IHS Support for HL7 Interfaces
(BHL)
Version 1.0

Installation Guide

July 1997
Preface

The Indian Health Service (IHS) Support for Health Level Seven (HL7) Interfaces software package (BHL) provides a way for Resource and Patient Management System (RPMS) applications to exchange health-care data with commercial off-the-shelf and other applications using the HL7 protocol. This package utilizes the Department of Veteran Affairs (VA) Decentralized Hospital Computer Program (DHCP) HL7 system. This installation guide has been written for Site Managers and other information systems personnel who will be responsible for the installation and maintenance of the BHL software package.

Please direct any comments or questions regarding this system to:

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## 1. Introduction

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- Using the HL Main Menu option, assign a MUMPS device to the BPSLNK Logical Link

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- Run the BHLRXPST routine
- Using the HL Main Menu option, assign a MUMPS device to the BPSLNK Logical Link
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Indian Health Service (IHS) Support for Health Level Seven (HL7) Interfaces Version 1.0 Installation Guide

1. Introduction

The IHS HL7 package consists of a set of routines that are installed concurrently with the DHCP HL7 Package (see section 3 for Resource Requirements). Documentation for the IHS code consists of the Installation Guide (this document) and the Technical Manual.


2. Contents of Distribution

<table>
<thead>
<tr>
<th>Routine/Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>bhl_0100.r</td>
</tr>
<tr>
<td>bhl_010i.pdf</td>
</tr>
<tr>
<td>bhl_010t.pdf</td>
</tr>
</tbody>
</table>

Routines
Installation Guide (this document)
Technical Manual

3. Resource Requirements

The following minimum package versions are required in order to install this version of IHS HL7:

- Kernel 7.3 Toolkit
- DHCP HL7 1.6

If you are installing the HL7 package as an adjunct to the Community Health Representative (CHR) package, the Kermit Protocol option must be installed. Refer to the Kernel Toolkit V 7.3 Installation Guide for the proper procedures and requirements.

NOTE: Two of the routines in this package have been modified by IHS to call a third HL-routine instead of a VA routine. The modified routines are HLCSMM and HLDTIWU3; the change is to make a call to HLZFUNC instead of VASITE. The modifications in HLCSMM and HLDTIWU3, and the routine HLZFUNC must be present for the HL7 package to work correctly in the IHS environment.

The DHCP HL7 package consists of the following files:

<table>
<thead>
<tr>
<th>Routine/Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>hl__0160.r</td>
</tr>
<tr>
<td>hl__016d.pdf</td>
</tr>
<tr>
<td>hl__016i.pdf</td>
</tr>
<tr>
<td>hl__016n.pdf</td>
</tr>
<tr>
<td>hl__016s.pdf</td>
</tr>
<tr>
<td>hl__016t.pdf</td>
</tr>
<tr>
<td>hl__016u.pdf</td>
</tr>
</tbody>
</table>

Routines
Developer’s Manual
Installation Guide
Release Notes
Security Guide
Technical Manual
User Manual
4. Common Installation Instructions

The IHS HL7 package relies on the DHCP HL7 1.6 package for proper operation. Therefore, the DHCP HL7 1.6 package must be installed prior to, or concurrently with, the IHS HL7 package. This Guide assumes that the DHCP HL7 1.6 package and the IHS HL7 package will be installed concurrently. The steps described in this section must be completed in order to lay the foundation for an interface between RPMS and non-RPMS systems. Refer to the DHCP HL7 1.6 Installation Guide, as necessary, to complete the following steps.

As noted in the DHCP HL7 1.6 Installation Guide, these packages can be loaded into either a Test UCI (T) or a Production UCI (P) by following these steps. Users do not need to be off the system when installing these packages if global placement (Step 1 in the DHCP HL7 1.6 Installation Guide) is accomplished in advance. Installation will normally take five (5) minutes or less.

1. Perform Steps 1 through 6 of the Installation Instructions in the DHCP HL7 1.6 Installation Guide. (See the example of Step 6 in Section 5.1.)
2. Delete BHL* routines. (See the example in Section 5.2.)
3. Perform Step 7 in the DHCP HL7 1.6 Installation Guide. NOTE: The HL7 routines are to be loaded from the file <hl__0160.r>. (See the example in Section 5.3.)
4. Perform Step 8 in the DHCP HL7 1.6 Installation Guide. NOTE: There will be two discrepancies between the calculated checksums and the expected checksums; this is due to the IHS modifications in the VA programs ^HLCSMM and ^HLDTIWU3. If there are any discrepancies OTHER THAN THESE, please call the HL7 Help Desk in Tucson: (520) 295-2533 or (520) 295-2534. (See the example in Section 5.4.)
5. Perform Steps 9 through 11 in the DHCP HL7 1.6 Installation Guide. Examples of some of these steps are provided in the Installation Guide. (See also the examples of steps 10 and 11 in Section 5.5.)
6. Load the BHL* routines. NOTE: The BHL* routines are to be loaded from the file <bhl_0100.r>. (See the example in Section 5.6.) This step will restore 18 routines.
7. Run the BHL integrity routine. D ^BHLINTEG NOTE: Please call the HL7 Help Desk in Tucson, (520) 295-2533 or (520) 295-2534, if any routines fail the integrity check.
8. Run the BHLINIT routine to initialize the IHS HL7 files. D ^BHLINIT (See the example in Section 5.7.)
9. Perform Steps 12 through 14 in the DHCP HL7 1.6 Installation Guide. (See the example of step 13 in Section 5.8.)
10. Delete the BHLIN* routines.
11. Run the post-initialization routine. D ^BHLPOST (See the example in Section 5.9.)
12a. If you are installing this package in conjunction with the CHR Package, please refer to the CHR Interface Installation Section (Section 6), for the remainder of the installation instructions.
12b. If you are installing this package in conjunction with a commercial, off-the-shelf (COTS) Pharmacy System, please refer to the COTS Pharmacy Interface Installation Section (Section 7), for the remainder of the installation instructions.
13. If the HL and BHL packages were loaded into a production UCI, move the BHL* and HL* routines to all systems as necessary. (Refer also to Step 15 in the DHCP HL7 1.6 Installation Guide.)
14. Enable Journalling for HL* globals. (Refer also to Step 16 in the DHCP HL7 1.6 Installation Guide.)
5. Sample Session for Common Installation

This section provides screen examples for some of the steps in Section 4, Common Installation Instructions.

5.1 Perform Steps 1 through 6 of the Installation Instructions in the DHCP HL7 1.6 Installation Guide

Step 6. Delete HLIN* routines. **NOTE:** We recommend that all HL* routines be deleted from the working area to ensure a clean restoration from the UNIX file. The example below shows the deletion of all HL* routines.

> D ^%RDEL

MSM - Routine Delete Utility
23-OCT-96 11:39 AM

Routine selector: HL*

221 routines selected.

Routine selector: <RETURN>

Deleting Selected Routines? <N> Y

Deleting ...
5.2 Delete BHL* routines

>`D ^%RDEL

MSM - Routine Delete Utility
23-OCT-96  2:11 PM

Routine selector: BHL*

22 routines selected.

Routine selector: <RETURN>

Delete Selected Routines? <N> Y

Deleting ...
BHLBACK BHLBCH BHLBCH1 BHLBCH2 BHLBLNCH BHLBPS BHLBPS1 BHLBPSND
BHLDLR BHLIN001 BHLIN002 BHLIN003 BHLIN004 BHLINIS BHLINIT BHLINIT1
BHLINIT2 BHLINIT3 BHLINIT4 BHLINIT5 BHLPTDMO BHLTMP
>`
5.3 Perform Step 7 in the DHCP HL7 1.6 Installation Guide

Step 7. Load DHCP HL7 software tape.

> D ^%RR

MSM - Routine Restore Utility

Enter input device <HFS>: <RETURN> Host File Server
File Name >: /usr/spool/uucppublic/hl_0160.r
Routine(s) saved at 11:51 AM  22-JAN-96
Header comment is: HEALTH LEVEL SEVEN VERSION 1.6 OCTOBER 13, 1995 WITH IHS MODIFICATIONS
Selective restore? (allows rename) <N>: <RETURN> NO
Restoring...

221 Routines restored.
5.4 Perform Step 8 in the DHCP HL7 Installation Guide

Step 8. Run Integrity routine(s).

>`D ^HLNTEG

Checksum routine created on 2951013.161539 by KERNEL V7.3

HLCHK    ok
HLCS      ok
HLCS1     ok
HLCSDL    ok
HLCSDL1   ok
HLCSDL2   ok
HLCSDR    ok
HLCSDR1   ok
HLCSDR2   ok
HLCSFMN   ok
HLCSFMN0  ok
HLCSFMN1  ok
HLCSHDR   ok
HLCSIN    ok
HLCSLNCH  ok
HLCSMM    Calculated 2780898, off by 51350
HLCSMM1   ok
HLCSMON   ok
HLCSMON1  ok
HLCSORA1  ok
HLCSORA2  ok
HLCSORAT  ok
HLCSOUT   ok
HLCSQUE   ok
HLCSQUE1  ok
HLCSQUED  ok
HLCSRE1   ok
HLCSREP   ok
HLCSREQ   ok
HLCSRQ    ok
HLCSRV    ok
HLCSTERM  ok
HLCSUTL   ok
HLCSUTL1  ok
HLCSUTL2  ok
HLDTIW01  ok
HLDTIW02  ok
HLDTIW03  ok
HLDTIW04  ok
HLDTIW05  ok
HLDTIW2A  ok
HLDTIW2B  ok
HLDTIW2C  ok
HLDTIW0P  ok
HLDTIW01  ok
HLDTIW2P  ok
HLDTIW3P  ok
HLDTIW3  Calculated 4205647, off by 2050668

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5.5 Perform Steps 9 through 11 in the DHCP HL7 1.6 Installation Guide

Step 10. Run the HLINIT routine to initialize the DHCP HL7 package files.

NOTE: This example was taken from a new installation of the DHCP HL7 package. If you are upgrading from DHCP HL7 V. 1.5 to V. 1.6, some of the displays may be different. However, the user input remains the same.

> D ^HLINIT

This version (#1.6) of 'HLINIT' was created on 13-OCT-1995
   (at ALBANY CAMPUS DEVELOPMENT, by VA FileMan V.21.0)

I AM GOING TO SET UP THE FOLLOWING FILES:

   101   PROTOCOL   (Partial Definition)
      Note: You already have the 'PROTOCOL' File.

   770   HL7 NON-DHCP APPLICATION PARAMETER

   771   HL7 APPLICATION PARAMETER

   771.1   HL7 FIELD   (including data)
      I will OVERWRITE your data with mine.

   771.2   HL7 MESSAGE TYPE   (including data)
      I will OVERWRITE your data with mine.

   771.3   HL7 SEGMENT TYPE   (including data)
      I will OVERWRITE your data with mine.

   771.4   HL7 DATA TYPE   (including data)
      I will OVERWRITE your data with mine.

   771.5   HL7 VERSION   (including data)
      I will OVERWRITE your data with mine.

   771.6   HL7 MESSAGE STATUS   (including data)
      I will OVERWRITE your data with mine.

   771.7   HL7 ERROR MESSAGE   (including data)
      I will OVERWRITE your data with mine.

   771.8   HL7 STANDARD   (including data)
      I will OVERWRITE your data with mine.

   772   HL7 MESSAGE TEXT

   773   HL7 MESSAGE ADMINISTRATION

   779.001   HL7 EVENT TYPE CODE   (including data)
      I will OVERWRITE your data with mine.

   779.002   HL7 ACKNOWLEDGMENT CODE   (including data)
      I will OVERWRITE your data with mine.

   779.003   HL7 ACCEPT/APPLICATION ACK CONDITION   (including data)
      I will OVERWRITE your data with mine.
779.004   COUNTRY CODE (including data)
I will OVERWRITE your data with mine.

869.1     HL LOWER LEVEL PROTOCOL TYPE (including data)
I will MERGE your data with mine.

869.2     HL LOWER LEVEL PROTOCOL PARAMETER

869.3     HL COMMUNICATION SERVER PARAMETERS

870       HL LOGICAL LINK

SHALL I WRITE OVER FILE SECURITY CODES? No//Y (Yes)
NOTE: This package also contains INPUT TEMPLATES
SHALL I WRITE OVER EXISTING INPUT TEMPLATES OF THE SAME NAME? Yes//<RETURN> (Yes)

NOTE: This package also contains OPTIONS
SHALL I WRITE OVER EXISTING OPTIONS OF THE SAME NAME? Yes//<RETURN> (Yes)

ARE YOU SURE EVERYTHING'S OK? No//Y (Yes)

Starting Pre-Init
Pre-Init Finished

...HMMMM, JUST A MOMENT PLEASE................................................
....................................................................................
....................................................................................

Compiling Cross-Reference(s) of File 101.

...EXCUSE ME, I'M WORKING AS FAST AS I CAN...

'ORD11' ROUTINE FILED.
'ORD12' ROUTINE FILED.
'ORD13' ROUTINE FILED.
'ORD14' ROUTINE FILED.
'ORD15' ROUTINE FILED.
'ORD16' ROUTINE FILED.
'ORD17' ROUTINE FILED.
'ORD18' ROUTINE FILED.
'ORD19' ROUTINE FILED.
'ORD110' ROUTINE FILED.
'ORD111' ROUTINE FILED.
'ORD112' ROUTINE FILED.
'ORD1' ROUTINE FILED..........................................................

......

'HL CLEAR COMMUNICATIONS ERROR' Option Filed
'HL CLEAR QUEUE' Option Filed
'HL COMMUNICATIONS SERVER' Option Filed
'HL COPY QUEUE ENTRY' Option Filed
'HL CRE/ED QUEUE TEST ENTRY' Option Filed
'HL CUSTOM REPORT' Option Filed
'HL EDIT APPL PARAM' Option Filed
'HL EDIT COMM SERVER PARAMETERS' Option Filed
'HL EDIT SITE PARAM' Option Filed
'HL FILER MONITOR' Option Filed
'HL INTERFACE WORKBENCH' Option Filed
'HL MAIN MENU' Option Filed
'HL MANAGE FILERS' Option Filed
'HL MENU 1.5' Option Filed
'HL MENU 1.6' Option Filed
'HL MESSAGE MONITOR' Option Filed
'HL MESSAGE REQUEUER' Option Filed
'HL MS SERVER' Option Filed
'HL PRINT APPL PARAM' Option Filed
'HL PRINT DATA TYPE' Option Filed
'HL PRINT FAILED TRANS' Option Filed
'HL PRINT FIELDS' Option Filed
'HL PRINT MENU' Option Filed
'HL PRINT MSG TYPE' Option Filed
'HL PRINT SITE PARAM' Option Filed
'HL PRINT VERSION' Option Filed
'HL PURGE TRANSMISSIONS' Option Filed
'HL QUEUE MANAGEMENT' Option Filed
'HL SERVER' Option Filed
'HL SHOW COMMUNICATIONS ERROR' Option Filed
'HL START' Option Filed
'HL START DEFAULT FILERS' Option Filed
'HL START ONE INCOMING FILER' Option Filed
'HL START ONE OUTGOING FILER' Option Filed
'HL STOP' Option Filed
'HL STOP ALL INCOMING FILERS' Option Filed
'HL STOP ALL OUTGOING FILERS' Option Filed
'HL STOP ONE INCOMING FILER' Option Filed
'HL STOP ONE OUTGOING FILER' Option Filed
'HL TASK' Option Filed
'HL TRANSMISSION LOG' Option Filed
'HL V16 SERVER' Option Filed...

NOTE THAT FILE SECURITY-CODE PROTECTION HAS BEEN MADE

Initial entry in HL COMMUNICATION SERVER PARAMETER file (#869.3) has been created.

This version of 'HLONIT' was created on 13-OCT-1995
(at ALBANY CAMPUS DEVELOPMENT, by OE/RR V.2.5)

PROTOCOL INSTALLATION

...OK, this may take a while, hold on please........................................

........................................

'HL CS/RQ - DESELECT MESSAGES' Protocol Filed
'HL CS/RQ - SELECT MESSAGES' Protocol Filed
'HL CS/RQ - VIEW MESSAGE' Protocol Filed
'HL CS/RQ MENU - SCREEN 2' Protocol Filed
'HL DT/IW - ACTIVATE/INACTIVATE APPLICATION' Protocol Filed
'HL DT/IW - AI FOR SCREEN 1' Protocol Filed
'HL DT/IW - BLANK 1' Protocol Filed
'HL DT/IW - BLANK 2' Protocol Filed
'HL DT/IW - BLANK 3' Protocol Filed
'HL DT/IW - CA FOR SCREEN 1' Protocol Filed
'HL DT/IW - CC FOR SCREEN 4' Protocol Filed
'HL DT/IW - CL FOR SCREEN 2' Protocol Filed
'HL DT/IW - CREATE APPLICATION' Protocol Filed
'HL DT/IW - CREATE CLIENT PROTOCOL' Protocol Filed
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'HL DT/IW - CREATE LOGICAL LINK' Protocol Filed
'HL DT/IW - CREATE SERVER PROTOCOL' Protocol Filed
'HL DT/IW - CS FOR SCREEN 3' Protocol Filed
'HL DT/IW - DA FOR SCREEN 1' Protocol Filed
'HL DT/IW - DC FOR SCREEN 4' Protocol Filed
'HL DT/IW - DELETE APPLICATION' Protocol Filed
'HL DT/IW - DELETE CLIENT PROTOCOL' Protocol Filed
'HL DT/IW - DELETE LOGICAL LINK' Protocol Filed
'HL DT/IW - DELETE SERVER PROTOCOL' Protocol Filed
'HL DT/IW - DL FOR SCREEN 2' Protocol Filed
'HL DT/IW - DS FOR SCREEN 3' Protocol Filed
'HL DT/IW - EA FOR SCREEN 1' Protocol Filed
'HL DT/IW - EC FOR SCREEN 4' Protocol Filed
'HL DT/IW - EDIT APPLICATION' Protocol Filed
'HL DT/IW - EDIT CLIENT PROTOCOL' Protocol Filed
'HL DT/IW - EDIT LOGICAL LINK' Protocol Filed
'HL DT/IW - EDIT SERVER PROTOCOL' Protocol Filed
'HL DT/IW - EL FOR SCREEN 2' Protocol Filed
'HL DT/IW - ES FOR SCREEN 3' Protocol Filed
'HL DT/IW - JUMP TO APPLICATION (SCREEN 1)' Protocol Filed
'HL DT/IW - JUMP TO CLIENT (SCREEN 4)' Protocol Filed
'HL DT/IW - JUMP TO LINK (SCREEN 2)' Protocol Filed
'HL DT/IW - JUMP TO NEXT APP (SCREEN 1)' Protocol Filed
'HL DT/IW - JUMP TO NEXT CLIENT (SCREEN 4)' Protocol Filed
'HL DT/IW - JUMP TO NEXT LINK (SCREEN 2)' Protocol Filed
'HL DT/IW - JUMP TO NEXT SERVER (SCREEN 3)' Protocol Filed
'HL DT/IW - JUMP TO NEXT SERVER (SCREEN 5)' Protocol Filed
'HL DT/IW - JUMP TO PREVIOUS APP (SCREEN 1)' Protocol Filed
'HL DT/IW - JUMP TO PREVIOUS CLNT (SCREEN 4)' Protocol Filed
'HL DT/IW - JUMP TO PREVIOUS LINK (SCREEN 2)' Protocol Filed
'HL DT/IW - JUMP TO PREVIOUS SRVR (SCREEN 3)' Protocol Filed
'HL DT/IW - JUMP TO PREVIOUS SRVR (SCREEN 5)' Protocol Filed
'HL DT/IW - JUMP TO SERVER (SCREEN 3)' Protocol Filed
'HL DT/IW - JUMP TO SERVER (SCREEN 5)' Protocol Filed
'HL DT/IW - REBUILD SCREEN 1' Protocol Filed
'HL DT/IW - REBUILD SCREEN 2' Protocol Filed
'HL DT/IW - REBUILD SCREEN 3' Protocol Filed
'HL DT/IW - REBUILD SCREEN 4' Protocol Filed
'HL DT/IW - REBUILD SCREEN 5' Protocol Filed
'HL DT/IW - REMOVE Subscription' Protocol Filed
'HL DT/IW - RS FOR SCREEN 5' Protocol Filed
'HL DT/IW - S2 FOR SCREEN 5' Protocol Filed
'HL DT/IW - SHOW CLIENT PROTOCOLS' Protocol Filed
'HL DT/IW - SHOW LOGICAL LINKS' Protocol Filed
'HL DT/IW - SHOW SERVER PROTOCOLS' Protocol Filed
'HL DT/IW - SUBSCRIBE' Protocol Filed
'HL DT/IW - SUBSCRIBE TO SERVER' Protocol Filed
'HL DT/IW MENU - SCREEN 1' Protocol Filed
'HL DT/IW MENU - SCREEN 2' Protocol Filed
'HL DT/IW MENU - SCREEN 3' Protocol Filed
'HL DT/IW MENU - SCREEN 4' Protocol Filed
'HL DT/IW MENU - SCREEN 5' Protocol Filed
OK, Protocol Installation is Complete.

'HL INTERFACE WORKBENCH - 1' List Template...Filed.
'HL INTERFACE WORKBENCH - 2' List Template...Filed.
'HL INTERFACE WORKBENCH - 3' List Template...Filed.
'HL INTERFACE WORKBENCH - 4' List Template...Filed.
'HL INTERFACE WORKBENCH - 5' List Template...Filed.
'HL MESSAGE REQUEUER - 1' List Template...Filed.
'HL MESSAGE REQUEUER - 2' List Template...Filed.
'HL MESSAGE REQUEUER - 3' List Template...Filed.

Select output device for file conversion: HOME// ;;9999

- File conversions started on 23-OCT-96 @ 11:44:10 -

Copying entries from HL7 NON-DHCP APPLICATION PARAMETER file (#770) to HL7 APPLICATION PARAMETER file (#771)
Purging data from HL7 MESSAGE TEXT file (#772)
Converting newly defined fields in HL7 MESSAGE TEXT file (#772)
- File conversions completed on 23-OCT-96 @ 11:44:10 -
Step 11. Add the HL Main Menu option to the menus of appropriate IRM staff.

> D P^DI

VA FileMan 21.0

Select OPTION: 1   ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: LOCATION// OPTION (2809 entries)
EDIT WHICH FIELD: ALL// MENU
  1   MENU (multiple)
  2   MENU TEXT
CHOOSE 1-2: 1
   EDIT WHICH MENU SUB-FIELD: ALL// <RETURN>
THEN EDIT FIELD: <RETURN>

Select OPTION NAME: EVE Systems Manager Menu
Select ITEM: XMMGR// HL MAIN MENU HL7 Main Menu
Are you adding 'HL MAIN MENU' as a new MENU (the 12TH for this OPTION)? Y (Yes)
   MENU SYNONYM: <RETURN>
SYNONYM: <RETURN>
DISPLAY ORDER: <RETURN>
Select ITEM: ^

Select OPTION NAME: <RETURN>

Select OPTION: <RETURN>

>
5.6 Load the BHL* routines

>>&CHR

MSM - Routine Restore Utility

Enter input device <HFS>: Host File Server
File Name >: /usr/spool/uucppublic/bhl_0100.r
Routine(s) saved at 11:59 AM  24-OCT-96
Header comment is:
Selective restore? (allows rename) <N>: <RETURN> NO
Restoring...

BHLBCH  BHLBCH1  BHLBCH2  BHLBPS  BHLBPS1  BHLIN001  BHLINIS  BHLINIT
BHLINIT1  BHLINIT2  BHLINIT3  BHLINIT4  BHLINIT5  BHLINTEG  BHLPOST  BHLRXPS1
BHLRXPS2  BHLRXPS

18 Routines restored.
5.7 Run the BHLINIT routine to initialize the IHS HL7 files

>`D ^BHLINIT

This version (#1.0) of 'BHLINIT' was created on 24-OCT-1996
(at TUCAPD, by VA FileMan V.21.0)

NOTE: This package also contains BULLETINS

ARE YOU SURE EVERYTHING'S OK? No// Y (Yes)

...EXCUSE ME, HOLD ON.......'BHLBPS RX-PCC LINK DATA ERROR' BULLETIN FILED -- Remember to add mail groups for new bulletins.'BHLBPS RX-PCC MESSAGE ERROR' BULLETIN FILED -- Remember to add mail groups for new bulletins.. >
**5.8 Perform Steps 12 through 16 in the DHCP HL7 1.6 Installation Guide**

**Step 13. Start the incoming and outgoing filers.**

Select OPTION NAME: HL MAIN MENU

1. V1.5 OPTIONS ...
2. V1.6 OPTIONS ...
3. Activate/Inactivate Application
4. Print/Display Menu ...
5. Purge Message Text File Entries

Select HL7 Main Menu Option: 2 V1.6 OPTIONS

1. Communications Server ...
2. Interface Workbench
3. Message Requeuer

Select V1.6 OPTIONS Option: 1 Communications Server

1. Edit Communication Server parameters
2. Manage incoming & outgoing filers ...
3. Monitor incoming & outgoing filers
4. Start LLP
5. Stop LLP
6. Systems Link Monitor
7. Logical Link Queue Management ...
8. Report

Select Communications Server Option: 2 Manage incoming & outgoing filers

1. Start default number of incoming & outgoing filers
2. Start an incoming filer
3. Start an outgoing filer
4. Stop all incoming filers
5. Stop all outgoing filers
6. Stop an incoming filer
7. Stop an outgoing filer

Select Manage incoming & outgoing filers Option: 1 Start default number of incoming & outgoing filers

Incoming filer queued as task number 1689712

Outgoing filer queued as task number 1689713
6      Stop an incoming filer
7      Stop an outgoing filer

Select Manage incoming & outgoing filers Option: <RETURN>

1      Edit Communication Server parameters
2      Manage incoming & outgoing filers ...
3      Monitor incoming & outgoing filers
4      Start LLP
5      Stop LLP
6      Systems Link Monitor
7      Logical Link Queue Management ...
8      Report

Select Communications Server Option: <RETURN>

1      Communications Server ...
2      Interface Workbench
3      Message Requeuer

Select V1.6 OPTIONS Option: <RETURN>

1      V1.5 OPTIONS ...
2      V1.6 OPTIONS ...
3      Activate/Inactivate Application
4      Print/Display Menu ...
5      Purge Message Text File Entries

Select HL7 Main Menu Option: <RETURN>

Do you really want to halt? YES// <RETURN>
5.9  Run the post-initialization routine

>`D ^BHLPOST

    DELETING UNNECESSARY BHL-NAMESPACE FILES.

No dictionaries were selected.

Now checking for residual `DD entries within range.

DONE

    DELETING BHL PACKAGE ENTRY.

    BHL post-init is complete.

>`
6. CHR Interface Installation

Installation of the CHR package, including its post-initialization files, will install all of the required file entries in order to use the HL7 interface. There is no additional installation required within the IHS HL7 package.
7. **COTS Pharmacy Interface Installation**

To finish the pharmacy interface installation, complete the following steps.

1. Run the BHL.RXPST routine. `D ^BHL.RXPST` (See the example in Section 8.1.)
2. Using the HL7 Main Menu option, assign a MUMPS device to the BPSLNK Logical Link. (See the example in Section 8.2.)
8. Sample Session for COTS Pharmacy Installation

8.1 Run the BHLRXPST routine

`>D ^BHLRXPST`

Enter Facility: SELLS HOSPITAL/CLINIC/ <RETURN> TUCSON SELLS 01

I created a PHARM MGR Mail Group entry. Please add appropriate members to this group.

PHARM MGR Mail Group added to the BHLBFS RX-PCC MESSAGE ERROR Bulletin.
PHARM MGR Mail Group added to the BHLBFS RX-PCC LINK DATA ERROR Bulletin.

Adding required entries to the HL7 APPLICATION PARAMETER file.
....adding: BHLBPS
....adding: VIKRX

Adding required entries to the PROTOCOL file.
....adding: BHLBPS
....adding: VIKRX

....Re-indexing the PROTOCOL file.

Adding HL7 Lower Level Protocol Entry.

Adding HL7 Logical Link Entry.

ALL DONE WITH POST-INIT

>`
8.2 Using the HL Main Menu option, assign a MUMPS device to the BPSLNK Logical Link

NOTE: The example given below includes displays taken from the HL7 workbench. Onscreen, these displays include formatting characteristics that do not translate well to paper. Therefore, what you see on your terminal and what is shown here may not be exactly the same. The computer dialog shown inside the boxes, for example, includes escape sequences for cursor control and screen display, whereas the dialog shown outside the boxes is a simpler, “roll-and-scroll” display.

Select OPTION NAME: **HL MAIN MENU**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>V1.5 OPTIONS ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>V1.6 OPTIONS ...</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Activate/Inactivate Application</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Print/Display Menu ...</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Purge Message Text File Entries</td>
<td></td>
</tr>
</tbody>
</table>

Select HL7 Main Menu Option: 2  V1.6 OPTIONS

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Communications Server ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Interface Workbench</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Message Requeuer</td>
<td></td>
</tr>
</tbody>
</table>

Select V1.6 OPTIONS Option: 2  Interface Workbench..

---

**HL-7 Interface Workbench**

Currently Defined Applications

(1) BHLBPS

- **Facility Name**: 000101
- **Country Code**: USA
- **Mail Group**: PHARM MGR
- **Active/Inactive**: ACTIVE
- **HL7 Field Separator**: |
- **HL7 Encoding Characters**: ^~\&

(2) VIKRX

- **Facility Name**: 000101
- **Country Code**: USA
- **Mail Group**: PHARM MGR
- **Active/Inactive**: ACTIVE
- **HL7 Field Separator**: |
- **HL7 Encoding Characters**: ^~\&

---

CA Create Application   EA Edit Application
DA Delete Application   AI Activate/Inactivate
SL Show Logical Links   SS Show Srvr Protocols   SC Show Client Protocols
JN Jump To Next App     JP Jump To Previous App   JA Jump To Application

Select Tool:Jump To Next App// **SL**  Show Logical Links
Currently Defined Logical Links

<table>
<thead>
<tr>
<th>Logical Link</th>
<th>LLP Parameter</th>
<th>LLP Type</th>
<th>Device</th>
<th>Version ID</th>
<th>Block Size</th>
<th>Queue Size</th>
<th>Read Timeout</th>
<th>ACK Timeout</th>
<th>Re-transmission Attempts</th>
<th>Start Block Character</th>
<th>End Block Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPSLNK</td>
<td>BPSLNK</td>
<td>HLLP</td>
<td>BBB78</td>
<td>2.2</td>
<td>&lt;DEFAULT&gt;</td>
<td>2000</td>
<td>10</td>
<td>10</td>
<td>3</td>
<td>VT</td>
<td>FS</td>
</tr>
</tbody>
</table>

Enter ?? for more actions

CL Create Logical Link  EL Edit Logical Link  DL Delete Logical Link
JN Jump To Next Link   JP Jump To Previous Link  JL Jump To Link
Select Tool: Jump To Next Link// EL Edit Logical Link
Installation Guide

Currently Defined Applications

(1) BHLBPS
Facility Name: 000101                         Active/Inactive: ACTIVE
Country Code: USA                               HL7 Field Separator: |
Mail Group: PHARM MGR                             HL7 Encoding Characters: ^~\&

(2) VIKRX
Facility Name: 000101                         Active/Inactive: ACTIVE
Country Code: USA                               HL7 Field Separator: |
Mail Group: PHARM MGR                             HL7 Encoding Characters: ^~\&

Select Tool: Jump To Next App//
1      Communications Server ...
2      Interface Workbench
3      Message Requeuer

Select V1.6 OPTIONS Option: <RETURN>
1      V1.5 OPTIONS ...
2      V1.6 OPTIONS ...
3      Activate/Inactivate Application
4      Print/Display Menu ...
5      Purge Message Text File Entries

Select HL7 Main Menu Option: <RETURN>

Do you really want to halt? YES// <RETURN>

Halting at 10:22 am
>