

INSTALLATION NOTES FOR LABORATORY SERVICE PATCH 1

PREFIX: LR and BLR
CURRENT VERSION: 5.2

*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****
* READ THE ENTIRE NOTES FILE PRIOR TO ATTEMPTING ANY INSTALLATION! *
*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****NOTE*****

1. GENERAL INFORMATION

- a). Print all notes/readme files.
b). It is recommended that the terminal output during installation be captured using an auxport printer attached to the terminal at which you are performing the patch installation. This will ensure a printed audit trail if any problems should arise.
c). Patch Description:
NOTE: THIS PATCH IS NOT THE SAME AS la__0520.01k, THE FIRST AUTOINSTRUMENT PATCH!!!!

This patch contains 4 VA released patches and 21 IHS fixes or enhancements of the Laboratory Package version 5.2.

VA Patch LR*5.2*126: After installation of VA patch LR*5.2*108, the option LRQC (Quality Control Levy Jennings report) does not issue a form feed after each report. This patch fixes the problem.

VA Patch LR*5.2*152: This patch was issued to clean up references to files 3, 6, and 16. The routines in the "LR52" namespace converted references from files 3, 6, and 16 to file 200. These routines are run when installing Laboratory V 5.2. The LRNPXA1 routine included in this patch was part of the Laboratory Archiving software. This patch will delete the following routines:

- LR52CNV LR52CNV0 LR52CNV1 LR52CNV3 LR52CNV4 LR52CNV5
LR52CNV8 LR52CNV9 LR52CNVA LR52CNVP LR52CNVU
LR52CNV7
LR52CNVX LR52TIM2 LR52TIME LRNPXA1

In addition, routines BLRVLABP and BLRVLABC are removed.

- VA Patch LR*5.2*160: This patch corrects the following issues:
1. NOPEN error EN+3^LR0LOVER.
2. Output tests screened from the "Quality control display (Levey-Jennings)" option when the user does not hold the LRSUPER key.
3. Wrong Lab sample when a UA is ordered.
4. Extension of mean to 3 decimal places on cumulative summary of the quality control display.

VA Patch LR*5.2*172: The printer does not set up properly when running the cumulative reports manually. The problem was identified when using the Manual queuing of cumulative (LRAC MANUAL) and Reprint cumulative from location to location (LRAC LOC-LOC) options. Adding a call to the LRPARAM routine, within the LRAC routine, resolves this problem.

In addition, this patch contains the following IHS fixes or enhancements:

- a). In defining the cumulative report in file 64.5, even though the user has

specified BOTTOM in the field TOP/BOTTOM, the Medical Center Name appears on both the top and bottom of each page of the cumulative report. The code was corrected in routine LRAC6 to display the Medical Center Name as indicated.

- b). When using the option, List of patients by location for cumulative report, patient social security numbers were displayed. Routine LRACM2F was modified to display the HRCN instead of the social security number.
- c). When using the option, Interim reports for 1 provider (manual queue)(LRRD BY MD), it was noted that if a range of dates was entered instead of a single date, data for all providers for that date range displayed. A new option, IHS interim report for 1 provider (manual queue), (BLRLRRD BY MD), has been developed to show results for only one provider for the date range specified.
- d). Two types of IHS Lab Transaction Log Errors were logged for Gram Stains and no transactions were created to pass gram stain results to PCC. The routine BLRFLTL has been modified to create transactions for gram stains with multiple entries to PCC.
- e). An error (\$ZE= <UNDEF>BLRSLTL+9^BLRSLTL:::4:0) was generated while using the option, Accession tests ordered by ward order entry, if an order had not previously been placed and this option was used to order and accession a test instead of Multi purpose Accessioning. The routine BLRSLTL was modified to allow this functionality without creating a link error.
- f). An error (\$ZE= <UNDEF>SET3+8^BLRSLTL1:::4:0) was generated while using the option, Accession tests ordered by ward order entry, to accession tests ordered as ward/clinic collect. The routine BLRSLTL was modified to allow this functionality without creating a link error. Note: The error, \$ZE=<UNDEF>BLRSLTL1+58^BLRSLTL1:::4:0, was a result of the same process and was also corrected with this routine modification.
- g). An error (\$ZE= <UNDEF>SET3+8^BLRSLTL1:::4:0) was generated while using the option, Add to Collection list, to generate a daily collection list. Routine BLRSLTL was modified to allow this functionality without creating a link error.
- h). Error noted (\$ZE= <PGMOV>+52^DIT3:::6:1:20) at Albuquerque Indian Hospital with Last Global Ref: ^DIC(9009022,0,"GL"). It was determined that when a test or panel is added to an accession number created several days previously, an entry is generated for each transaction between the original accession and the addition to the accession. The resulting array completely filled a 100k partition creating the PGMOV error. The routine BLRSLTR was modified to prevent this from occurring.
- i.) In troubleshooting link errors identified by bulletins, the messages were too vague to actually determine the cause of the error. BLR error bulletins were revised to display the BLR variables to assist in troubleshooting.
- j.) No check was made in the BLR code to check for a match between the institution of the user and the institution of the patient location. This could potentially result in data being passed to the wrong PCC. BLRLINK and BLRLINK1 routines were modified to check for an institution match. If no match is found, a transaction is created but a bulletin is issued noting that an entry can not be made in PCC.
- k.) If no entry or an invalid entry is made for the ordering provider for a laboratory test, no data is passed to PCC and an error bulletin is generated indicating that an entry could not be made to PCC because of a null provider.
- l.) Microbiology results passed to PCC are not currently displayed on the Health Summary. Three new fields were added to the data dictionary for the BLR Transaction Log for the display of Microbiology results on the Health Summary - Collection Sample pointer, Collection Sample name, and Complete Date.
- m.) When placing orders for Lab Collect, if the user did not go back to the menu option between patients, no AOT cross reference was set and therefore no transaction

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was created for those orders. BLRSTL was modified to permit batch Ward Order Entry.

n.) When entering results for MI subscript tests an error bulletin was issued indicating that no transaction was created because an AAT X-reference did not exist.

This bulletin was issued for specimens from institutions defined in the BLR Master Control File to NOT pass data to PCC. The routine BLRMLTL was modified to prevent this bulletin from being issued.

o.) In preparation of routines for reference laboratory download of test data, it was determined that LRDFN was not an appropriate identifier in the LAB VA-IHS LINK (file 68.999999901). The content of the first piece of this file has been changed from LRDFN (IEN of patient in file 63) to DFN (IEN of patient in file #2).

p.) At multi-divisional sites, it was determined that AOT cross references were not set correctly for orders originating from alternate sites because of multiple BLR transaction queues. The BLR transaction queue was redesigned to queue on the primary site only. Routines modified were BLRFLTL, BLRLINK, BLRPARAM, BLRQINST, and LRKILL.

q.) Several modifications of the label format were requested by sites installing the Intermec 4100 label printer. LRBARA (the routine to set up the printer) and LRLABELA (the label format routine) were modified to:

- 1.) Display the test urgency on the label.
- 2.) Display the Patient date of birth on the plain label.
- 3.) Print barcode labels for accession areas designated for Barcode print in the ACCESSION file and print plain labels for accession areas not designated for barcode printing.
- 4.) Reduced the size of the font for the display of lab tests.
- 5.) Display a bed# if it exists.

r.) Modified link routines to capture transactions for the options Receipt of routine lab collection from wards, Itemized routine lab collection, and Add to collection list. Eliminated AOT cross-reference errors for these options.

s.) Three BLR routines were modified to check for the year/month of collection for daily accession numbers when resulting tests. This prevents the link processor from accessing transactions for the same accession numbers from previous years.

2. CONTENTS OF DISTRIBUTION

- a). lr_0520.01n - Notes file for installation of this patch.
- b). lr_0520.01k - Patch routines.

3. REQUIREMENTS

- a). Laboratory Service V 5.2
 - b). Kernel V 8.0 through Patch 1
 - c). Fileman V 21.0 through Patch 5
- Note: This patch can be installed without Kernel Patch 1 or Fileman Patch 5 but an update of the Build file will not take place during the installation.

4. INSTALLATION INSTRUCTIONS

- a). This patch was built with KIDS and must be installed using the KIDS install package option.
- b). Remove Lab Users from the system while this patch is installed. The BLR link ordinarily need not be disabled during patch installation, but it should not be running. This means all lab users should be off the system for at least ten minutes prior

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to patch installation. To ensure that the link is not running, use the option, LS, Link Transaction Processor Status, in the IHS Lab Main Support Menu (BLRMENU). Look for the message, "Link is not running!" The processor status may also be checked by entering D ^BLRPST at the programmer's prompt.

- c). From the Installation Menu of the KIDS menu, select the option, Load a 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 Systems Manager Menu Option:  LOAD a Distribution
Enter a Host File:  D:\ftp\pub\lr_0520.01k
```

```
KIDS Distribution saved on May 11, 1998@09:18:05
Comment: IHS LR PATCH 1 05/11/98 AAB
```

```
This distribution contains Transport Globals for the following Package(s):
LR*5.2*1001
```

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

```
Want to RUN the Environment Check Routine? YES//
LR*5.2*1001
```

```
Will first run the Environment Check Routine, LR1001
```

```
Use LR*5.2*1001 to install this Distribution
```

- d). Verify Checksums in Transport Global
(Recommended but not required for 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: VERi fy Checksums in Transport Global
```

```
Select INSTALL NAME: LR*5.2*1001 Loaded from Distribution
```

```
Loaded from Distribution 5/11/98@09:36:47
```

```
=> IHS LR PATCH 1001 05/11/98 AAB ; Created on May 11, 1998@09:18:05
```

```
DEVICE: HOME//
```

```
PACKAGE: LR*5.2*1001 May 11, 1998 9:37 am
```

```
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```

```
-----
31 Routine checked, 0 failed.
```

- e). Print Transport Global
(Recommended but not required.)

```
1   Load a Distribution
2   Verify Checksums in Transport Global
3   Print Transport Global
```

```

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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: PRINT Transport Global
Select INSTALL NAME:      LR*5.2*1001      Loaded from Distribution
Loaded from Distribution  5/11/98@09:36:47
=> IHS LR PATCH 1001 05/11/98 AAB ; Created on May 11, 1998@09:18:05
DEVICE: HOME//

```

PACKAGE: LR*5.2*1001 May 11, 1998 9:37 am PAGE 1

```

-----
TYPE: SINGLE PACKAGE
NATIONAL PACKAGE: LAB SERVICE
DESCRIPTION:
1. LR*5.2*126   seq 102
2. LR*5.2*152   seq 110
3. LR*5.2*160   seq 114
4. LR*5.2*172   seq 122
5. CUM header/footer selection - LRAC6
6. Display HRCN - routine LRACM2F
7. Interim Report for range of date for One Provider - BLRLRRD,
   BRLRRP2
8. Create Gram Stain transactions - BLRFLTL
9. UNDEFINED in SET+3^BLRSLTL1 (Options Accessioning Order and Add To
   Collection List) - BLRSLTL
10. PGMOV error - BLRSLTLR
11. UNDEFINED in +9^BLRSLTL (Accessioning Order option) - BLRSLTL
12. Display BLR variables in a bulletin - BLRFLTL
13. Display bulletin for an Institution and Hospital Location mismatch -
   BLRLINK, BLRLINK1
14. Display bulletin for zero provider - BLRLINK1
15. Add micro fields for Micro Health Summary - BLRMLTL, BLRMLTL1,
   BLRSPRSE, BLRLINK, BLRLINKP, BLRLINK3
16. Batch patients ordering -AOT Xref does not exist - BLRSLTL
17. Stop resulting micro tests when AAT Xref does not exist - BLRMLTL
18. Change contents of first piece in file 68.999999901 from LRDFN to DFN
   - BLRLINK1
19. Queue on Primary Site only - BLRFLTL, BLRLINK, BLRPARAM, BLRQINST,
   LRKILL
20. Intermec 4100 label printer - LRLABELA, LRBARA
21. Implement BLR LINK for 3 new options - Add To Collection List, Receipt
   of routine Lab Collection, Itemized Lab Collection -
   LRPSET2, LRPHEXPT, LRPHEM, BLRSLTL, BLRSLTL1
22. Prevent resulting of transactions with duplicate Accession numbers -
   BLRBLTL, BLRSLTLR, BLRFLTL
ENVIRONMENT CHECK : LR1001
PRE-INIT ROUTINE :

```

PACKAGE: LR*5.2*1001 May 11, 1998 9:37 am PAGE 3

```

-----
POST-INIT ROUTINE : POST^LR1001
PRE-TRANSPORT RTN :

```

FILE #	NAME	UP DATE DD	SEND SEC. CODE	DATA COMES W/FILE	SITE DATA	RSLV PTS	USER OVER RIDE
9009022	IHS LAB TRANSACTION LOG	YES	YES	NO			
Partial DD:	subDD: 9009022	file:	1307				

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fld: 1308
fld: 1309

ROUTINE:

BLRBLTL	SEND TO SITE
BLRFLTL	SEND TO SITE
BLRLI NK	SEND TO SITE
BLRLI NK1	SEND TO SITE
BLRLI NK3	SEND TO SITE
BLRLI NKP	SEND TO SITE
BLRLRRD	SEND TO SITE
BLRLRRP2	SEND TO SITE
BLRMLTL	SEND TO SITE
BLRMLTL1	SEND TO SITE
BLRPARAM	SEND TO SITE
BLRQI NST	SEND TO SITE
BLRSLTL	SEND TO SITE
BLRSLTLR	SEND TO SITE
BLRSPRSE	SEND TO SITE
BLRVLABC	DELETE AT SITE
BLRVLABP	DELETE AT SITE
LR52CNV	DELETE AT SITE
LR52CNV0	DELETE AT SITE
LR52CNV1	DELETE AT SITE
LR52CNV3	DELETE AT SITE
LR52CNV4	DELETE AT SITE
LR52CNV5	DELETE AT SITE
LR52CNV7	DELETE AT SITE
LR52CNV8	DELETE AT SITE
LR52CNV9	DELETE AT SITE
LR52CNVA	DELETE AT SITE
LR52CNVP	DELETE AT SITE
LR52CNVU	DELETE AT SITE
LR52CNVX	DELETE AT SITE
LR52TI M2	DELETE AT SITE
LR52TI ME	DELETE AT SITE
LRAC	SEND TO SITE
LRAC6	SEND TO SITE
LRACM2F	SEND TO SITE
LRBARA	SEND TO SITE
LRDI ST	SEND TO SITE
LRDI ST1	SEND TO SITE
LRDI ST2	SEND TO SITE
LRKI LL	SEND TO SITE
LRLABELA	SEND TO SITE
LRNPXA1	DELETE AT SITE
LR0LOVER	SEND TO SITE
LRPHEXPT	SEND TO SITE
LRPHI TEM	SEND TO SITE
LRPHSET2	SEND TO SITE
LRX07	SEND TO SITE
BLR LRRD BY MD	SEND TO SITE

- e). Compare transport Global to Current System
(Recommended but not required.)
- 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)

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Restart Install of Package(s)
Unload a Distribution

Select Installation Option: COMPare Transport Global to Current System
Select INSTALL NAME: LR*5.2*1001 Loaded from Distribution
Loaded from Distribution 5/11/98@09:36:47
=> IHS LR PATCH 1001 05/11/98 AAB ; Created on May 11, 1998@09:18:05

Select one of the following:

- 1 Full Comparison
- 2 Second line of Routines only
- 3 Routines only

Type of Compare: 1 Full Comparison
DEVICE: HOME//

Compare LR*5.2*1001 to current site

NOTE: An entire listing of all NEW, OLD, DEL and ADD routines
will be displayed.

f). From the Installation Menu of the KIDS menu, run the option,
Install Package(s).

Select INSTALL NAME: LR*5.2*1001 Loaded from Distribution
5/11/98@14:15:18
(IHS LR PATCH 1 5/11/98 AAB; Created on May 11, 1998@09:18:05
This Distribution was loaded on May 11, 1998@14:15:18 with header of
IHS LR PATCH 1 5/11/98 AAB ; Created on May 11, 1998@14:14:03
It consisted of the following Install(s):
LR*5.2*1001

LR*5.2*1001
Will first run the Environment Check Routine, LR1001

Environment Check is Ok ---

Install Questions for LR*5.2*1001

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 entering a 'Q' at the device prompt.
Enter a '^' to abort the install.

DEVICE: HOME//

Install Started for LR*5.2*1001:
May 11, 1998@14:15:50

Installing Routines
May 11, 1998@14:15:50

Installing Data Dictionaries:
May 11, 1998@14:15:50

Installing PACKAGE COMPONENTS:

Installing OPTION
May 11, 1998@14:15:58

Running Post-Install Routine: POST^LR1001
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Option [BLR LRRD BY MD] was added to [LR OUT]MENU
DONE Checking queues
Post install completed

Updating Routine file...

Updating KIDS files...

LR*5.2*1001 Installed.
May 11, 1998@14:15:39

5. POINT OF CONTACT
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