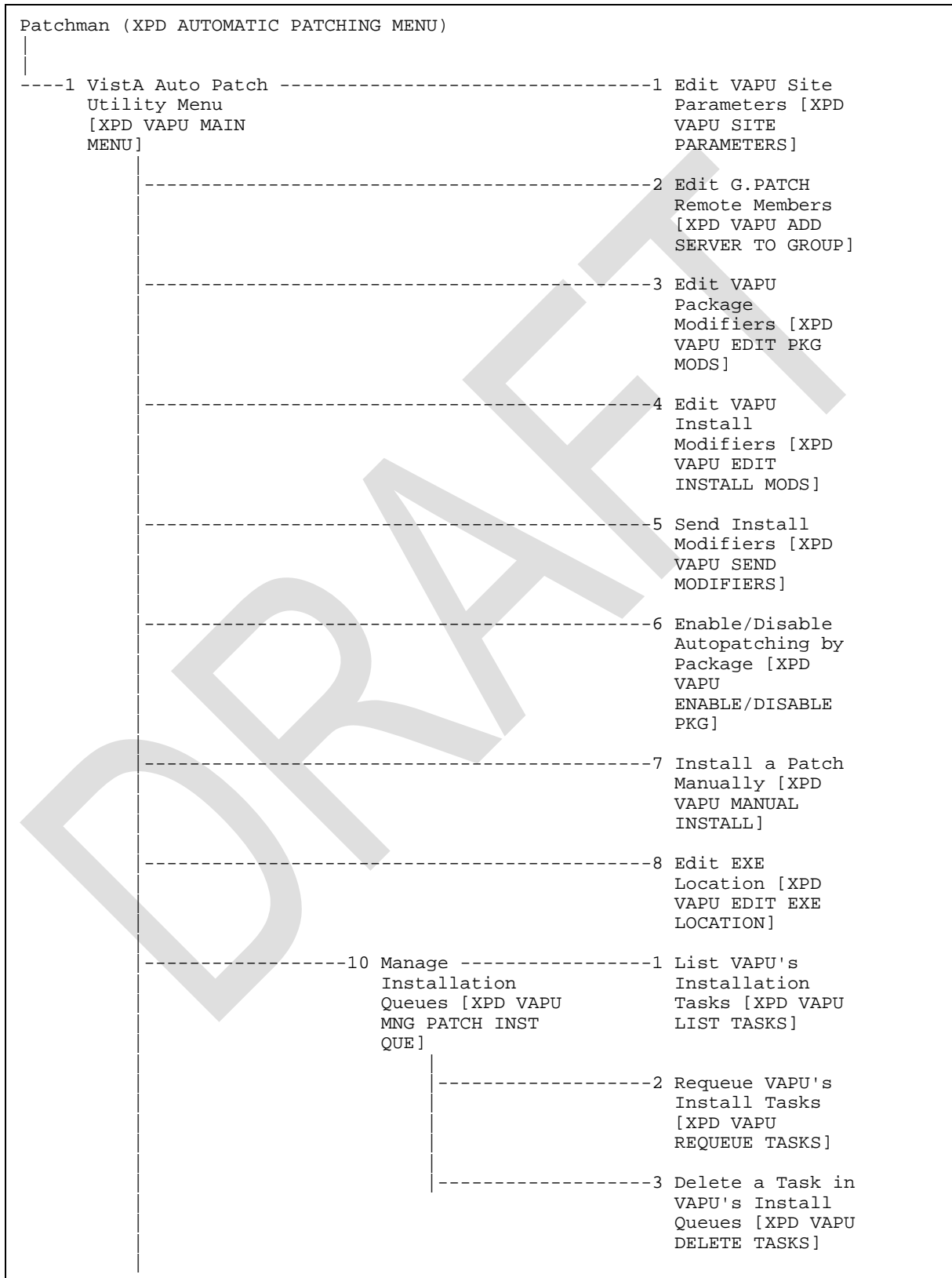
The following options comprising VistA Remote Patching are exported as part of Kernel Patch XU\*8\*345:

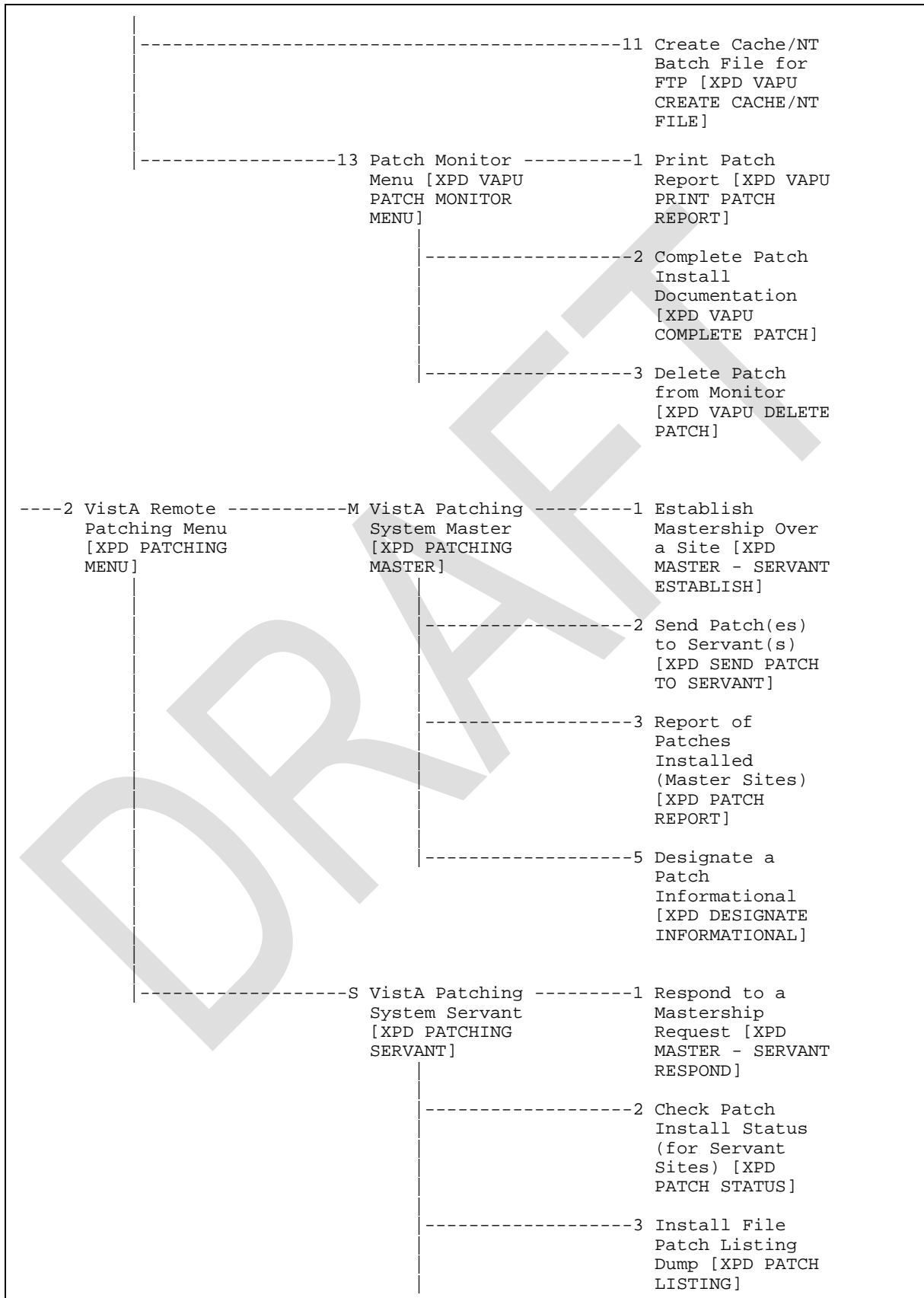
| Option and Menu Text                                                 | Description                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [XPD PATCHING MENU]<br>Vista Remote Patching Menu                    | Main menu for VistA remote patching comprising the following options: <ul style="list-style-type: none"> <li>VistA Patching System Master [XPD PATCHING MASTER]</li> <li>VistA Patching System Servant [XPD PATCHING SERVANT]</li> </ul>         |
| [XPD PATCHING MASTER]<br>VistA Patching System Master                | Main menu providing patching utilities for the Master facility (Master servers).                                                                                                                                                                 |
| [XPD MASTER - SERVANT ESTABLISH]<br>Establish Mastership Over a Site | This option sends a request, establishing a Master and Servant relationship with a selected site(s) for remote patch installations.                                                                                                              |
| [XPD SEND PATCH TO SERVANT]<br>Send Patch(es) to Servant(s)          | This option is used by a Master site to send patches to be installed remotely at Servant sites.                                                                                                                                                  |
| [XPD PATCH REPORT]<br>Report of Patches Installed (Master Sites)     | This option produces a report of all patches sent to Servant site(s) and installed to date. The report shows the time the patch request was sent and if it was installed.                                                                        |
| [XPD DESIGNATE INFORMATIONAL]<br>Designate a Patch Informational     | This option is deployed on both the Master site and Servant site(s) Remote Patching Menus. It allows a Servant site to flag Information patches so that the break in the patch numbering sequence will not stop the remote installation process. |

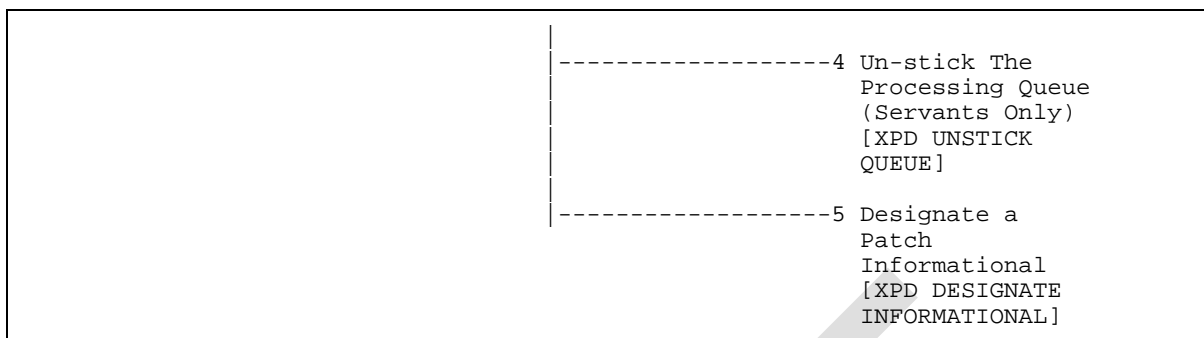
| Option and Menu Text                                                 | Description                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [XPD PATCHING SERVANT]<br>VistA Patching System Servant              | This is the main menu that provides patching utilities for the Servant facility (Servant servers).                                                                                                                                                          |
| [XPD MASTER - SERVANT RESPOND]<br>Respond to a Mastership Request    | Use this option to respond to a request from another site soliciting to be the patching Master site. The potential Servant site accepts or declines a request.                                                                                              |
| [XPD PATCH STATUS]<br>Check Patch Install Status (for Servant Sites) | Check Patch Install Status (for Servant sites) is used to generate a local (Master site) status report of patch installations.                                                                                                                              |
| [XPD PATCH LISTING]<br>Install File Patch Listing Dump               | Use this option to display all patches listed in the INSTALL file (#9.7) in order to view the installation status of each.                                                                                                                                  |
| [XPD UNSTICK QUEUE]<br>Un-stick The Processing Queue (Servants Only) | When a problem is discovered that halts the installation of patches, use this option to restart the patch sequence when processing for a single patch is interrupted.                                                                                       |
| [XPD DESIGNATE INFORMATIONAL]<br>Designate a Patch Informational     | This option is deployed on both the Master site and Servant site(s) Remote Patching Menus. This option allows a Servant site to flag Informational patches so that the break in the patch numbering sequence will not stop the remote installation process. |
| [XPD PATCH SERVER]<br>Vista Patch Server                             | This is the VistA package patch server. It is recommended that it be scheduled in TaskMan to run every 15 minutes.                                                                                                                                          |

**Table 4-12: New VistA Remote Patching options exported with Kernel Patch XU\*8\*345**

## Menu Diagram







**Figure 4-2: Menu diagram**

## New VA FileMan Functions

As part of the installation of Patch XU\*8.0\*345, three new "argumentless" VA FileMan Functions are installed in the FileMan FUNCTION file (#.5) in the XPD namespace. Each perform an operation that returns a value as described in

| Name                  | M Code                                                                   | Argument | Description                                                                  |
|-----------------------|--------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| XPD PATCH DATE        | S X=\$\$FNDATE^XPDPULT (D0,D1)                                           | 0        | Returns the installation date of a patch from the XPD PATCHING file (#9.76). |
| XPD PATCH DESIGNATION | S X=\$P(\$P(^XPD(9.7,D0,0), "^",1),"*",1,2)                              | 0        | Returns the patch designation and version number, only.                      |
| XPD PATCH SEQUENCE    | S X=\$S(\$G(^XPD(9.7,D0,2)) ["SEQ": "SEQ"_\$P(^2, "SEQ",2),1: "UNKNOWN"] | 0        | Returns the patch sequence number, if there is one.                          |

**Table 4-13: New VA FileMan functions exported with Kernel Patch XU\*8\*345**

## New VA FileMan Templates

### Print Templates

The following print templates, including file number and description, are exported with Kernel Patch XU\*8.0\*345:

| Print Template  | RD | WR | File Name and Number      |
|-----------------|----|----|---------------------------|
| XPD PATCH CHECK | @  | @  | XPD PATCHING file (#9.76) |
| XPD PATCHES     | @  | @  | INSTALL file (#9.7)       |

**Table 4-14: New VA FileMan print templates exported with Kernel Patch XU\*8\*345**

### Sort Templates

The following sort templates, including file number and description, are exported with Kernel Patch XU\*8.0\*345:

| Sort Template   | RD | WR | File Name and Number | Description                                                   |
|-----------------|----|----|----------------------|---------------------------------------------------------------|
| XPD PATCH CHECK | @  | @  | XPD PATCHING (#9.76) | Sort by: Date Patch Install Requested// (User is asked range) |

| Sort Template | RD | WR | File Name and Number | Description                                                                                                                                                              |
|---------------|----|----|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |    |    |                      | Within Date Patch Install Requested, sort by: Patch Designation// (Patch Designation not null)                                                                           |
| XPD PATCHES   | @  | @  | INSTALL (#9.7)       | Sort By: XPD PATCH DESIGNATION// (XPD PATCH DESIGNATION not null)<br><br>Within XPD PATCH DESIGNATION, sort by: Install Complete Time// (Install Complete Time not null) |

**Table 4-15: New VA FileMan sort templates exported with Kernel Patch XU\*8\*345**

## Archiving

There are no application-specific archiving procedures or recommendations for the Kernel Patch XU\*8\*345.

## Callable Routines

There are no callable routines exported with Kernel Patch XU\*8\*345.

## External Interfaces

There are no external interfaces exported with Kernel Patch XU\*8\*345.



## Scheduled Option

### XPD PATCH SERVER—Use TaskMan to Schedule This Option

The VISTA PATCH SERVER [XPD PATCH SERVER] option is exported with Kernel Patch XU\*8.0\*345. It needs to be scheduled using TaskMan to run periodically in order to transfer MailMan messages and activate the remote patching functionality such as, transferring the received patch requests from the XPD MAIL MESSAGES file (#9.79) into the XPD PATCHING file (#9.76), and populates the XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77) registering the Master/Servant site agreement. The scheduling frequency recommendation is every 15 minutes (i.e., 600S).



S.XPDAUTO is a server option that triggers automatic control over patch installations at your site.

For more information, see the documented option titled "Edit G.PATCH Remote Members" in this documentation.

## Mail Groups

| Mail Group Name | Description                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XPD VISTA PATCH | <p>This mail group receives install messages. Master sites send requests to selected site(s) for remote patch installations in MailMan messages sent to the XPD VISTA PATCH mail group. The site(s) in question must be members of this mail group in order to receive this request.</p> <p>It points to the MAIL GROUP file (#3.8), field INFORMATIONAL MAIL GROUP (#10).</p> |

Table 4-16: Mail group exported with Kernel Patch XU\*8\*345



**The G.PATCHES mail group must be in the parent domain remote member list for any sub-domain designated to be auto-patched. If this mail group does not exist, it must be created.**



For a definition of the term *remote members*, see the "Glossary" in this documentation.

## External Relations

### Software Dependencies

Kernel Patch XU\*8\*345 requires a standard VistA operating environment in order to function correctly. Check your VistA environment for software and versions installed.



For more information on the minimum VistA software and patches that are required by this patch, see the section titled: "**Error! Reference source not found.**" in this documentation.

### Internal Relations

#### Namespace

Kernel Patch XU\*8\*345 uses the **XPD** namespace, which is a Kernel Installation and Distribution System (KIDS) namespace.

#### File Numbers

Kernel Patch XU\*8\*345 file numbers and global locations are listed as follows:

| File # | Global     |
|--------|------------|
| 9.72   | ^XPD(9.72, |
| 9.73   | ^XPD(9.73, |
| 9.74   | ^XPD(9.74, |
| 9.75   | ^XPD(9.75, |
| 9.76   | ^XPD(9.76, |
| 9.77   | ^XPD(9.77, |
| 9.78   | ^XPD(9.78, |
| 9.79   | ^XPD(9.79, |

**Table 4-17: File list**

### Software-wide Variables

Kernel Patch XU\*8\*345 contains no software-wide variables.

# Software Security

## Mail Groups

There are no software-specific mail groups release with Kernel Patch XU\*8\*345 of interest to Information Security Officers (ISO).

## Remote Systems

VistA Remote Patching offers functionality for patching multiple out-of-date sites (e.g., test sites) remotely. This software is recommended for use with routine VistA installations and/or VA FileMan Data Dictionary changes when a software installation doesn't involve populating mail groups or setting up TaskMan to run a background job. It will not automate processes such as moving routines to the MGR account and running ZTMGRSET.



**If files need to be populated or conversions need to be run, do not use VistA Remote Patching.**

VistA Remote Patching sets up the Master and Servant relationship between Veterans Affairs medical facility Information Resource Management (IRM) sites and passes packages to the VistA Auto Patch Utility component of Patchman.

A site designated as the Master sends patches and patch installation orders to registered Servant sites. Patches can be sent to Servant sites one by one, or in a single batch sent at one time. A Master site can have any number of Servant sites; however, a Servant can have only one Master site.

This relationship is established through the Master site sending a Mastership Request to a potential Servant site. However, before this can happen, the option, VISTA PATCH SERVER [XPD PATCH SERVER], exported with Kernel Patch XU\*8.0\*345, must be run at any potential Servant site at least once. This ensures that the MailMan message sent by the Master site is transferred to the XPD MAIL MESSAGES file (#9.79). The Servant site receives the message and accepts or declines servitude.



**During site setup, the VISTA PATCH SERVER [XPD PATCH SERVER] option needs to be scheduled to run periodically using TaskMan, recommendation every 15 minutes, in order to transfer MailMan messages and activate the remote patching functionality.**

Once this relationship is registered in File #9.77, the Master site can send patches to be installed without intervention from the Servant site.



For more information on VistA Remote Patching software, see the section titled "VistA Remote Patching Menus and Options" in this documentation.

## Archiving

There are no software-specific archiving procedures or recommendations for Kernel Patch XU\*8\*345.

## Interfaces

There are no specialized (*not* VA produced) products (hardware and/or software) embedded within or required by Kernel Patch XU\*8\*345.

## Electronic Signatures

There are no electronic signatures used in Kernel Patch XU\*8\*345.

## Menus

There are no options of particular interest to Information Security Officers (ISOs) in Kernel Patch XU\*8\*345.

## Security Keys

There are no security keys exported with Kernel Patch XU\*8\*345.

## File Security

| File # | File Name                         | DD | RD | WR | DEL | LAYGO | AUDIT |
|--------|-----------------------------------|----|----|----|-----|-------|-------|
| 9.4    | PACKAGE                           | #  |    | #  | #   | #     |       |
| 9.7    | INSTALL                           | @  | #  | @  | #   | @     | #     |
| 9.72   | VAPU SITE PARAMETERS              | @  | @  | @  | @   | @     | @     |
| 9.73   | VAPU FTP SITES                    | @  | @  | @  | @   | @     | @     |
| 9.74   | VAPU INSTALL MODIFIERS            | @  | @  | @  | @   | @     | @     |
| 9.75   | VAPU PACKAGE MODIFIERS            | @  | @  | @  | @   | @     | @     |
| 9.76   | XPD PATCHING                      | @  | @  | @  | @   | @     | @     |
| 9.77   | XPD PATCHING<br>SERVITUDE/MASTERS | @  | @  | @  | @   | @     | @     |
| 9.78   | XPD PATCH BULLETIN TYPES          | @  | @  | @  | @   | @     | @     |
| 9.79   | XPD MAIL MESSAGES                 | @  | @  | @  | @   | @     | @     |

**Table 4-18: File security**



# Glossary

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| API                                  | VistA Application Program Interfaces (APIs) are units of programming code provided by a custodial development domain to permit developers outside the custodial domain to accomplish a specified purpose. APIs in VistA may be defined as extrinsic functions, extrinsic special variables, or label references to routines. They allow programmers to carry out standard computing activities without needing to duplicate utilities in their own software. APIs also further DBA goals of system integration by channeling activities, such as adding new users, through a limited number of callable entry points. |
| Autoinstall (automatic installation) | This is a required field, AUTO/MANUAL (#9), in the VAPU INSTALL MODIFIERS file (#9.74). It tells the VistA Auto Patch Utility if a patch can be processed automatically. It also provides for some interaction between the Patch Release message so the VAPU knows when a task is ready to process.                                                                                                                                                                                                                                                                                                                   |
| CAVHCS                               | Central Alabama Veterans Health Care System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| CIO                                  | Chief Information Office                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Class III Software                   | VistA software that is not released nationally through Enterprise VistA Support (EVS) and not publicly available through the Freedom of Information Act (FOIA).                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| DaIS                                 | Development & Infrastructure Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Data Dictionary (DD)                 | <p>The Data Dictionary is a global containing a description of what kind of data is stored in the global corresponding to a particular file. The data is used internally by VA FileMan for interpreting and processing files.</p> <p>A Data Dictionary contains the definitions of a file's elements (fields or data attributes), relationships to other files, and structure or design. Users generally review the definitions of a file's elements or data attributes; programmers review the definitions of a file's internal structure.</p>                                                                       |
| EVS                                  | Enterprise VistA Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| FORUM                                | The central E-mail system within VistA. It is used by developers to communicate at a national level about programming and other issues. FORUM is located at the Chief Information Office (CIO) Field Office—Washington, DC (162-2).                                                                                                                                                                                                                                                                                                                                                                                   |
| FTP                                  | File Transfer Protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| HSD&D                                | Health Systems Design & Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| HSITES                               | Health Systems Implementation Training and Enterprise Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| IEN                                  | Internal Entry Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Install Modifier (or Installation Modification) | The VistA Auto Patch Utility employs an Install Modifier concept that works in conjunction with KIDS. Receipt of an Install Modifier from the National Patch Distribution System is what sets up the parameters for the installation. These conditions are controlled the in the VAPU INSTALL MODIFIERS file (#9.74) for a VistA package. For a host file distribution, the Install Modifier tells VAPU the KIDS host file distribution name. Once it knows the name, VAPU knows to go retrieve the .KID file from National File Transfer Protocol (FTP) software sites. |
| ISS                                             | Infrastructure & Security Services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Kernel                                          | Set of VistA software routines that function as an intermediary between the host operating system and the VistA application packages such as Laboratory, Pharmacy, etc. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying M implementation.                                                                                                                                                                                                                                                    |
| KIDS                                            | Kernel Installation and Distribution System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| M (ANSI Standard)                               | A programming language recognized by the American National Standards Institute (ANSI). The acronym M (formerly MUMPS) stands for Massachusetts General Hospital Utility Multi-programming System.                                                                                                                                                                                                                                                                                                                                                                        |
| MailMan                                         | VistA software that provides a mechanism for handling electronic communication, whether it's user-oriented mail messages, automatic firing of bulletins or initiation of server-handled data transmissions.                                                                                                                                                                                                                                                                                                                                                              |
| Master Site                                     | Master Sites send the MailMan messages (i.e., containing patch installations) to Servant Sites for remote automated installation.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Namespacing                                     | Convention for naming VistA package elements. The database administrator (DBA) assigns unique character strings for package developers to use in naming routines, options, and other package elements so that packages may coexist. The DBA also assigns a separate range of file numbers to each package.                                                                                                                                                                                                                                                               |
| OIFO                                            | Office of Information Field Office                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Option                                          | An entry in the OPTION file (#19). As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by Task Manager.                                                                                                                                                                                                                                                                                                       |
| OS                                              | Operating System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Package Modifier (or Package Modification) | <p>This refers to conditions controlled in the VAPU PACKAGE MODIFIERS file (#9.75). This file can be edited by site support personnel, allowing them to modify install parameters to suit their specific needs. The EDIT VAPU PACKAGE MODIFIERS EDIT VAPU PACKAGE MODIFIERS option allows sites to set default install or package modifier parameters in this file for any VistA package used in the event an Install Modifier has not been received.</p> <p>NOTE: For a definition of the term "Install Modifier," see the "Glossary" in this documentation.</p>                                                                                                                                                                                                                                         |
| Programmer Access                          | <p>Programmer access in VistA is defined as DUZ(0)="@". It grants the privilege to become a programmer in VistA. Referred to as "having the at-sign ('@') because the at-sign is the DUZ(0) value that grants programmer access. Programmer access allows you to work outside many of the security controls enforced by the XUPROGMode Security key, enables access to all VA FileMan files, access to modify data dictionaries, etc. It is important to proceed with caution when having access to the system in this way.</p>                                                                                                                                                                                                                                                                           |
| Remote Members                             | <p>Remote Members constitute:</p> <ul style="list-style-type: none"> <li>MailMan domains entered in the G. PATCHES mail group that a site wants to auto-patch using VAPU (e.g., G.PATCHES@ DOMAIN.EXT). The G.PATCHES mail group must be entered in the parent domain remote member list for any sub-domain that the site wants auto-patched.</li> </ul> <p>NOTE: Sites enter remote members using the option Edit G.PATCH Remote Members.</p> <ul style="list-style-type: none"> <li>The server option S.XPDAUTO must be entered as a remote member (e.g., REMOTE MEMBER: S.XPDAUTO@[sitename]. DOMAIN.EXT) in order to activate the VistA Auto Patch Utility. In addition to this, the server option must also be entered as a remote member for each MailMan domain you wish to auto-patch.</li> </ul> |
| Routine                                    | <p>Program or a sequence of instructions called by a program that may have some general or frequent use. M (previously referred to as MUMPS) routines are groups of program lines, which are saved, loaded, and called as a single unit via a specific name.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| SDD                                        | <p>Software Design Document</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security Key                               | <p>The purpose of Security Keys is to set a layer of protection on the range of computing capabilities available with a particular software package. The availability of options is based on the level of system access granted to each user.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Servant Site        | Servant Sites receive the MailMan messages containing patch installations sent by the Master Site for remote automated installation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SRS                 | Software Requirements Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TCP/IP              | Transmission Control Protocol/Internet Protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Template            | Means of storing report formats, data entry formats, and sorted entry sequences. A template is a permanent place to store selected fields for use later. Edit sequences are stored in the INPUT TEMPLATE file (#.402), print specifications are stored in the PRINT TEMPLATE file (#.4), and search or sort specifications are stored in the SORT TEMPLATE file (#.401).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| VA                  | The Department of Veterans Affairs, formerly called the Veterans Administration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| VAMC                | Veterans Affairs Medical Center                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| VAPU                | VistA Auto Patch Utility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Variable            | Character or group of characters, that refers to a value. M (previously referred to as MUMPS) recognizes three types of variables: local variables, global variables, and special variables. Local variables exist in a partition of main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays. The term "global" may refer to either a global variable or a global array. A special variable is defined by systems operations (e.g., \$TEST).                                                                                                                                                                                                                                                                                                                                |
| VHA                 | Veterans Health Administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| VHA VistA Challenge | Contest issued by Health Systems Implementation Training and Enterprise Support (HSITES) via FORUM to all Department of Veterans Affairs (VA) field facilities. Its goal was to solicit functionality for streamlining and increasing efficiency in maintaining Veterans Health Information Systems and Technology Architecture (VistA) systems at Veterans Affairs Medical Centers (VAMC). Two proposals were selected as winners for implementation: the VistA Auto Patch Utility and the master servant patching system.<br><br>VAPU was developed by Thomas E. Ash, from the Central Alabama Veterans Health Care System (CAVHCS), as a Class III software application. The master servant patching system was developed by Dennis Follensbee. Infrastructure & Security Services (ISS) is reclassifying this software as Class I and releasing it nationally in Kernel Patch XU*8*345. |
| VISN                | Veterans Integrated Service Network                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VistA                           | Veterans Health Information Systems and Technology Architecture (VistA) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). VistA software, developed by VA, is used to support clinical and administrative functions at VA Medical Centers nationwide. It is written in M, and, via the Kernel runs on all major M implementations regardless of vendor. VistA is composed of packages, which undergo a verification process to ensure conformity with namespacing and other VistA standards and conventions. |
| VistA Auto Patch Utility (VAPU) | Class III software developed in response to the VHA VistA Challenge, reclassified as Class I and released nationally as Kernel Patch XU*8*345. The VistA Auto Patch Utility software automates the Kernel Installation and Distribution System (KIDS) installation steps, giving the VAMCs the ability to automate patch installations.                                                                                                                                                                                                      |



For a comprehensive list of commonly used infrastructure- and security-related terms and definitions, please visit the ISS Glossary Web page at the following Web address:

DOMAIN.EXT

For a list of commonly used acronyms, please visit the ISS Acronyms Web site at the following Web address:

DOMAIN.EXT

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# Appendix A: Updating Out-of-Date Accounts Using Remote Patching

**Step 1.** The first step to catching up patches using remote patching is to run the Install File Patch Listing Dump option located in the VistA Patching System Servant. This option will give you the list of all patches loaded in the INSTALL file (#9.7). Compare the two lists and see which patches that are loaded on the Master site are not on the Servant site. This will show you, which patches need to be "caught up" or "slammed."

**Step 2.** On the National Patch Module (NPM), located on FORUM, get a summary listing of all patches in a each package to get an idea of how far the servant site is behind.

**Step 3.** Sign onto an Office of Information Field Office (OIFO) File Transfer Protocol (FTP) account and download all the patches in a package that are within the ranges you need to install. This will accomplish two things.

1. It will bring in patches that you will need to download, anyway
2. It will give you break points in your patch "slamming" or "catch up" process, as you will need to stop for each of these download patches and load them manually

Place these downloads in your VMS host file server (HFS) directory (e.g., HFS DIRECTORY: USER\$:[TEMP]/) on the servant systems.

**Step 4.** Next look through the printed patch summaries for:

- informational patches
- patches placed on hold
- patches entered in error.

Once you located these patches, run the Designate a Patch Informational option in either the Master or Servant menu to put the cross-references in place for the sequence numbers for these patches. Thus, patching processing will not stop when a patch cannot see the last sequence number of a patch.

**Step 5.** On your Master system, do a global listing for any patches that are still on your system that you need to install, Figure 4-3. You can accomplish this by entering the following information in the global lister:

```

VAH>D ^%G
Device: <Enter> Right margin: 80=>
Global ^XMB(3.9,"B","Released IB":"Released IBzzz"
^XMB(3.9,"B","Released IB*2*103 SEQ #118",7586444)=
^XMB(3.9,"B","Released IB*2*123 SEQ #141",9253850)=
^XMB(3.9,"B","Released IB*2*137 SEQ #160",10857143)=
^XMB(3.9,"B","Released IB*2*51 SEQ #138",9018520)=
^XMB(3.9,"B","Released IBD*3*30 SEQ #40",9744416)=
^XMB(3.9,"B","Released IBD*3*56 SEQ #50",13883487)=

Global ^XMB(3.9,"B","EMERGENCY Released IB":"EMERGENCY Released IBzzz"
^XMB(3.9,"B","EMERGENCY Released IB*2*166 SE",10147602)=
^XMB(3.9,"B","EMERGENCY Released IB*2*176 SE",11552228)=
^XMB(3.9,"B","EMERGENCY Released IB*2*179 SE",11557250)=
^XMB(3.9,"B","EMERGENCY Released IB*2*180 SE",12219132)=
^XMB(3.9,"B","EMERGENCY Released IB*2*189 SE",11401438)=

```

Translation in effect.

Translation in effect.

**Figure 4-3: Global listing of patches on your system that need to be installed**

This finds all patches at the Master site, which prevents you from having to forward them to your system from FORUM.



Keep a record of the IEN number of each patch MailMan message found in your Global listing. You will use them to send patches to the Servant site(s).

**Step 6.** Determine which patches you do not have on site. You will need to resend them to your system from FORUM. To do this:

- From the National Patch Module, forward a patch to yourself within FORUM.
- Go into FORUM mail, copy the patch, and send that copy to yourself at the Master site.
- Delete the message in FORUM when you are done, copying so you will not fill up FORUM.

You need to send copies as patch messages that are already received will not forward to your site.



Keep a record of the IEN number of each patch MailMan message you forwarded to your site from FORUM. You will use them to send patches to the Servant site(s).

**Step 7.** Once you've obtained all the patches at your Master site that you need to install at the Servant site(s), either by listing them in the mailman global or forwarding copies to your site from FORUM, you are ready to install them. Run the Send Patch(es) to Servant(s) option, located in the VistA Patching System Master menu. Enter the IEN number of each patch MailMan message. Here is an example:

```
^XMB(3.9,"B","EMERGENCY Released IB*2*166 SE",10147602)=
```

**Step 8.** Enter the list of the patches to install; however, stop at the first patch that needs to be manually downloaded. After you select the patches, you can select the Servant site(s) in which to send the patch orders. The mail messages with the patches will be forwarded to the servant along with the patch orders.

**Step 9.** The patches will load automatically and send back self installing MailMan messages that will populate your patch files at competition. Use the Report of Patches Installed (Master Sites) option located on the VistA Patching System Master menu to print a report listing the patches installed to date in order to check the patch status at the remote site(s). If a patch does not install in a short period of time, one-half hour or so, use the Designate a Patch Informational option, also located on the VistA Patching System Master menu, to see what happened to the patch. You can then sign on to the VMS host file server (HFS) directory (e.g., HFS DIRECTORY: USER\$:[TEMP]/) to see why the patch is not installing. A record is entered in the HFS directory for any patch that did not install. Figure 4-4 shows an example:

|            |     |               |                 |
|------------|-----|---------------|-----------------|
| SOW_3_0_40 | 1KB | Text Document | 4/29/2004 12:10 |
|------------|-----|---------------|-----------------|

**Figure 4-4: HFS directory record for patch that did not install**



For information on editing your site's HFS directory, see the section titled "Edit Your Site's Host File Server Directory" in this documentation.

This text document will give you a status of the patch:

```
ACTION REQUIRED: Sequence # 58 could not be found.
An Install file entry with File Comment containing #Seq-number must exist
before I can continue!!!
XXX*1.0*33 HASD BEEN REQUED FOR INTALL!
PLEASE CORRECT DEFICIENCY DESCRIBED IN THE LOG FILE FOR SUCCESS
TASK REQUEUED TO TASK # 30995
```

**Figure 4-5: HFS directory text document for patch that did not install**

From this message shown in Figure 4-5, you can determine the problem and correct it. For single patches needing to be fixed, use the Tbox TaskMan option and re-queue the task number. For problems interrupting the processing of one patch within a sequence of patches, use the Un-stick The Processing Queue (Servants Only) option, located on the VistA Patching System Servant option, to release the queue. This could depend on the number of patches waiting for that sequence or if the patch is waiting on a patch from a different package to be installed.

DRAFT



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