

Department of Veterans Affairs

BAR CODE EXPANSION – POSITIVE PATIENT IDENTIFICATION

INSTALLATION GUIDE



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Revision History

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1 Introduction

1.1 Software Overview

The Bar Code Expansion – Positive Patient Identification (BCE-PPI) project will integrate a Commercial Off-the shelf (COTS) Patient Point of Care (PPoC) solution to minimize errors related to misidentification of patients. For this increment the COTS POC solution will be interfaced with VistA Blood Establishment Computer System (VBECS) and various VistA packages via HL7 messaging. The BCE VistA package will serve as the package to register the interfaces between VistA and vendor Bar Code POC solution.

The vendor COTS solution will allow nurse's to use bar code technology to scan patient's wristbands at the Blood administration POC. Similar to Bar Code Medication Administration (BCMA)

1.1.1 ADT HL7 Interface

This build will release the software components necessary to implement the HL7 interface with the VistA Patient Information Management System (PIMS) Admission Discharge Transfer (ADT) package. The vendor COTS solution will rely on ADT HL7 messaging for Patient demographics and movement information. Patient demographics information will provide the key data to positively identify patients at the Blood administration POC.

1.1.2 TIU HL7 Interface

Included in this release the BCE VistA package will also include software components interface the Transfusion Verification (TV) COTS solution with the Vista Text Integrated Utility (TIU) via HL7 interface. The TV COTS solution will capture electronically the Blood Transfusion Record Form (BTRF). This interface will utilize the TIU Generic HL7 VistA software components to send data capture by the vendor COTS solution and create a Progress Note in VistA TIU DOCUMENT file (#8925). The TV COTS solution will capture the required information to document a completed Transfusion.

1.1.3 Vitals RPC Interface

The TV COTS solution will allow clinicians to capturing of patient vital signs during a transfusion episode. Vitals captured by the TV COTS solution will use RPC's to record patients Vitals in the VistA GMRV VITALS MEASUREMENT file (#120.5)

1.1.4 Vendor Application Security

Several VistA software components will be released as part of this build to include VistA security keys and menu options to control access to application and management functions. Users will also be able to

sign as a second verifier of a Transfusion Record form using VistA verify and access codes for electronic signature.

MJCF TV USER – The holder of this VistA SECURITY KEY will be able to access the vendor Blood administration client application using the VistA access/verify code method.

The following VistA components will be released as part of this build:

MJCF TV ADMINISTRATOR

This OPTION should be assigned to the users that need to access functionality in the COTS vendor Management Console.

- * Ability to access the TV Record report.
- * Ability to access the Manager Reports.
- * Ability to access the TV Application properties.

MJCF TV REPORTS

This OPTION should be assigned to the users that need to access Functionality in the CareFusion Management Console.

- * Ability to access the TV Record Report.
- * Ability to access the Manager Reports.

MJCF TV USER

This OPTION should be assigned to the users that need to access the following CareFusion TV functions.

- * Access to the TV Application.
- * Ability to witness a Blood Product Transfusion.
- * Ability to set or change a hand held device location.

1.2 Document Overview

This document provides installation and setup steps for Bar Code Expansion Build MJCF*1.0*0. It is intended for M administrators at Veterans Affairs (VA) facilities, and it assumes familiarity with installing Kernel Installation and Distribution System (KIDS) file distributions on VistA/M servers.

1.2.1 Additional Resources

The complete BCE 1.0 end-user documentation package consists of the following documentation:

Table 1: Documentation Resources

Title	File Name	Retrieval Format
BCE-PPI User Manual	<ul style="list-style-type: none">• MJCF_PYXIS_TV_User_Guide_EDA• MJCF_PYXIS_TV_User_Guide_Desktop	Binary

Title	File Name	Retrieval Format
BCE-PPI Technical Manual	<ul style="list-style-type: none"> BCE-PPI_TV_Technical_Manual 	Binary
BCE-PPI Version Description Document (VDD)	<ul style="list-style-type: none"> BCE-PPI_TV_VDD 	Binary
BCE-PPI Installation Guide	<ul style="list-style-type: none"> MJCF*1.0*0_Installation_Guide 	Binary

Bar Code Expansion v 1.0 end-user documentation and software can be downloaded from any of the **anonymous.software** directories on the Office of Information Field Office (OIFO) FTP(FTP) download sites:

- Preferred Method <ftp://download.vista.med.va.gov/>

This method transmits the files from the first available FTP server. Sites may also elect to retrieve software directly from a specific server as follows:

OIFO	FTP Address	Directory
• -----	-----	-----
• Albany OIFO	ftp://ftp.fo-albany.med.va.gov/	anonymous.software
• Hines OIFO	ftp://ftp.fo-hines.med.va.gov/	anonymous.software
• Salt Lake City OIFO	ftp://ftp.fo-slc.med.va.gov/	anonymous.software

Bar Code Expansion v1.0 end-user 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: www.adobe.com/



DISCLAIMER: The appearance of any external hyperlink references in this manual does not constitute endorsement by the Department of 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.

2 Software Prerequisites

BCE Build MJCF*1.0*0 is a distribution file.

Software Dependencies:

The following builds must be installed prior to MJCF*1.0*0:

Table 2: Software Builds

Software	Version	Required Builds
VBECS	1.0	VBECS*1.0*27
TIU	1.0	TIU*1.0*281
VITALS	5.0	GMRV*5*26
RPC	1.1	XWB*1.1*53

2.1 Build Components

2.1.1 Files and Fields

File Name (Number) -----	Field Name (Number) -----	New/Modified/Deleted -----
No New files or DD		

2.1.2 Forms

N/A

2.1.3 Mail Groups

Mail Group Name -----	New/Modified/Deleted -----
MJCF HL7	New

2.1.4 Options

Option Name -----	Type -----	New/Modified/Deleted -----
MJCF TV ADMINISTRATOR	Client/Server	New
MJCF TV REPORTS	Client/Server	New
MJCF TV USER	Client/Server	New

2.1.5 Protocols

Protocol Name	New/Modified/Deleted
-----	-----
MJCF ADT-A01 CLIENT	New
MJCF ADT-A01 ROUTER	New
MJCF ADT-A01 SERVER	New
MJCF ADT-A02 CLIENT	New
MJCF ADT-A02 ROUTER	New
MJCF ADT-A02 SERVER	New
MJCF ADT-A03 CLIENT	New
MJCF ADT-A03 ROUTER	New
MJCF ADT-A03 SERVER	New
MJCF ADT-A04 CLIENT	New
MJCF ADT-A04 ROUTER	New
MJCF ADT-A04 SERVER	New
MJCF ADT-A08 CLIENT	New
MJCF ADT-A08 ROUTER	New
MJCF ADT-A08 SCHED CLIENT	New
MJCF ADT-A08 SCHED ROUTER	New
MJCF ADT-A08 SCHED SERVER	New
MJCF ADT-A08 SDAM CLIENT	New
MJCF ADT-A08 SDAM ROUTER	New
MJCF ADT-A08 SDAM SERVER	New
MJCF ADT-A08 SERVER	New
MJCF ADT-A11 CLIENT	New
MJCF ADT-A11 ROUTER	New
MJCF ADT-A11 SERVER	New
MJCF ADT-A12 CLIENT	New
MJCF ADT-A12 ROUTER	New
MJCF ADT-A12 SERVER	New
MJCF ADT-A13 CLIENT	New
MJCF ADT-A13 ROUTER	New
MJCF ADT-A13 SERVER	New
MJCF ADT Application	New
MJCF TIU Application	New

2.1.6 HL7 Application Parameter file (#771) Entries

HL7 Application Parameter	New/Modified/Deleted
-----	-----
MJCF ADT	New
MJCF TIU	New

2.1.7 HL7 Logical Link file (#870) Associated

HL7 LOGICAL LINKS	New/Modified/Deleted
-------------------	----------------------

-----	-----
MJCFADT	New
MJCFTIU	New

2.1.8 Security Keys

Security Key Name	New/Modified/Deleted
-----	-----
MJCF TV USER	New

2.1.9 Templates

N/A

2.1.10 Bulletins

Bulletin Name	comment
-----	-----
N/A	

2.1.11 Routine Information

The second line of each of these routines now looks like:
 ;;1.0;Bar Code Expansion;**[Patch List]**;;

The checksums below are new checksums, and
 can be checked with CHECK1^XTSUMBLD.

Routine Name: MJCF1POS		
Before:	n/a	After: 2418561
Routine Name: MJCF1PRE		
Before:	n/a	After: 4383138
Routine Name: MJCFHLRT		
Before:	n/a	After: 3011864

2.1.12 Additional Information

N/A

2.1.13 New Service Requests (NSRs)

N/A

2.1.14 Patient Safety Issues (PSIs)

There are two (2) patient safety issues currently being mitigated:

1. Potential exists when post transfusion data will not be recorded on the VBECS if the CareFusion application server is not time zone synchronized with VBECS. This is due CareFusion server not including time zone offsets in their Message Header (MSH) segment of the HL7 messages.

Mitigation: System Design and Engineering (SDE) Platform Engineering will synchronize CareFusion Application Server with the time zone of the servicing VISTA server.

2. Potential exists that vitals recorded with the CareFusion TV application and TIU notes will reflect the incorrect time zone if the CareFusion application server is not synchronized with the Vista server.

Mitigation: SDE Platform Engineering will synchronize CareFusion Application Server with the time zone of the servicing VISTA server

2.2 Configuring ACLs

The Tables below show the information recommended to be compiled prior to install.

Table 3: Production information prior to install

Production				
	DNS/IP	HL7 Port	RPC Port	Remark
VISTA		██████ -- See Multi-Listener Port for more info		HL7 IP/Port information acquired by the CareFusion app server to send post-transfusion MDM HL7 messages to TIUHL7. RPC Port required by the CareFusion App server to provide client authentication (RPC Broker) and Vista Vitals RPC Interface.
VBECS		██████	N/A	VBECS HL7 Multi-Listener (Production) might require modification of Local MDIA/ACL to accept HL7 messaging connections. Required by the CareFusion App server to send Post-Transfusion Disposition (BTS) HL7 Messages.
CareFusion App Server		██████████	N/A	IP is required by VISTA to configure ADT and TIU HL7 interfaces. MJCF patch will include the ADT port configuration.

Table 4: Test information prior to install

Test				
	DNS/IP	HL7 Port	RPC Port	Remark
VISTA		██████ -- See Multi-Listener Port for more info		Regional IT and CareFusion vendor staff will require this information for configuration of CareFusion App Server.
VBECS		██████	N/A	VBECS HL7 Multi-Listener (Test) might require modification of Local MDIA/ACL for VBECS to accept HL7 messaging connections. Required by the CareFusion App server to send Post-Transfusion Disposition (BTS) HL7 Messages.
CareFusion App Server		██████████	N/A	IP is required by VISTA to configure ADT and TIU HL7 interfaces. MJCF patch will include the ADT port configuration.

NOTE: VBECS HL7 Ports are the ports published by VBECS Development team for national use but these ports could vary from Region to Region. Contact Regional LAN Team to verify these ports.

3 Pre/Post Installation Overview

A pre-install routine will delete any existing beta version of the BCE (MJCF) from the PACKAGE file (#9.4).

A post-install routine will update fields in the entry for BCE (MJCF) in the PACKAGE file (#9.4).

NOTE: Please refer to the CareFusion Installation Guide for instructions on installing the BarCode Database and the BarCode Application server installation and configuration.

A copy of the CareFusion Installation Guide can be accessed by clicking the following link:



3.1 Estimated Installation Time

The estimated installation time for BCE Build MJCF*1.0*0 is less than five minutes.

The Post- Installation will require coordination with the site BCE-PPI coordinator, Blood Bank Supervisor as well as Regional Data Center staff for configuration of software interfaces. This will require the compilation of server Domain Name Service (DNS) or IP along with the ports associated with each interface prior to the setup.

4 Installation Instructions

If installed during the normal workday, it is recommended that the following selection(s) in the OPTION (#19) file, and all of their descendants be disabled to prevent possible conflicts while running the KIDS Install:

The install of Bar Code Expansion MJCF*1.0*0 does not require disabling any options.

1. Retrieve the KIDS distribution host file. This patch will be distributed in a host file. The name of the host file is:

File Name	Contents	Retrieval Format
MJCF*1.0*0	MJCF PACKAGE DISTRIBUTION VERSION 1	Host File

Sites can retrieve Vista software from the following FTP addresses. The preferred method is to FTP the files from:



This will transmit the files from the first available FTP server. Sites may also elect to retrieve software directly from a specific server as follows:

Albany
Hines
Salt Lake City



The MJCF*1.0*0 host file is located in the anonymous.software directory. Use ASCII Mode when downloading the file.

2. Start up the KIDSMenu
[XPD MAIN]:

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

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: Load a Distribution

3. From the KIDSMenu, select the Installation Menu and Locate the MJCF Host file (MJCF*1.0*0) within your VISTA system.
4. Select Installation Option: Load a Distribution Enter a Host File: (e.g., "SYS\$USER:[XXX] MJCF*1.0*0).
5. 4. From this menu, you may elect to use the following options
(when prompted for INSTALL NAME, enter MJCF*1.0*0)
 - a) Backup a Transport Global - this option will create a backup message of any routines exported with the patch. It will NOT backup any other changes such as DDs or templates.
 - b) 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.).
 - c) Verify Checksums in Transport Global - this option will ensure the integrity of the routines that are in the transport global.
6. From the Installation Menu, select the Install Package(s) option and choose the build, MJCF*1.0*0, to install.
7. When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//', answer NO.

8. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', answer NO.

9. When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO// ', answer NO.

5 Post-Installation Instructions

This section describes the procedures for configuring the ADT and TIU interfaces at the completion of the MJCF*1.0*0 build installation. To ensure that the configurations are correct, do the following:

- Verify that the application, protocols, and link parameters in the VistA HL7 software component are correct sections 5.1.1 and 5.1.2
- Add site-specific information including the Transmission Control Protocol/Internet Protocol (TCP/IP) configurations in section 5.1.3, Verify Link Parameters (From table above)
- Add users for Mail notifications
- Configure VBECS interface parameter settings

5.1 Configure ADT HL7 Interface

The COTS Application server requires up-to-date information regarding patient location and status provided by the VistA ADT package. To accomplish this, the MJCF build will import five new subscriber protocols.

This section describes the steps you use to:

- Verify the Application Parameters
- Verify the Protocol Parameters
- Verify Link Parameters
- Start Logical Links

5.1.1 Verify Application Parameters

From the HL7 MAIN MENU [HL MAIN MENU]:

Event monitoring menu ...
Systems Link Monitor
Filer and Link Management Options ...
Message Management Options ...
Interface Developer Options ...
Site Parameter Edit

1. Select the Interface Developer Options sub-menu:

EA Application Edit
EP Protocol Edit
EL Link Edit
VI Validate Interfaces
Reports ...

2. Press the EA hot key for the Application Edit option.

3. Enter MJCF ADT at the following prompt:

Select HL7 APPLICATION PARAMETER NAME: MJCF ADT

The following window should display:

HL7 APPLICATION EDIT

<u>NAME</u> : MJCF ADT	ACTIVE/INACTIVE: ACTIVE
FACILITY NAME:	COUNTRY CODE: USA
HL7 FIELD SEPARATOR:	HL7 ENCODING CHARACTERS:
MAIL GROUP: MJCF HL7	

4. Verify that the ACTIVE/INACTIVE field is set to ACTIVE. If not, set the field to ACTIVE.
5. Verify that nothing is entered in the HL7 ENCODING CHARACTERS (leave it blank).
This interface will use the default VistA encoding characters.
6. Verify that the MAIL GROUP field is set to MJCF HL7.
7. Tab down to COMMAND prompt.
8. Select SAVE and EXIT.

5.1.2 Verify the Protocol Parameters

This section provides the procedures to verify the entries in the protocol file to ensure the fields are properly populated.

From the HL7 MAIN MENU [HL MAIN MENU]

```

Event monitoring menu ...
Systems Link Monitor
Filer and Link Management Options ...
Message Management Options ...
Interface Developer Options ...
Site Parameter Edit

```

1. Select the Interface Developer Options sub-menu:

```

EA  Application Edit
EP  Protocol Edit
EL  Link Edit
VI  Validate Interfaces
    Reports ...

```

2. Press EP hot key for Protocol Edit option.
3. Enter protocol name from the list below at the following prompt:

MJCF ADT-A01 CLIENT

MJCF ADT-A02 CLIENT
MJCF ADT-A03 CLIENT
MJCF ADT-A04 CLIENT
MJCF ADT-A08 CLIENT
MJCF ADT-A08 SCHED CLIENT
MJCF ADT-A08 SDAM CLIENT
MJCF ADT-A11 CLIENT
MJCF ADT-A12 CLIENT
MJCF ADT-A13 CLIENT

Select HL7 PROTOCOL NAME: MJCF ADT-A0# CLIENT

The following window should display:

4. Enter MJCF ADT-A## CLIENT it will display the following window:

HL7 INTERFACE SETUP	PAGE 1 OF 2

NAME: MJCF ADT-A## CLIENT	
DESCRIPTION (wp): [CareFusion ADT-A01 SUBSCRIBER]	
ENTRY ACTION:	
EXIT ACTION:	
<u>TYPE</u> : subscriber	

5. Tab down to the TYPE file and press the Enter key.

The following screen should display:

HL7 SUBSCRIBER	PAGE 2 OF 2
MJCF ADT-A## CLIENT	

<u>RECEIVING APPLICATION</u> : MJCF ADT	
<u>RESPONSE MESSAGE TYPE</u> : ACK	EVENT TYPE: A##
SENDING FACILITY REQUIRED?: YES	RECEIVING FACILITY REQUIRED?: YES
SECURITY REQUIRED?: NO	
LOGICAL LINK: MJCFADT	
PROCESSING RTN:	
ROUTING LOGIC:	

6. Verify that the RECEIVING APPLICATION field contains “MJCF ADT”.
7. Verify the RESPONSE MESSAGE TYPE is set to “ACK”.
8. Verify the EVENT TYPE field has the value A##.
9. Verify that both SENDING and RECEIVING FACILITY REQUIRED? Field is set to “YES”.
10. Verify that Logical Link field is set to “MJCFADT”.
11. Verify that both PROCESSING RTN and ROUTINE LOGIC field has the “NULL” value.
12. Tab down to COMMAND prompt.
13. Select SAVE and then EXIT.
14. Repeat step 3 to step 13 until you verified all 10 protocols.

5.1.3 Verify Link Parameters

From the HL7 MAIN MENU [HL MAIN MENU]

Event monitoring menu ...

Systems Link Monitor

Filer and Link Management Options ...

Message Management Options ...

Interface Developer Options ...

Site Parameter Edit

1. Select Interface Developer sub-menu:
 - EA Application Edit
 - EP Protocol Edit
 - EL Link Edit
 - VI Validate Interfaces
 - Reports ...
2. Enter EL hot key for Link Edit option.
3. Enter MJCFADT at the following prompt: Select HL LOGICAL LINK NODE: MJCFADT.

The following edit screen will appear:

HL7 LOGICAL LINK	
<u>NODE</u> : MJCFADT	DESCRIPTION :
INSTITUTION :	
MAILMAN DOMAIN :	
AUTOSTART :	

QUEUE SIZE: 10

LLP TYPE: TCP

DNS DOMAIN:

4. Verify that the AUTOSTART field is set to NULL.
5. Verify that the LLP TYPE field is set to "TCP".
6. Tab down to the LLP TYPE field and press Enter.

This will display the following screen:

```

                                HL7 LOGICAL LINK
-----
R.....TCP LOWER LEVEL PARAMETERS.....T
.                MJCFA DT                .
.                .                        .
.  TCP/IP SERVICE TYPE: CLIENT (SENDER)  .
.    TCP/IP ADDRESS: [REDACTED]          .
.                .                        .
.    TCP/IP PORT: [REDACTED]             .
.    TCP/IP PORT (OPTIMIZED):            .
.                .                        .
.  ACK TIMEOUT: 240                      RE-TRANSMISSION ATTEMPTS: 4 .
.  READ TIMEOUT: 240                    EXCEED RE-TRANSMIT ACTION: shutdown
. BLOCK SIZE:                          SAY HELO: .
.                .                        .
.  STARTUP NODE:                        TCP/IP OPENFAIL TIMEOUT: .
.  RETENTION:                          PERSISTENT:NO .
.                .                        .
.  UNI-DIRECTIONAL WAIT:                .
F.....G

```



Warning: The values contained in the following fields will vary from site to site. Additional care should be taken when entering the TCP/IP ADDRESS and PORT, to not introduce a blank space at the end of the TCP/IP ADDRESS and PORT field. The local IRM is responsible for providing the TCP/IP at each site.

7. Verify that the TCP/IP Address field value is correct for the CareFusion server.
8. Verify that the TCP/IP Port field value is correct for the Care Fusion server.
9. Tab down to COMMAND prompt.
10. Enter CLOSE and press Enter.
11. Previous screen will be displayed after TCP/IP parameter screen closed.
12. Tab down to COMMAND prompt.
13. Select SAVE and then EXIT.

5.1.4 Start Logical Links

Enable the MJCFADT logical links, as follows:

1. Select the HL MAIN menu.
2. Select Filer and Link Management Options.
3. Select Start/Stop Links.
4. Select the HL Logical Link node MJCFADT.
5. Verify link is up and running
 - a. From the Filer and Link Management Options, Select PI Ping (TCP Only)
 - b. At the “Select a TCP link” prompt, enter MJCFADT.
 - c. If asked for which type of port to PING, select HL7.

5.2 Configure TIU HL7 Interface

The TIU interface of the BCE-PPI integration project will allow for notes previously captured in the SF-518 BTRF to be sent via the Generic TIU HL7 interface. This requires sites to have build TIU*1.0*281 which allows COTS products to upload documents into VISTA CPRS via an HL7 interface without having to modify existing VISTA software.

This section describes the steps you use to:

- Verify the Application Parameters
- Verify the Protocol Parameters
- Verify the Link Parameters
- Start Logical Links

5.2.1 Verify the Application Parameters

From the HL7 MAIN MENU [HL MAIN MENU]...

Event monitoring menu ...
Systems Link Monitor
Filer and Link Management Options ...
Message Management Options ...
Interface Developer Options ...
Site Parameter Edit

1. Select Interface Developer sub-menu:
 - EA Application Edit
 - EP Protocol Edit
 - EL Link Edit
 - VI Validate Interfaces

Reports ...

2. Enter EA hot key for Application Edit option.
3. Enter MJCF at the following prompt:
Select HL7 APPLICATION PARAMETER NAME: MJCF TIU

The following window should display:

HL7 APPLICATION EDIT	
NAME: MJCF TIU	ACTIVE/INACTIVE: ACTIVE
FACILITY NAME: CareFusion	COUNTRY CODE: USA
HL7 FIELD SEPARATOR:	HL7 ENCODING CHARACTERS:
MAIL GROUP: MJCF HL7	

4. Verify that the ACTIVE/INACTIVE field is set to ACTIVE. If not set the field to ACTIVE.
5. Verify that nothing is entered in the HL7 ENCODING CHARACTERS. This interface will use the default VistA encoding characters.
6. Verify that the MAIL GROUP field is set to MJCF HL7.
7. Tab down to COMMAND prompt.
8. Select SAVE and then EXIT.

5.2.2 Verify Protocol Parameters

5.2.3 Verify Link Parameters

From the HL7 MAIN MENU [HL MAIN MENU]
Event monitoring menu ...
Systems Link Monitor
Filer and Link Management Options ...
Message Management Options ...
Interface Developer Options ...
Site Parameter Edit

1. Select Interface Developer Options

EA Application Edit
 EP Protocol Edit
 EL Link Edit
 VI Validate Interfaces

Reports ...

2. Enter EL hot key for Link Edit option.
3. Enter MJCFTIU at the following prompt:
 Select HL LOGICAL LINK NODE: MJCFTIU

The following edit screen will appear:

```

                                HL7 LOGICAL LINK
-----
NODE: MJCFTIU                DESCRIPTION:

    INSTITUTION:

    MAILMAN DOMAIN:

    AUTOSTART:

    QUEUE SIZE: 10

    LLP TYPE: TCP

    DNS

DOMAIN: _____
  
```

4. Verify that the AUTOSTART field is set to NULL.
5. Verify that the LLP TYPE field is set to "TCP".
6. Tab down to the LLP TYPE field and press Enter.

The following screen displays:

```

                                HL7 LOGICAL LINK
-----
R,,,,,,,,,,,,,TCP LOWER LEVEL PARAMETERS,,,,,,,,,,,,,T
.
.      MJCFTIU
.
.  TCP/IP SERVICE TYPE: CLIENT (SENDER)
.  TCP/IP ADDRESS: ██████████
.
.  TCP/IP PORT: ████████
.  TCP/IP PORT (OPTIMIZED):
.
.  ACK TIMEOUT: 240                RE-TRANSMISSION ATTEMPTS: 4
.  READ TIMEOUT: 240              EXCEED RE-TRANSMIT ACTION: shutdown
. BLOCK SIZE:                      SAY HELO:
.                                TCP/IP OPENFAIL TIMEOUT:
. STARTUP NODE:                    PERSISTENT:NO
.  RETENTION:                      UNI-DIRECTIONAL WAIT:
F,,,,,,,,,,,,,G
  
```



Warning: IP and Port information should be obtained prior to install of the MJCF*1.0*0 package.

7. Verify that the TCP/IP Address field value is correct for the Care Fusion server.
8. Verify that the TCP/IP Port field value is correct for the Care Fusion server.
9. Tab down to COMMAND prompt.
10. Enter CLOSE and press Enter.
11. Previous screen will be displayed after TCP/IP parameter screen closed.
12. Tab down to COMMAND prompt.
13. Select SAVE and then EXIT.

5.2.4 Start Logical Links

Enable the MJCF TIU logical links, as follows:

1. Select the HL MAIN menu.
2. Select Filer and Link Management Options.
3. Select Start/Stop Links.
4. Select the HL Logical Link node MJCF TIU.
5. Verify link is up and running
 - d. From the Filer and Link Management Options, Select PI Ping (TCP Only).
 - e. At the “Select a TCP link” prompt, enter MJCFADT.
 - f. If asked for which type of port to PING, select HL7.

5.3 Assign Menus and Keys

IT application support should coordinate with the BCE Coordinator to identify clinical staff that will require specific Menus and Keys.

User must be granted the MJCF TV USER key and assigned the MJCF TV USER option as a secondary menu in order to access the TV application.

The Transfusion Verification client application also allows users to input vital signs that automatically update the VISTA Vitals package. In order for users to have access to this functionality the user must have [GMV V/M GUI] menu option assigned as a secondary menu option.

Below is a table of the recommended menus and keys based on their clinical/supervisory role.

Table 5: User Role for Menus and Keys

User Role	Transfuses	VISTA Menus Option	VISTA Security Keys	Client App Access	CareFusion Management Console Access
RN	Yes	MJCF TV USER	MJCF TV USER	Yes	N/A
Nurse Manager	Yes	MJCF TV USER MJCF TV REPORTS	MJCF TV USER	Yes	TV Admin Report TV Reports
Nurse Manager	No	MJCF TV REPORTS	N/A	No	TV Admin Report TV Report
BCE Coordinator	Yes	MJCF TV USER MJCF TV ADMINISTRATOR	MJCF TV USER	Yes	TV Admin Report TV Reports TV Configuration
BCE Coordinator	No	MJCF TV ADMINISTRATOR	N/A	No	TV Admin Report TV Reports TV Configuration

5.4 VistA and CareFusion User Mail Notifications

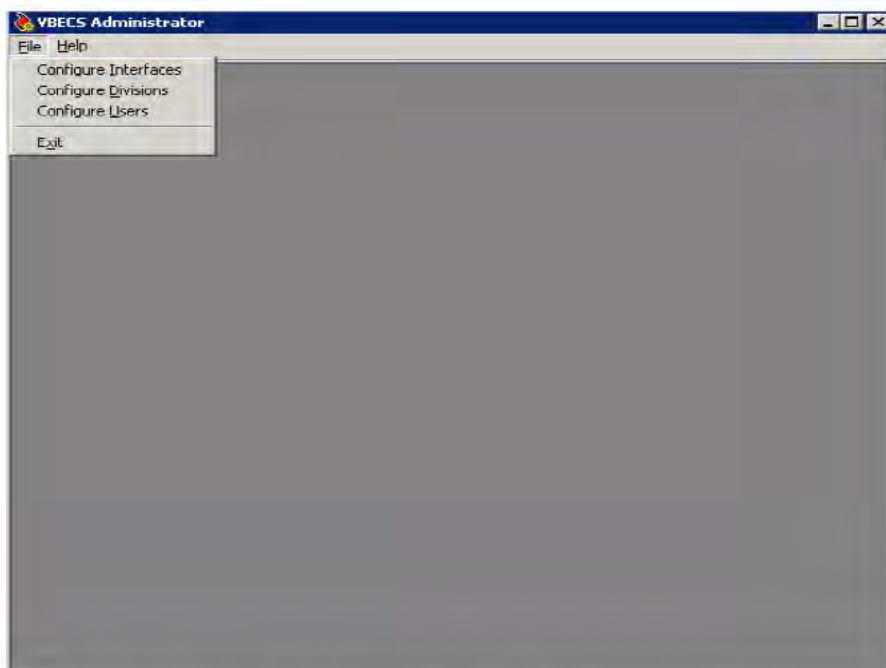
The MJCF*1.0*0 package imports a VISTA Mail group MJCF HL7 to provide users with messages in the case of a VISTA HL7 message failure. Sites can select which members to add it is recommended that the site BCE coordinator and a member of the IT Application support be added.

Users can also be notified of any exceptional event that occurs on the CareFusion application server to include failed HL7 messaging. Sites should contact BCE Coordinator to identify Mail Groups used for notification.

5.5 VBECS Interface Configuration

The CF TV application requires enabling of the BCE COTS interface on the site supporting VBECS server. The following are steps on to enable and configure parameter settings should be performed by the local VBECS Administrator in coordination the site Blood Bank Supervisor.

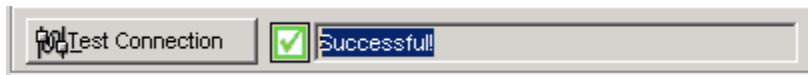
- a. Open VBECS Administrator Console
- b. Select *Configure interfaces* option from *File* menu bar



- c. Select *BCE COTS* from the left pane of Configure Interface window.

- d. Enter the IP Address of the CareFusion application server for your site.

- e. Enter CareFusion Port number. The Port Number field reflects the port that the CareFusion Server will be listening to HL7 traffic from the VBECS server. The recommended port will be [REDACTED] but this may vary based on availability of that port at your Regional IT Data Center.
- f. Enter the IP Address of your VBECS server.
- g. Enter Port number for the VBECS HL7 Multi Listener. This is typically [REDACTED] for Test and 21994 for production but may vary from site to site.
- h. Enter E-mail address of your local VBECS administrator in the *Interface Failure Alert Recipient* section.
- i. Click on *Test Connection* button. You should see following if the interface is correctly configured:



NOTE: If Test connection is not successful contact Regional IT LAN Team to troubleshoot any network communication problems.

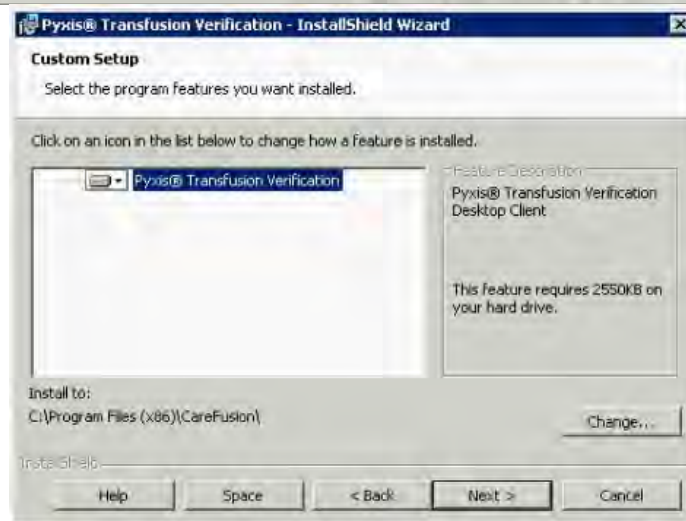
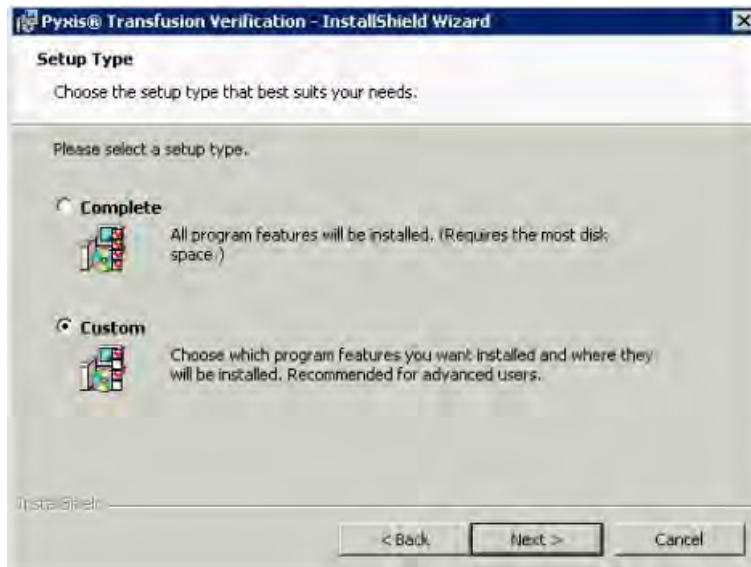
- j. Click *Save* button to save all changes.

5.6 Install TV Desktop Client

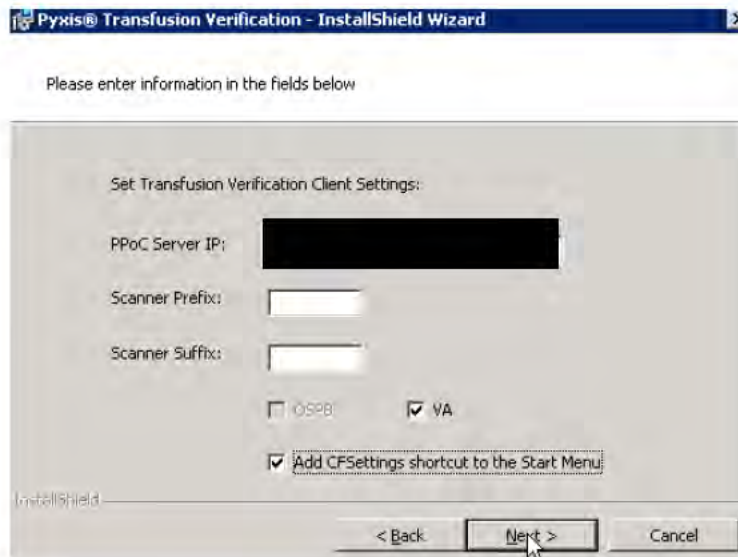
1. In the <BCE_PACKAGE>Desktop Setup folder, double click **Pyxis Transfusion Verification.2.4.0.3.msi**.



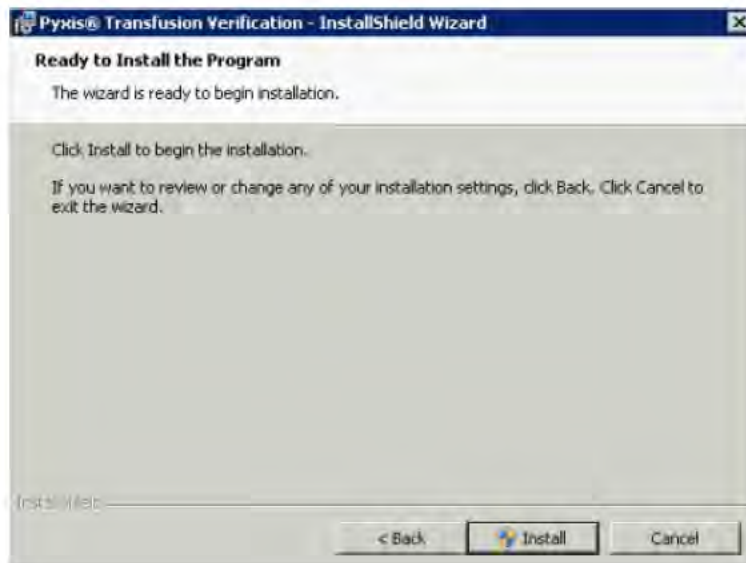
2. Select Custom setup type, and then click **Next**.



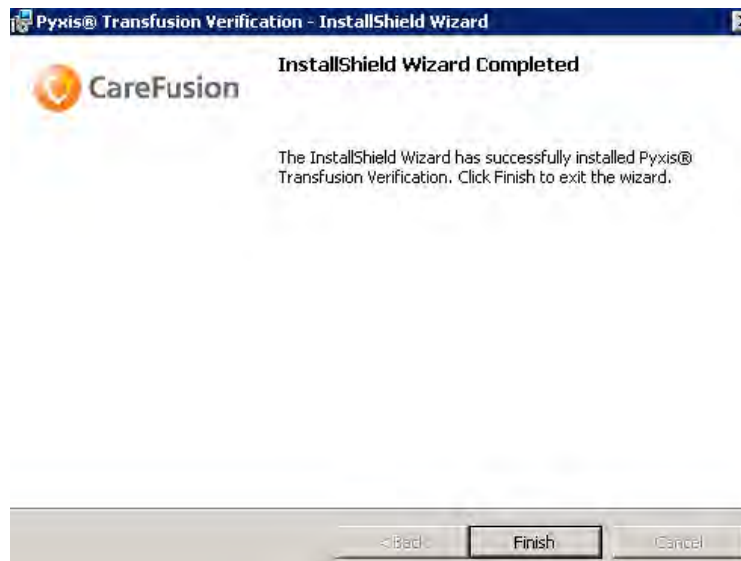
3. Enter PPOC FQDN Server IP as shown below and check **VA** and **Add CFSettings** shortcut to the **Start Menu**, and then click **Next**.



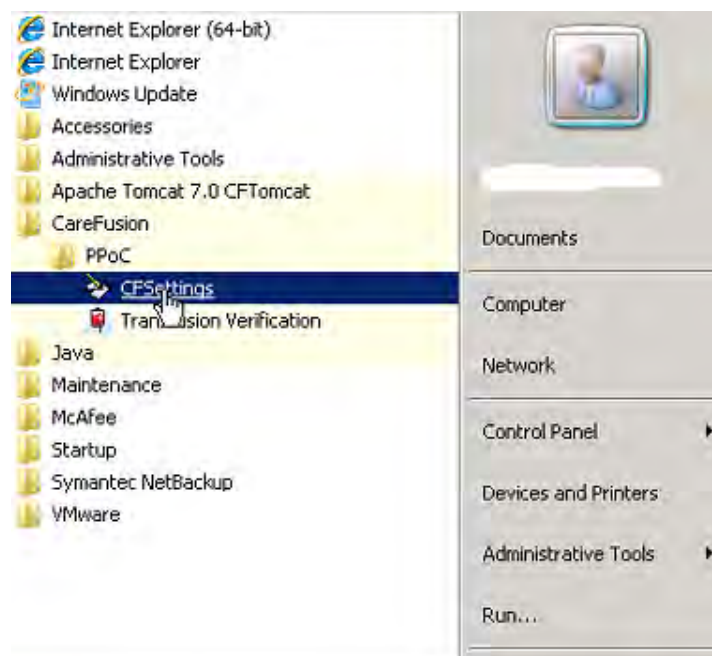
4. Click **Install**.



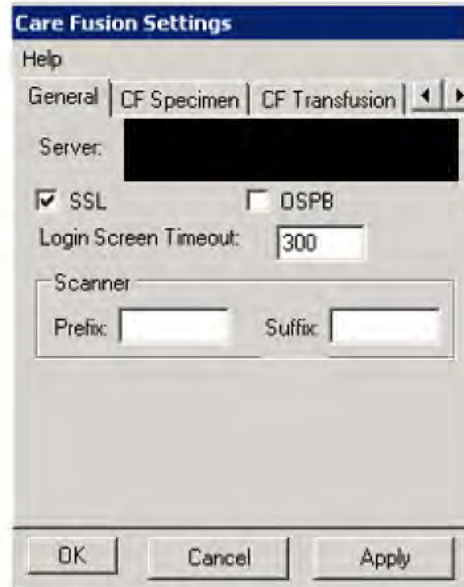
5. Install complete.



6. Go to **start all programs>CF Settings**



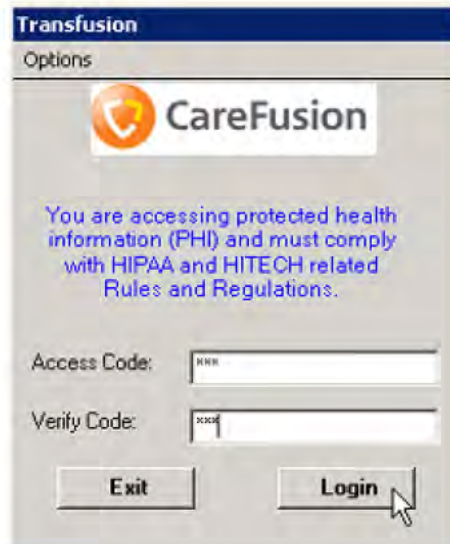
7. Check the **SSL** Box and click **OK**.



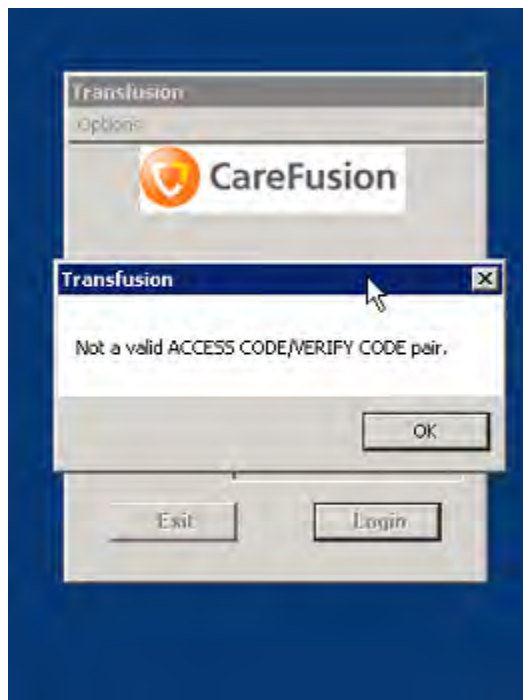
8. Double click the Transfusion Verification icon on your desktop.



9. Enter a valid **Access Code** and **Verify Code** and click **Login**.

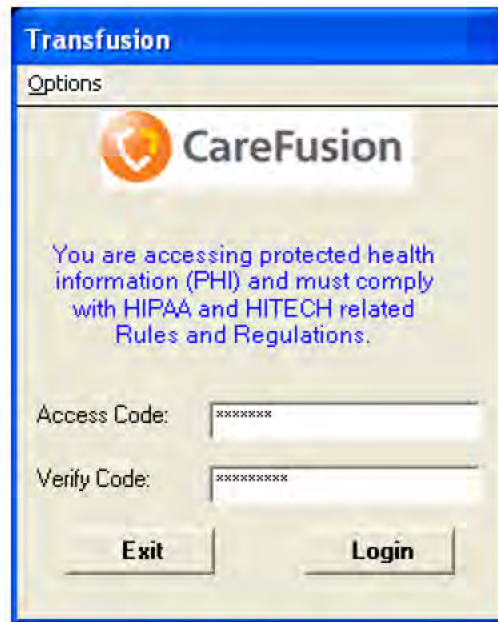


10. If the **Access Code** and/or **Verify Code** entered are invalid you will see the screen below. Please re-enter the **Access Code** and/or **Verify Code** so access is granted.




5.7 Login to TV Desktop Client

- a. Navigate START > ALL PROGRAMS > CareFusion > PPoC > Transfusion Verification.
- b. Login to TV with Access/Verify codes from your VISTA account.



Transfusion

Options

 **CareFusion**

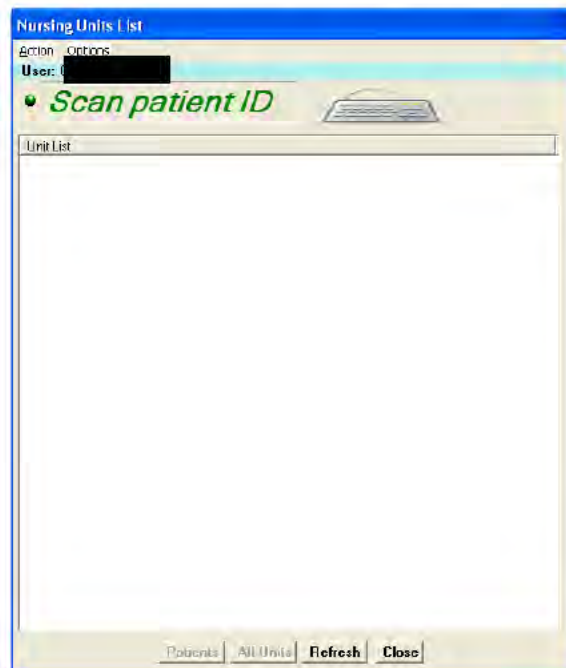
You are accessing protected health information (PHI) and must comply with HIPAA and HITECH related Rules and Regulations.

Access Code:

Verify Code:

Exit **Login**


- c. Upon successful login you will see the Main Window for Transfusion Verification.



Nursing Units List

Action Options

User: [REDACTED]

 **Scan patient ID**

Unit List

[Empty list area]

Patients **All Units** **Refresh** **Close**

Appendix – A: Troubleshooting

Errors encountered with the software, any requests for troubleshooting support should be made via your sites local Regional IT Service Support.

See the table below showing the primary Tier 1, 2, and 3 operational support entities:

Table 6: Tier 1, 2, and 3 operational support entities

Name	Role	Gov or non-Gov?	FTE (man-hours/yr)	Org	Contact Info
OIT National Service Desk	Tier 1 Support	Gov	365/yr	OIT	[REDACTED]
CareFusion Help Desk	Tier 2 and 3 Support	non-Gov	340/yr	Vendor	[REDACTED]
Admin 2 Health Product	Tier 2 Application Support	Gov	630/yr	OIT	[REDACTED]
OIT System Admin/Field Operation Support	Tier 2 and 3 support	Gov	550/yr	OIT	[REDACTED]
VistA Patch Maintenance	Tier 3 Application Support	Gov	860/yr	OIT	[REDACTED]

Appendix – B: Acronyms and Definitions

The table below shows all acronyms and definitions used in this document.

Table 7: Acronyms and Definitions

Acronym	Definition
ADT	Admission Discharge Transfer
BCE-PPI	Bar Code Expansion – Positive Patient Identification
BCMA	Bar Code Medication Administration
BTRF	Blood Transfusion Record Form
COTS	Commercial Off-the shelf
DNS	Domain Name Service
FTP	File Transfer Protocol
KIDS	Kernel Installation and Distribution System
MJCF	(Vista Name Space for BCE)
MSH	Message Header
PDF	Portable Document Format
PIMS	Patient Information Management System
PPoC	Patient Point of Care
SDE	System Design and Engineering
TIU	Text Integrated Utility
TV	Transfusion Verification
TCP/IP	Transmission Control Protocol/Internet Protocol
VA	Veterans Affairs
VBECS	VistA Blood Establishment Computer System
VDD	Version Description Document