RESOURCE AND PATIENT MANAGEMENT SYSTEM

Laboratory
(LR)

Installation Guide

Version 5.2 Patch 21
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Office of Information Technology
Albuquerque, New Mexico

PREFACE

This manual contains installation information and lists of technical additions for the IHS RPMS Laboratory Package, V 5.2 Patch 21.

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1.0   Release Notes

This KIDS build contains the following items:

- All BLRL software including routines, data dictionaries and options added in support of the Reference Lab Project.

- All BLRL and LR software added to the Reference Lab Project

- Changes made to incorporate the Reference Lab Project including additional prompts, DD changes to the Data File (#63) and changes to reports and screen displays.

2.0   Installation Notes

2.1.1   General Information

This guide explains how to install and set up the Generic Interface System (GIS) for transferring data from and/or to a commercial Reference Laboratory from the Resource and Patient Management System (RPMS) using standard HL7 messaging.

Sites may use the Reference Laboratory package as a unidirectional interface, which only transfers laboratory results back to the ordering facility. Other sites may use the package as a bidirectional interface to transmit their orders electronically as well as receive results using the auto instrument option of the RPMS Laboratory Package.

Urban, Tribal, and IHS facilities using the RPMS Laboratory System may use a unidirectional interface if laboratory staff do not have time to accession and track all reference laboratory data. Sites will select to use either a unidirectional or a bidirectional interface during the software installation when site parameters are set.

A unidirectional interface passes laboratory data from the Reference Laboratory to the Patient Care Component (PCC) database, if it meets all criteria of patient and test identification. Do not interpret the laboratory data stored in the PCC as a replacement for the hard copy laboratory reports issued by the Reference Laboratory and filed in the patient charts. **The hard copy report remains the legal laboratory report.** The laboratory data transmitted to PCC via the interface is designed as a replacement for PCC data entry and provides an abstracted view of laboratory results suitable for health summary display, database searches, and clinical overview

A bidirectional interface will place test orders in the RPMS Laboratory System, which are exported to the designated Reference Laboratory. Test results are released by the Reference Laboratory, and may be reviewed and verified using the Enter/Verify Data (Auto Instrument) option in the Processing menu of the Laboratory Package. If a site uses a bidirectional interface, the data stored in the laboratory files

duplicates the data sent by the Reference Laboratory and is available in all normal laboratory report options as well as from PCC and the Electronic Health Record (EHR).

The interface does not use commercial software or hardware, such as that supplied by Data Innovations for interfacing laboratory instruments to RPMS.

The current interface has been tested and certified for the following Reference Laboratories:

Reference Laboratory	Mode
Dynacare	Unidirectional
Laboratory Corporation of America (LabCorp)	Unidirectional and Bidirectional
Quest Diagnostics	Unidirectional and Bidirectional
Unilab	Unidirectional

3.0   Installation Issues

3.1   Unidirectional vs. Bidirectional

The site manager and area office information system staff in discussion with the facility laboratory staff must decide whether the interface will be installed as a unidirectional or bidirectional interface. Site parameters are set during the installation process when installation questions are asked. The unidirectional interface requires less time for initial set up as well as file maintenance over time. It is important to note that if the unidirectional interface option is chosen, reference ranges and units are passed from the reference laboratory via the interface and stored with the patient results in PCC, but are not available to providers when they are trying to view Laboratory results via EHR. If the bidirectional interface is chosen, facility staff must maintain reference ranges and units consistent with those transmitted by the Reference Laboratory in the Laboratory Test file.

3.2   Connectivity Issues

There are two potential choices for determining how electronic files are sent out to the Reference Laboratory and results are returned:

* Continuous streaming in which results and/or orders are passed back and forth in real time via TCPIP between the referring facility and the reference laboratory. This requires set up of a Virtual Private Network (VPN) connection for the exchange of files.

* FTP via a VPN in which a file or files of test results are deposited into the designated import directory on the RPMS server of the referring facility at

designated time intervals. Files of laboratory orders may also be picked up by the reference laboratory from the designated export directory.

Setting up the VPN connection must be coordinated between the local facility, the Reference Laboratory, and the IHS Networking staff. Requests for LAN to LAN VPN connections must be submitted to the IHS HELP Desk several months before the anticipated implementation date. The VPN request forms may be obtained from the IHS HELP desk.

When submitting the VPN form to the Reference Laboratory, note that they must state that this is a LAN-to-LAN connection. You must identify the IP address of your RPMS server where it lists which machines the requestor needs access to. The Reference Laboratory must include the IP address of the VPN box on their side of the network, as well as the name and contact number for the Reference Laboratory network VPN specialist.

The type of encryption, port assignments etc., can be worked out between the Reference Laboratory network person and IHS Network staff after the form is approved. The only way to do a LAN-to-LAN connection is to have two network people exchange technical info as well as the pre-shared encrypted key**.**

3.3   Contents of Distribution

This distribution contains:
      lr__0520.21k

3.4   Requirements

- Kernel Version 8.0 through patch 8
- Fileman Version 22 through patch 1
- Laboratory Package Version 5.2 through patch 20
- GIS Version 3.01 patch 13 (Note that not all sequential GIS patches are required as each patch provides the software for a specific type of interface. For this interface, patches 1, 2, 11, and 13 are required.)

3.5   File Directories

As noted in the Required Information section, a master directory named, *REFLAB,* will need to be set up in a public directory on the RPMS server. Three subdirectories can be set up within the *REFLAB* folder – *REFLABIN*, *REFLABOUT*, and *REFLABSAVE*.   These directories should be username and password protected.

3.6   Required Information

Be prepared to answer the following questions during installation:

1. REFERENCE LAB NAME:
   LabCorp
   Quest
   Unilab
   Dynacare

2. EXPORT DIRECTORY: This is where outgoing order files will be stored for a bi-directional interface site. Specify the complete path.
   e.g. C:\reflab\reflabout\ (Windows) or /usr/ihs/reflab/reflabout/ (AIX)

3. SENDING MACHINE IP ADDRESS:

4. FTP USER ID: The assigned user ID for the reference laboratory to use when FTP'ing files via a VPN to the facility.

5. FTP PASSWORD: The assigned password for the reference laboratory to use when FTP'ing files via a VPN to the facility.

6. ORDER(S) FILE NAME PREFIX:
   Quest - TDA
   LabCorp - OR

7. RESULT(S) FILE NAME PREFIX:
   Quest - DAL
   LabCorp – RS
   Unilab – IHxx as assigned by Unilab where xx is the unique identity assigned to the receiving facility.

8. HL7 IMPORT FILE FORMAT:
   Quest, LabCorp, and Unilab - CARRIAGE RETURN/LINE FEED

9. STORAGE DIRECTORY: This is where both outgoing and incoming files are stored after they have been imported or exported. Specify the complete path. e.g. C:\reflab\reflabsave\ (Windows) or /usr/ihs/reflab/reflabsave/ (AIX)

10. IMPORT DIRECTORY: This is where the incoming files are stored when they are imported.   Specify the complete path.
    e.g. C:\reflab\reflabin\ (Windows) or /usr/ihs/reflab/reflabin/ (AIX)

11. BIDIRECTIONAL/UNIDIRECTIONAL: Specify choice.

12.HOLD LABS FOR VERIFICATION: This means that results will not be passed directly to PCC at unidirectional sites, but will be held for review and manual

verification before passing to PCC. (**Enter Yes until the interface has been thoroughly tested.**)

13. DAYS TO KEEP ORD/RES FILE(S): Recommend 30 days to retain old result and order files.

14. CLIENT NUMBER: Enter the client number assigned by the reference laboratory, e.g. 032458. Note that facilities with more than one client number will need to edit the BLR MASTER CONTROL file and add the appropriate client numbers for each facility in their service unit receiving results via the interface.

15. DEVICE FOR SHIPPING MANIFEST: For bi-directional sites, the printer on which you wish shipping manifests to print when tests are accessioned.

16. DEFAULT ORDERING LOCATION: For unidirectional sites, the ordering location that should be used as the default. This must be a valid entry in file 44 with an abbreviation and an Institution entry consistent with PCC site parameters. If more than one facility in the service unit will be using the interface, the BLR MASTER CONTROL file will need to contain entries for each facility.

17. PASS CPT CODES ?: If a unidirectional site wishes to pass CPT codes to Third Party Billing for incoming reference laboratory tests, set to "YES".

The option should only be set to "YES" if the referring facility is set up as "client bill" with the Reference Laboratory, and the Referring Facility wishes to bill for the tests sent to the Reference Laboratory. If the option to pass CPT codes is selected, the visits created by the incoming reference laboratory tests will be created as ambulatory visits and if not matched with an existing PCC visit will appear on the VRR Reports with no Primary Provider and Purpose of Visit. If the field, Pass CPT Codes?, is set to "NO", visits will be created as Historical Event type visits in PCC. They will not appear on VRR reports. **Note that this option should be selected at a unidirectional site only if a person on site will take responsibility for maintaining the CPT code table in the laboratory package.**

Ordering providers should have valid UPIN numbers assigned in the Provider file. The UPIN numbers should be included on any requisitions submitted to the Reference Laboratory. Incoming laboratory data will be filed in PCC with the correct ordering provider information, if a match is made on UPIN number. If no UPIN number is provided in the incoming laboratory record, the ordering provider in PCC will be automatically assigned as TECHNICIAN,LAB.

3.7   Reference Laboratory Information

To implement the interface, contact your reference laboratory sales representative. They will need to:

- Submit a project request plan to their national office.
- Provide you with a list of your test utilization for the last year.
- Provide you with a list of order and result codes for the tests that you routinely order from that reference laboratory. **You will note that it is essential that you have a test and result code database from the Reference Laboratory in order to complete this mapping. The Reference Laboratory should provide a spreadsheet or other table similar to below:**

Order #	Order Name	Result #	Result Name
000455	THYROID PANEL	001149	Thyroxine (T4)
000455	THYROID PANEL	001156	T3 Uptake
000455	THYROID PANEL	001164	Free Thyroxine Index
000703	RENIN ACTIVITY AND ALDOSTERONE	002006	Renin, Plasma
000703	RENIN ACTIVITY AND ALDOSTERONE	004374	Aldosterone, Serum
000810	VITAMIN B12 AND FOLATE	001503	Vitamin B12
000810	VITAMIN B12 AND FOLATE	002014	Folates (Folic Acid), Serum

- Provide you with an electronic interface account number.

4.0   LR Patch Installation Instructions

The Laboratory Package Version 5.2 through patch 20 must be installed prior to installation of the Reference Laboratory patch.

The Reference Laboratory patch includes a single KIDS distribution:
    lr__0520.21k

This is a standard KIDS install and should be installed by an individual with programmer access.

Access the KIDS menu by typing, D ^XUP, and selecting Kernel Installation & Distribution System.

Note that a number of questions about the Reference Laboratory will be asked during the installation that you should be prepared to answer. However, you can subsequently change the entries using the option in the BLR Reference Laboratory Menu to edit the site parameters.

```
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: 1  Load a Distribution
Enter a Host File: /usr/ihs/frv/lr__0520.21k

KIDS Distribution saved on Dec 17, 2003@17:17:56
Comment: BLR Reference Lab Test Submission 1

This Distribution contains Transport Globals for the following Package(s):
   BLR REFERENCE LAB 1.0
Distribution OK!

Want to Continue with Load? YES//
Loading Distribution...

   BLR REFERENCE LAB 1.0
Use INSTALL NAME: BLR REFERENCE LAB 1.0 to install this Distribution.



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

Select Installation Option: 6  Install Package(s)
Select INSTALL NAME: BLR REFERENCE LAB 1.0       Loaded from Distribution
Lo
aded from Distribution  12/26/03@12:39:13
     => BLR Reference Lab Test Submission 1  ;Created on Dec 17,
2003@17:17:56

This Distribution was loaded on Dec 26, 2003@12:39:13 with header of
BLR Reference Lab Test Submission 1  ;Created on Dec 17, 2003@17:17:56
   It consisted of the following Install(s):
BLR REFERENCE LAB 1.0
Checking Install for Package BLR REFERENCE LAB 1.0

Install Questions for BLR REFERENCE LAB 1.0

Incoming Files:


   9009022   IHS LAB TRANSACTION LOG
Note:  You already have the 'IHS LAB TRANSACTION LOG' File.


   9009026   BLR REFERENCE LAB  (including data)
```

```
   9009026.1 BLR REFERENCE LAB IMPORT/EXPORT LOG


   9009029   BLR MASTER CONTROL
Note:  You already have the 'BLR MASTER CONTROL' File.

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


Want KIDS to INHIBIT LOGONs during the install? YES// NO
Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.

DEVICE: HOME//
qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq

 Install Started for BLR REFERENCE LAB 1.0 :
               Dec 26, 2003@12:39:37

Build Distribution Date: Dec 17, 2003

 Installing Routines:
               Dec 26, 2003@12:39:38

 Installing Data Dictionaries:
               Dec 26, 2003@12:39:38

 Installing Data:
               Dec 26, 2003@12:39:40

 Installing PACKAGE COMPONENTS:

 Installing BULLETIN

 Installing SECURITY KEY
Installing PROTOCOL
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
  Located in the BLR (IHS LABORATORY) namespace.
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  Located in the BLR (IHS LABORATORY) namespace.

 Installing LIST TEMPLATE

 Installing OPTION
               Dec 26, 2003@12:39:40
```

```
 Running Post-Install Routine: ^BLRRPOST
Now setting up reference lab parameters..
Setup Parameters for which Reference Lab: LABCORP (Name of Reference
Laboratory)

EXPORT DIRECTORY: /usr/ihs/frv/reflab/reflabout
SENDING MACHINE IP ADDRESS:
FTP USER ID:
FTP PASSWORD:
ORDER(S) FILE NAME PREFIX: OR//
RESULT(S) FILE NAME PREFIX: RS//
STORAGE DIRECTORY: /usr/ihs/frv/reflab/reflabsave
BIDIRECTIONAL/UNIDIRECTIONAL: BIDIRECTIONAL// UNIDIRECTIONAL

HOLD LABS FOR VERIFICATION: YES//
DAYS TO KEEP ORD/RES FILE(S): 30
CLIENT NUMBER: 43807// 4141815
DEVICE FOR SHIPPING MANIFEST:
DEFAULT ORDERING LOCATION: LBH
PASS CPT CODES ?: N  NO

Now setting up GIS HL7 Message Parameters..
Now creating TECHNICIAN,LAB for filing data...

 Updating Routine file...

 Updating KIDS files...

 BLR REFERENCE LAB 1.0 Installed.
               Dec 26, 2003@12:42:03

 No link to PACKAGE file

Install Completed
```
Figure X.X Patch Installation

5.0   Initial Setup

5.1   BLR Master Control File

Identify each facility on the RPMS database that will be using the interface by
making an entry in the BLR MASTER CONTROL file.   Use Fileman as follows to
make the appropriate entries.

```
Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: V LAB// BLR MASTER CONTROL     (2 entries)
EDIT WHICH FIELD: ALL//


Select BLR MASTER CONTROL SITE: LITTLE BUILDING HOSPITAL        ALBUQUERQUE
```

```
 JICARILLA        10                    IHS
            ...OK? Yes//   (Yes)


SITE: LITTLE BUILDING HOSPITAL//
LAB LOG TRANSACTION: YES
LAB LOG TO PCC: YES
LOG PAT DATA ONLY: YES
*DEFAULT DIRECTORY PATH:
START PROCESSING DATE: NOV 26, 2003 (Date you want the interface to become
active.)
START EVENT DATE: NOV 26, 2003 (Date you want the interface to become
active.)
DAYS TO KEEP TRANSACTIONS: 180 (How many days you want the incoming reference
laboratory transactions stored in the IHS Lab Transaction Log file.)
STOP PROCESSOR:
TAKE SNAPSHOTS:
ERROR OVERFLOW LIMIT:
LOINC EXPORT DESTINATION IP:
LOINC EXPORT DEST. FOLDER:
LOINC LOCAL DESTINATION:
LOINC DAYS TO KEEP EXPORT LOG:
LOINC LOG IN ID:
LOINC LOG IN PASSWORD:
ACCESSION TEST GROUP TEMPLATE:
Select EVENT DATE:
Select PROCESSING DATE: JUN 17,2002//
  PROCESSING DATE: JUN 17,2002//   (No Editing)
  LAST TRANSACTION SEQ ASSIGNED: 32//   (No Editing)
  LAST TRANSACTION SEQ PROCESSED: 32//
  TRANSACTION LOG # ASSIGNED:
Select LAB APPLICATION PLUG-IN: LR*5.2*21  (The installation name of the
Reference Laboraotry Interface patch.)        Install Completed    Install
Completed  12/26/03@09:05:48
    => Reference Laboratory Interface  ;Created on Dec 17, 2003@07:05:06
  Are you adding 'LR*5.2*xxxx' as a new LAB APPLICATION PLUG-IN (the 1ST for
this BLR MASTER CONTROL)? No// Y
  (Yes)
  PLUG-IN ON/OFF?: ON   ON
Select LAB APPLICATION PLUG-IN:
REFERENCE LAB: LABCORP (or Quest, Dynacare, or Unilab)
Select CLIENT ACCOUNT NUMBER: 4104005

DEFAULT ORDERING LOCATION: LBH (For unidirectional sites, the ordering
location. (Hospital Location file #44)that should be assigned for creating
the PCC visit.)
```

Figure X.X BLR Master Control File

5.2   PCC Master Control File

Identify each facility on the RPMS database that will be using the interface by
making an entry in the PCC MASTER CONTROL file for LR. Use Fileman as
follows to make the appropriate entries:

```
Select VA FileMan Option: Enter or Edit File Entries

INPUT TO WHAT FILE: STATE// PCC MASTER CONTROL    (1 entry)
EDIT WHICH FIELD: ALL//


Select PCC MASTER CONTROL SITE: CIMARRON HOSP   TUCSON      TUCSON   01
AZ                                      PHS
        ...OK? Yes//   (Yes)

SITE: CIMARRON HOSP//
TYPE OF LINK: DATE ONLY REQUIRED//
DEFAULT HEALTH SUMMARY TYPE: ADULT REGULAR//
TYPE OF VISIT: IHS//
UNCODED ICD DIAGNOSIS CODE:
UNCODED ICD PROCEDURE CODE:
ATTEMPT ANCILLARY LINKAGE:
Beginning FISCAL YEAR Month:
Select PACKAGE: LR
     1   LR63 1ST TIME INSTALL       LR63
     2   LR  LAB SERVICE      LR
     3   LRDJOB  AUTOMATED LAB INSTRUMENTS     LA
CHOOSE 1-3: 2  LAB SERVICE      LR
  PASS DATA TO PCC ?: Y  YES
  PACKAGE FLAG: 0
```

Figure X.X PCC Master Control File

6.0   Additional Setup for Bidirectional Sites

6.1   LA7 Message Parameter Configuration

Make an entry for the Reference Laboratory in the LA7 MESSAGE PARAMETER CONFIGURATION file (#62.48) **if using a bidirectional interface.** Use Fileman to edit the file as follows.

6.1.1   Quest

```
Select LA7 MESSAGE PARAMETER CONFIGURATION: QUEST
CONFIGURATION: QUEST//
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: ON
PROCESS IN: D QUE^BLRQIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: TDA43807
      TDA = Receiving Facility
      43807 = Client Number
      Entry will be provided by ITSC and Reference Laboratory.  This will be
      changed when testing has been completed and the interface is switched
      to production.
```
Figure X.X Message Parameter Configuration (Quest)

6.1.2   LabCorp

```
Select LA7 MESSAGE PARAMETER CONFIGURATION: LABCORP
CONFIGURATION: LABCORP
PROTOCOL: HEALTH LEVEL SEVEN
STATUS: ACTIVE
GRACE PERIOD FOR MESSAGES:
LOG ERRORS: ON
PROCESS IN: D QUE^BLRLIIN
PROCESS DOWNLOAD:
HL7 NON-DHCP APPLICATION:
Select ALERT CONDITION:
Select REMOTE SYSTEM ID: 1100DACIMIDA000111
      Entry will be provided by ITSC and Reference Laboratory.  This will be
      changed when testing has been completed and the interface is switched
      to production.
```
Figure X.X Message Parameter Configuration (LabCorp)

7.0   Completing Setup

The additional steps required to make the interface operational are included in the User Manual. For unidirectional sites, these steps include:

1. Adding a test for each incoming reference laboratory test and panel to the Laboratory Test file (#60)

2. Mapping each of the laboratory tests (whether orderable or resultable) used by your facility to the Order and Result code entries in the BLR Reference Laboratory file.

3. If CPT Codes are to be passed to PCC, the IHS Lab CPT Code file will need to be updated for all orderable tests from the reference laboratory.

4. When adding a new provider to the RPMS database using the AVA Edit/Add Provider option, enter the provider's UPIN into the appropriate field. The UPIN is stored in both the provider file and the new person file. When the GIS interface software is installed, the provider file will be checked for the presence of a generic provider of TECHNICIAN,LAB. An entry will be added automatically if is not present. If UPIN numbers have not been added to the RPMS Provider file, all incoming transactions will be filed in PCC with the generic TECHNICIAN,LAB as the ordering provider.

For bidirectional sites, in addition to the four steps listed above, entries will need to be made in the Load/Worklist and Auto Instrument file for all reference laboratory tests passed via the interface. The UI test code to be used in the Auto Instrument file is the Result Code supplied by the Reference Laboratory for that test.

Update reference ranges and units in the Laboratory Test file as well. If the unidirectional interface option is chosen, reference ranges and units are passed from the reference laboratory via the interface and stored with the patient results in PCC.

In addition, at bidirectional sites, decisions will have to be made about how incoming reference laboratory data will be displayed and/or printed on interim and cumulative reports.

8.0   Patch 21 Additions

8.1   Data Dictionaries

9.0 GIS Interface Activation

The routines for processing incoming and outgoing laboratory data for different reference laboratories are contained in GIS Patch 13. The following instructions are provided for activating the appropriate processes for LabCorp, Quest, and Unilab unidirectional and bidirectional TCPIP interfaces *after installation of Laboratory Reference Patch 21.*

> **Note:** If the Reference Laboratory Interface is already running, stop the HL IHS LAB RECEIVER and HL IHS LAB TRANSMITTER background processes by using the GIS menu option, SH1 Stop Background Process, for each processor before installation of GIS Patch 13.

After installation of GIS Patch 13, activate the appropriate Reference Laboratory interface by performing the following configuration steps in Section 9.1:

9.1 TCPIP Configuration

9.1.1 LabCorp

1. Identify the Destination for the Lab Receiver (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM    File and Table Menu ...
      BPE     Background Process Entry/Edit

Select HL IHS LAB RECEIVER
Change the Destination Field to:  HL IHS LAB R01 LABCORP IN
Change the Destination Determination Code field to:  D LABCORP^INHVIHS
Save your changes
```
Figure X.X Background Process Entry/Edit

2. Turn on Message Ack (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM    File and Table Menu...
      DE     Destination Entry/Edit

Select HL IHS LAB R01 LABCORP IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes
```
Figure X.X Destination Entry/Edit

3. Activate the Reference Laboratory Processes (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM    File and Table Menu...
      TTE    Destination Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 LABCORP IN
Change the Active field to ACTIVE
Save your changes and exit
```
Figure X.X Destination Entry/Edit

Activate the Reference Laboratory Processes (Bidirectional Sites Only)

```
Select HL IHS LAB LABCORP O01 OUT CHILD
Change the Active field to ACTIVE
Save your changes and exit
```
Figure X.X

4. Start the Reference Laboratory Processes (Unidirectional Sites)

```
GIS Interface Menu
      BPM    Background Process Control Menu ...
             S1    Startup a Background Process

      Select OUTPUT CONTROLLER
      Select FORMAT CONTROLLER
      Select HL IHS LAB RECEIVER
```
Figure X.X Startup Background Process

Start the Reference Laboratory Processes (Bidirectional Sites)

```
GIS Interface Menu
      BPM    Background Process Control Menu ...
             S1    Startup a Background Process

      Select OUTPUT CONTROLLER
      Select FORMAT CONTROLLER
      Select HL IHS LAB TRANSMITTER
      Select HL IHS LAB RECEIVER
```
Figure X.X Startup a Background Process

9.1.2   Quest

1. Identify the Destination for the Lab Receiver (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM   File and Table Menu ...
            BPE    Background Process Entry/Edit

Select HL IHS LAB RECEIVER
Change the Destination Field to:  HL IHS LAB R01 QUEST IN
Change the Destination Determination Code field to:  D QUEST^INHVIHS
Save your changes
```
Figure X.X Background Process Entry/Edit

2. Turn on Message Ack (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM   File and Table Menu...
            DE     Destination Entry/Edit

Select HL IHS LAB R01 QUEST IN
Change the Accept Ack Conditions field to: ALWAYS
Save your changes
```
Figure X.X Destination Entry/Edit

3. Activate the Reference Laboratory Processes (Unidirectional and Bidirectional Sites)

```
GIS Interface Menu
      FTM   File and Table Menu...
            TTE    Destination Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 QUEST IN
Change the Active field to ACTIVE
Save your changes and exit
```
Figure X.X Destination Entry/Edit

Activate the Reference Laboratory Processes (Bidirectional Sites)

```
Select HL IHS LAB QUEST O01 OUT CHILD
Change the Active field to ACTIVE
Save your changes and exit
```
Figure X.X

4. Start the Reference Laboratory Processes (Unidirectional Sites)

```
GIS Interface Menu
      BPM   Background Process Control Menu ...
            S1    Startup a Background Process

      Select OUTPUT CONTROLLER
```

```
      Select FORMAT CONTROLLER
      Select HL IHS LAB RECEIVER
```

Figure X.X Startup a Background Process

Start the Reference Laboratory Processes (Bidirectional Sites)

```
GIS Interface Menu
      BPM   Background Process Control Menu ...
            S1   Startup a Background Process

      Select OUTPUT CONTROLLER
      Select FORMAT CONTROLLER
      Select HL IHS LAB TRANSMITTER
      Select HL IHS LAB RECEIVER
```

Figure X.X Startup a Background Process

9.2   FTP Configuration

9.2.1   Unilab (Unidirectional)

1. Activate the Reference Laboratory Processes

```
GIS Interface Menu
      FTM   File and Table Menu...
            TTE    Destination Entry/Edit

Select HL IHS LAB R01 IN
Change the Active field to INACTIVE
Save your changes and exit
Select HL IHS LAB R01 UNILAB IN
Change the Active field to ACTIVE
Save your changes and exit
```

Figure X.X Destination Entry/Edit

2. Start the Reference Laboratory Processes

```
GIS Interface Menu
      BPM   Background Process Control Menu ...
            S1   Startup a Background Process

      Select OUTPUT CONTROLLER
```

Figure X.X Startup a Background Process

9.3 TaskMan

The task, BLRTASK LAB LOG CLEANUP, should be tasked to run daily at a time when relatively few users are on the system. This task removes laboratory transaction log records that are older than 180 days or whatever time frame has been specified in the BLR MASTER CONTROL file for the facility. This task should already be scheduled at sites currently using the RPMS Laboratory Package. The task, INH AUTOPURGE, which deletes raw data in ^INTHU should be tasked to run every 14D. Two additional tasks, BLR REFLAB RESTART RECEIVER and BLR REFLAB RESTART TRANSMITTER should be scheduled to run at 1H intervals at bidirectional sites with real time VPN connections. These tasks restart the GIS receiver and transmitter on an hourly basis in the event connectivity is lost.

Summary of Tasks

Task	Unidirectional/Bidirectional	Frequency
BLRTASK LAB LOG CLEANUP	Both	Daily
INH AUTOPURGE	Both	14D
BLR REFLAB RESTART RECEIVER	Bidirectional	1H
BLR REFLAB RESTART TRANSMITTER	Bidirectional	1H

9.4 Mail Group

Bidirectional Sites:
If it does not already exist, a mail group should be set up to receive bulletins notifying them of reference laboratory tests that failed to pass to PCC. The mail group should be called, Lab/PCC Link. Members should be the site manager and the primary person(s) on site who will be managing the tests imported and/or exported from the Reference Laboratory. Identify this mail group as recipients for the bulletins:

      BLRTXERR
      BLRTXLOG
      BLRTXLOGERR

Directions for researching and dealing with failed transactions are provided in the Maintenance Section of the User Manual.

Unidirectional Sites:
At unidirectional sites, there are three reasons an incoming result message will fail.

- If a match is not found on a patient based on matching chart number, date of birth, and sex.
- If no collection date and/or time is provided

- If a matching test code with a pointer to the LABORATORY TEST file (#60) is not found in the BLR REFERENCE LABORATORY file.

A mail group should be set up to receive the following bulletins of lab data that could not be filed:

BLRTXERR
BLRTXLOG
BLRTXLOGERR
BHL NO TEST MATCH
BHL REFLAB NO PAT

9.5   Security Keys

Any staff needing access to the Reference Laboratory interface menu will need to be allocated the security key, **BLRRLZ**. In addition, staff should be given the security key, **BLRZMENU**, which will allow them to view the status of the link to PCC, edit CPT codes, and refile transactions.

9.6   Menu Management

The Reference Lab Main Menu will be installed and appended to the IHS Lab Main Support Menu (BLR or LINK) during installation of Laboratory Reference Patch 21. This menu contains options to map laboratory test codes to reference laboratory test codes, to export and import files to or from the Reference Laboratory, to set site parameters, and to review and verify incoming data for a unidirectional interface.

At unidirectional sites, it should be noted that the full DHCP Laboratory Menu may contain far more options than are useful to a site using the reference laboratory interface. In addition, menu options to Display a Patient's Visit and Browse a Health Summary may help staff to monitor the status of imported reference laboratory data. It is recommended that some menu customization be done as follows:

1. Add BLRMENU with a menu synonym of BLR to AKMOCORE
2. Add APCDVIEWVISIT to BLRMENU*
3. Add APCHSBRW to BLRMENU*
4. Add LRDIEATOMIC to BLRMENU*
5. Add LRDIECOSMIC to BLRMENU*

* Unidirectional Sites Only

10.0   Ref Lab Site Parameter Setup

The site parameters should have been set up when the Reference Laboratory Interface patch was installed based on the answers to the installation questions. However, it is highly recommended that you confirm settings in the BLR Reference Laboratory file. Use the menu option, **SIT   Reference Lab Site Parameter Add/Edit**, to verify the settings as follows.

```
   LAB     Laboratory DHCP Menu ... (locked with LRLAB)
        BLR     IHS Lab Main Support Menu ... (locked with BLRZMENU)
              REF     Reference Lab Main Menu ...
                  SIT     Reference Lab Site Parameter Add/Edit


Select Reference Lab Main Menu Option: SIT  Reference Lab Site Parameter
Add/Edit
Now setting up reference lab parameters..
Setup Parameters for which Reference Lab: LABCORP
EXPORT DIRECTORY: c:\reflab\reflabout\  Replace
SENDING MACHINE IP ADDRESS: (for VPN site)
FTP USER ID: (for VPN site)
FTP PASSWORD: (for VPN site)
ORDER(S) FILE NAME PREFIX: OR
RESULT(S) FILE NAME PREFIX: RS
STORAGE DIRECTORY: c:\reflab\reflabsave\  Replace
IMPORT DIRECTORY: c:\reflab\reflabin\//
BIDIRECTIONAL/UNIDIRECTIONAL: BIDIRECTIONAL//
HOLD LABS FOR VERIFICATION: (only used for unidirectional)
DAYS TO KEEP ORD/RES FILE(S): 30
CLIENT NUMBER: 02305092
DEVICE FOR SHIPPING MANIFEST: (only used for bidirectional)
DEFAULT ORDERING LOCATION: (only used for unidirectional)
PASS CPT CODES ?: (only used for unidirectional)


Now setting up GIS HL7 Message Parameters..
SENDING APPLICATION: CIMI (provided by ITSC)
SENDING FACILITY: TEST0223 (provided by ITSC)
RECEIVING APPLICATION: 1100 (provided by ITSC)
RECEIVING FACILITY: PD (provided by ITSC)
Add this Reference Lab to which Site: LITTLE BUILDING HOSPITAL
ALBUQUERQUE
        JICARILLA       10             IHS


Now setting up Lab HL7 Message Parameter File..


Now activating Reference Lab Interface..


Generation for message: HL IHS LAB O01
LABCORP................................
...........


The following scripts were generated:
     Generated: HL IHS LAB O01 LABCORP-O
```

```
Compiling Script: Generated: HL IHS LAB O01 LABCORP-O
..
MUMPS section....
DATA
section................................................................
..
END section.

Compile completed with 0 warnings and 0 errors.
Linking...  Filing generated routines...
```
Figure X.X Reference Lab Site Parameter Add/Edit

11.0   Contact Information

If you have any questions or comments regarding this distribution, contact the ITSC Help Desk by:

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

Fax: (505) 248-4199

Web: http://www.rpms.ihs.gov/TechSupp.asp

Email: RPMSHelp@mail.ihs.gov