



# **Patchman (VistA Auto Patch Utility and VistA Remote Patching)**

## **Installation and Setup Guide**

**Kernel Patch XU\*8.0\*345**

**May 2005**

**DRAFT**

Department of Veterans Affairs  
VistA Health Systems Design & Development (HSD&D)  
Infrastructure and Security Services (ISS)



# 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 2005	Patchman (VistA Auto Patch Utility and VistA Remote Patching) documentation, Kernel Patch XU*8.0*345	

**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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# Acknowledgements

The VistA Challenge Project Team consists of the following Infrastructure & Security Services (ISS) personnel:

- ISS Program Director—Larry Weldon
- ISS Enhancements Project Manager—Jean Sheppard
- Centralized Planner Support Team (CPST)—Laura Rowland
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- Software Quality Assurance (SQA)—Gurbir Singh
- Technical Writer—Susan Strack

The VistA Challenge Project Team would like to thank the following developers, whose proposals were selected as winners of the Veterans Health Administration (VHA) Veterans Health Information Systems and Technology Architecture (VistA) Maintenance Challenge contest for implementation in VistA. They are:

- VA DEVELOPER—Developer of the VistA Auto Patch Utility (VAPU)
- DEVELOPER—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.



# Orientation



This Installation and Setup Guide is intended for use in conjunction with 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. This manual is organized into the following major parts:

1. Introduction
2. Pre-Installation Information
3. Installation Instructions
4. Site Setup Instructions

## 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 gives a description of each of these symbols:

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

**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:

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## 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 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:

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## 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 VA DEVELOPER Veterans Affairs Medical Center (VAMC)
- VistA Patch Slammer—Documentation by VA DEVELOPER, 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:

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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.

# Chapter 1: Introduction

Kernel Patch XU\*8.0\*345 is a Kernel Installation and Distribution System (KIDS) software release. This is the Installation and Site Setup Guide. It provides the information necessary to install the software. Installation instructions can also 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. The Installation and Site Setup Guide is available on the VistA Documentation Library at this Web address:

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## 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 in 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), all VistA sites, and Veterans Affairs Medical Centers (VAMC).

## Background

The Veteran Health Administration (VHA) VistA Maintenance Challenge was a contest issued 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 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 gives VAMCs the ability to automate patch installations.
2. The VistA Remote Patching system was also created as Class III software to allow site support personnel the ability to patch both single and multiple accounts 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 also 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.





## Chapter 2: Pre-Installation Information

### 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 that other MUMPS vendors. Support is provided for both GT.M on VMS and GT.M on Linux. Like Cache, GT.M does not have UCIs. 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**

### New Files

The files listed below are exported with Kernel Patch XU\*8.0\*345. The Database Administrator has assigned the following internal numbers to these files, ranging from 9.72 through 9.79.

- VAPU SITE PARAMETERS file (#9.72)
- VAPU FTP SITES file (#9.73)—Comes with data.
- VAPU INSTALL MODIFIERS file (#9.74)
- VAPU PACKAGE MODIFIERS file (#9.75)
- XPD PATCHING file (#9.76)

- XPD PATCHING SERVITUDE/MASTERSHIP file (#9.77)
- XPD PATCH BULLETIN TYPES file (#9.78)—Comes with data
- XPD MAIL MESSAGES file (#9.79)

## Modified Files

Two partial data dictionaries containing new fields are exported with Kernel XU\*8\*345 for existing VistA files. They are:

- INSTALL file (#9.7). The following two sets of codes have been added to the STATUS field (#.02):
  1. Informational
  2. Patch 'IN ERROR'
- PACKAGE file (#9.4). The following new field has been added to control automatic installations by VistA package. This field must be set to a value of Enabled as a last step to activate auto-patching. By default, this field is exported with a value of Disabled.
  - ^DIC(9.4,D0,24)= (#24) AUTOPATCH ENABLE/DISABLE [1S]^

## 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

## Menus and Options

The following menus and options are exported in the XPD Namespace:

Option	Menu Text
[XPD AUTOMATIC PATCHING MENU]	Patchman
[XPD VAPU MAIN MENU]	VistA Auto Patch Utility Menu
[EDIT VAPU SITE PARAMETERS]	Edit VAPU Site Parameters
[XPD VAPU ADD SERVER TO GROUP]	Edit G.PATCH Remote Members
[XPD VAPU EDIT PKG MODS]	Edit VAPU Package Modifiers
[XPD VAPU EDIT INSTALL MODS]	Edit VAPU Install Modifiers
[XPD VAPU SEND MODIFIERS]	Send Install Modifiers
[XPD VAPU ENABLE/DISABLE PKG]	Enable/Disable Autopatching by Package
[XPD VAPU MANUAL INSTALL]	Install a Patch Manually
[XPD VAPU EDIT EXE LOCATION]	Edit EXE Location
[XPD VAPU MNG PATCH INST QUE]	Manage Installation Queues ...
[XPD VAPU LIST TASKS]	List VAPU's Installation Tasks
[XPD VAPU REQUEUE TASKS]	Requeue VAPU's Install Tasks
[XPD VAPU DELETE TASKS]	Delete a Task in VAPU's Install Queues
[XPD VAPU CREATE CACHE/NT FILE]	Create Cache/NT Batch File for FTP
[XPDAUTO]	VAPU SERVER

Option	Menu Text
[XPD VAPU MNG BSKTS]	MANAGE THE PATCH INSTALL USER BASKETS
[XPD VAPU PATCH MONITOR MENU]	Patch Monitor Menu
[XPD VAPU PRINT PATCH REPORT]	Print Patch Report
[XPD VAPU COMPLETE PATCH]	Complete Patch Install Documentation
[XPD VAPU DELETE PATCH]	Delete Patch from Monitor
[XPD PATCHING MENU]	Vista Remote Patching Menu
[XPD PATCHING MASTER]	Vista Patching System Master
[XPD MASTER - SERVANT ESTABLISH]	Establish Mastership Over a Site
[XPD SEND PATCH TO SERVANT]	Send Patch(es) to Servant(s)
[XPD PATCH REPORT]	Report of Patches Installed (Master Sites)
[XPD DESIGNATE INFORMATIONAL]	Designate a Patch Informational
[XPD PATCHING SERVANT]	Vista Patching System Servant
[XPD MASTER - SERVANT RESPOND]	Respond to a Mastership Request
[XPD PATCH STATUS]	Check Patch Install Status (for Servant Sites)
[XPD PATCH LISTING]	Install File Patch Listing Dump
[XPD UNSTICK QUEUE]	Un-stick The Processing Queue (Servants Only)
[XPD DESIGNATE INFORMATIONAL]	Designate a Patch Informational
[XPD PATCH SERVER]	Vista Patch Server

**Table 2-2: Menus and options exported with Kernel Patch XU\*8\*345**

## Chapter 3: Installation Instructions



Install Kernel Patch XU\*8.0\*345 on all Master and Servant systems to which you plan to send remote patch installations.

- Step 1.** Select the Kernel Installation & Distribution System (KIDS) PackMan message (XU\*8.0\*345) in MailMan. At the MailMan prompt "Enter message action (in PATCHES basket): Ignore//", enter the XTRACT command to extract the PackMan message and display the PackMan functions, Figure 3-1.

```
Enter message action (in PATCHES basket): Ignore// Xtract <Enter> KIDS
Select PackMan function: ?
  Answer with PackMan function NUMBER, or NAME
  Choose from:
  1          ROUTINE LOAD
  2          GLOBAL LOAD
  3          PACKAGE LOAD
  4          SUMMARIZE MESSAGE
  5          PRINT MESSAGE
  6          INSTALL/CHECK MESSAGE
  7          INSTALL SELECTED ROUTINE(S)
  8          TEXT PRINT/DISPLAY
  9          COMPARE MESSAGE

Select PackMan function: 4 <Enter> SUMMARIZE MESSAGE
```

**Figure 3-1: Extract the PackMan message from MailMan and run the SUMMARIZE MESSAGE option**

**Step 2.** Select the PackMan function SUMMARIZE MESSAGE to print a listing of the KIDS Build File Print, Figure 3-1, for Kernel Patch XU\*8.0\*345.

```

DEVICE: HOME// ;;9999 Telnet terminal

Line 3      Message #1677989      KIDS Distribution      XU*8.0*345

PACKAGE: XU*8.0*345      Apr 19, 2005 4:38 pm      PAGE 1
-----
TYPE: SINGLE PACKAGE
TRACK NATIONALLY: YES
NATIONAL PACKAGE: KERNEL
DESCRIPTION:
See patch XU*8*345 in the National Patch Module on FORUM for complete
information on this patch.

ENVIRONMENT CHECK :
PRE-INIT ROUTINE :
POST-INIT ROUTINE : INIT^XPDAPUTL
PRE-TRANSPORT RTN :
DELETE ENV ROUTINE: No
DELETE PRE-INIT ROUTINE: No
DELETE POST-INIT ROUTINE: No

FILE #      NAME      UP      SEND      DATA      SITE      RSLV      USER
DATE      SEC.      COMES      DATA      PTS      OVER
DD      CODE      W/FILE
-----
9.4      YES      YES      NO
9.7      YES      YES      NO
9.72     YES      YES      NO
9.73     YES      YES      YES      OVER      NO      NO
9.74     YES      YES      NO
9.75     YES      YES      NO
9.76     YES      YES      NO
9.77     YES      YES      NO
9.78     YES      YES      YES      OVER      NO      NO
9.79     YES      YES      NO

PRINT TEMPLATE:
XPD PATCH CHECK      FILE #9.76      SEND TO SITE
XPD PATCHES      FILE #9.7      SEND TO SITE

SORT TEMPLATE:
XPD PATCH CHECK      FILE #9.76      SEND TO SITE
XPD PATCHES      FILE #9.7      SEND TO SITE

FUNCTION:
XPD PATCH DATE      SEND TO SITE
XPD PATCH DESIGNATION      SEND TO SITE
XPD PATCH SEQUENCE      SEND TO SITE

```

```

MAIL GROUP:
    XPD VISTA PATCH                                SEND TO SITE

ROUTINE:
    XPDAFTP                                         SEND TO SITE
    XPDAFTP2                                        SEND TO SITE
    XPDAMENU                                        SEND TO SITE
    XPDAMSTR                                        SEND TO SITE
    XPDAPMES                                        SEND TO SITE
    XPDAPROC                                        SEND TO SITE
    XPDAPSVR                                        SEND TO SITE
    XPDAPUTL                                        SEND TO SITE
    XPDAUTL                                        SEND TO SITE
    XPDAUTL2                                        SEND TO SITE
    XPDAUTO                                        SEND TO SITE
    XPDAUTO2                                        SEND TO SITE
    XPDAUTOM                                        SEND TO SITE
    XPDDCS                                         SEND TO SITE
    XPDI                                           SEND TO SITE
    XPDI1                                          SEND TO SITE
    XPDIB                                          SEND TO SITE
    XPDIL                                          SEND TO SITE
    XPDIL1                                         SEND TO SITE
    XPDIPM                                          SEND TO SITE
    XPDIQ                                           SEND TO SITE
    XQOO                                            SEND TO SITE

OPTION:
    XPD AUTOMATIC PATCHING MENU                   SEND TO SITE
    XPD DESIGNATE INFORMATIONAL                   SEND TO SITE
    XPD MAIN                                       USE AS LINK FOR MENU ITEMS
    XPD MASTER - SERVANT ESTABLISH                SEND TO SITE
    XPD MASTER - SERVANT RESPOND                 SEND TO SITE
    XPD PATCH LISTING                             SEND TO SITE
    XPD PATCH REPORT                              SEND TO SITE
    XPD PATCH SERVER                              SEND TO SITE
    XPD PATCH STATUS                             SEND TO SITE
    XPD PATCHING MASTER                          SEND TO SITE
    XPD PATCHING MENU                            SEND TO SITE
    XPD PATCHING SERVANT                         SEND TO SITE
    XPD SEND PATCH TO SERVANT                     SEND TO SITE
    XPD UNSTICK QUEUE                             SEND TO SITE
    XPD VAPU ADD SERVER TO GROUP                  SEND TO SITE
    XPD VAPU COMPLETE PATCH                      SEND TO SITE
    XPD VAPU CREATE CACHE/NT FILE                 SEND TO SITE
    XPD VAPU DELETE PATCH                        SEND TO SITE
    XPD VAPU DELETE TASKS                        SEND TO SITE
    XPD VAPU EDIT EXE LOCATION                   SEND TO SITE
    XPD VAPU EDIT INSTALL MODS                   SEND TO SITE
    XPD VAPU EDIT PKG MODS                       SEND TO SITE
    XPD VAPU ENABLE/DISABLE PKG                  SEND TO SITE
    XPD VAPU LIST TASKS                          SEND TO SITE
    XPD VAPU MAIN MENU                           SEND TO SITE
    XPD VAPU MANUAL INSTALL                      SEND TO SITE
    XPD VAPU MNG BSKTS                           SEND TO SITE
    XPD VAPU MNG PATCH INST QUE                  SEND TO SITE
    XPD VAPU PATCH MONITOR MENU                  SEND TO SITE
    XPD VAPU PRINT PATCH REPORT                  SEND TO SITE
    XPD VAPU REQUEUE TASKS                       SEND TO SITE
    XPD VAPU SEND MODIFIERS                      SEND TO SITE
    XPD VAPU SITE PARAMETERS                     SEND TO SITE
    XPDAUTO                                       SEND TO SITE

```

**Figure 3-2: Packman SUMMARIZE MESSAGE option outputs the KIDS Build File Print**

**Step 3.** Use the PackMan function INSTALL/CHECK MESSAGE to load the KIDS package onto your system via PackMan message in MailMan.

```
Select PackMan function: ?
  Answer with PackMan function NUMBER, or NAME
  Choose from:
  1          ROUTINE LOAD
  2          GLOBAL LOAD
  3          PACKAGE LOAD
  4          SUMMARIZE MESSAGE
  5          PRINT MESSAGE
  6          INSTALL/CHECK MESSAGE
  7          INSTALL SELECTED ROUTINE(S)
  8          TEXT PRINT/DISPLAY
  9          COMPARE MESSAGE

Select PackMan function: 6 <Enter> INSTALL/CHECK MESSAGE

Line 3      Message #1677989   Unloading KIDS Distribution   XU*8.0*345
Build XU*8.0*345 has been loaded before, here is when:
      XU*8.0*345   Install Completed
                  was loaded on Apr 13, 2005@10:47:29
OK to continue with Load? NO// y <Enter> YES

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

XU*8.0*345
```

**Figure 3-3: Load KIDS package onto your system via PackMan message in MailMan**

If your distribution is in the form of an HFS file, bypass the previous step using the INSTALL/CHECK MESSAGE function to load the KIDS package onto your system. Instead, use the KIDS Load a Distribution option, Figure 3-4. This option is used to transport host file distributions onto your system. The INSTALL/CHECK MESSAGE option is used only to send KIDS distributions via a PackMan message in MailMan.

This patch is now loaded into a transport global on your system.



- Step 4.** Use KIDS to install the transport global. At the programmer prompt, DO ^XUP, Figure 3-4. Select the Kernel Installation & Distribution System [XPD MAIN] option. At the prompt "Select Installation & Distribution System Option:". Then select the Installation [XPD INSTALLATION MENU] option.

```
>D ^XUP
Setting up programmer environment
Access Code: *****
Terminal Type set to: C-VT100
Select OPTION NAME: KERNEL INSTALLATION & DISTRIBUTION SYSTEM <Enter> XPD MAIN
Kernel

Installation & Distribution System

  Edits and Distribution ...
  Utilities ...
  Installation ...

Select Installation & Distribution System Option: Installation

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

**Figure 3-4: Use KIDS to install the transport global**

**Step 5.** Run the KIDS Installation option Verify Checksums in Transport Global [XPD PRINT CHECKSUM], Figure 3-4, to verify that all routines have correct checksums.

```
Select Kernel Installation & Distribution System Option: INST <Enter> allation

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

Select Installation Option: 2 <Enter> Verify Checksums in Transport Global
Select INSTALL NAME: XU*8.0*345 <Enter> Loaded from Distribution
4/19/05@16:36:28
=> XU*8.0*345T4

This Distribution was loaded on Apr 19, 2005@16:36:28 with header of
XU*8.0*345T4
It consisted of the following Install(s):
XU*8.0*345
DEVICE: HOME//;;9999 <Enter> Telnet terminal

PACKAGE: XU*8.0*345      Apr 19, 2005 4:42 pm      PAGE 1
-----

22 Routine checked, 0 failed.
```

**Figure 3-5: Use KIDS to verify checksums in transport global**

If there are any discrepancies, do not run the Install Package(s) option. Instead, run the Unload a Distribution option to remove the Transport Global from your system. Call your Enterprise VistA Support (EVS) office and report the problem.

**Step 6.** Select the KIDS Installation option Compare Transport Global to Current System to compare the routines, files, functions, templates, mail groups, and options of the transport global, which has been loaded into the XTMP global on your current system.

```

Select Installation & Distribution System Option: Installation

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

Select Installation Option: 4 <Enter> Compare Transport Global to Current System
Select INSTALL NAME: XU*8.0*345 <Enter> Loaded from Distribution 4/19/05@16:36:28

=> XU*8.0*345T2

This Distribution was loaded on Apr 06, 2005@10:24:14 with header of
XU*8.0*345T2
It consisted of the following Install(s):
XU*8.0*345

Select one of the following:

1      Full Comparison
2      Second line of Routines only
3      Routines only

Type of Compare: 1 <Enter> Full Comparison
DEVICE: HOME//;9999 <Enter> Telnet terminal
Compare XU*8.0*345 to current site
-----

ADD Routine: XPDAFTP

ADD Routine: XPDAFTP2

ADD Routine: XPDAUTL

ADD Routine: XPDAUTL2

ADD Routine: XPDAUTO

ADD Routine: XPDAUTO2

ADD Routine: XPDAUTOM

Routine: XPDDCS

Routine: XPDI

Routine: XPDI1

```

```
Routine: XPDIB

Routine: XPDIL
* ADD *   D GI D ^%ZISC
* ADD *   Q
* ADD *   ;
* DEL *   D GI C IO
* DEL *   S IO=IO(0)
* DEL *   Q
* DEL *   ;

Routine: XPDIL1

Routine: XPDIPM

Routine: XPDIQ

Routine: XQ00

File # 9.72 Data Dictionary
File # 9.73 Data Dictionary
File # 9.74 Data Dictionary
File # 9.75 Data Dictionary
File # 9.76 is NEW
File # 9.77 is NEW
File # 9.78 is NEW
File # 9.79 is NEW

FUNCTION

FUNCTION: XPD PATCH DATE will be ADDED
FUNCTION: XPD PATCH SEQUENCE will be ADDED
FUNCTION: XPD PATCH DESIGNATION will be ADDED

PRINT TEMPLATE

PRINT TEMPLATE: XPD PATCH CHECK will be ADDED
PRINT TEMPLATE: XPD PATCHES will be ADDED

SORT TEMPLATE

SORT TEMPLATE: XPD PATCH CHECK will be ADDED
SORT TEMPLATE: XPD PATCHES will be ADDED

MAIL GROUP

MAIL GROUP: XPD VISTA PATCH will be ADDED

OPTION

OPTION: XPDAUTO will be ADDED
OPTION: XPD VAPU MAIN MENU will be ADDED
OPTION: XPD VAPU SITE PARAMETERS will be ADDED
OPTION: XPD VAPU ADD SERVER TO GROUP will be ADDED
OPTION: XPD VAPU EDIT PKG MODS will be ADDED
OPTION: XPD VAPU SEND MODIFIERS will be ADDED
```

```
OPTION: XPD VAPU EDIT INSTALL MODS will be ADDED
OPTION: XPD VAPU ENABLE/DISABLE PKG will be ADDED
OPTION: XPD VAPU MANUAL INSTALL will be ADDED
OPTION: XPD VAPU EDIT EXE LOCATION will be ADDED
OPTION: XPD VAPU MNG PATCH INST QUE will be ADDED
OPTION: XPD VAPU MNG BSKTS will be ADDED
OPTION: XPD VAPU DELETE TASKS will be ADDED
OPTION: XPD VAPU REQUEUE TASKS will be ADDED
OPTION: XPD VAPU LIST TASKS will be ADDED
OPTION: XPD VAPU CREATE CACHE/NT FILE will be ADDED
OPTION: XPD MASTER - SERVANT RESPOND will be ADDED
OPTION: XPD PATCH LISTING will be ADDED
OPTION: XPD PATCH REPORT will be ADDED
OPTION: XPD PATCH SERVER will be ADDED
OPTION: XPD PATCH STATUS will be ADDED
OPTION: XPD PATCHING MASTER will be ADDED
OPTION: XPD SEND PATCH TO SERVANT will be ADDED
OPTION: XPD UNSTICK QUEUE will be ADDED
OPTION: XPD PATCHING MENU will be ADDED
OPTION: XPD PATCHING SERVANT will be ADDED
OPTION: XPD DESIGNATE INFORMATIONAL will be ADDED
OPTION: XPD MASTER - SERVANT ESTABLISH will be ADDED
```

**Figure 3-6: Use KIDS to compare the transport global to your current system**

**Step 7.** Select the KIDS Installation option to create a MailMan message that will backup all existing routines in your system, which are being replaced by the packages in the transport global.



Those components that are not routines must be backed up separately if they need to be preserved.

```
Select Installation & Distribution System Option: Installation

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

Select Installation Option: 5 <Enter> Backup a Transport Global
Select INSTALL NAME: XU*8.0*345 <Enter> Loaded from Distribution
4/19/05@16:36:2
8
    => XU*8.0*345T4

This Distribution was loaded on Apr 19, 2005@16:36:28 with header of
XU*8.0*345T4
It consisted of the following Install(s):
    XU*8.0*345
Subject: Backup of XU*8.0*345 install on Apr 19, 2005
Replace
Loading Routines for XU*8.0*345..
Routine XPDAMENU is not on the disk..
Routine XPDAMSTR is not on the disk..
Routine XPDAPMES is not on the disk..
Routine XPDAPROC is not on the disk..
Routine XPDAPSVR is not on the disk..
Routine XPDAPUTL is not on the disk.....
Send mail to: [LAST NAME],[FIRST NAME]// <Enter> [LAST NAME],[FIRST NAME]
Select basket to send to: IN// PATCHES
And Send to:
```

**Figure 3-7: Use KIDS to backup all routines on your system replaced by Kernel Patch XU\*8.0&345**

**Step 8.** Run the KIDS Installation option Install Package(s), Figure 3-8, to begin the installation process for all packages in the transport global that are part of the distribution. At the prompt "Select INSTALL NAME:," enter the package: **XU\*8.0\*345** and proceed with the installation.



You must load the distribution before you can use this option to install it.

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

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

Select Installation Option: 6 <Enter> Install Package(s)
Select INSTALL NAME: XU*8.0*345 <Enter> Loaded from Distribution 4/19/05@16:36:2
=> XU*8.0*345

This Distribution was loaded on Apr 19, 2005@16:36:28 with header of
XU*8.0*345
It consisted of the following Install(s):
XU*8.0*345
Checking Install for Package XU*8.0*345

Install Questions for XU*8.0*345

Incoming Files:

9.4      PACKAGE
Note: You already have the 'PACKAGE' File.

9.7      INSTALL
Note: You already have the 'INSTALL' File.

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 SERVITUDE/MASTERSHIP

9.78     XPD PATCH BULLETIN TYPES (including data)

9.79     XPD MAIL MESSAGES

Incoming Mail Groups:

Enter the Coordinator for Mail Group 'XPD VISTA PATCH': [LAST NAME],[FIRST NAME]
COMPUTER SPECIALIST
```

Enter the coordinator of XPD VISTA PATCH mail group to receive install messages. Master sites send requests to selected site(s) for remote patch installations via MailMan messages to this mail group. Site(s) must be members in order to receive this request.

## Installation Instructions

```
Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

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// ;;9999 <Enter> Telnet terminal

  Install Started for XU*8.0*345 :
      Apr 19, 2005@16:43:32

Build Distribution Date: Apr 19, 2005

  Installing Routines:
      Apr 19, 2005@16:43:32

  Installing Data Dictionaries:
      Apr 19, 2005@16:43:43

  Installing Data:
      Apr 19, 2005@16:43:43

  Installing PACKAGE COMPONENTS:

  Installing FUNCTION

  Installing PRINT TEMPLATE
      XU*8.0*345

  Installing SORT TEMPLATE

  Installing MAIL GROUP

  Installing OPTION
      Apr 19, 2005@16:43:43

  Running Post-Install Routine: INIT^XPDAPUTL

  Updating Routine file...

  Updating KIDS files...

  XU*8.0*345 Installed.
      Apr 19, 2005@16:43:43

  Install Message sent #1679988
```

---

100% Complete	25	50	75
------------------	----	----	----

**Figure 3-8: Begin the KIDS installation process for Kernel Patch XU\*8.0\*345**

If the installation aborts, run the Unload a Distribution option to remove the Transport Global from your system. Enter the name of each package separately when prompted for package name. Call your Enterprise VistA Support (EVS) office and report the problem.





It is recommended that you rebuild your menu trees after this installation using the XQBUILDTREEQUE option. However, this is optional if your site runs a nightly TaskMan job to rebuild menus.



## Chapter 4: Site Setup Instructions



**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. 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 file (#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 4-1, 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 "Step 4. Enable Automatic Installation in PACKAGE file (#9.4)" in this documentation.

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.



**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, when entering your site name, to enter it correctly. This field is not editable once you've entered the name. If edits are required after the field has been entered, the field must be deleted and the name enter again.**

Figure 4-1 shows a screen capture of the Edit VAPU Site Parameters option.

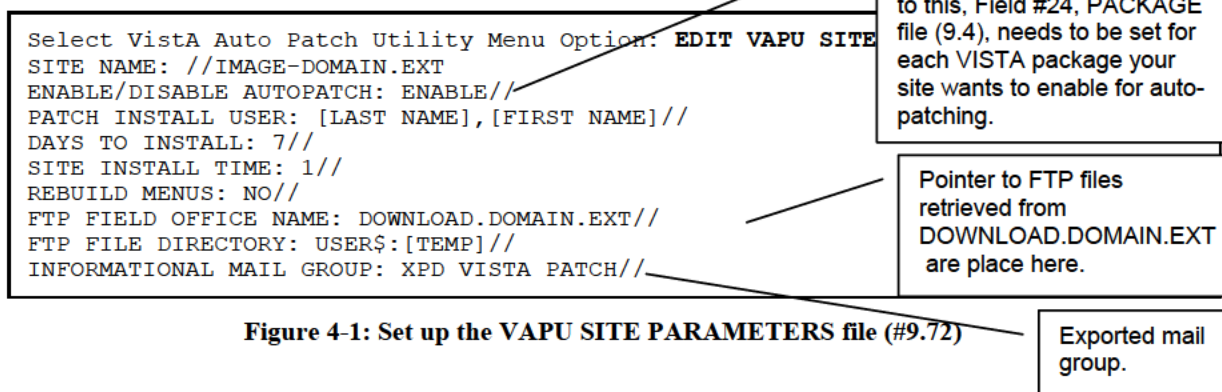


Table 4-1 lists the prompts generated by the Edit VAPU Site Parameters option and provides a description of the field value(s) for each.

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.
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//	<p>Enter FTP sites from which to retrieve your sites' KIDS FTP distributions.</p> <p>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:</p> <ul style="list-style-type: none"> <li>DOWNLOAD.DOMAIN.EXT</li> </ul> <p>_____</p> <p>_____</p> <p>_____</p>


Prompt	Description
	 The directory at the FTP location on each server is: ANONYMOUS.SOFTWARE
FTP FILE DIRECTORY: USER\$:[TEMP]//	<p>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 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 4-1: Prompts and descriptions for Edit VAPU Site Parameters option

## Step 2. Edit the 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 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.

Figure 4-2 shows 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 4-2: HFS DIRECTORY field (#5) in the VAPU SITE PARAMETERS file (#9.72)**

### 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.



These instructions use the FACILITY 1, FACILITY 2, and Test systems as examples of systems, which have been combined as an integrated facility, where FACILITY 1 represents a Production system, FACILITY 2 represents a Legacy system, and Test represents a Test system.

For example, FACILITY 1 is a merged (or integrated) facility. The production domain serves (or relays) messages for the FACILITY 2 and Test domains. The following is an example of a production domain and its relationship to FACILITY 2 and Test domains through the G.PATCHES mail group, Figure 4-3.

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 4-3.
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 4-3.

```

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@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@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:

```

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

Add G.PATCHES mail group of any sub-domains to the Production domain G.PATCHES as remote members.

**Figure 4-3: Add S.XPDAUTO and sub-domain G.PATCHES to Production domain G.PATCHES as remote members**

Figure 4-4 shows the server option S.XPDAUTO being added 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 4-4: Sub-domain G.PATCHES adds S.XPDAUTO to itself only, 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 4-5 shows the resulting remote member lists for the sample integrated facility (e.g., FACILITY 1).

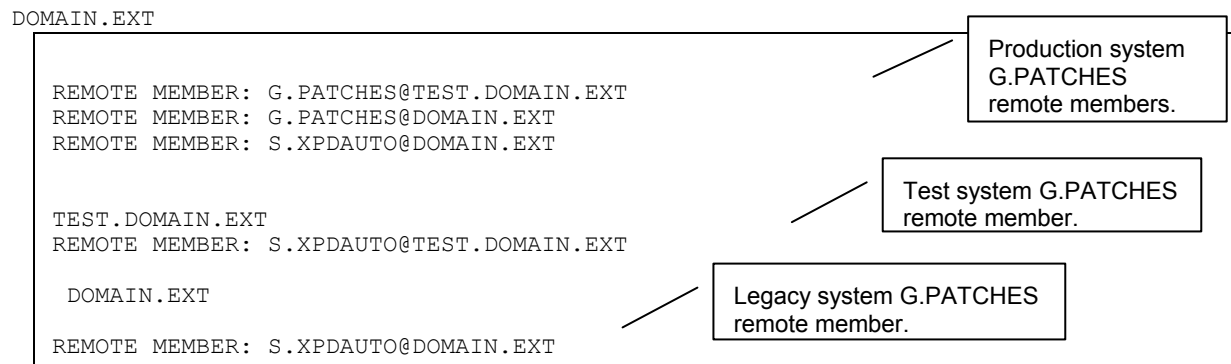


Figure 4-5: Remote member lists for example integrated facility



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.

## 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.

Use the Enable/Disable Autopatching by Package option to set the AUTOPATCH ENABLE/DISABLE field (#24) to the value of 1 (Enabled) or 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 4-6: Enable or disable auto-patching in PACKAGE file (#9.4)

Field #24 in the PACKAGE file (9.4) 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 the following two steps to enable a package for automatic installation, by using the following two options:

1. Use the Edit VAPU Site Parameters option; enter Enable the prompt "ENABLE/DISABLE AUTOPATCH: DISABLE//."
2. Use the 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.

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

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



For more information on modifying installation parameters (Install Modifiers), see the documented 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 4-7, 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, TaskManager will be stopped prior to the automatic installation of the patch. Once the installation is complete, TaskManager 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 4-7 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 4-7: Edit the VAPU PACKAGE MODIFIERS file (#9.75)**

Table 4-2 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

Prompt	Description
	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.
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 4-2: Prompts and descriptions for Edit VAPU Package Modifiers option**

## Step 6. Use TaskMan to Schedule the XPD PATCH SERVER Option to Run Every 15 Minutes

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 4-8 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:

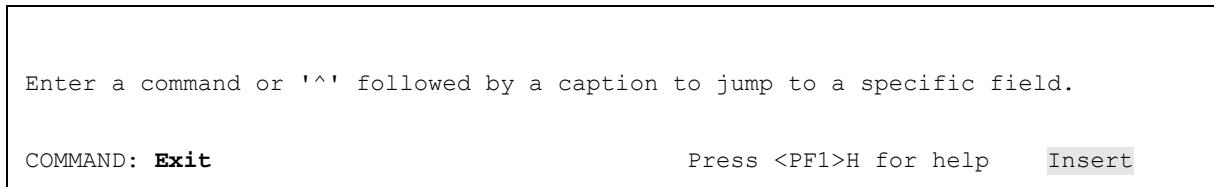
RESCHEDULING FREQUENCY: 900S

TASK PARAMETERS:

SPECIAL QUEUEING: Startup Persistent

-----
Exit      Save      Next Page      Refresh

```



**Figure 4-8: 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. 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.



For detailed information on setting up and establishing the Master/Servant Relationship, see the section titled "Establishing Master/Servant Relationship" in the *Patchman (VistA Auto Patch Utility and VistA Remote Patching) Supplement to Patch Description*



# 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 messages so the VAPU knows when a task is ready to process.
VHCS	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)** 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.



For a definition of the term "Install Modifier," see the "Glossary" in this documentation.

## Programmer Access

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.

## Remote Members

Remote Members constitute:

- MailMan domains entered in the G. PATCHES mail group that a site wants to auto-patch using VAPU (e.g., G.PATCHES@TEST.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.



Sites enter remote members using the option Edit G.PATCH Remote Members.

- 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.

## Routine

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.

## SDD

Software Design Document

Security Key	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.
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.  VAPU was developed by VA DEVELOPER , as a Class III software application. The master servant patching system was developed by VA DEVELOPER. 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:

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

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