



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Laboratory Reference

(LR)

Technical Addendum

Version 5.2 Patch 1030
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Preface

The purpose of this guide is to provide Area and Facility Information Technology staff with the documentation for installing and configuring the HL7 components and Ensemble Production for LR_VaLediIII.xml. These will permit implementation of a bidirectional reference laboratory interface with a billing component for Quest Diagnostics.

Note: This guide is to be used only for sites requiring a bidirectional interface with the billing components for Quest Diagnostics. Existing bidirectional interfaces with Quest Diagnostics (client bill) or other reference laboratories will be unchanged. They will continue to use the Generic Interface System (GIS) and will not be implementing any of the features described in this manual.

1.0 Introduction

RPMS Laboratory v5.2 Patch 1030 incorporates changes to the IHS Lab Package that adds new functionality for implementing a bidirectional reference laboratory interface with Quest Diagnostics including billing using VA LEDI III, HL7 Version 1.6, and Ensemble. This is the first reference laboratory interface to use Ensemble as the interface “engine”. All sites with existing reference laboratory interfaces will remain unchanged and may disregard the instructions in this manual.

This manual includes instructions for:

- Creating a new namespace on the RPMS server for the LEDI III Production.
- Importing the LEDI III Production.
- Configuring Quest Diagnostics IP address and ports on the LEDI Production that will be used for exchanging order and result messages.
- Starting the HL7 Link Manager and the Filers for LA7VQT and LA7VQR.

2.0 Creating a Namespace for the Quest Production

Begin by working with Area IT staff to create a new namespace on the RPMS server to host the production for Quest Diagnostics (LR_VaLediIII.xml). The namespace will usually be your RPMS production namespace concatenated with RL and the Reference Lab Name, such as PRDRLQST. A separate namespace is recommended because only one production may be supported for a single namespace on a server. For example, if a site is already using an Ensemble Dentrax interface, they will need to run the Dentrax interface in one namespace and the Quest interface in a separate namespace.

3.0 Importing LR_VaLedIII.xml

Login to Studio on Ensemble



Figure 3-1: Logging into Studio

Change the namespace to the location where the production will reside. It will usually be the name of your production namespace concatenated with RL and the Reference Lab Name, such as PRDRLQST.

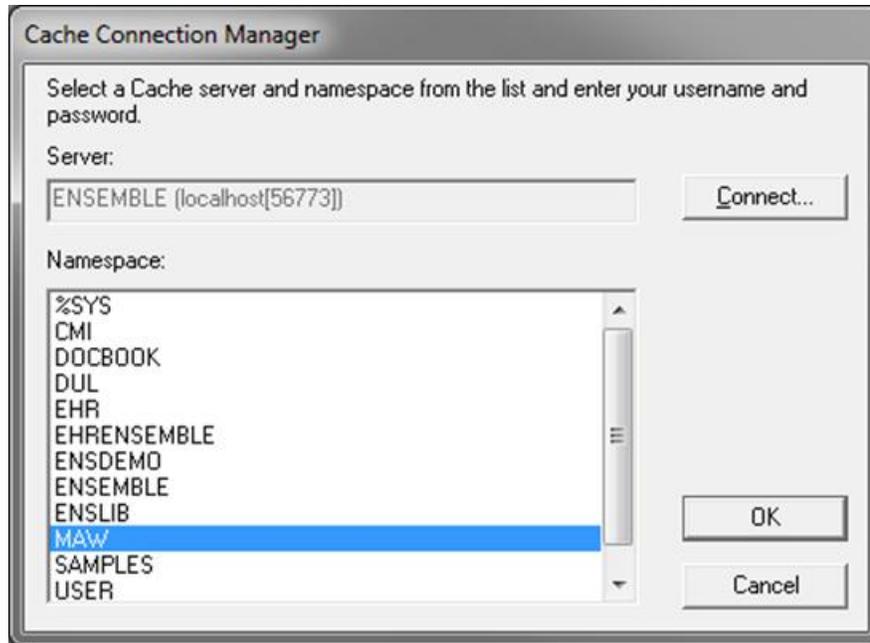


Figure 3-2: Selecting the Namespace for importing production

Now select the **Tools** menu and Import Local (this imports from your local PC, not the system the Ensemble software is located on). Navigate to the directory where the LR_VaLediIII.xml file is located and select **Open**.

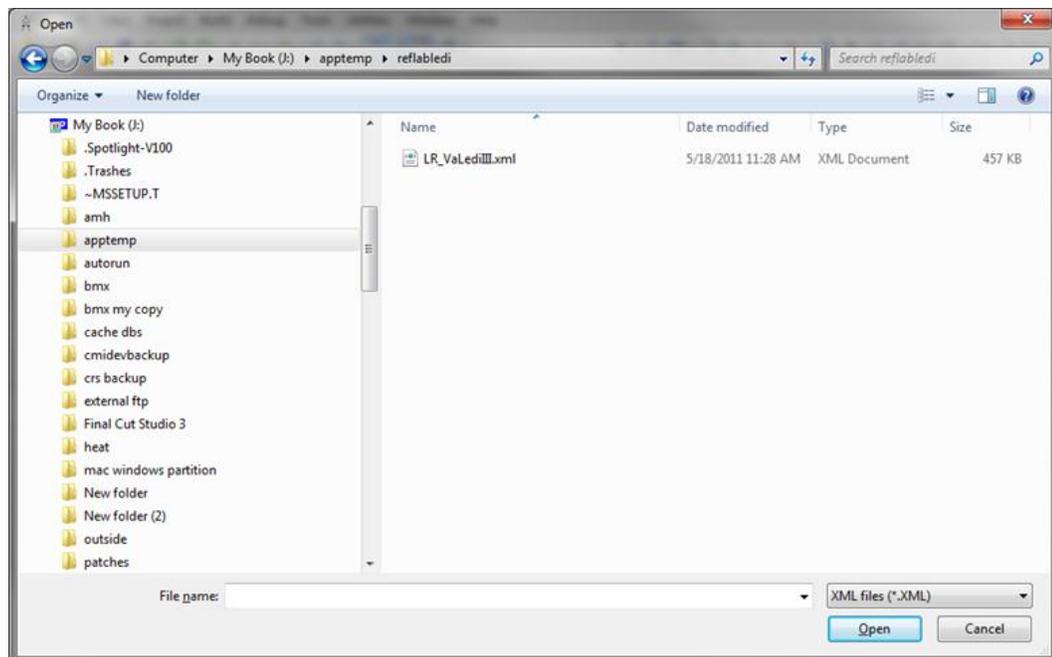


Figure 3-3: Navigating to Menu on Local System to production for import

Click the **Open** Button. This will open the Import dialog box.

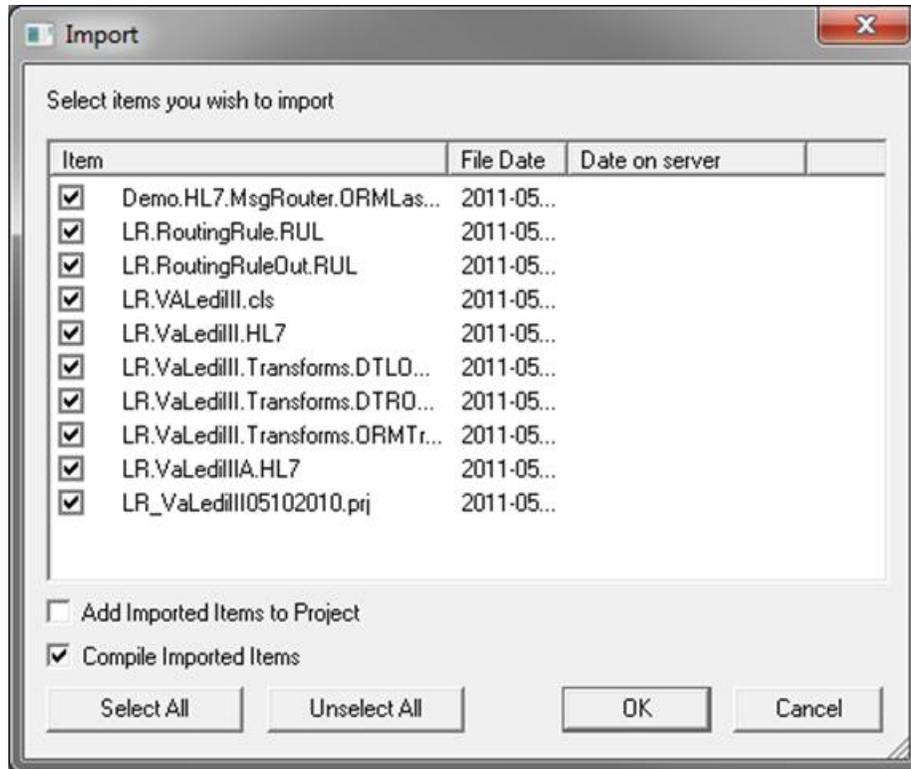


Figure 3-4: Import Dialog Box

At the Import dialog box, make sure the Compile Imported Items is checked and click **OK**.

The Production is now imported and ready to be started via the System Management Portal.

4.0 Configuring LR_VaLedIII.xml Production

Go to the **System Management Portal**, and select **Ensemble Management Portal**

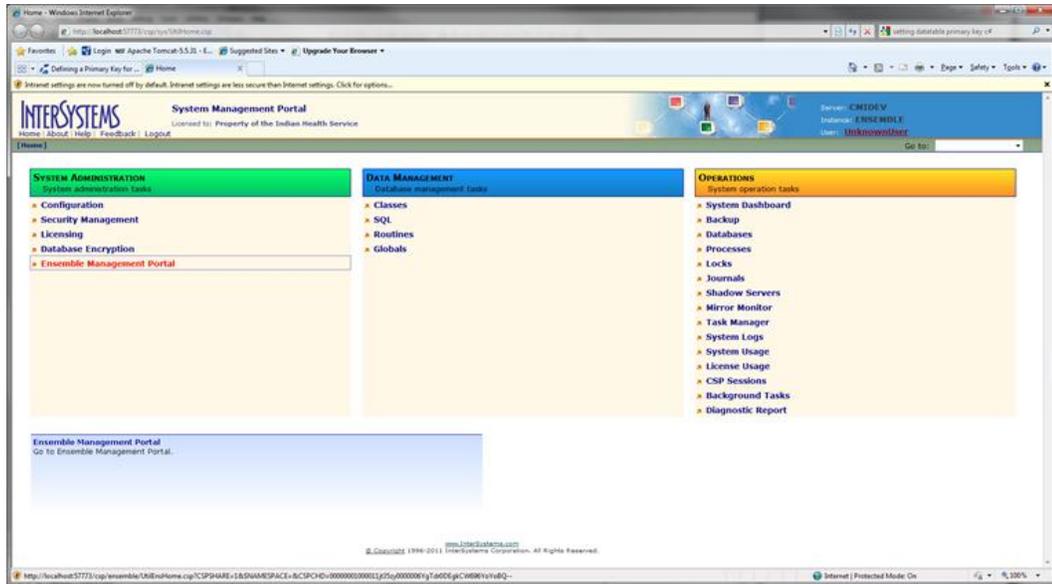


Figure 4-1: Selecting the Ensemble Management Portal

In the Namespace dropdown box select the **namespace** where the Production has been imported.

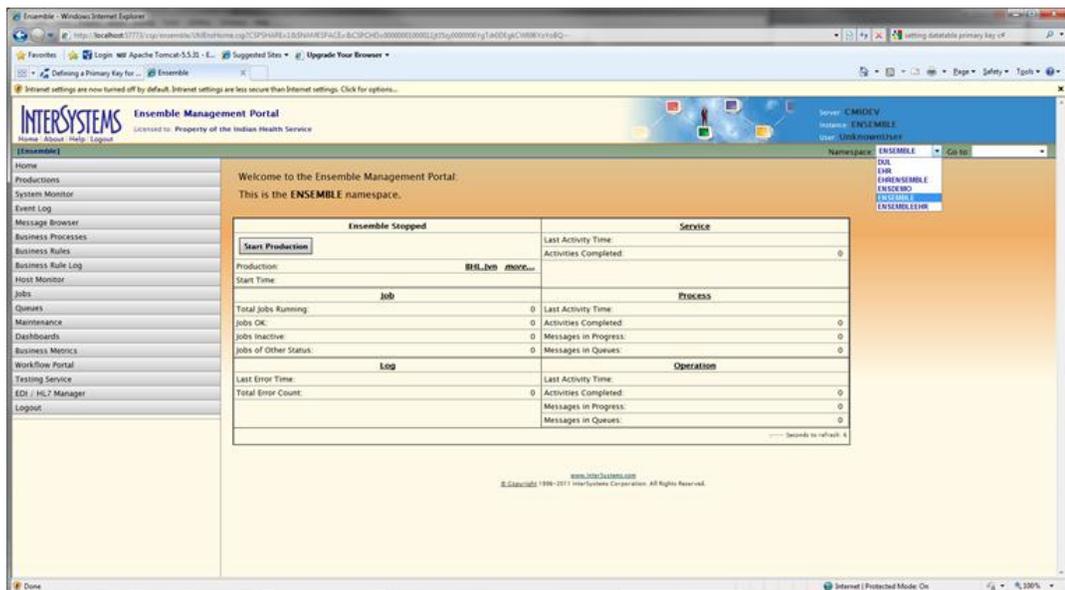


Figure 4-2: Selecting the Namespace where Production was imported

You should now see the Production listed. Select the desired namespace. Click the **Start Production button**.

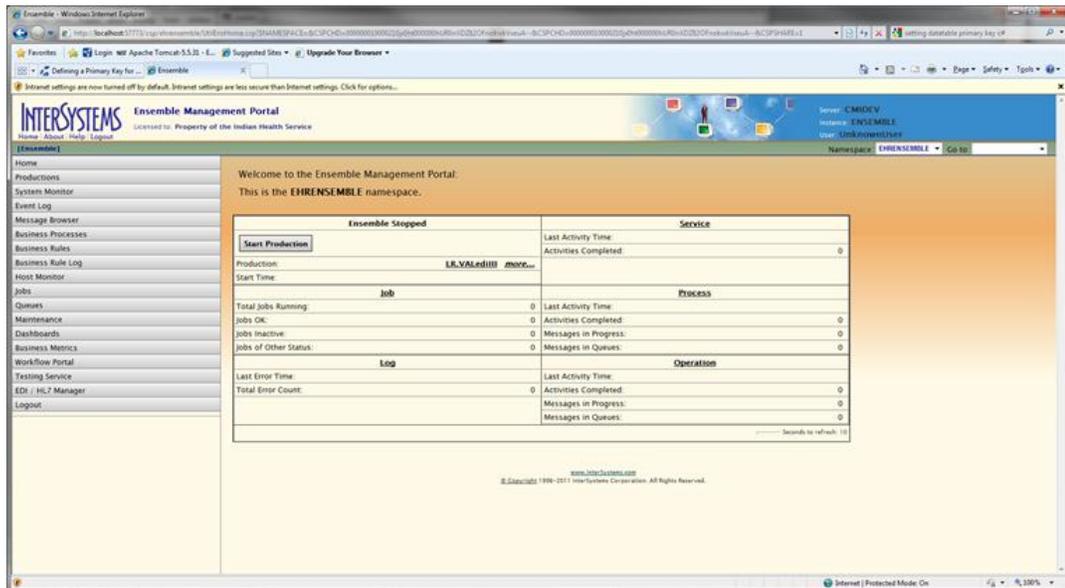


Figure 4-3: Starting the Production for LR.VALedIII

You will be asked if you are sure you want to start Production LR.VALedIII, click **OK**.



Figure 4-4: Dialog for start Production LR.VALedIII

There will be a dialog box displaying the processes started. Select **OK**, when this is finished and the Production is now running.

5.0 Configuring Quest IP Address and Ports

Obtain the port that Quest wishes to use for receiving orders and the TCPIP address and port that Quest wishes to use for transmitting orders.

Note: The VPN connection must be in place before this configuration should be attempted.

Sign on to the **Ensemble Management Portal**.

Click on then name of the production, **LRVALediIII**.

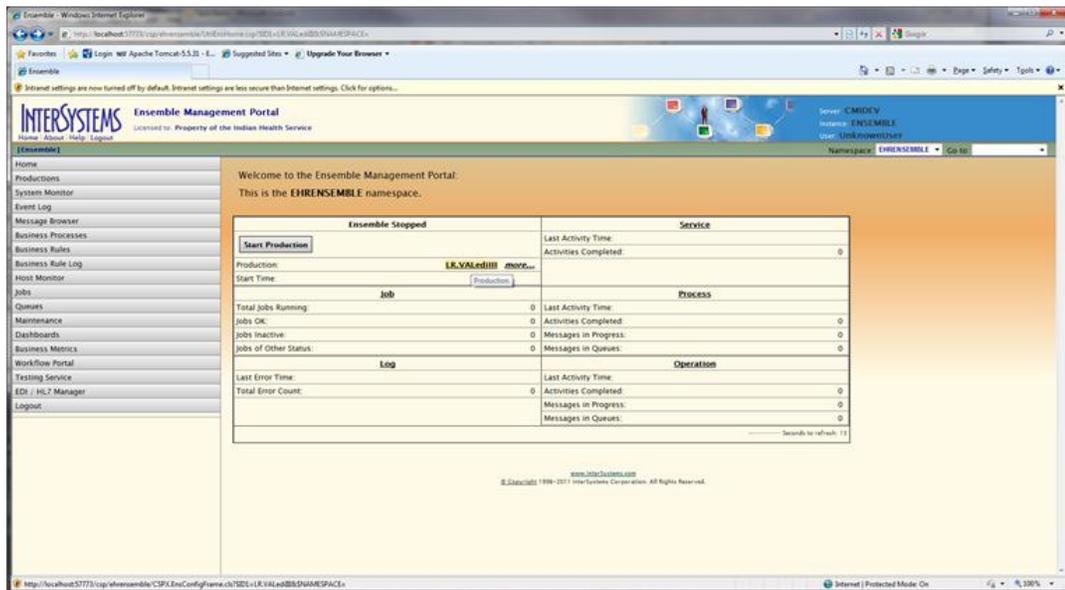


Figure 5-1: Selecting production for configuring ports and IP addresses for Quest interface

The following screen appears. To configure the listener click on the **VALediIIITCPLinkInbound Business Service** and change the Port field to the port defined by Quest, click the **Apply** button.

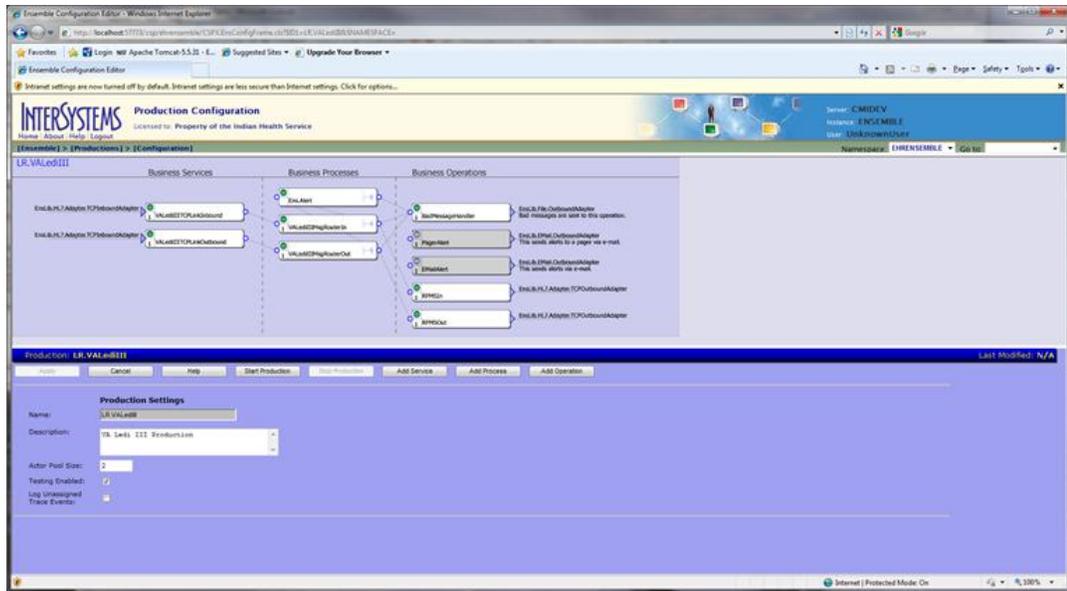


Figure 5-2: Configuring the Listener for results

To configure the transmitter click on the **RPMSOut Business Operation** and put in the IP Address and Port defined by Quest, click the **Apply** button.

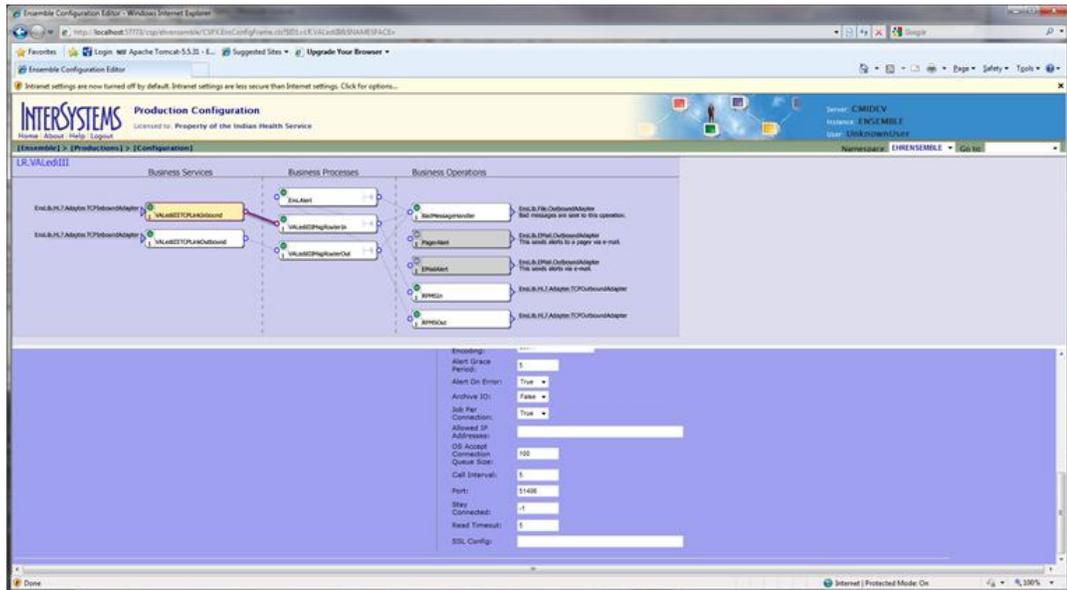


Figure 5-3: Configuring the Transmitter for Quest

Ensemble is now configured to send/receive messages from Quest.

6.0 HL7 Link Manager and Filers

The bidirectional reference laboratory interface for the Quest billing interface uses HL7 Version 1.6 filers.

The HL7 main menu is usually found on the Operations Management Menu of the Site Manager's menu, AKMOEVE.

```

SM      Operations Management ...

HL7     HL7 Main Menu ...

        Event monitoring menu ...
        Systems Link Monitor
        Filer and Link Management Options ...
        Message Management Options ...
        Interface Developer Options ...
        Site Parameter Edit
HLO     HL7 (Optimized) MAIN MENU ...

```

Figure 6-1: Accessing HL7 Main Menu

The tools that will be used for monitoring the Quest interface are found under Filer and Link Management Options. The Quest specific filers, LA7VQR and LA7VQT, will be installed and available when lr_0520.30k is installed.

Note: Taskman must be running for the Link Manager to be active.

Begin by confirming that the Link Manager is running. Note that even though it may appear to be running, you may wish to stop it and restart it.

```

Select HL7 Main Menu Option: Filer and Link Management Options

SM      Systems Link Monitor
FM      Monitor, Start, Stop Filers
LM      TCP Link Manager Start/Stop
SA      Stop All Messaging Background Processes
DF      Default Filers Startup
SL      Start/Stop Links
PI      Ping (TCP Only)
ED      Link Edit
ER      Link Errors ...

Select Filer and Link Management Options Option: LM TCP Link Manager
Start/Stop
Link Manager already running!

Would you like to stop the Link Manager now? NO//

```

Figure 6-2: Start/Stop Link Manager

You can confirm that the Link Manager is running by checking the List of Running Tasks in Taskman. Look for the Link Manager as follows:

```

TM      Taskman Management ...
        List Tasks
        Running tasks.

1214207: EN^HLCSLM, HL7 Link Manager. No device. SIH,SIH.
        From 7/1/2011 at 14:30, By you. Started running 7/1/2011 at
14:30.
        Job #: 6312 [18A8]

```

Figure 6-3: Checking Taskman for running Link Manager

Next you will need to check that the Quest incoming and outgoing filers are active. Use the menu option Systems Link Monitor from the HL7 Main Menu. This option will also show you if the Link Manager is running and if Taskman is running. You may type Q to exit from this screen.

```

HL7      HL7 Main Menu ...
Systems Link Monitor

          SYSTEM LINK MONITOR for TEST FACILITY (P System)

      NODE      MESSAGES RECEIVED  MESSAGES PROCESSED  MESSAGES TO SEND  MESSAGES SENT  DEVICE TYPE  STATE

      LA7VQR    16          16          26          15          SS      Reading
      LA7VQT    26          26          26          26          NC      Enabled
      PSOTPBA   69          69          69          69          NC      Open

      Incoming filers running => 1          TaskMan running
      Outgoing filers running => 1          Link Manager running
                                          Monitor current [next job 0.7 hr]

      Select a Command:
      (N)EXT (B)ACKUP (A)LL LINKS (S)CREENED (V)IEWS (Q)UIT (?) HELP:

```

Figure 6-4: Checking incoming and outgoing filers for Quest

In Figure 6-4, it can be noted that LA7VQR, the Quest Receiver shows that it is Reading and that LA7VQT, the Quest Transmitter is Enabled. If this were not the case and either or both of these filers were not running or appear to have gone to sleep (no data filing), they may be stopped and restarted as shown on the next page.

To stop and restart the Quest filers, use the menu option, SL Start/Stop Links, from the Filer and Link Management Options menu. Confirm that the filers have stopped, and then use the same option to restart them.

```

Select HL7 Main Menu Option: Filer and Link Management Options

```

```

SL      Start/Stop Links
Select Filer and Link Management Options Option: SL Start/Stop Links

This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: LA7VQT
The LLP was last started on JUL 01, 2011 14:35:20.

Okay to shut down this job? Y

Select Filer and Link Management Options Option: Start/Stop Links

This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: LA7VQR
The LLP was last started on JUL 01, 2011 14:33.

Okay to shut down this job? Y

```

Figure 6-5: Stopping Quest Receiver and Transmitter

```

Confirm that the links have stopped using the System Monitor option.

                SYSTEM LINK MONITOR for SONOMA (P System)

      NODE          MESSAGES RECEIVED  MESSAGES PROCESSED  MESSAGES TO SEND  MESSAGES SENT  DEVICE TYPE  STATE
      LA7VQR        16              16              26              15              SS      Shutdown
      LA7VQT        26              26              26              26              NC      Shutdown
      PSOTPBAA      69              69              69              69              NC      Open

      Incoming filers running => 1          TaskMan running
      Outgoing filers running => 1          Link Manager running
                                          Monitor current [next job 0.5 hr]

      Select a Command:
      (N)EXT (B)ACKUP (A)LL LINKS (S)CREENED (V)IEWS (Q)UIT (?) HELP:

```

Figure 6-6: Confirming that Quest links have stopped

Restart the links using the SL Start/Stop Links option again. Confirm that the links are now active.

```

Select Filer and Link Management Options Option: SL Start/Stop Links
This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: LA7VQR
The LLP was last shutdown on JUL 03, 2011 09:53:02.

Select one of the following:

```

```
F          FOREGROUND
B          BACKGROUND
Q          QUIT

Method for running the receiver: B// <enter>

Select Filer and Link Management Options Option: Start/Stop Links

This option is used to launch the lower level protocol for the
appropriate device. Please select the node with which you want
to communicate

Select HL LOGICAL LINK NODE: LA7VQT
The LLP was last shutdown on JUL 03, 2011 09:51:15.
This LLP has been enabled!
```

Figure 6-7: Restarting the Quest links

7.0 Glossary

Bidirectional

A two way exchange of data. In the case of reference laboratory interfaces, this refers to the electronic transfer of orders to an external reference laboratory and the electronic receipt of results into RPMS from that external reference laboratory.

Ensemble

A single, architecturally consistent technology stack (integration server, data server, application server, and portal development software) used for running RPMS server applications and interfaces.

HL7

Health Level Seven. An ANSI approved American National Standard for electronic data exchange in health care.

HL7 Filer

An application specific routine that controls filing of HL7 messages to a designated RPMS application or to an external entity.

HL7 Link Manager

An HL7 tool in RPMS that allows monitoring and control of HL7 filers. Taskman must be running in order for the Link Manager to run.

IHS

Indian Health Service. An Operating Division (OPDIV) within the U.S. Department of Health and Human Services (HHS).

Interface

An interface is a tool and concept that refers to a point of interaction between components, and is applicable at the level of both hardware and software. It allows a component, whether a piece of hardware or a piece of software to function independently while using interfaces to communicate with other components via an input/output system and an associated protocol.

LEDI

The Veteran's Administration's Laboratory Electronic Data Interchange standard.

MUMPS

Massachusetts General Hospital Utility Multi-Programming System. A procedural, interpreted general-purpose programming language oriented towards database applications.

Ensemble Production

An application-specific Ensemble component that can be configured to both translate and route HL7 messages to and from either RPMS applications or interfaces.

RPMS

Resource and Patient Management System. A suite of software applications used at IHS facilities to support administrative, clerical, and clinical functions.

VA

Veteran's Administration. United States Department of Veterans Affairs

Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

Phone: (505) 248-4371 or (888) 830-7280 (toll free)

Fax: (505) 248-4363

Web: <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

Email: support@ihs.gov