VIC Replacement Project
PIC Workstation
Configuration Guide

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Document Control

Change Record

Date	Author	Version	Change Reference
03/23/04	Joe Parks	1.0.0	Initial Version
04/01/04	Michael Boone	1.0.1	Additional configuration considerations
04/07/04	Joe Parks	1.0.2	Added section for pre-imaged Workstation and information for obtaining most up-to-date software from VHA site and information for full installation of Sentillion Vergence software.
04/12/04	Joe Parks	1.0.3	Incorporated installation instructions for VIC replacement patch. Included instructions for configuration of browser for pass-through authentication. Updated documentation for new release of PICS Workstation executable
04/13/04	Joe Parks	1.0.4	Included instructions for PIC Workstation Camera configuration. Modified instructions for registry entry.
04/13/04 04/14/04 04/15/04	Joe Parks	1.0.5	Included instruction for setting LDAP connection for PICS. Included more detailed instructions throughout the document, incorporating information found through additional testing and review
04/23/04	Joe Parks	1.0.6	Performed final consistency check during configuration of baseline PICS Workstation image. -Added the caveat at the beginning, to state that our testing of this configuration has only been validated for Windows XP -Shortened the instructions for installing the VistA Broker - instructing users to open the zip file from the link, rather than downloading the zip file to a folder and then extracting it. -Changed the location of the CPRSChart.exe from the c:\CPRS folder to the c:\Program Files\Vista\CPRS folder -With the latest version of PICS the registry entries have changed. -Added cautionary note about possible conflicts with other Twain devices -Added reference to the fact that the Microsoft Scanner and Camera Wizard is launched when we connect the camera to the workstation - In the *Congratulations* section and in the intro to the *Running PICS* section, indicated that submission of a test patient card request should be conducted, to confirm successful completion of the installation/configuration procedures - and to introduce the Running PICS section, as the final step for confirmation of successful completion.
04/23/04	Joe Parks	1.0.7	Inserted update of Appendix B – Installation Instructions for the VistA Imaging Server
04/29/04	Joe Parks	1.0.8	Included instructions for configuration of the Sentillion Vergence Vault Locator
05/03/04	Joe Parks	1.0.9	Included instructions to modify permissions on specific folders and on the VistA Registry Key
05/20/04	Joe Parks	1.0.10	Modified regedit instructions to indicate use of regedit32 instead of regedit. Changed port numbers in examples from port 9400 to port 9200

Date	Author	Version	Change Reference
05/27/04	Joe Parks	1.0.11	Posted update to Visio Diagram in Appendix C, with a correction to the sequence of VIC processing. (The card request is sent to VistA Imaging before it is sent to the NCMD.)
06/09/04	Joe Parks	1.0.12	Updated installation instructions for CPRS
06/15/04	Joe Parks	1.0.13	Updated instructions for configuration of VistA "roll & scroll" component. Included screen print as illustration for regedit instructions for VistA server name and port number entries. Eliminated instructions for PICS LDAP configuration for a pre-imaged workstation. Included instructions for changing permissions on registry key so that flash and zoom settings can be maintained between sessions Included instructions for registry entries for propagation of Browser pass-through authentication settings to all users.
06/17/04	Joe Parks	1.0.14	Removed reference to installation of an ActiveX control from Appendix B. Those instructions seemed to indicate that the ActiveX control requires separate installation.
06/23/04	Joe Parks	1.0.15	Updated instructions for establishing NCMD access.
06/24/04	Joe Parks	1.0.16	Included information regarding consolidated sites. Included instructions for configuration of CPRS that enables launch of PICS from the CPRS toolbar
06/30/04	Joe Parks	1.0.17	Included Appendix C instructions for deleting entries from the queue
07/20/04	Joe Parks	1.0.18	Included Appendix E, a table of PICS Error Messages
07/21/04	Joe Parks	1.0.19	Removed instructions for browser pass-through authentication for imaged workstations, since those settings have already been configured there. Changed example provided for settings for the context vault for the Sentillion Vergence Locator to correspond to the standard naming convention for ccow servers. Also for the Sentillion Vergence Locator on imaged workstation, changed instructions regarding the deletion of the DesktopID file, since this file has already been deleted on the imaged workstation
08/04/04	Joe Parks	1.0.20	Included requirement for secondary menu option to enable storage of pictures to VistA Imaging
08/11/04	Joe Parks	1.0.21	Included update to Appendix A per Kevin Louck
08/26/04	Joe Parks	1.0.22	Included update to section on configuration of VistA auto sign-on and multiple sign-on for all VIC Workstation operators
08/31/04	Joe Parks	1.0.23	Included update to instructions on installation of the terminal emulator for VistA
09/01/04	Joe Parks	1.0.24	Included update for VistA access via secondary menu option VIC RPC Menu [DGQE VIC RPCS] option
09/22/04	Joe Parks	1.0.25	Included note regarding case-sensitivity of target parameters for CPRS and PICS shortcut. Included note regarding the re-submission of a card request in order to overwrite mistakenly submitted request. Included notes specific to Windows 2000 when changing folder permissions. Updated instructions to simplify creation of CPRS shortcut.
09/27/04	Joe Parks	1.0.26	Included note warning against acceptance of XP SP2 during workstation upgrade
09/28/04	Joe Parks	1.0.27	Included Appendix F – Specification for Hardware used during VIC Testing

Date	Author	Version	Change Reference
12/10/2004	Joe Parks	1.0.28	Included instructions for camera Auto Power Down settings. Included notification that all non-consolidated sites have installed the import API Enhancement patch. Included preliminary workaround instructions for XP Service Pack 2
03/16/2005	Joe Parks	1.0.29	Added clarification to Appendix C for Queue Management
10/17/2005	Joe Parks	1.0.30	Included additional screen shots for Browser pass through authentication
03/16/2007	Joe Parks	1.0.31	Updated Appendix C for Queue Management

Reviewers

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Daniel Maloney	Director
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Distribution

Copy No.	Name	Location
1	PIC_Workstation_Configuration_Guide.doc	http://vaww.va.gov/techsvc/projects/VICWorkstationSetup.html

Contents

Introduction

Purpose

The purpose of this guide is to provide instructions for software installation and system configuration for the software components that are used to create the VIC Replacement Card Issuing Workstation.

Background

The VIC Replacement Card Issuing Workstation allows the VHA VIC Issuer to gather information from VistA, to capture a patient picture, to save the picture file to the local VistA Imaging server, and to electronically submit a Card Request. These card requests are collected on the VHA national system called the National Card Management Directory (NCMD). Each day, these Requests are relayed from the NCMD to a vendor who prints and mails the cards to the veterans. The NCMD also provides an on line web browser interface The status of any individual Card Request is available on line from the NCMD, as well as a number of management reports.

This document addresses the software installation and software configuration of the components that are necessary to make the VIC Replacement Workstation operate properly.

There are 3 major Sections of this document and three Appendixes.

1. Section I describes how to configure your workstation if it arrives from the national contract vendor with all the software preloaded. There are a number of workstation configuration adjustments that are needed to link the workstation to your local VistA system. There are also configurations that are needed to the VistA server. The VIC Issuers will need the Network Usernames to be added to NCMD Access Control Groups that are managed at your local facility.

2. Section II describes the steps involved in using the VIC Issuer Software

3. Section III describes how to load and configure all the software components if you are starting with a Microsoft XP workstation without any application software pre-loaded.

4. Appendix A describes how to install the **VistA Server** components, identified as PIMS, that are needed to communicate the VistA data to the VIC Issuer Workstation

5. Appendix B describes how to install the **VistA Imaging Server** components that are needed to allow the VIC Issuer workstation to automatically store the patient picture to the local VistA Imaging system.

6. In Appendix C, you can find a data flow diagram of the entire process

Note: The information contained in this guide has been validated only for the Windows XP workstation.

I. Configuration of Imaged VIC Replacement Workstation

This section explains how to configure a VIC Workstation that has the software pre-installed at the factory.

1) **Establish network connectivity** – The facility network administrator must join the VIC Workstation to the facility domain.

2) **Configure network and Workstation security for the VIC Workstation**

a. Load and configure McAfee Antivirus with the latest DAT files

b. Update the Windows XP operating system with the latest OS Antivirus patches

Note: At this time there is an incompatibility issue with XP Service Pack 2. During upgrade

DO NOT ACCEPT THE XP SERVICE PACK 2 UPGRADE.

3) **Provide VistA access for all VIC Workstation operators**

a) Provide a list of VIC Workstation operators to the facility VistA Administrator to ensure that all VIC Workstation operators have VistA accounts that are configured for multiple sign-on and auto-sign on.

b) To ensure that VIC Workstation operators are able to store pictures in VistA imaging, *MAG WINDOWS* must be implemented as a secondary menu option. No security keys are required to view the photos in VistA Imaging.

c) To ensure that VIC Workstation operators are able to retrieve veteran demographic data from the VistA Registration database, the VIC RPC Menu [DGQE VIC RPCS] option must be implemented as a secondary menu option.

4) **Establish NCMD access for all VIC Workstation operators**

The facility network administrator must add the domain accounts of all VIC Workstation operators to the VHAV##VICWrite global group.

Other VHA staff may only need Read access to the NCMD data. Staff who need to view the veteran data and will use the Web Browser interface should be added to the VHAV##VICRead global group. Examples would include the Police who may need to access the veteran pictures when trying to locate a missing patient, or management who need access to the management reports.

To locate the VHAV##VICWrite or VHAV##VICRead global groups in your domain, the following steps may be taken:

a. Launch Active Directory Users and Computers
b. Right click on their domain and select Find (if the person is not in the VISN being searched you will have to first select “Connect to domain”).
c. Type in the name of the group (e.g. vhav20VICwrite)
d. Hit return.

5) **Configure the CCOW-enabled version of CPRS**

The client version of CPRS must be compatible with the local facility version on the server. The Emerging Technologies (ET) web site will continue to post updated versions of CPRS at the link shown below at b. The following link will also provide the most recent versions from the following VHA site. Please note however, that this site is not controlled by VHA and so we can offer no ongoing assurances as to the site contents.

ftp://ftp.va.gov/vista/Software/Packages/Order%20Entry-Results%20Reporting%20-%20OR/Programs/

a. Confirm CPRS version with your facility administrator and obtain the VistA server name and port.

b. Updated versions of CPRS are available from: http://vaww.va.gov/techsvc/projects/VICWorkstationSetup.html

c. From within the zip utility, extract the CPRS files to the C:\Program Files\Vista\CPRS\ directory

d. In this directory, right-click the icon for *CPRSChart.exe* and select *Send to Desktop (Create Shortcut)*

e. On the desktop, right-click the newly created shortcut and select *Properties*

f. In the *Target* field of the shortcut, put the VistA *Server Name* and *Port Number* as arguments that follow the path to the executable, as shown in the example that follows. The *Server Name* parameter is specified with a lower-case "s" and the *Port Number* parameter is specified with a lower-case "p".

Example: "C:\Program Files\Vista\CPRS\CPRSChart.exe" **s=your-VistA-server p=9200**

Click *Apply* and then *Ok* to complete the configuration.

6) **Configure the VIC Patient Image Capture software (PICS)**

a) Right-click the shortcut on the desktop for the PICSWorkstation.exe executable and select *Properties*

b) Put the VistA *Server Name* and *Port Number* in the shortcut ***Target*** field as arguments that follow the path to the executable. The server name parameter is specified with an "s" and the port parameter is specified with a "p". *Please note that these parameters are case-sensitive and must be lower-case.*

Example: "C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation.exe" **s= your-VistA-server p=9200**

7. Configuration of CPRS for launching PICS from the CPRS Toolbar

Sign on to the VistA in programmers mode:

D ^XPAREDIT

--- Edit Parameter Values ---

Select PARAMETER DEFINITION NAME: **CPRS** GUI TOOLS MENU ORWT TOOLS MENU CPRS GUI Tools Menu

ORWT TOOLS MENU may be set for the following:

1 User USR [choose from NEW PERSON]
2 Location LOC [choose from HOSPITAL LOCATION]
2.5 Service SRV [choose from SERVICE/SECTION]
3 Division DIV [choose from INSTITUTION]
4 System SYS [IMGDEM01.MED.VA.GOV]

Enter selection: **4 System** IMGDEM01.MED.VA.GOV

---------- Setting ORWT TOOLS MENU for System: IMGDEM01.MED.VA.GOV ----------
Select Sequence: ?

Sequence Value
-------- -----
1 Display Patient EKGs="c:\program files\vista\imaging\EKGDisplay.exe"
3 VistA Imaging Display="c:\program files\vista\imaging\imgvwp10.exe" %
4 VistA Imaging Capture="c:\program files\vista\imaging\tele19n.exe" %D
10 BCMA="c:\program files\vista\bcma\bcma.exe" %DFN %MREF %SRV %PORT
15 BCMAPAR="c:\program files\vista\bcma\bcmapar.exe" %DFN %MREF %SRV %PO
16 VIC Issuer="C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation

Select Sequence: 16

Sequence: 16// 16
Name=Command: VIC Issuer="C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation.exe"
s=%SRV p=%PORT
Select Sequence:

8.Change the entry to the registry for the VistA server name and port number.

The following instructions are for changing the targeted VistA Server name and port, to the required values as confirmed with your facility administrator in step 5.

a) Using *Start/Run* from the bottom toolbar, type *regedt32* to make an entry in the registry

b) In the Registry Editor, expand the *HKEY_LOCAL_MACHINE* folder

c) Expand the *SOFTWARE* folder

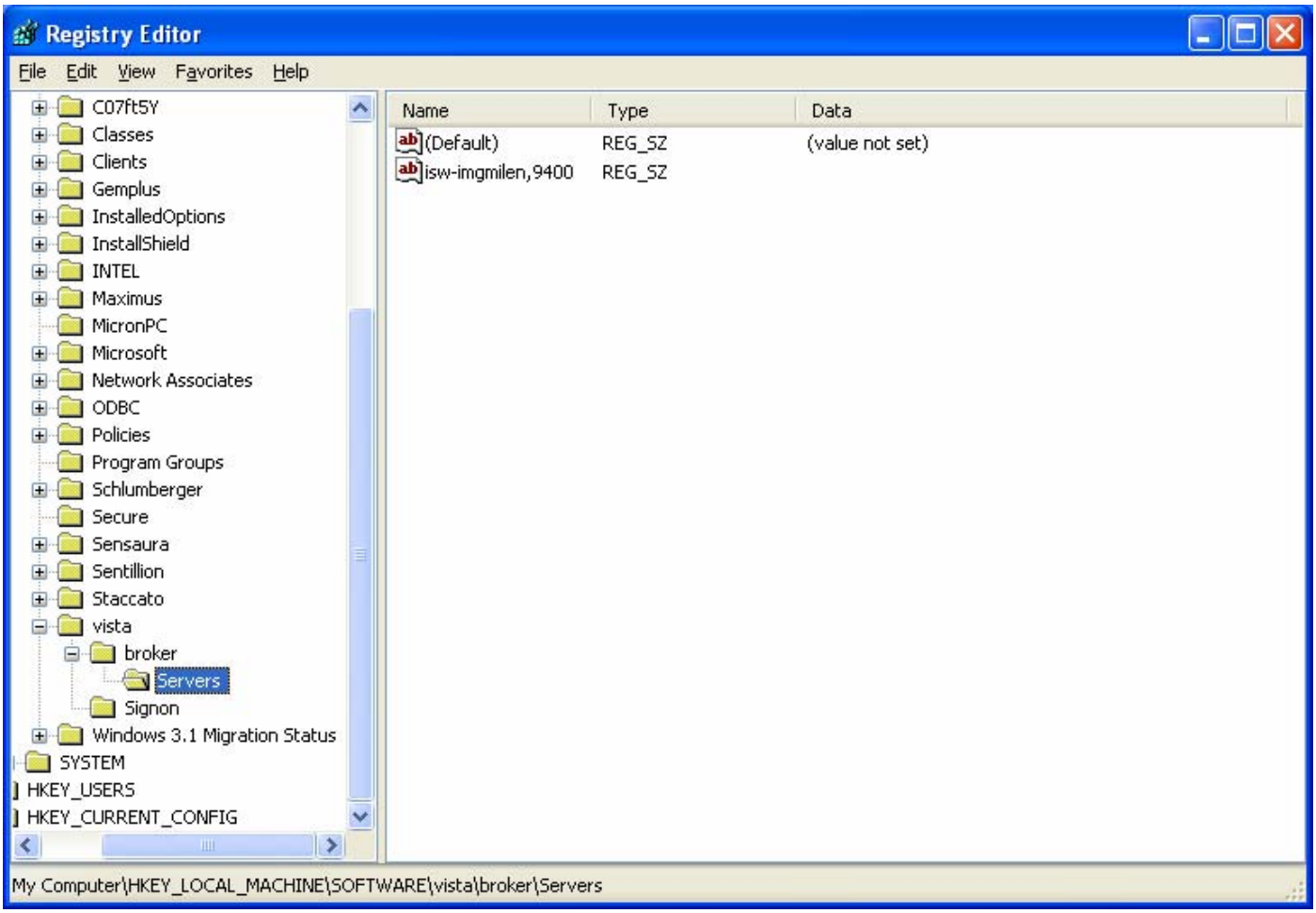
d) From within the *SOFTWARE* folder, expand *Vista*

e) From within *Vista*, expand *Broker*

f) From within *Broker*, click *Servers*

g) In the right pane, change the value for *Servers* to the required values for *servername* and *port* as confirmed with your facility administrator in step 5. *(Note in the example below, that there is no space between the comma and the Port Value.)*

Example: isw-VistA-server,9200. Note that no value is set for the key



9.Configure the Sentillion Vergence Locator

This will enable *CCOW* communication between *CPRS* and *PICS*.

a) Obtain the DNS name for the Sentillion CCOW context vault from the facility network administrator. (This is a network server that will handle the context session established on the VIC Workstation.)

b) Right click the Start button and select *Explore*, Drill down through ***C:\Program Files\Sentillion\Desktop Components\Data***.

c) From the *Data* folder, double-click the *ContextVault* file.

d) Edit the entry shown for the Virtual IP address of the context vault. Enter the DNS given by the facility network administrator.

Example: *ccv.yourserver.med.va.gov*

f) Restart the Workstation.

10.Configure PIC Workstation Camera

Please note that for standard installation, only one Twain device can be supported on the PIC Workstation. Attempts to configure the Camera with other graphic devices, such as scanners, will cause communication errors.

a. Turn the Camera power *On*, the green *On* indicator light will flash

b. Set the dial on top of the Camera to *Auto*, if continual use is intended.

c. Put the Camera in *Review Mode*. (Note: The review mode Camera indicator resembles a VCR play control button.)

d. Connect the USB port cable between the Camera and the Workstation

e. The Green *On Indicator Light* will flash and then remain on

Note: Although the *Microsoft Scanner and Camera Wizard* may be launched at this time, it is not necessary to employ this wizard to configure the camera for PICS operation.

f. To change the camera's *Auto Power Down* setting

1. On the back of the camera, press the *Menu* button.
2. Move the menu cursor one place to the right on the menu tool bar
3. Move the menu cursor two places down, to the *Auto Power Down* setting
4. Change the setting as desired.

11.Congratulations. All the software has been configured. It is good practice to reboot your system after any software installation, so please reboot your system now. In order to test your configuration, please go to section II to run the PICS software and submit a test patient card request.

II. Running the PICS software

To ensure all installation and configuration procedures have been completed successfully, the following section provides instructions for submission of a test patient card request.

1. Launch CPRS from the desktop shortcut. Supply your VistA ***Access Code*** and ***Verify Code*** when prompted.

2. Select a veteran from the listing. For an initial test, select a veteran who is also a local VA employee.

3. Launch PICS from the desktop shortcut.

    a) Capture, crop and save a picture

    b) Submit the VIC request

    c) Observe the window that indicates a successful submission
    (Note: The PICS user guide contains detail of the software functionality.)

    d) You may check on the status of any request on-line at any time by opening your Internet Explorer Web Browser and going to URL https://vaww.etech.med.va.gov/VIC/index.asp. Your Network Authentication Identity is used to transparently access the NCMD for this information once your Workstation browser is configured as described in Section I or III.

> Note: A DOS bat file or other means of launching both applications is being established. PICS will also be enabled for launch from the CPRS tools menu.

Note that **when a Veteran's card has been lost or destroyed**, a new one may be issued – by following the steps outlined above, to re-submit the Card Request.

1. Launch CPRS from the desktop shortcut. Supply your VistA ***Access Code*** and ***Verify Code*** when prompted.

2. Select the desired Veteran from the listing.

3. Launch PICS from the desktop shortcut.

4. (Re)Submit the VIC request.

Note that this also applies to the case of **a request that has been mistakenly submitted**. For example, in the case where an incorrect photo has been submitted for a card request, that request can be overwritten immediately by following the steps outlined above.

III. Installation of VIC Workstation if no software is pre-installed

What follows are the instructions for the installation of the VIC Replacement software on a Workstation that only has the XP operating system installed. If your Workstation has been received with the VIC Replacement software "image" installation, then you do not need to perform the steps listed below for the software installation. If the software has been installed, you need to follow the instructions in Section 1 in order to Configure the software to communicate with the VistA systems at your facility.

1. **Establish network connectivity -** The facility network administrator must join the VIC Workstation to the facility domain.

2. Configure network and Workstation security for the VIC Workstation

a) Load and configure McAfee Antivirus with the latest DAT files

b) Update the Windows XP operating system with the latest OS Antivirus patches

Note: At this time there is an incompatibility issue with XP Service Pack 2. However

If for any reason, SP2 is mandated for a workstation, the Internet Firewall must be disabled

3. **Load the VistA Broker to allow CPRS to communicate with your VistA server**

a) Open the zip file for the VistA RPCBroker version 1.1 software from the following link:

http://vaww.va.gov/techsvc/projects/VIC/RPCBroker.zip

b) Launch *xwb1_1ws.exe* and accept all the defaults.

4. Configure VistA auto sign-on and multiple sign-on for all VIC Workstation operators

a) Provide a list of VIC Workstation operators to the facility VistA Administrator to ensure that all VIC Workstation operators have VistA accounts that are configured for multiple sign-on and auto-sign on.

b) To ensure that VIC Workstation operators are able to store pictures in VistA imaging, *MAG WINDOWS* must be implemented as a secondary menu option. No security keys are required to view the photos in VistA Imaging.

c) To ensure that VIC Workstation operators are able to retrieve veteran demographic data from the VistA Registration database, the VIC RPC Menu [DGQE VIC RPCS] option must be implemented as a secondary menu option.

5. Establish NCMD access for all VIC Workstation operators

a) The facility Network Administrator must add the domain accounts of all VIC Workstation operators to the VHAV0#VICWrite global group.

b) Other VHA staff may only need Read access to the NCMD data. Staff who need to view the veteran data and will use the Web Browser interface should be added to the VHAV0#VICRead global group. Examples would include the Police who may need to access the veteran pictures when trying to locate a missing patient, or management who need access to the management reports.

To locate the VHAV##VICWrite or VHAV##VICRead global groups in your domain, the following steps may be taken:

c) Launch Active Directory Users and Computers
d) Right click on their domain and select Find (if the person is not in the VISN being searched you will have to first select "Connect to domain").
e) Type in the name of the group (e.g. vhav20VICwrite)
f) Hit return.

6. Install the CPRS program that is CCOW-enabled (version 22 or higher)

The client version of CPRS must be compatible with the local facility version on the server. The Emerging Technologies (ET) web site will continue to post updated versions of CPRS at the link shown below in b.

g. Confirm CPRS version with your facility administrator and obtain the VistA server name and port.

h. Create a the following folder: c:\Program Files\Vista\CPRS\

i. Access the CPRS link from the page below. Save the zip file to the newly created directory on the Workstation
http://vaww.va.gov/techsvc/projects/VICWorkstationSetup.html

Note: You can also obtain the current CPRS version from the VistA Software FTP site found at URL ftp://ftp.va.gov/vista/Software/Packages/Order%20Entry-Results%20Reporting%20-%20OR/Programs/ <ftp://ftp.va.gov/vista/Software/Packages/Order Entry-Results Reporting - OR/Programs/>. If you use this method to obtain CPRS, you will need to create the shortcut yourself by right clincking the CPRS program and selecting "Create Shrotcut".

j. From within the zip utility, extract the CPRS files to the C:\Program Files\Vista\CPRS\ directory

k. In this directory, right-click the icon for *CPRSChart.exe* and select *Send to Desktop (Create Shortcut)*

l. On the desktop, right-click the newly created shortcut and select *Properties*

m. In the *Target* field of the shortcut, put the VistA *Server Name* and *Port Number* as arguments that follow the path to the executable, as shown in the example that follows. The *Server Name* parameter is specified with a lower-case "s" and the *Port Number* parameter is specified with a lower-case "p".

Example: "C:\Program Files\Vista\CPRS\CPRSChart.exe" **s=your-VistA-server p=9200**

n. Click *Apply* and then *Ok* to complete the configuration.

o. Double click the *CPRS Shortcut* on the desktop to be sure that it opens the CPRS sign-on screen. Click Cancel. This also places values in the Windows Registry that we will use later.

6 a. Configuration of CPRS for launching PICS from the CPRS Toolbar

Sign on to the VistA in programmers mode:

D ^XPAREDIT

--- Edit Parameter Values ---

Select PARAMETER DEFINITION NAME: **CPRS** GUI TOOLS MENU ORWT TOOLS MENU CPRS GUI Tools Menu

ORWT TOOLS MENU may be set for the following:

1 User USR [choose from NEW PERSON]
2 Location LOC [choose from HOSPITAL LOCATION]
2.5 Service SRV [choose from SERVICE/SECTION]
3 Division DIV [choose from INSTITUTION]
4 System SYS [IMGDEM01.MED.VA.GOV]

Enter selection: **4 System** IMGDEM01.MED.VA.GOV

---------- Setting ORWT TOOLS MENU for System: IMGDEM01.MED.VA.GOV ----------
Select Sequence: ?

Sequence Value
-------- -----
1 Display Patient EKGs="c:\program files\vista\imaging\EKGDisplay.exe"
3 VistA Imaging Display="c:\program files\vista\imaging\imgvwp10.exe" %
4 VistA Imaging Capture="c:\program files\vista\imaging\tele19n.exe" %D
10 BCMA="c:\program files\vista\bcma\bcma.exe" %DFN %MREF %SRV %PORT
15 BCMAPAR="c:\program files\vista\bcma\bcmapar.exe" %DFN %MREF %SRV %PO
16 VIC Issuer="C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation

Select Sequence: 16

Sequence: 16// 16
Name=Command: VIC Issuer="C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation.exe" s=%SRV p=%PORT
Select Sequence:

7. Install the Sentillion Vergence Locator -

This will enable CCOW communication between *CPRS* and *PICS*.

a) Obtain the DNS name for the Sentillion CCOW context vault from the facility network administrator. (This is a network server that will handle the context session established on the VIC Workstation.)

b) Open the WinZip file from the following link

I. http://vaww.va.gov/techsvc/projects/VIC/SentillionVergenceLocator.zip

II. or obtain the Sentillion Vergence Desktop Components v 3.3. CD.

c) Scroll through the files in the WinZip listing until the Setup.exe executable is shown

d) Double click the Setup.exe executable and accept all defaults.

e) When prompted for the Virtual IP address of the context vault specify the DNS given by the facility network administrator. Note: To view the Sentillion *ReadMe* file for the installation you will need to install Adobe, however it will not be necessary to view that file. **Example: *ccv.yourserver.med.va.gov***

Note: If the CCOW server has not been activated, then a full install of the Sentillion Vergence locator must be performed. When performing step 7d above, installation defaults must be accepted for all Sentillion Vergence components.

8. Install the VIC Patient Image Capture software (PICS)

a) Run the PICS Workstation package setup from the PICS Workstation installation link on the following page: When prompted, click the Open button.)
http://vaww.va.gov/techsvc/projects/VICWorkstationSetup.html

b) Double-click the Setup.exe file that will be shown in the WinZip listing.

c) The installation will begin – accept all defaults

d) A *Shortcut* will be created on the desktop

e) Right-click the newly created *Shortcut* and select *Properties*

f) In the *Target* field of the shortcut, key in the VistA server name and port number as arguments, that follow the path to the executable. The server name parameter is specified with an "s" and the port parameter is specified with a "p". Please note that this parameter is case-sensitive.

Example:
"C:\Program Files\MAXIMUS\PICS Workstation\PICSWorkstation.exe" **s=your-VistA-server p=9200**

g) Click *Apply* then *Ok*, to complete the configuration

9. Add an entry to the registry for the VistA server name and port number.

a) Using *Start/Run* from the bottom toolbar, type *regedt32* to make an entry in the registry

b) In the Registry Editor, expand the *HKEY_LOCAL_MACHINE* folder

c) Expand the *SOFTWARE* folder

d) From within the *SOFTWARE* folder, expand *Vista*

e) From within *Vista*, right-click *Broker*

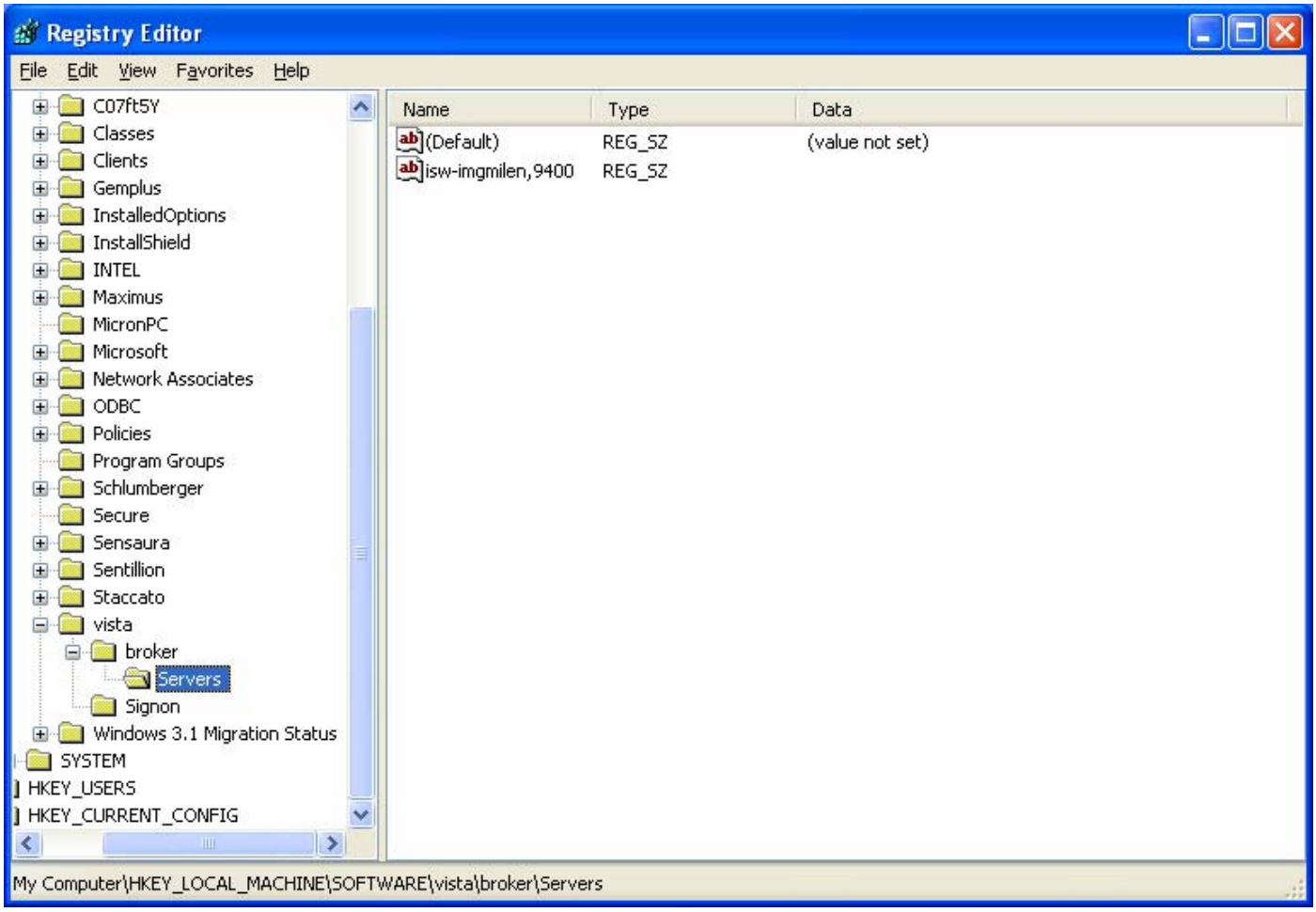
f) Click *New* and select *Key*

g) Change the value of the new key from *New Key #1* to *Servers*

h) Right click *Servers* and select *New/String Value*

i) Right click the *New String Value* and change the value from *New Value #1* to the required values for *servername* and *port* as confirmed with your facility administrator in step 5. *(Note in the example below, that there is no space between the comma and the Port Value.)* .

Example: isw-VistA-server,9200. Note that no value is set for the key



10. Change user permissions for the Registry key for VistA

a) Using *Start/Run* from the bottom toolbar, type *regedt32* to make an entry in the registry

b) In the Registry Editor, expand the *HKEY_LOCAL_MACHINE* folder

c) Expand the *SOFTWARE* folder

d) From within the *SOFTWARE* folder, Right-Click *Vista* and select *Permissions*.

e) Select *Users* from the User Name listing and Click the *Full Control* check-box in the Permissions window

f) Click the *Apply* and *Ok* buttons to complete the permissions change.

11. Change user permissions for PICS Registry key, to enable save of camera settings

a) Using *Start/Run* from the bottom toolbar, type *regedt32* to make an entry in the registry

b) In the Registry Editor, expand the *HKEY_LOCAL_MACHINE* folder

c) Expand the *SOFTWARE* folder, and the *Maximus* folder, Right-Click *VAIssuance* and select *Permissions*.

d) Select *Users* from the User Name listing and Click the *Full Control* check-box in the Permissions window

e) Click the *Apply* and *Ok* buttons to complete the permissions change.

12.Change file access permissions

To ensure that employees with non-Administrative rights can successfully run the VIC-PIC software, file access permissions of *Modify* and *Write* must be granted to the workstation group called: *Users,* for the following folders, highlighted in ***Italics***.

C:\Program Files\Maximus***PICS Workstation***

C:\Windows***Pictures*** (C:\WINNT***Pictures*** for Windows 2000)

C:\ Windows ***Maximus*** (C:\WINNT***Maximus*** for Windows 2000)

13.Configure PICS with the LDAP setting for the National Card Management Directory

a) Launch CPRS from the desktop shortcut. Supply the VistA Access Code and Verify Code.

* Note: CPRS must be launched in order for PICS to run.

b) From the CPRS toolbar, click *Tools*, then *VIC Issuer.*

c) On the PICS toolbar, click *Patient*, then *Settings*.

d) In the *LDAP Address* field, enter the following:

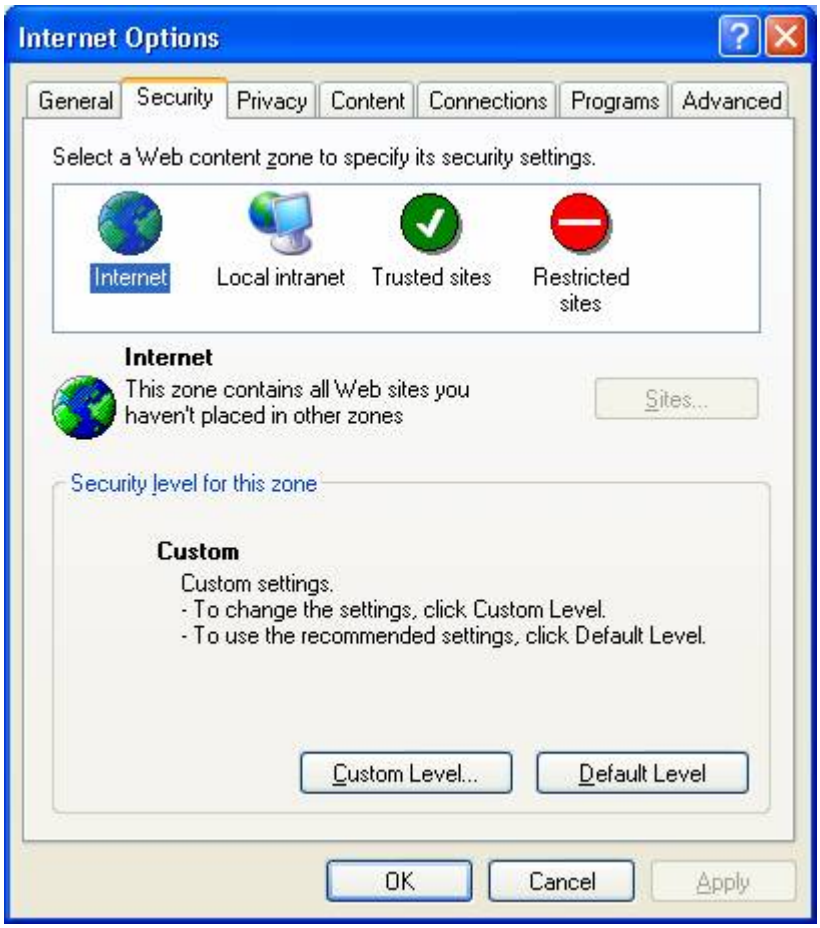
LDAP://veterans1.oneva.va.gov/DC=veterans1, DC=oneva, DC=va, DC=gov

e) Click the *Ok* button.

14.Configure Browser for pass through authentication

a) From the Browser toolbar select *Tools/Internet Options*

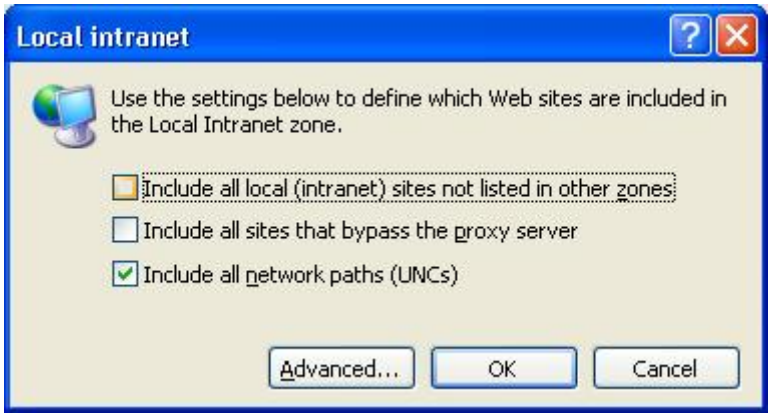
b) From the Internet Options dialog box select the *Security* tab



c) From the Security tab select the icon for *Local Intranet* and click *the Sites* button.

Local Intranet setting that should be checked: *Include all network paths (UNCs)*

On the *Local Intranet* dialog box, ensure only the third check box is checked. (See below)



e) From this same dialog box, Click the *Advanced* button

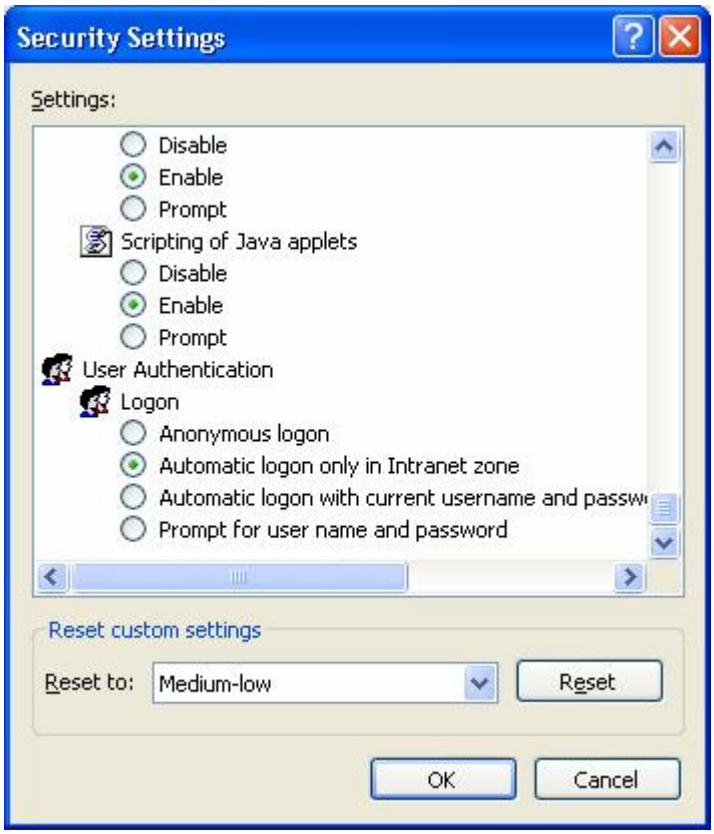
f) Add the following URL: https://vaww.etech.med.va.gov/vic and click *Add*

g) Click *Ok* on this dialog box and then *Ok* on the next, to return to the *Security* dialog box.

h)Click the *Custom Level* button

I. Scroll to the bottom of the listing

II. Under *User Authentication/Logon* click the Radio Button for *Automatic Logon only in Intranet Zone*



i)Click the *OK* button on this dialog box and the main dialog box to complete the changes

15.Add an entry to the registry for propagation of Browser pass through authentication for All Users

a) Using *Start/Run* from the bottom toolbar, type *regedit32* to make an entry in the registry

b) In the Registry Editor, expand the *HKEY_LOCAL_MACHINE* key

c) Expand the *Software* key

d) Expand the *Microsoft* Key

e) Expand the *Windows* key

f) Expand the *Current Version* key

g) Expand the *Internet Settings* key

h) Expand the *ZoneMap* Key

i) Right-click the *Domains* Key and select *New Key*

j) Change the name of the *New Key* to *va.gov*

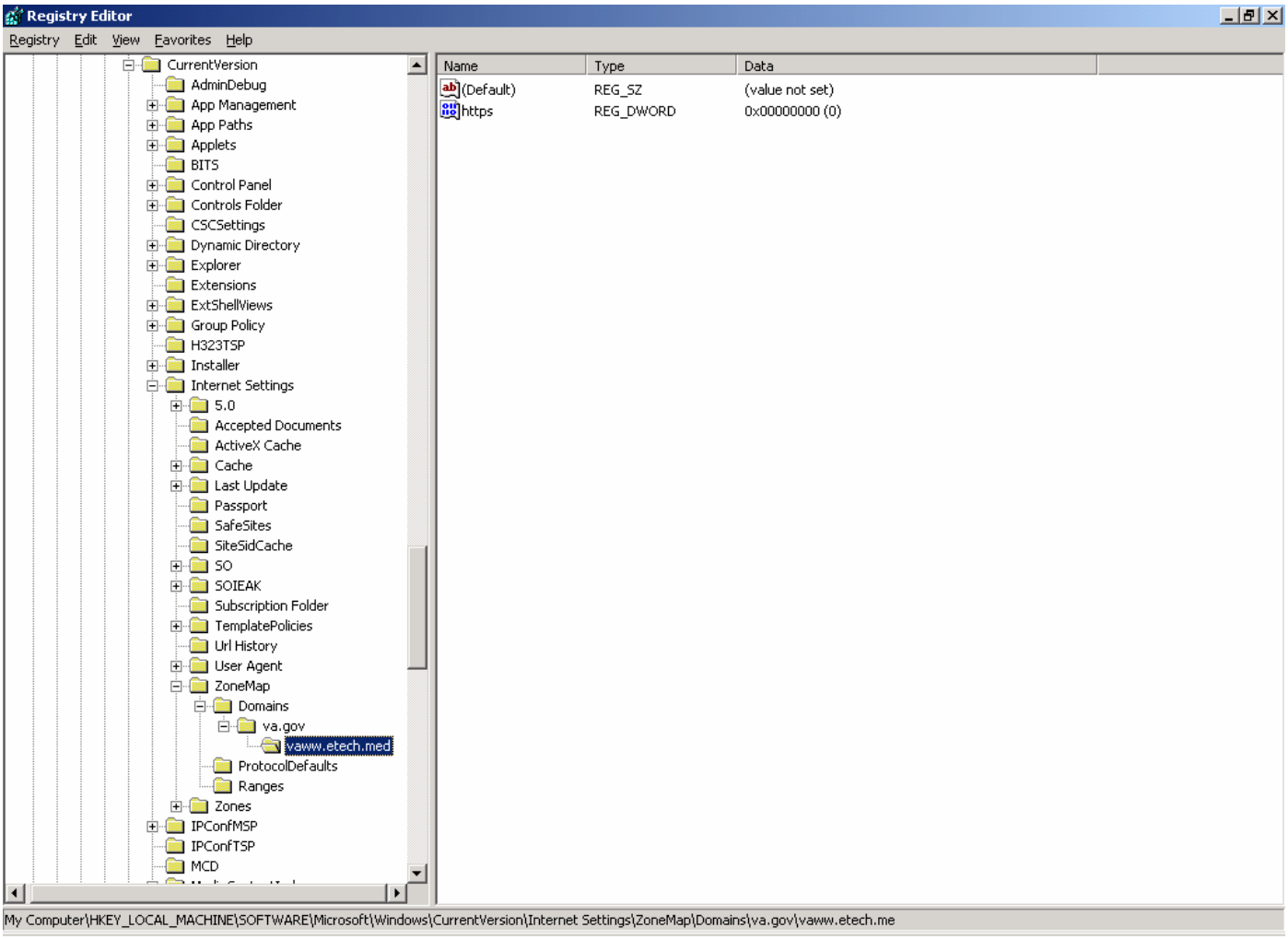
k) Right click the *va.gov* key and select *New Key*

l) Rename the *New Key* to *vaww.etech.med*

m) Right-click the *vaww.etech.med* key and select *New DWORD Value*

n) Rename the *New DWORD Value* to *https*

Illustration of Registry Keys for Propagation of Browser Pass-through Authentication:



16.Configure PIC Workstation Camera

Please note that for standard installation, only one Twain device can be supported on the PIC Workstation. Attempts to configure the Camera with other graphic devices, such as scanners, will cause communication errors.

a) Turn the Camera power *On*, the green *On* indicator light will flash (Note: Set the dial on top of the Camera to *Auto*, if continual use is intended.

b) Put the Camera in Review Mode. (Note: The Camera indicator for review mode resembles a VCR play control button.)

c) Connect the *USB Port Cable* between the Camera and the Workstation

d) The green *On* indicator light will flash and then remain on.

Note: Although the *Microsoft Scanner and Camera Wizard* may be launched at this time, it is not necessary to employ this wizard to configure the camera for PICS operation.

e) Turn the *Auto Power Down* function off

1. On the back of the camera, click the Menu button
2. Move to the second menu item (Set Up options) on the toolbar
3. Move to the second Setup option in that list (Auto Power Down)
4. Turn *Auto Power Down* off.

17. **Install the terminal emulator so that your staff can connect to the VistA roll-and-scroll interface. The terminal emulator should be configured to connect to the VistA Server where the RPC Broker listener is running. The terminal emulator** can be used by the VIC Issuer to make adjustments to the patient address or other data as needed. This assumes that the VIC Issuer has the VistA rights to make these adjustments and hospital policy would allow the VIC Issuer to make these changes.

18. **Congratulations! All the software has been installed.** It is good practice to reboot your system after any software installation, so please reboot your system now. In order to test your configuration, please go to section II to run the PICS software and submit a test patient card request.

Appendix A – VistA Server Installation Instructions for VIC replacement patch DG*5.3*571

SOFTWARE AND DOCUMENTATION RETRIEVAL

- The software for this patch is not being distributed through the National Patch Module. This patch is being distributed as a host file. The host file will contain a single KIDS build.

  Host File Name: DG_53_P571.KID
  Build: DG*5.3*571

- Sites may retrieve the software and documentation directly using FTP from the following Office of Information Field Offices (OIFOs):

OIFO	FTP ADDRESS	DIRECTORY
Albany	ftp.fo-albany.med.va.gov	anonymous.software
Hines	ftp.fo-hines.med.va.gov	anonymous.software
Salt Lake City	ftp.fo-slc.med.va.gov	anonymous.software

- The following files will be available for download. Use ASCII mode when transferring the .KID file. Use binary mode when transferring the .PDF files.

FILE NAME	DESCRIPTION
DG_53_P571.KID	Host file containing KIDS software distribution
DG_53_571_TM.PDF	Changes to the PIMS V. 5.3 Technical Manual
DG_53_571_UM.PDF	Changes to the PIMS V. 5.3 User Manual
DG_53_571_PICIS.PDF	PICS Interface Specification

- The VistA Documentation Library [VDL] web site will contain the updated 'User Manual-ADT Outputs Menu' manual and 'PIMS Technical Manual'. This web site is usually updated within 1-3 days of the patch release date.

  The VDL address is http://www.va.gov/vdl/Clinical.asp?appID=55.

SOFTWARE INSTALLATION INSTRUCTIONS

Pre-Installation Items:

- **Environment Check**

  Programmer access is required to install this patch. Prior to installation, the installer must ensure the DUZ(0) node of the DUZ array is set to the "@" symbol.

- **Users on the System**

  This patch may be installed with users on the system.

- **Software Installation Time**

  The estimated installation time for this patch is less than 3 minutes during non-peak hours.

- **Namespace**

  The namespace for the VETERAN ID (VIC) REPLACEMENT patch is: DG (Registration).

- **Required Patches**

Application	Patch	Build
Kernel	XU*8*205	XU*8.0*205
Order Entry/Results Reporting	OR*3*187	OR*3.0*187

- **File and Global Information**

  There is one new global, ^DGQE. The ^DGQE global contains the following (2) new files.

File #	File Name	Global Root	Journaling Recommended
39.6	VIC REQUEST	^DGQE(39.6,	Yes
39.7	VIC HL7 TRANSMISSION LOG	^DGQE(39.7,	Yes

The ^DGQE global must be placed with the appropriate Read/Write Global Access protection prior to installing this patch. Note: This should be done even if global translations are in effect.

Installation Steps:

1. Download the KIDS file DG_53_P571.KID from the ANONYMOUS.SOFTWARE directory of Albany, Hines, or Salt Lake City OIFO to the appropriate directory on your system.

2. Use LOAD A DISTRIBUTION option on the KIDS INSTALLATION menu, and enter: DG_53_P571.KID

3. From the 'Kernel Installation & Distribution System' menu, select the Installation menu.

4. From this menu, you may now elect to use the following options (when prompted for INSTALL NAME, enter DG*5.3*571).

   - Backup a Transport Global - This option will create a backup message of any routines exported with the patch. It will NOT backup any changes such as DDs or templates.

   - Compare Transport Global to Current System - This option will allow you to view all changes that will be made when the patch is installed. It compares all components of the patch (routines, DDs, templates, etc.).

   - Verify Checksums in Transport Global - This option will allow you to ensure the integrity of the routines that are in the transport global.

   - Print Transport Global - this option will allow you to view the components of the KIDS build.

5. Use the Install Package(s) option and select package DG*5.3*571.

6. When prompted "Enter the Coordinator for Mail Group 'DGQE HL7 TRANSMISSION ERRORS':", please enter the name of the individual that will be responsible for maintaining the new mail group. This mail group receives notifications when a General Orders (ORM~O01) HL7 transmission has been rejected by the National Card Management Directory.

7. When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES//', respond NO.

8. When prompted 'Want KIDS to INHIBIT LOGONs during the install? YES//', it is recommended you answer NO.

9. When prompted to 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES//', respond YES. When prompted to select the options you would like to place out of order, enter the following:

   DG OUTPUTS MENU ADT Outputs Menu

10. The ENV/PRE/POST Installation routine DG53P571 may be deleted from your system after successful patch installation.

IMPLEMENTATION STEPS

This section contains the procedures required to implement the Veteran Identification Card Replacement Project software module.

1. Menu Option assignment

- All users of the Veteran ID Card PICS workstation must have the VIC RPC Menu [DGQE VIC RPCS] added to their secondary menu to allow access to the VIC Remote Procedures.

- The intent of the Print Patient Label [DG PRINT PATIENT LABEL] option is to provide a functional replacement for the embossing feature of the original VIC and is being added to the ADT Outputs Menu [DG OUTPUTS MENU] by this patch. The Print Patient Label option may be assigned as a standalone option to staff that previously used the VIC embossing feature.

2. Mail Group members

- The appropriate personnel should be added to the DGQE HL7 TRANSMISSION ERRORS mail group.

3. Background Option (Scheduling):

- Schedule the new VIC Background Processing [DGQE BACKGROUND PROCESSING] option. Using the SCHEDULE/UNSCHEDULE OPTIONS [XUTM SCHEDULE] option, schedule the option to run daily (i.e. RESCHEDULING FREQUENCY: D@2AM). The DEVICE FOR QUEUED JOB OUTPUT, TASK PARAMETERS, and SPECIAL QUEUEING prompts should remain unanswered.

- The following functions are processed by this background option:

  o Evaluate VIC eligibility for all VIC requests that have a pending enrollment status and/or National ICN.

  o Cancel any VIC requests that are still pending after 90 days.

  o Transmit HL7 messages to the NCMD with any updated VIC requests.

  o Purge all VIC requests that been acknowledged by the NCMD after 7 days.

4. HL7 Logical Link configuration

- The AUTOSTART field of the VIC NCMD logical link should be set to Enabled, so that the logical link will restart after a system reboot. Since the IP address of the NCMD HL7 server is exported with the VIC NCMD logical link, the IP address should be removed from the logical link in the Test environment to prevent unintentional HL7 messages from being transmitted.

Appendix B – Installation Instructions for the VistA Imaging Server

Note: As of September 17th, all non-consolidated Vista imaging sites have installed the MAG*3*15 API Enhancement patch

VistA patch 15 (MAG*3*15 entitled: Import API Enhancements) must be installed for images to be saved to the VistA Imaging server. This patch is scheduled for release by August 2004. Test sites requiring the patch prior to release must contact Kathy Trombetta for a test agreement.

Kathy can be reached as follows:

Kathy Trombetta
VistA Imaging Team
301-734-0357
301-734-0146 - Fax

1335 East-West Hwy
Third Floor
Silver Spring, MD 20910

A sample test site Agreement is attached for your use:

"Appendix A for Import API.doc"

Patch 15 MAG*3*15 entitled: (Import API Enhancements) will consist of:

- A KIDS package that contains 1 routine. This package is to be installed on the VistA Server.
- An ActiveX control.

Distribution:

- The patch will be released through the VistA Imaging FTP site which requires a Username and Password. It is located at ftp://ftp.imaging.med.va.gov/.
- Any site that needs the patch before it is released should contact Kathy Trombetta for a test agreement.

Release:

- TBD - before July 15th.

Vista Imaging and Consolidated Sites

Definition: Consolidated Sites as defined by VistA Imaging only refers to sites that have **merged their VistA data** bases into one computer system, but also have **separate VistA imaging** servers located at each facility. This configuration is used because images are very big, and performance is much better if the images do not need to travel across the Wide Area Network (WAN) between facilities.

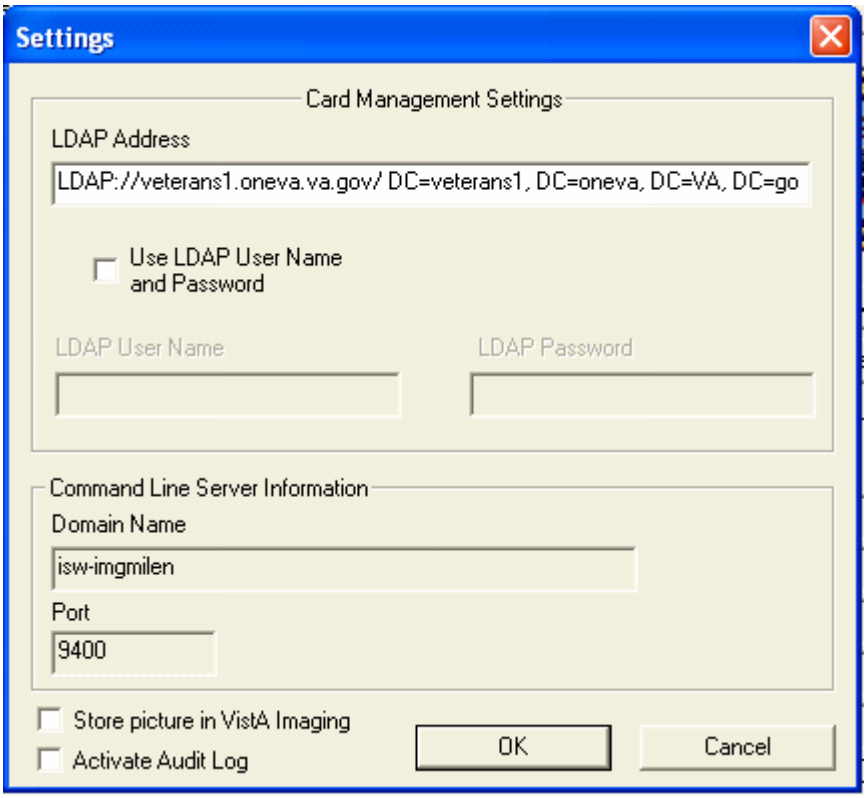
VistA Imaging created a different version to deal with this situation, so the sites definitely know who they are. They are:

- VISN 2
- VISN 15
- North Florida/South Georgia portion of VISN 8 (Gainsville, Lake City & CBOCs)
- VISN 23 south (old VISN 14)

Since they are running a different version of VistA Imaging, they will not be able to use patch 15. The functionality including the import API capability (like patch 15) will be included in a separate release for consolidated sites in the version called 2.5T73. This is planned to be released in September 2004.

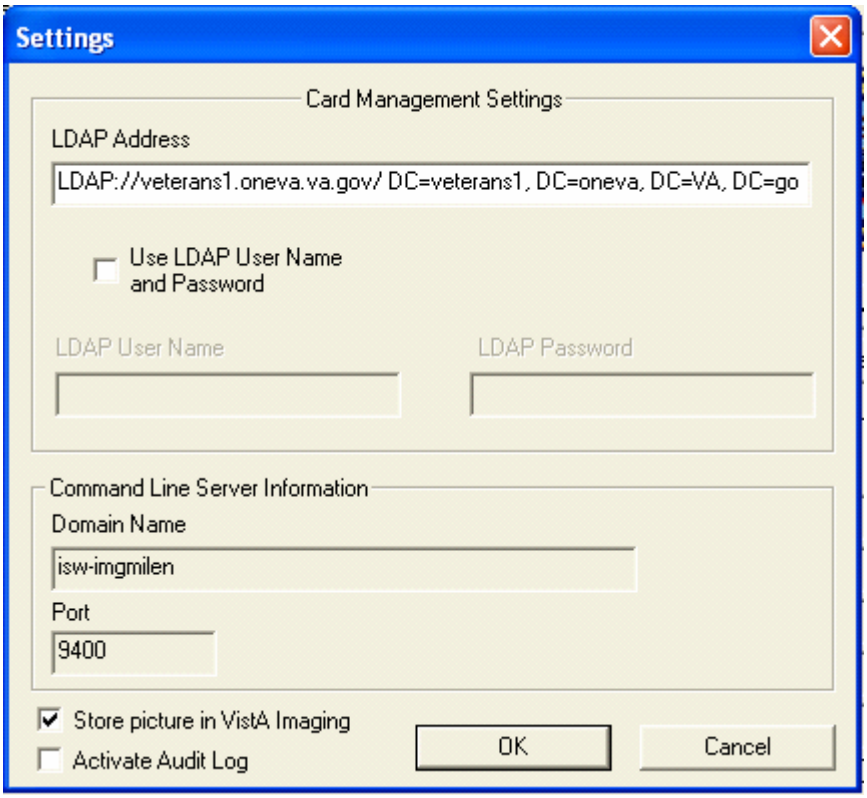
Solution:
Therefore, the VistA Imaging Consolidated Sites need to configure their PICS workstation to **not** store veterans' pictures in VistA Imaging.

=> PICS Workstation menu - Patient/ Settings/ uncheck the box labeled "Store picture in VistA Imaging",
then press the OK button in the window that states "Warning - by disabling this options, the patient picture will not be stored in VistA Imaging"
then press the OK button in the Settings window.



When the Consolidated site installs the new 2.5T73 version of VistA Imaging, they will need to configure their PICS workstations to store the veterans' pictures in VistA Imaging.

=> PICS Workstation menu - Patient/ Settings/ check the box labeled "Store picture in VistA Imaging",
then press the OK button in the Settings window.


Settings
Card Management Settings
LDAP Address
LDAP://veterans1.oneva.va.gov/ DC=veterans1, DC=oneva, DC=VA, DC=go
Use LDAP User Name and Password
LDAP User Name
LDAP Password
Command Line Server Information
Domain Name
isw-imgmilen
Port
9400
Store picture in VistA Imaging
Activate Audit Log
OK
Cancel

Appendix C – Queue Management on the VIC Workstation

If a card request fails to transmit to the NCMD it will be for one of three reasons:

1. Issues of User Authorization:
   Everyone who submits VIC card requests must have membership in the VHAV##VICWrite global group for their site. The facility network administrator must add the domain accounts of all VIC Workstation operators to the global group for each site. (See Section I. Configuration of the VIC Workstation). As soon as the user authorization is established (or re-established) the requests will automatically be released from the queue the next time the user logs on to PICS.
2. Temporary Network Issues:
   Each time a card request is issued, PICS checks to confirm that the request can be transmitted across the network prior to attempting the transmission. If PICS determines that the card request transaction cannot be completed, PICS saves the card request to the queue and then checks network conditions each time PICS is opened and each time a new card request is transmitted. When PICS determines that the network is clear it transmits the request(s) from the queue before transmitting the current card request.
3. Incomplete Card Requests that block Transmission:
   Although PICS tries to ensure that each card request can be completely transmitted before attempting the transmission, there may be times when card requests are incompletely transmitted. When this occurs it blocks the transmission of additional card requests. The error message: "Unable to process off-line transactions" is generated. These incompletely transmitted card requests are easily identified because they show a mismatch between the "#Card Transactions" and the "#Patient Transactions" in the queue list. Incompletely transmitted card requests can be removed from the queue via the "Remove" button on the queue management window. Once these incompletely transmitted card requests are removed, the rest of the card requests will be released from the queue either: when the user clicks the "Process Queue" button; or when the next card request is transmitted; or the next time that PICS is initiated.

Removing Incomplete Card Requests from the Queue:
We only need to remove a card request from the queue when we encounter the "Unable to Process Offline Transactions" message and we see a mismatch between the "#Card Transactions" and the "#Patient Transactions. After the card request has been removed from the queue the card and veteran information is still available in the following folder:

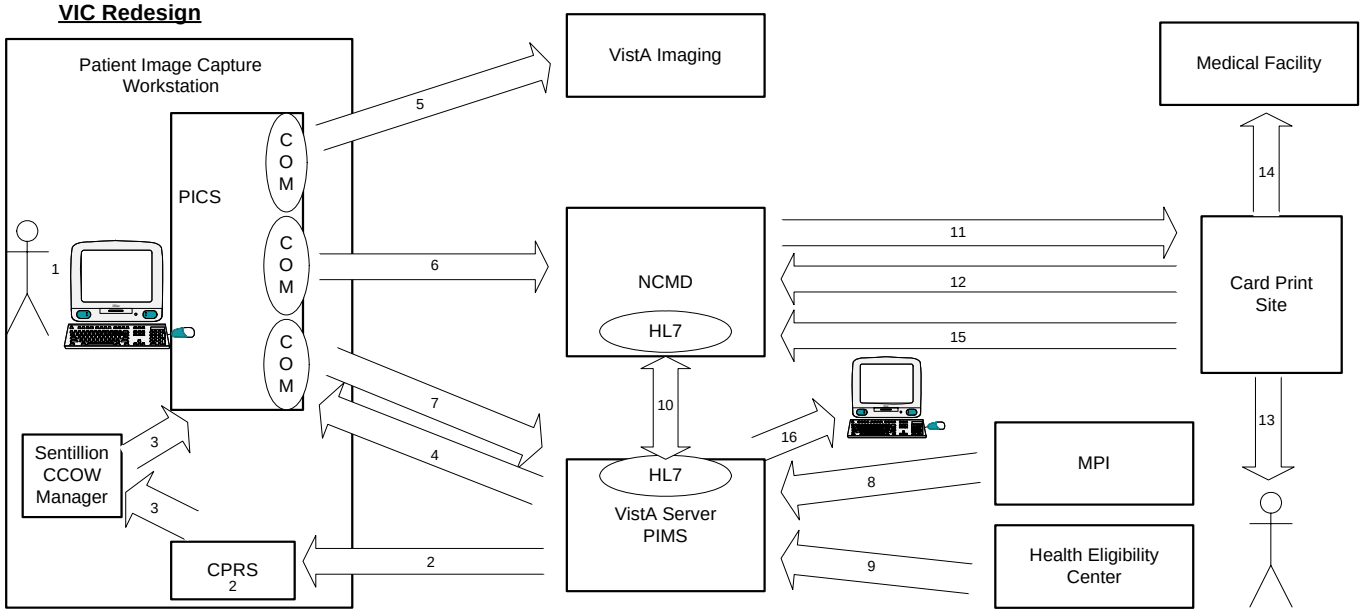
Location of Deleted Card Requests
C:\WINDOWS\MAXIMUS\Deleted Transactions

We can use the picture from this folder to resubmit the card request.

Excessive Numbers of Batched Requests:
If an excessive number of batched card requests accumulate, it may be important to confirm whether some of the batched requests have accumulated from a prior version of PICS. Upgraded versions of PICS cannot process batched card requests from earlier versions of PICS. In such a case, it will be necessary to re-install the earlier version of PICS, in order to process the card requests from that earlier version.

Appendix D – Data

VIC Redesign



#1: User logs into the workstation with NT log-on. They open CPRS and Patient Image Capture Software (PICS). User logs on to VistA CPRS.
#2: User performs a patient lookup on the workstation with CPRS and validates patient identity using VistA data facts. CPRS performs all privacy checks and data screening. When the privacy checks are completed, CPRS changes the CCOW patient context.
#3: PICS obtains the CCOW patient context change.
#4: PICS uses the COM interface to retrieve the patient data (name, demographics, current ICN, mailing address, etc) and card print release status from VistA for the selected patient. The Card Print Release Status will indicate either: that the request can be sent to the Card Print Site, that it should be held pending eligibility and/or ICN updates from PIMS, or that it should be canceled. If valid eligibility does not meet requirement for VIC card, Card Print Release Status will be received from PIMS as Cancel and PICS "Submit" button will remain inactive.
#5: The user captures the patient image using PICS and presses the "Submit" button. PICS uses a COM interface to send the patient's image to the local VistA Imaging system using a VistA Imaging API.
#6: PICS sends a copy of the patient's image, the patient data, and a Card Print Release Status indicator to the NCMD.
#7: PICS calls the VistA COM interface to notify PIMS that a card request has been successfully completed.
#8: If necessary, the VistA (PIMS) server obtains a national ICN update from MPI. Eligibility and ICN status checked to see if NCMD should be notified.
#9: If necessary, PIMS obtains eligibility status from the HEC and determines whether or not the card should be issued. Eligibility and ICN status checked to see if NCMD should be notified.
#10: If necessary, the VistA (PIMS) server sends a Card Print Release Status update to NCMD when the patient's eligibility is updated by the HEC and/or a national ICN is obtained. A single HL7 message will be sent communicating both the eligibility and the national ICN. This update will finalize the Card Print Release Status.
#11 NCMD sends daily card request files and photos to the Card Print Site after checking that each record has data that is needed to print and mail each card.
#12 Card Print Site sends NCMD initial confirmation file with the date/time that each record was received from NCMD. NCMD updates each patient record with date/time that record was received by the Card Print Site.
#13 Card Print Site produces the cards and verifies addresses prior to mailing. If the address is valid the card is mailed to the veteran.
#14 If the patient address is not valid, the card is mailed to the originating facility. The facility identifier associated with the request is used to obtain the originating facility address from a list maintained at the Card Print Site.
#15 Card Print Site sends NCMD the final confirmation file with the date/time that each card was mailed. NCMD updates database with date/time that cards were successfully mailed. NCMD generates reports as defined by business office (within reason) ;-)
#16 Patient labels may be printed on demand by staff from VistA.

Revised 6 April 2004

Appendix E – PICS Error Messages

Error Message Text	System Cause
Unable to find veteran in database.	**Patient record number is not valid. Should not happen.**
A previous VIC request for the veteran, entered on ***entry_date*** from your facility, is awaiting a National ICN or Enrollment Status update. If no update is received by ***expiration_date***, the previous request will expire, allowing you to enter a new request.	A pending request exists in a HOLD status.
Unable to determine veteran's Sex.	Sex field is null.
Unable to determine veteran's Social Security Number.	SSN field is null.
Unable to determine veteran's complete Date of Birth.	DOB field is null or does not include day of birth.
Unable to determine veteran's Name.	FAMILY NAME component is null.
Unable to determine a mailing address.	**Attempting to use the facility address as the mailing address, but there is a problem with INSTITUTION file for local site.**
Unable to determine the STREET1 field of the permanent mailing address.	Permanent address STREET1 field is null.
Unable to determine the STREET1 field of the temporary mailing address.	Temporary address STREET1 field is null.
Unable to determine the STREET1 field of the confidential mailing address.	Confidential address STREET1 field is null.
Unable to determine the STREET1 field of the facility mailing address.	Facility address STREET1 field is null.
Unable to determine the CITY field of the permanent mailing address.	Permanent address CITY field is null.
Unable to determine the CITY field of the temporary mailing address.	Temporary address CITY field is null.
Unable to determine the CITY field of the confidential mailing address.	Confidential address CITY field is null.
Unable to determine the CITY field of the facility mailing address.	Facility address CITY field is null.
Unable to determine the STATE field of the permanent mailing address.	Permanent address STATE field is null.
Unable to determine the STATE field of the temporary mailing address.	Temporary address STATE field is null.
Unable to determine the STATE field of the confidential mailing address.	Confidential address STATE field is null.
Unable to determine the STATE field of the facility mailing address.	Facility address STATE field is null.
Unable to determine the ZIP field of the permanent mailing address.	Permanent address ZIP field is null.
Unable to determine the ZIP field of the temporary mailing address.	Temporary address ZIP field is null.
Unable to determine the ZIP field of the confidential mailing address.	Confidential address ZIP field is null.
Unable to determine the ZIP field of the facility mailing address.	Facility address ZIP field is null.
Unable to determine veteran's Service Connected Indicator.	**Should never happen.**
Unable to determine a source facility.	**There is a problem with INSTITUTION file for local site.**

Appendix F - Specifications for Hardware used in VIC testing

Workstation and Camera Configuration:

PCHS2 CLIN	Description
CLT790	Clientpro 345G Small Desktop
DSC007252-00	DIG.DSC.PCHS Canon Powershot A60 2MP 3X OPT CF Slot 1600x1200 Dig Cam.8401A001
DSC007251-00	HDW.DSC.PCHS CANON ACK600 AC ADAPTER KIT.6870A001
DSO008212-00	HDW.DSO Canon Deluxe Tripod 200 W/#-Way Pan HD.CAT200
DSO007732-00	HDW.DSO.ENVOY Data USB 6-IN-1 CARD READER.EDC-USB
DSO009186-00	DSO.BELKIN 10FT USB A/4PIN MINI B DEVICE 26/28 AWG DSTP.F3U139-10
	Total Cost - $1428.67
Vendor Contact:	Greg Brandon - gjbrandon@buympc.com
	MPC-G - VA Account Manager
	VA PCHS-2 Contract# V101 (93)P-1841 http://mgcs.buympc.com/contact/fContact.asp?agId=3323
	1-800-249-1179 ext. 31205
	Direct: (208) 893-1205
	Fax: (208) 898-2109

Label Printers:

Two brands of label printers were tested. Both are available via PCHS2.

PCHS2 CLIN	Description
966-1268205	Zebra Technologies, 105SL Printer, 203 DPI Print head, 6MB internal NIC card. Cost: $1632. Available from GTSI - 800-999-GTSI.
4420E00400200	Intermec 4420E, Printhead: 5 Mil - Resolution: 203 dpi (8 dots/mm); US cord, 115 VAC; intrf opt (Serial+ethernet); mem opt - std 1MB; 8 MB storage (flsh) mem; no media handling opt (straight through printing). Cost: $1888.13. Available from PlanetGov - 703-279-3000.

Magnetic Stripe Reader:

One magnetic stripe reader was tested and is available via PCHS2.

PCHS2 CLIN	Description
DSO008778-00	MINIMAG USB READER – HDW.DSO.ID TECH MINIMAG USB READER, TRK 123.IDT3331-33U. Cost: $97. Contact: Greg Brandon - 208-893-1205.