



BAR CODE MEDICATION ADMINISTRATION (BCMA)

BCMA Backup System (BCBU) INSTALLATION GUIDE

PSB*2*17

Version 2.0
August 2003

Acknowledgments:

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Mr. Felix Desarno and Mr. Naeem Mian of the New Jersey Health Care System. The Bar Code Medication Administration Backup System (BCBU) has been based on their original conceptual model and retains many of the ideas implemented in the Class III plan. Their hard work and determination has led the way for us to provide all VA Medical Centers with a viable BCMA Contingency Plan.

Mr. John Clemens of VA Medical Center San Francisco, California. His knowledge of the **VISTA** HL7 package and work on the security portion of the Bar Code Medication Administration Backup System (BCBU) made it possible for the Class I acceptance of the package.

Revision History

The table below lists changes made since the initial release of this manual. Update an existing manual with the Change Pages document or print out the entire updated manual.

Note: Some pages in the Change Pages document are unchanged, but provided for two-sided copying only. Only changed pages include the patch number and revision date in the page footer.

Date	Revised Pages	Patch Number	Description
08/03			Original Released Bar Code Medication Administration Backup System (BCBU) Installation Guide.

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BCMA V. 2.0 and This Guide

Benefits of BCMA PSB*2*17

The Veterans Health Information Systems and Architecture (VISTA) Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software will provide a Class I solution to the BCMA Contingency IRA #20020403. This plan reflects the intent of VHA Directive #6210, The Automated Information Systems (AIS) Security, which states that all facilities are responsible for the development, maintenance, and annual testing of individual AIS contingency. This software maintains a current copy on the designated workstation, of all the inpatient pharmacy activities including the inpatient medication orders, medication administration and allergies, that are included on a Pharmacy Medication Administration Record (MAR).

The Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 will interface with the BCMA VISTA product to provide a real time backup of all inpatient medication activities on a designated workstation(s). Designated workstation(s) will contain current information regarding inpatient medication orders (Unit Dose and IV), medication administration record (MAR), medication administration history (MAH) and patient allergies. Workstation(s) are updated using the VA Health Level (HL7) package. These workstation(s) are available for use according to local policies concerning VISTA, BCMA or network outages.

Benefits of This Guide

The Veterans Health Information Systems and Architecture (VISTA) Bar Code Medication Administration Backup System (BCBU) Installation for patch PSB*2*17 provides detailed instructions required for installing and implementing this new software. Additional manuals are available with instructions for installing and implementing the new software on either a Linux or Cachè workstation environment.

Our Target Audience

This guide was developed for the following individuals, who are responsible for the installation, maintenance, support and use of the package.

Information Resources Management (IRM)
Clinical Application Coordinator (CAC) – called
Applications Package Coordinator (ADPAC) at some
sites

BCMA V. 2.0 and This Guide

Other Sources of Information

Bookmark these sites for future reference.

National *VISTA* Support (NVS)

Independent Verification and Validation (IV&V)

Refer to the Web sites listed below when you want to receive more background and technical information about BCMA V.2.0.

Background/Technical Information

From your Intranet, enter <http://vaww.VISTA.med.va.gov/bcma> in the Address field to access the BCMA Main Web page. The Installation Guide is available in MS Word (.doc) format and the Portable Document Finder (.PDF).

This Manual Includes

Security Information: This section contains information regarding the mail group, alerts, and file security associated with the Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software.

Pre-Installation Information: This section provides information needed prior to installing the Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software.

Installation Information: This section contains instructions and examples of the Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software.

Technical Information: This section provides information on protocols involved in the Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software.

Conventions Used in This Guide

Before installing patch PSB*2*17, review this section to learn the many conventions used throughout this guide.

Keyboard Responses: Keys provided in **boldface**, within the steps, help you quickly identify what to press on your keyboard to perform an action. See the examples provided below.

- **Within the Steps:** At the "Select Kernel Installation & Distribution System Option" prompt, type **INSTALL**, and then press **ENTER**.
- **Within Screen Captures:** Text in **boldface**, centered between arrows on

BCMA V. 2.0 and This Guide

screen captures, identifies the key you must press for the system to capture your response or to move the cursor to the next field. See the following example.

DEVICE FOR QUEUED JOB OUTPUT: <Enter>

Mouse Responses: Buttons provided in **boldface**, within the steps, indicate what you should click on your computer screen using the mouse. For example, when you see **NEXT**, **YES/NO**, or **OK** in the steps, click the appropriate button on your computer screen.

User Responses: Information presented in **boldface**, within steps or shaded screen captures, indicate what you should "type" (enter) onto your computer screen. See the examples provided below.

- **Within the Steps:** At the "Select OPTION NAME" prompt, type XPD MAIN and then press ENTER.
- **Within Screen Captures:** See the following example.

RESCHEDULING FREQUENCY: 1M

Screen Captures: Provide "shaded" examples of what you will see on your computer screen, and possible user responses.

Notes: Provided within the steps, describe exceptions or special cases about the information presented. They reflect the experience of our Staff, Developers, and Testers.

Menu Options: When provided in *italics*, identifies a menu option. When provided in **boldface**, ALL CAPS, identifies the letters that you should type onto your computer screen, before pressing **ENTER**. The system then goes directly to the menu option. (**Note:** The letters do *not* have to be entered as capital letters, even though they are provided within the steps in this format.) See the examples provided below.

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- **Italicized:** Use the Kernel *First Line Routine Print* option to print a list containing the first line of every PSB routine.
- **Capitalized:** At the "TaskMan Management Option:" prompt, type **Schedule/Unscheduled Options**, and then press **ENTER**.

Locating Detailed Listings

You can obtain and print listings about patch PSB*2*17 routines, and Data Dictionaries using the information provided below.

Routines

Use the Kernel routine XINDEX to produce detailed listings of routines. Use the Kernel First Line Routine Print option to print a list containing the first line of every ALPB routine.

Data Dictionaries

The Data Dictionaries (DDs) are included in the on-line documentation for this software application. You can use the VA FileMan List File Attributes option, under Data Dictionary Utilities option, to print the Dictionaries. Journaling is not recommended for the ALPB global.

Interface Software

The interface software is HL7. This will transmit the pharmacy data to the designated workstation.

Alerts

The mail group, PSB BCBU ERRORS, will receive all alerts.

BCMA Menus

Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 software exports two main menus. The options for each menu are listed in this section.

BCMA Backup System (Wrkstn)
[PSB BCBU WRKSTN MAIN]

BCMA Backup System (VISTA)
[PSB BCBU VISTA MAIN]

BCMA Backup System (Wrkstn)

This menu includes the following options:
List/Display Orders

BCMA V. 2.0 and This Guide

- Print MAR for All Wards
- Print MAR for Selected Patient
- Print MAR for Selected Ward
- Print Blank MAR for Selected Patient
- List of Wards in BCMA Backup File
- BCMA Backup System Management Menu
 - BCMA Backup System Error Log

BCMA Backup System (VISTA)

This menu includes the following options:

- Associate Backup Workstations with a Division
- Default Workstation Initialize
- Divisional Workstation Initialize
- Initialize a Backup Workstation with BCMA Users
- Single Patient Init

Security Information

Mail Group	The PSB BCBU Errors Mail Group is used to notify responsible users of potential problems with sending information to the Contingency Workstation(s). Members of this group should include the staff that monitors the BCMA Backup System.
Remote Systems	The workstation where the software resides is the only remote system that will receive any data.
Archiving/Purging	The product purges itself and only keeps active inpatient data. The journal files are flipped and purged nightly so disk space is not consumed by journaling.
Contingency Planning	This contingency plan software can be used if there is a VISTA outage. The sites can use the data stored on the workstations using the outputs on the menu supplied.
Menus	There are two menus for use with this package, BCMA Backup System (Wrkstn) and BCMA Backup System (VISTA). The BCMA Backup System Management Menu is under the first menu and requires a Security Key as described below.
Security Keys	The BCMA Backup System Management Menu is secured by the security key, PSB BUMGR and MUST be assigned to the designated IRM personnel who currently manages the system for total access to the Bar Code Medication Administration Backup System patch (BCBU) PSB*2*17.
References	Kernel Systems Manual V 8.0 Kernel Toolkit V 7.3 VA FileMan V 22.0 MailMan V 8.0 Health Level Seven (HL7) V 1.6

Pre-Installation Information

Recommended Users

Information Resource Management (IRM) Staff is recommended for installing, implementing and supporting the Bar Code Medication Administration Backup System (BCBU) PSB*2*17. IRM, Pharmacy and Nursing staff must coordinate the implementation of the setup tasks after the package is installed.

VISTA Operating System and Performance Capacity

VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 currently runs on the standard hardware platforms used by the Department of Veterans Affairs Health Care System facilities. These hardware platforms consist of standard or upgraded Alpha 4100, ES40 or ES45 clusters, and run either DSM on VMS, Cache/VMS, Cache/NT or CacheXP. There are no significant changes in the performance capacity of the VISTA operating system once the VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 has been installed. The software application should not create any appreciable global growth or network transmission problems. There are no memory constraints.

Central Processing Unit (CPU) Requirements

The following workstation configuration is recommended for installing and running the VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17.

Sites previously using the New Jersey Class III package should be able to use current workstations and Caché license.

Hardware

- 1-2 Ghz CPU
- 256-512 Mb RAM
- 20 Gb hard drive
- Monitor
- Printer

Software

- Microsoft Windows NT, Windows 2000 or Windows 98 with Intersystems Cache 4.1.4 (3.2.1) 20 user License

Pre-Installation Information

or

RedHat Linux 8.0 with Greystone GT.M

Test Sites

VISTA BCBU PSB*2*17 software was tested at the following VA Sites and platforms prior to being released.

- Bay Pines VA Medical Center, Florida
- New Jersey Health Care System
- San Francisco VA Medical Center, California
- Connecticut Health Care System – West Haven
- VA Heartland West – VISN 15 Kansas City, Missouri
- VA Heartland East – VISN 15 St. Louis, Missouri
- Bath VA Medical Center, New York
- Fayetteville VA Medical Center, North Carolina
- Martinez VA Medical Center, California
- Miami VA Medical Center, Florida
- Dublin VA Medical Center, Georgia

Minimum Required Packages

Before installing BCBU PSB*2*17 make sure that your VISTA system includes the following Department of Veterans Affairs (VA) software packages and versions (those listed or higher).

Package	Minimum Version Needed
Kernel	8.0
VA FileMan	22.0
VA MailMan	8.0
Health Level Seven (HL7)	1.6
Pharmacy Inpatient Medications	5.0
Bar Code Med Admin (BCMA)	2.0

Pre-Installation Information

Installation Time Estimates

IMPORTANT:
You should install and test BCBU
PSB*2*17 in your test accounts
BEFORE installing in your
production accounts.

VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 installation time is less than 2 minutes during off peak hours. The time for workstation setup is approximately 30 minutes

Required Patches

Before installing PSB*2*17, make sure that the following released patches are installed.

Inpatient Medications V5.0
PSJ*5*102

Bar Code Medication Administration V2.0
PSB*2*18
PSB*2*6

Health Level Seven V1.6
HL*1.6*96

VISTA Kernel
XU*8.0*313

Users on the System

Users may remain on the system; however, the *VISTA* Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 installation should be done during off peak hours when minimal Pharmacy activity is occurring.

Options Out of Order

The options, INPATIENT ORDER ENTRY [PSJ OE] and NON-VERIFIED/PENDING ORDERS [PSJU VBW] are to be placed out of order during installation.

Namespace

VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 routine namespace is ALPB. The options/protocols/templates/parameters and keys use the PSB namespace. Files are distributed under the PSB namespace, but use ALPB global namespace..

Data Dictionary Changes

There are no changes made to the Data Dictionaries, but two new files have been added. These files are located on both the workstation and the *VISTA* server, but are only populated on the workstation.

Pre-Installation Information

^ALPB(53.7, BCMA Backup Data
^ALPB(53.71, BCMA Backup Parameters

Journaling is not recommended for the ALPB global.

Resource Requirements

This section summarizes the (approximate) number of resources required to install BCMA V. 2.0.

Routines 26
Globals 1 (^ALPB)
Files 2 (53.7, 53.71)

^ALPB Size Backup data = 268,288 bytes
(131 blocks) per order

Note: Population of the ALPB global will only occur on the workstation, there is no global growth on the **VISTA** server. ALPB global size estimate was acquired by dividing the number of blocks consumed by the total number of orders in file 53.7. This results in the number of blocks per order which is multiplied by 2048, which is the number of bytes per block in Cache.

FTEE Support .2
FTEE Maintenance .2

Printers

Your site should provide dedicated printers for each of the contingency workstations, which would allow printing of the MAR or MAH if the network was down. The printer needs to have the capability to print 132 characters per line.

Routines Installed

Review the listing below to learn the routines installed on your site's **VISTA** Server during the installation of patch PSB*2*17. The first line of each routine briefly describes its general function.

NOTE: You can use the Kernel First Line Routine Print option to print a list containing the first line of each ALPB routines.

Pre-Installation Information

BCMA PSB*2*17 Routines Installed on to VISTA Server

ALPBBK	value = 6214167
ALPBCBU	value = 1637834
ALPBELOG	value = 6391337
ALPBFRM1	value = 9887439
ALPBFRM2	value = 8886579
ALPBFRMU	value = 4053521
ALPBGEN	value = 10423241
ALPBGEN1	value = 8591971
ALPBGEN2	value = 2679718
ALPBHL1	value = 14492515
ALPBHL1U	value = 12048992
ALPBIN	value = 4105691
ALPBIND	value = 5809117
ALPBINP	value = 9416944
ALBPBALL	value = 6006540
ALBPBARM	value = 8937865
ALPBPPAT	value = 5702674
ALBPBWRD	value = 7025105
ALPBSP1	value = 4545482
ALPBSP2	value = 845669
ALPBSPAT	value = 2404489
ALPBSWRD	value = 5435921
ALPBUTL	value = 9642997
ALPBUTL1	value = 6143314
ALPBUTL2	value = 1954969
ALPBUTL3	value = 3052806
PSBML	value = 19151889

Installation Information

VISTA Server Installation Instructions

VISTA Bar Code Medication Administration Backup System (BCBU) patch PSB*2*17 distribution is by using VA MailMan. An example of this installation is found at the end of this install guide.

PC Workstation Database Initialization

Once the PC Workstation(s) have been setup and assigned an IP address, proceed with setting up the workstation link.

Create a link (node) for the PC workstation. This will be the regular transmission node. Call it "BC" and the ward. For example, if the ward is 2A the link could be called "BC 2A". Use the LINK EDIT [HL EDIT LOGIBAL LINK] option of the HL Interface menu. An example of this installation is found at the end of this install guide in the Sample PC Workstation Database Initialization Section..

MAR Reports

Various MAR reports are located at the end of this install guide under the Contingency PC Workstation Reports Section.

Please refer to two additional separate documents for additional Installation Information.

Bar Code Medication Administration Backup System (BCBU) InterSystems Cache Installation Setup

Refer to "Bar Code Medication Administration Backup System (BCBU) InterSystems Cachè Installation Setup" guide for a systematic installation of Cachè install on a PC workstation.

Bar Code Medication Administration Backup System (BCBU) Linux Installation Setup

Refer to "Bar Code Medication Administration Backup System (BCBU) Linux Installation Setup" for systematic installation of Linux on a PC workstation.

This manual also includes step-by-step installation of GT/M, VISTA and Bar Code Medication Administration Backup System (BCBU) on the Linux workstation.

Sample Installation

```
VISTA>D ^XUP

Setting up programmer environment
Terminal Type set to: C-VT100

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: Install Package(s)
Select INSTALL NAME:      PSB*2.0*17      Loaded from Distribution
7/11/03@12:49:47      => PSB*2*17

This Distribution was loaded on Jul 11, 2003@12:49:47 with header of
PSB*2*17
  It consisted of the following Install(s):
    PSB*2.0*17

Checking Install for Package PSB*2.0*17

Install Questions for PSB*2.0*17

Incoming Files:

 53.7      BCMA BACKUP DATA

 53.71     BCMA BACKUP PARAMETERS (including data)

Incoming Mail Groups:

Enter the Coordinator for Mail Group 'PSB BCBU ERRORS': COWNIE,KEVIN P// <ENT>
KPC      20092      COMPUTER SPECIALIST      IRM      COMPUTER SPECIALIST

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// <ENT>

Enter options you wish to mark as 'Out Of Order': PSJ OE <ENT>      Inpatient
Order Entry

Enter options you wish to mark as 'Out Of Order': PSJU VBW <ENT>      Non-
Verified/Pending Orders

Enter options you wish to mark as 'Out Of Order': <ENT>
```

Sample Installation

Enter protocols you wish to mark as 'Out Of Order': <ENT>

Delay Install (Minutes): (0-60): 0// <ENT>

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// <ENT> TCP/IP terminal

Install Started for PSB*2.0*17 :
Jul 11, 2003@12:55:11

Build Distribution Date: Jul 10, 2003

Installing Routines:
Jul 11, 2003@12:55:12

Installing Data Dictionaries:
Jul 11, 2003@12:55:13

Installing Data:
Jul 11, 2003@12:55:13

Installing PACKAGE COMPONENTS:

Installing SECURITY KEY

Installing MAIL GROUP

Installing HL7 APPLICATION PARAMETER

Installing PROTOCOL

Located in the PSB (BAR CODE MED ADMIN) namespace.
Located in the PSB (BAR CODE MED ADMIN) namespace.
Located in the PSB (BAR CODE MED ADMIN) namespace.
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Located in the PSB (BAR CODE MED ADMIN) namespace.
PSB*2.0*17

Sample Installation

```
Located in the PSB (BAR CODE MED ADMIN) namespace.  
Located in the PSB (BAR CODE MED ADMIN) namespace.  
Located in the PSB (BAR CODE MED ADMIN) namespace.
```

```
Installing LIST TEMPLATE
```

```
Installing OPTION
```

```
Installing PARAMETER DEFINITION  
Jul 11, 2003@12:55:19
```

```
Updating Routine file...
```

```
Updating KIDS files...
```

```
PSB*2.0*17 Installed.  
Jul 11, 2003@12:55:19
```

```
Install Message sent #16266376
```

100%
Complete



Install Completed

Sample PC Workstation Database Initialization

When initializing the workstations, you add an entry at the HL Logical Link Node prompt for each pc workstation your site has. The name of each link should represent the actual workstation location. For example, if you have a workstation on Ward 2A, the name of the workstation should be BC 2A. Associating the name of the HL Logical Link Node with the ward where the workstation is located, will aid in locating specific workstations should a problem arise. Once you have initialized the workstation with the correct workstation location, you can update the workstation with the users from the **VISTA** system that have the [PSB GUI CONTEXT - USER] option. This initialization process will queue the activity and when complete send an alert.

On new installations, check the Parameter Value. The Parameter can be left off until the workstation is ready to be initialized. If the workstation is already running, **do not** turn the Parameter Value off. Use the 'General Parameter Tools' option to edit the parameter values.

```
XPAR MENU TOOLS      General Parameter Tools

LV      List Values for a Selected Parameter
LE      List Values for a Selected Entity
LP      List Values for a Selected Package
LT      List Values for a Selected Template
EP      Edit Parameter Values
ET      Edit Parameter Values with Template
EK      Edit Parameter Definition Keyword

Select General Parameter Tools Option: ep Edit Parameter Values
          --- Edit Parameter Values ---

Select PARAMETER DEFINITION NAME: PSB BKUP ONLINE

----- Setting PSB BKUP ONLINE for Package: BAR CODE MED ADMIN -----
Value: YES//<ENTER>
-----

Select PARAMETER DEFINITION NAME: PSB BKUP IPH      BCMA Contingency Active Pharm Order

----- Setting PSB BKUP IPH for Package: BAR CODE MED ADMIN -----
Value: 15// <ENTER>
-----

Select PARAMETER DEFINITION NAME: PSB BKUP MEDLG    BCMA Contingency MedLog DFT

----- Setting PSB BKUP MEDLG for Package: BAR CODE MED ADMIN -----
Value: 30// <ENTER>
-----
```

Continue with the Workstation setup.

```
>D ^XUP
Setting up programmer environment
Terminal Type set to: C-VT100

Select OPTION NAME: HL MAIN MENU      HL7 Main Menu
      Systems Link Monitor
      Filer and Link Management Options ...
      Message Management Options ...
      Interface Developer Options ...
      Site Parameter Edit
```

Sample PC Workstation Database Initialization

```
Select HL7 Main Menu Option: INTERFACE Developer Options
  EA   Application Edit
  EP   Protocol Edit
  EL   Link Edit
  VI   Validate Interfaces
       Reports ...

Select Interface Developer Options Option: EL Link Edit

Select HL LOGICAL LINK NODE: BC 2A
INSTITUTION:<ENTER> ← leave blank
DOMAIN: <ENTER>← leave blank
AUTOSTART: Enabled
QUEUE SIZE: 10
LLP TYPE: TCP
TCP/IP SERVICE TYPE: CLIENT (SENDER)
  TCP/IP ADDRESS: (workstation IP address)
  TCP/IP PORT: (10000)
ACK TIMEOUT:10                RE-TRANSMISSION ATTEMPTS: 2
READ TIMEOUT:10              EXCEED RE-TRANSMIT ACTION: restart
BLOCK SIZE: 256
STARTUP NODE: ←leave blank    PERSISTENT: NO
RETENTION: 120                UNI-DIRECTIONAL WAIT: ←leave blank

Save the link
```

Sign out and then sign back in by doing the following:

```
>D ^XUP

Setting up programmer environment
Terminal Type set to: C-VT100

Select OPTION NAME:      PSB BCBU VISTA MAIN      BCMA Backup System (VISTA)

PSB BCBU VISTA MAIN BCMA Backup System (VISTA)
  LNK   Associate Backup Workstations with a Division
  DFT   Default Workstation Initialize
  DIV   Divisional Workstation Initialize
  USR   Initialize a Backup Workstation with BCMA Users
  PAT   Singe Patient Init

Select BCMA Backup System (VISTA) Option: LNK Associate Backup Workstations
with a Division
Do you want all backup data to go to the same group of
backup devices regardless of the patient's division?
Enter Yes or No: YES// <ENTER>

  Select one of the following:

      A      Add a Logical Link
      D      Delete a Logical Link
```

Sample PC Workstation Database Initialization

```
OPERATION: ADD// <ENTER> Add a Logical Link
The following DEFAULT links are associated with this package:
BC KEVC
BC SID
BC KEVINK
BC SFVA
Select HL LOGICAL LINK: BC 2A ...Added
Select HL LOGICAL LINK: ?
```

```
LNK    Associate Backup Workstations with a Division
DFT    Default Workstation Initialize
DIV    Divisional Workstation Initialize
USR    Initialize a Backup Workstation with BCMA Users
PAT    Singe Patient Init
```

NOTE: If you want to remove an HL7 Link from your system, make sure you use the LNK Associate Backup Workstation with a Division option to delete the logical link association prior to deleting the link in HL7. If this is not done, you will get undefined errors on the **VISTA** system. It is recommended that the Workstation Initialize be queued to run during non-peak hours. These inits may run for several hours depending on the parameter settings.

```
Select BCMA Backup System (VISTA) Option: DFT <RET> Default Workstation
Initialize
Include all workstations
Enter Yes or No? YES// NO
Select WorkStation Link : BC 2A
```

Selected Workstations

```
BC 2A
Select WorkStation Link :
Requested Start Time: NOW// <RET> (FEB 18, 2003@14:28:13)
2624847
```

```
LNK    Associate Backup Workstations with a Division
DFT    Default Workstation Initialize
DIV    Divisional Workstation Initialize
USR    Initialize a Backup Workstation with BCMA Users
PAT    Singe Patient Init
```

```
Select BCMA Backup System (VISTA) Option: USR Initialize a Backup Workstation
with BCMA Users
```

This option searches for users that hold the option, 'PSB GUI CONTEXT - USER' and if they are active users, transmits the information to your BCMA Backup Workstations.

NOTE that you must have completed the step of assigning workstations to either a single default group or by division.

```
Do you wish to continue? YES// <ENTER>
```

Sample PC Workstation Database Initialization

```
Do you wish to queue this init? YES//<ENTER>
Requested Start Time: NOW// <ENTER> (FEB 20, 2003@17:17:02)
TASK #: 2625005
```

```
LNK    Associate Backup Workstations with a Division
DFT    Default Workstation Initialize
DIV    Divisional Workstation Initialize
USR    Initialize a Backup Workstation with BCMA Users
PAT    Singe Patient Init
```

You have PENDING ALERTS

```
Enter "VA to jump to VIEW ALERTS option
Select BCMA Backup System (VISTA) Option: "VA
```

```
1.I BCBU INIT Started Feb 20, 2003@17:17:04 and finished Feb 20, 2003@17:2
Select from 1 to 1
or enter ?, A, I, D, F, S, P, M, R, or ^ to exit: 1
Processed Alert Number 1
BCBU INIT Started Feb 20, 2003@17:17:04 and finished Feb 20, 2003@17:27:57.
556
```

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Option Descriptions

PSB BCBU MANAGEMENT MENU

BCMA Backup System Management Menu

This Menu contains all Management option for the BCMA Contingency (Workstation Menu)

ITEM: PSB BCBU ERROR LOG

TYPE: menu

PSB BCBU ERROR LOG

BCMA Backup System Error Log

This option is used to view the Error Log. (Workstation Menu)

TYPE: run routine Routine: ALPBELOG

PSB BCBU WRKSTN MAIN

This is the main menu for the BCMA Backup system -- the ward workstation containing the BCMA backup/contingency data. (Workstation Menu)

TYPE: menu

ITEM: PSB BCBU SHOW PATIENT

ITEM: PSB BCBU PRINT MAR ALL

ITEM: PSB BCBU PRINT MAR PATIENT

ITEM: PSB BCBU PRINT MAR WARD

ITEM: PSB BCBU MANAGEMENT MENU

ITEM: PSB BCBU WARD LIST

ITEM: PSB BCBU PRINT BLK MAR

PSB BCBU PRINT MAR ALL

Print MAR for All Wards

This option prints a MAR report for all wards. (Workstation Menu)

TYPE: run routine ROUTINE: ALPBPALL

PSB BCBU PRINT MAR PATIENT

Print MAR for Selected Patient

This option prints a MAR report by individual patients. (Workstation Menu)

TYPE: run routine ROUTINE: ALPBPPAT

PSB BCBU PRINT MAR WARD

Print MAR for Selected Ward

This option prints a MAR report by individual wards. (Workstation Menu)

TYPE: run routine ROUTINE: ALBPWRD

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PSB BCBU SHOW PATIENT

Display Orders for Selected Patient

This option will display orders to the screen by individual patient.
(Workstation Menu)

TYPE: run routine ROUTINE: ALPBSPAT

PSB BCBU SHOW WARD

Display Orders for Selected Ward

This option will display orders to the screen by Ward. (Workstation Menu)

TYPE: run routine ROUTINE: ALPBSWRD

PSB BCBU WARD LIST

List of Wards in BCMA Backup File

This option will display all the wards available on the workstation.
(Workstation Menu)

TYPE: run routine ROUTINE: WARDLIST^ALPBUTL

PSB BCBU PRINT BLK MAR

Print Blank Mar for Selected Patient

This option allows the user to select a patient from the BCMA contingency and print a blank 3 or 7 day MAR. The MAR will only contain patient info.

TYPE: run routine ROUTINE: ALPB BK

PSB BCBU VISTA MAIN

BCMA Backup System (VISTA)

This is the Primary Menu for the BCMA Backup Contingency. (VISTA Menu)

TYPE: menu

ITEM: PSB BCBU INIT WRKSTN DFT
ITEM: PSB BCBU INIT WRKSTN DIV
ITEM: PSB BCBU LINK ASSOCIATIONS
ITEM: PSB BCBU USER INIT
ITEM: PSB BCBU INIT SINGLE PT

PSB BCBU INIT WRKSTN DFT

Default Workstation Initialize

This option is used to initialize Workstations that are linked as default.
(VISTA Option)

TYPE: run routine ROUTINE: OPT^ALPBIND

PSB BCBU LINK ASSOCIATIONS

Associate Backup Workstations with a Division

For sites running the REAL-TIME BCMA BACKUP interface, use this option to

Technical Information

assign your backup workstations to specific divisions. If you are not a multidivisional site, associate all backup workstations with a single division.

When HL7 events occur, the division associated with the patient will be used to determine which workstations will get the message. (VISTA Menu)

TYPE: run routine ROUTINE: ALPBPARM

PSB BCBU INIT WRKSTN DIV

Divisional Workstation Initialize

This option is used to initialize Workstations that are linked by Division. (VISTA Option)

TYPE: run routine ROUTINE: OPT^ALPBIN

PSB BCBU USER INIT

Initialize a Backup Workstation with BCMA Users

This option searches the VISTA New Person file for authorized BCMA users and generates a version 2.4 HL7 message. Messages are addressed dynamically based on the parameter definitions for BCMA Backup using divisions or the default group.

TYPE: run routine ROUTINE: INIT^ALPBGEN2

PSB BCBU INIT SINGLE PT

Single Patient Init

This option will send inpatient orders to the BCMA Contingency workstation for a single patient.

TYPE: run routine ROUTINE: SNDPT^ALPBIND

PSB BCBU PRINT BLK MAR

Print Blank Mar for Selected Patient

This option allows the user to select a patient from the BCMA contingency and print a blank 3 or 7 day MAR. The MAR will only contain patient info.

TYPE: run routine ROUTINE: ALPBK

HL7 Parameters

PSB BCBU CLIENT

ACTIVE/INACTIVE: ACTIVE

HL7 ENCODING CHARACTERS: ~|&

PSB BCBU SERVER

ACTIVE/INACTIVE: ACTIVE

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HL7 ENCODING CHARACTERS: ~|&

PSB PMU RECV

ACTIVE/INACTIVE: ACTIVE

COUNTRY CODE: USA

HL7 ENCODING CHARACTERS: ~&^\

HL7 FIELD SEPARATOR: |

PSB PMU SEND

ACTIVE/INACTIVE: ACTIVE

COUNTRY CODE: USA

HL7 ENCODING CHARACTERS: ~&^\

HL7 FIELD SEPARATOR: |

HL7 Message Examples

Unit Dose Orders

```
PID^^488-36-5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^^^000002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^^^^NSC VETERAN
ORC^XX^~OR^1U~PS^^DC~discontinued^^^^199709191028-0400^33~ATHENS,ROMAN PHARM
D^^7356~ALBANY, ALBERT^^^199709191028-0400^^~99ORN~~^^^
RXO^~~~~99PSP^^^^^^^^^^^^^^^^^^^^
RXE^&&2&~Q4H PRN&~~199709191028-0400~19970920120402-0400~~~^326.2485~OXYCODONE
HCL 5MG/ACETAMINOPHEN
      325MG TAB~99NDF~7106~OXYCODONE 5MG/ACETAMINOPHEN 325MG
TAB UD~99PSD^^^~~~~0~~99PSU^~~~~99PSF^^^^^^^^^24133~BISMARK, SAMANTHA
      E~99NP^^^^^^^^^^^^^^^^~~~~99PSU
RXR^~~~~1~ORAL~99PSR^^^^^
ZRX^^^^^24133~BISMARK, SAMANTHA E~99NP^

PID^^488-36-
5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^^^000002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^^^^NSC VETERAN
ORC^XX^2425936~OR^15U~PS^^DC~discontinued^^^^199802170206-0400^159~BOISE,
WILLIAM W^^14109~COLUMBIA,CHARLIE^^^199802170206-
      0400^^~99ORN~~^^^
RXO^~~~~765~HEPARIN INJ,SOLN~99PSP^^^^^^^^^^^^^^^^^^^^
RXE^&&1&~Q12H&0600-1800~~199802170206-0400~19980217164826-0400~~~5000
UNITS^80.742~HEPARIN NA 10000UNT/ML INJ~99NDF~6847~HEPARIN NA
      10000 UNT/ML
INJ~99PSD^^^~~~~43~UNT/ML~99PSU^~~~~84~INJ,SOLN~99PSF^^^^^^^^^24133~BISMARK,
SAMANTHA E~99NP^^^^^^^^^^^^^10000^~~~~43~UNT/ML~99PSU
RXR^~~~~30~SUBCUTANEOUS~99PSR^^^^^
ZRX^^^^^24133~BISMARK, SAMANTHA E~99NP^
```

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IV Orders

```
PID^^488-36-
5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^^^000002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^^^^NSC VETERAN
ORC^XX^8547404;1~OR^53V~PS^^CM~finished/verified by
pharmacist(active)^^^^20021206135950-0400^24133~BISMARK, SAMANTHA
E^^24133~BISMARK, SAMANTHA E^^200212061359-
0400^~~99ORN~~~~^^
RXO^~~~1062~MULTIVITAMIN INJ,SOLN~99PSP^^^^^^^^^^^^^^^^^^^^
RXE^~&~~200212061359-0400~200212071400-0400^^^^^^^^^^^^^^^^24133~BISMARK,
SAMANTHA E~99NP^^^^^^^^^^^^10^~~~~ml/hr~PSU^^
NTE^21^L^I would like to enter these provider comments
RXC^A^~~~1062~MULTIVITAMIN~99PSP^10^~~~PSIV-1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^A^~~~688~FOLIC ACID~99PSP^2^~~~PSIV-4~MG~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^A^~~~1488~TRACE ELEMENTS~99PSP^2^~~~PSIV-1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^B^~~~490~DEXTROSE 5%/WATER~99PSP^1000^~~~PSIV-
1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
ZRX^^^N^^24133~BISMARK, SAMANTHA E~99NP^IV

PID^^488-36-
5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^^^000002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^^^^NSC VETERAN
ORC^XX^8528561~OR^48V~PS^^CM~finished/verified by
pharmacist(active)^^^^2001041
12336-0400^159~CHALK,PINK W^^16114~AUSTIN,JEFFREY^^^200104112336-
0400^~~99ORN~~~~^^
RXO^~~~282~CEFTRIAXONE INJ,SOLN~99PSP^^^^^^^^^^^^^^^^^^^^
RXE^~Q24H&06~~200104112336-0400~200104161400-0400^^^^^^^^^^^^^^^^24133~BISMARK,
SAMANTHA E~99NP^^^^^^^^^^^^INFUSE OVER 30 MINUTES^^
RXC^A^~~~282~CEFTRIAXONE~99PSP^1^~~~PSIV-5~GM~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^B^~~~2254~ISO-OSMOTIC~99PSP^50^~~~PSIV-1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
RXX^~~~14~INTRAVENOUS~99PSR^^^~~~P~PIGGYBACK~99PSR^
ZRX^^^N^^24133~BISMARK, SAMANTHA E~99NP^

PID^^488-36-
5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^^^000002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^^^^NSC VETERAN
ORC^XX^5997759~OR^46V~PS^^DC~discontinued^^^^200103201458-
0400^8124~WITT,DIM^^23714~JURGENSMEYER,JOHN JACOB C^^^200103201458-
0000^~~99ORN~~~~^^
RXO^~~~1062~MULTIVITAMIN INJ,SOLN~99PSP^^^^^^^^^^^^^^^^^^^^
RXE^~&~~200103201458-0400~200103211037-0400^^^^^^^^^^^^^^^^24133~BISMARK,
SAMANTHA E~99NP^^^^^^^^^^^^100^~~~~ml/hr~PSU^^
NTE^21^L^TO STOP WHEN TAKING ADEQUATE ORALS
RXC^A^~~~1062~MULTIVITAMIN~99PSP^10^~~~PSIV-1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^A^~~~1456~THIAMINE~99PSP^100^~~~PSIV-4~MG~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^A^~~~688~FOLIC ACID~99PSP^1^~~~PSIV-4~MG~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^A^~~~1371~SODIUM BICARBONATE~99PSP^50^~~~PSIV-
8~MEQ~99OTH^^^^^^^^^^^^^^^^^^^^
RXC^B^~~~486~DEXTROSE 5%/0.45% NAACL~99PSP^1000^~~~PSIV-
1~ML~99OTH^^^^^^^^^^^^^^^^^^^^
ZRX^^^N^^24133~BISMARK, SAMANTHA E~99NP^IV
```

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Med Log

```
PID^^488-36-
5850~~^10748~2~M10^^AUGUSTA~JOHN~J^^19350517^M^^^^^^^^^^00002222
PV1^1^I^4E M-KC~SE403~3^^^^5468~BISMARK~CAPTAIN~A^^^^^^^^^^NSC VETERAN
ORC^ML^^330U~PS^^G~GIVEN^^^^20010414131522-0400^15454~KELLER, ANGELA L
```

Parameter Definitions

PSB BKUP DEFAULT

DISPLAY TEXT: Package-specific 'default' Logical Links

MULTIPLE VALUED: Yes

INSTANCE TERM: Logical Link

VALUE DATA TYPE: pointer

VALUE DOMAIN: 870

VALUE HELP: Enter the HL7 logical link

INSTANCE DATA TYPE: pointer

INSTANCE DOMAIN: 870

INSTANCE HELP: Enter the HL7 logical link

DESCRIPTION: This parameter is used by the BCMA Backup system to route messages to a "default" group of HL7 Logical Links that are associated with the BCMA package rather than individual divisions. When the default group is defined, all messages will be routed to this group rather than using division-based grouping under the following conditions:

1. If a call is made to the API, GET^ALPBPARM, and the division parameter is not present or null.
2. If a call is made to the API, GET^ALPBPARM, and the division specified has no logical links associated with it.

PRECEDENCE: .5

ENTITY FILE: PACKAGE

PSB BKUP MACHINES

DISPLAY TEXT: Division-specific Logical Links

MULTIPLE VALUED: Yes

INSTANCE TERM: Logical Link

VALUE DATA TYPE: Pointe

VALUE DOMAIN: 870

VALUE HELP: Enter the HL7 Logical Link

INSTANCE DATA TYPE: pointer

INSTANCE DOMAIN: 870

INSTANCE HELP: Enter the HL7 Logical Link

DESCRIPTION: This parameter defines the BCMA Backup Logical Links that may be

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associated with a division when there are one or more divisions at a site.

PRECEDENCE: 1

ENTITY FILE: DIVISION

PSB BKUP ONLINE

DISPLAY TEXT: BCMA Contingency Online

VALUE DATA TYPE: yes/no

DESCRIPTION: This parameter is used by the BCMA Backup system to activate the Contingency software. If the value is set to NO then no HL7 messages will be sent to the Workstation. This does not affect the workstation initialization option.

PRECEDENCE: 1

ENTITY FILE: PACKAGE

PSB BKUP IPH

DISPLAY TEXT: BCMA Contingency Active Pharm Order

VALUE DATA TYPE: numeric

DESCRIPTION: The BCMA Backup Contingency software uses this parameter. During the Workstation initialization process, this tells the process how many days of historic Inpatient Medication Orders to capture. It is based off the fact the order was active during that time.

PRECEDENCE: 1

ENTITY FILE: PACKAGE

PSB BKUP MEDLG

DISPLAY TEXT: BCMA Contingency MedLog DFT

VALUE DATA TYPE: numeric

DESCRIPTION: The BCMA Backup Contingency software uses this parameter. During the Workstation initialization process, this tells the process how many days of historic Med Log entries of Inpatient Medication Orders to capture.

PRECEDENCE: 1

ENTITY FILE: PACKAGE

List Templates

PSB ERROR LOG

TYPE OF LIST: PROTOCOL

RIGHT MARGIN: 80

TOP MARGIN: 4

BOTTOM MARGIN: 20

OK TO TRANSPORT?: OK

USE CURSOR CONTROL: YES

PROTOCOL MENU: PSB ERROR LOG MENU

SCREEN TITLE: BCMABu Error Log

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ALLOWABLE NUMBER OF ACTIONS: 1
AUTOMATIC DEFAULTS: YES
HIDDEN ACTION MENU: VALM IDDEN ACTIONS
ARRAY NAME: ^TMP("ALPBELOG", \$J)
EXIT CODE: D EXIT^ALPBELOG
HEADER CODE: D HDR^ALPBELOG
HELP CODE: D HELP^ALPBELOG
ENTRY CODE: D INIT^ALPBELOG

PSB SELECT ORDERS

TYPE OF LIST: PROTOCOL
RIGHT MARGIN: 80
TOP MARGIN: 5
BOTTOM MARGIN: 19
OK TO TRANSPORT?: OK
USE CURSOR CONTROL: YES
PROTOCOL MENU: PSB ORDERS MENU
SCREEN TITLE: BCMAbu ACTIVE Orders List
ALLOWABLE NUMBER OF ACTIONS: 1
HIDDEN ACTION MENU: VALM HIDDEN ACTIONS
ARRAY NAME: ^TMP("ALPBORDS", \$J)
ITEM NAME: OrderNum
COLUMN: 2
WIDTH: 10
DISPLAY TEXT: Order No.
ITEM NAME: OrderType
COLUMN: 22
WIDTH: 4
DISPLAY TEXT: Type
ITEM NAME: Status
COLUMN: 14
WIDTH: 7
DISPLAY TEXT: Status
ITEM NAME: Meds
COLUMN: 28
WIDTH: 45
DISPLAY TEXT: Medication(s)
EXIT CODE: D EXIT^ALPBSP1
HEADER CODE: D HDR^ALPBSP1
HELP CODE: D HELP^ALPBSP1
ENTRY CODE: D INIT^ALPBSP1

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PSB SELECT PATIENT

TYPE OF LIST: PROTOCOL
RIGHT MARGIN: 80
TOP MARGIN: 4
BOTTOM MARGIN: 15
OK TO TRANSPORT?: OK
USE CURSOR CONTROL: YES
PROTOCOL MENU: PSB PATIENT MENU
SCREEN TITLE: BCMABu Patient List (All)
ALLOWABLE NUMBER OF ACTIONS: 1
HIDDEN ACTION MENU: VALM HIDDEN ACTIONS
ARRAY NAME: ^TMP("ALPBPLIST", \$J)
ITEM NAME: Patient
COLUMN: 2
WIDTH: 30
DISPLAY TEXT: Patient
ITEM NAME: SSN
COLUMN: 33
WIDTH: 9
DISPLAY TEXT: SSN
ITEM NAME: WARD
COLUMN: 43
WIDTH: 15
DISPLAY TEXT: Ward
ITEM NAME: ROOM
COLUMN: 62
WIDTH: 5
DISPLAY TEXT: Room
ITEM NAME: BED
COLUMN: 72
WIDTH: 5
DISPLAY TEXT: Bed
EXIT CODE: D EXIT^ALPBSPAT
HEADER CODE: D HDR^ALPBSPAT
HELP CODE: D HELP^ALPBSPAT
ENTRY CODE: D INIT^ALPBSPAT

PSB SHOW ORDERS

TYPE OF LIST: DISPLAY
RIGHT MARGIN: 80
TOP MARGIN: 5
BOTTOM MARGIN: 20
OK TO TRANSPORT?: OK
USE CURSOR CONTROL: YES

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SCREEN TITLE: BCMABu Selected Order(s)
ALLOWABLE NUMBER OF ACTIONS: 1
AUTOMATIC DEFAULTS: YES
HIDDEN ACTION MENU: VALM HIDDEN ACTIONS
ARRAY NAME: ^TMP("ALPBFORM",\$J)
EXIT CODE: D EXIT^ALPBSP2
HEADER CODE: D HDR^ALPBSP2
HELP CODE: D HELP^ALPBSP2
ENTRY CODE: D INIT^ALPBSP2

HL Communication Service Parameters

These parameters exist only on the workstations and is included in the .dat file.

Select HL COMMUNICATION SERVER PARAMETERS ONE: 1

ONE: 1 DOMAIN: BCMABU.MED.VA.GOV
DEFAULT PROCESSING ID: training INSTITUTION: SOFTWARE SERVICE
DEFAULT NUMBER INCOMING FILERS: 2 DEFAULT NUMBER OUTGOING
FILERS: 2
PURGE COMPLETED MESSAGES: 2 PURGE AWAITING ACK MESSAGES: 2
PURGE ALL MESSAGES: 4

Select HL LOGICAL LINK NODE: LISTNER

NODE: LISTNER LLP TYPE: TCP
DEVICE TYPE: Single-threaded Server
AUTOSTART: Enabled
SHUTDOWN LLP?: NO
QUEUE SIZE: 10 RE-TRANSMISSION ATTEMPTS: 2
BLOCK SIZE: 256 READ TIMEOUT: 2
ACK TIMEOUT: 10 EXCEED RE-TRANSMIT ACTION: restart
TCP/IP PORT: 10000 TCP/IP SERVICE TYPE: SINGLE LISTENER
PERSISTENT: NO RETENTION: 120

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Files Associated with GT.M/Linux BCMA:

The following files are provided with the GT.M version of Bar Code Medication Administration Backup System (BCBU) and are unpacked from the `bcma_files.tar.gz` file into `$HOME` of the BCMA manager account.

.bashrc – this is the BCMA manager's `$HOME/.bashrc` file. This file defines GT.M related global variables, sets convenient aliases and sets terminal characteristics. This file may be edited but all GT.M variable and terminal definitions should be retained to guarantee the proper functioning of the GT.M database.

bcmabashrc – `install_bcma` creates a generic "bcma" Linux account tied to **VISTA**. `bcmabashrc` is renamed to `/home/bcma/.bashrc` and is called with each "bcma" user login. The call to this file ties the user to **VISTA** and prevents access to the Linux or GT.M level as well as defining GT.M related global variables.

bcma.gld – this is the GT.M global directory file which defines the location of the BCMAbu database. `install_bcma` edits this file automatically to account for the directory structure specified by the installer. The GT.M database utility, GDE, accesses this file.

cronjrnclean – this file is used to generate the crontab procedure (found in `/var/spool/tar/bcma_manager_name`) which runs nightly to flip the GT.M journal file, remove old journal files and remove temporary GT.M process related files in the manager's `$HOME`. This file is only used once during the BCMA install.

gcomp - run this file at your GT.M manager to recompile all M routines. At times, compiled objects may end up with the wrong user ownership (for example, if patches were installed and run as root). Run this script to correct such situations.

jrnclean – this file is called by `/var/spool/tar/bcma_manager_name` nightly at 1:00am to flip the GT.M journal file, remove old journal files and remove temporary GT.M process related files in the BCMA manager's `$HOME`.

jrnoff - this file may be used to turn journaling off. Note that journaling is automatically enabled with every reboot of the system by `rc.local`.

jrnnon – this file may be used to turn journaling on or flip the current journal file to a new one. It is called by `jrnclean`. Journal files are found in `$HOME/jrn` of the bcma manager.

netmail_start – this file is called by `rc.local` during runlevel 5-system startup to start network mail on port 25. If netmail needs to be started manually, run this file as root (other users will not have the privileges to connect a process to port 25).

rc.local – this is a user-editable Linux file found in `/etc/rc.d` and is called during system startup and shutdown. This file calls `$HOME/recoverall`, `$HOME/jrnnon`, `$HOME/taskman_start` and

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\$HOME/netmail_start during system startup. It will call *\$HOME/zgstop* during system shutdown. If *rc.local* is successful in each of these calls, the following empty files will be created in *\$HOME* of the BCMA manager account: *recoverys*, *TaskMan*, *netmails*, and *rundowns*.

recoverall – this file is called by *rc.local* during system startup and attempts to recover the database should the system be shutdown uncleanly.

taskman_start – this file starts TaskMan automatically during system startup. If TaskMan needs to be started manually, run *taskman_start* as root (TaskMan automatically starts HL7 processes – the LISTNER link needs to connect with port 10000).

VISTA – this script resides in the */home/bcma* and */home/gtm* manager directories and is called by the icon file *\$HOME/.gnome-desktop/VISTA* -icon for the respective users

***-icon** - These are the desktop icon files. The BCMA and GT.M manager users both have the **VISTA** -icon, which will bring the user to the access/verify prompts. In addition to this, the GT.M manager user will also have the term-icon and editor-icon on its desktop to open a terminal session and gedit text editor respectively.

zgstop - this file is called by *rc.local* during system shutdown to shutdown GT.M cleanly and performs a recovery if needed. Call this file as root if GT.M needs to be shutdown (only the root user will be permitted to stop ALL GT.M processes – if another user call *zgstop*, only its own processes will be shutdown). This file is derived from */usr/local/gtm/gstop*.

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Adding a BCMA printer to the Cache/NT Contingency system:

Contingency Workstation (VISTA) printer:

Slave printers are defined in **VISTA** as P22O/102 SLAVE CACHE/NT

- test the printer through **VISTA**

DEVICE file entry:

```
NAME: P22O/102 SLAVE CACHE/NT          $I: 0
  ASK DEVICE: NO                        ASK PARAMETERS: NO
  LOCATION OF TERMINAL: slave device for Cache/NT
MNEMONIC: SLAVE
  SUBTYPE: C-VT220                      TYPE: TERMINAL
```

Network printer:

From the NT menu:

- **Start/Settings/Printers/Add Printer**
- Select the **My Computer** radio button then **Next** to continue
- Click the **Add Port** button
- Double click the **LPR Port** then fill in the IP address of the device and the name then **Close** to continue
- make sure the box for the newly created port is checked then **Next** to continue
- select the printer driver (note - you may need the NT install CD handy for this step) then **Next** to continue
- enter the printer name then **Next** to continue – NOTE: this is the value that will be used in the \$I below
- select shared or not shared then **Next** to continue
- try printing a test page - at this point, NT might start requesting the install CD for specific drivers

From the W2K menu:

- **Start/Settings/Printers/Add Printer**
- **Next** at the welcome add printer wizard box
- Select the **Local Printer** radio button and uncheck the automatic detection for plug and play devices then **Next** to continue
- Select the **Create a new port** radio button then select either **LPR** or **Standard TCPIP port** from the dropdown menu.
- For LPR:
 - o fill in the IP address of the device and the name then **Close** to continue

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- For TCPIP:
 - o click *Next* to continue in the welcome wizard window
 - o enter the printer name or IP address then *Next* to continue
- select the driver then *Next* to continue
- enter the printer name then *Next* to continue – NOTE: this is the value that will be used in the \$I below
- share or not then *Next* to continue
- print a test page then *Next* to continue

From within Contingency Workstation (VISTA) Printer

- No special terminal types need to be used for Cache/NT network printing. Several HP-LASER terminal types are available in the TERMINAL TYPE file as installed.
- Create a new entry in the DEVICE file as per the example below. \$I syntax is |PRN|\\bcmaservername\LPR device defined above. In the example below, the A410 printer was defined as an LPR port through NT. The server name is VHAISADHC1
- Test the printer through *VISTA*.

Examples:

DEVICE file entries:

```
NAME: A410                                $I: |PRN|\\VHAISADHC2\A410
LOCATION OF TERMINAL: A410                 SUBTYPE: P-HPL/10/6/U
TYPE: TERMINAL
```

TERMINAL TYPE file entries:

```
NAME: P-HPLASER-P10                       RIGHT MARGIN: 80
FORM FEED: #                              PAGE LENGTH: 64
BACK SPACE: $C(8)                          OPEN EXECUTE: W *27,"E"
CLOSE EXECUTE: W *27,"E"                   PROPORTIONAL SPACING: $C(27) "(s1P"
DESCRIPTION: LASER PRINTER PORTRAIT MODE 10 CPI

NAME: P-HPLASER-L230                       RIGHT MARGIN: 230
FORM FEED: $C(12,13)                       PAGE LENGTH: 64
BACK SPACE: $C(8)
OPEN EXECUTE: W *27,"E",*27,"&k7.2H",*27,"&k2S",*27,"&l1o11c1e5.15c72F",*27,"&a011230m0R",*27,"(s0p16.66h12v0s0b3T"
CLOSE EXECUTE: W *27,"&l00",*27,"&s0C",*27,"&k10H",*27,"&17.4c69p2e67F",*27,"&a01195M"
DESCRIPTION: LASER REDUCED 16 CPI (8 1/2 X 14)
16 PITCH: W $C(27)_(s16.66H"
```

Technical Information

Adding a BCMA printer to the GT.M/Linux Contingency system:

Contingency Workstation (VISTA)

From the Linux menu:

1. Select *System Settings* then *Printing*
2. In the Red Hat printer config windows click *New* to create a new printer queue
3. Read the instructions then click *Forward* to continue
4. Specify 'local' or 'LOCAL' as the name for the new printer and select *local printer* radio button then click *Forward* to continue
5. Accept */dev/lp0* as printer device to use then click *Forward* to continue
6. Select the driver for your local printer then click *Forward* to continue. *Postscript Printer* is usually acceptable for HP printers
7. Click *Apply* button to restart LPD
8. You may test the printer by selecting it in the Red Hat printer config window then selecting *Test* from the horizontal menu.

From within Contingency Workstation (VISTA)

1. P220/102 SLAVE GTM/LINUX entries are already pre-defined in **VISTA DEVICE** file.
2. test the printer through **VISTA**

DEVICE file entries:

```
NAME: P220/102 SLAVE GTM/LINUX          $I: $HOME/slave.dat
ASK DEVICE: NO                          ASK PARAMETERS: NO
LOCATION OF TERMINAL: basic slave device for gtm/linux
ASK HOST FILE: NO                        SUPPRESS FORM FEED AT CLOSE: YES
OPEN PARAMETERS: newversion
MNEMONIC: SLAVE
SUBTYPE: P-SLAVE TEXT GTM/LINUX         TYPE: HOST FILE SERVER
```

```
NAME: P220/102 HP 80 SLAVE GTM/LINUX    $I: $HOME/slave.dat
ASK DEVICE: NO                          ASK PARAMETERS: NO
LOCATION OF TERMINAL: HP 80 slave device for gtm/linux
ASK HOST FILE: NO                        SUPPRESS FORM FEED AT CLOSE: YES
OPEN PARAMETERS: newversion
MNEMONIC: SLAVE
SUBTYPE: P-SLAVE HP 80 GTM/LINUX        TYPE: HOST FILE SERVER
```

```
NAME: P220/102 HP 132 SLAVE GTM/LINU   $I: $HOME/slave.dat
ASK DEVICE: NO                          ASK PARAMETERS: NO
LOCATION OF TERMINAL: HP 132 slave device for gtm/linux
ASK HOST FILE: NO                        SUPPRESS FORM FEED AT CLOSE: YES
OPEN PARAMETERS: newversion
MNEMONIC: SLAVE
SUBTYPE: P-SLAVE HP 80 GTM/LINUX        TYPE: HOST FILE SERVER
```

Technical Information

TERMINAL TYPE file entries:

```
NAME: P-SLAVE HP 132 GTM/LINUX          RIGHT MARGIN: 132
FORM FEED: #                          PAGE LENGTH: 60
BACK SPACE: $C(8)
OPEN EXECUTE: W *27,"E",*27,"(s16.7H",*27,"&k3G"
CLOSE EXECUTE: W *27,"E" U IO K IO(1,IO) C IO ZSYSTEM "lpr -lr "_IO
```

```
NAME: P-SLAVE HP 80 GTM/LINUX          RIGHT MARGIN: 80
FORM FEED: #                          PAGE LENGTH: 60
BACK SPACE: $C(8)                     OPEN EXECUTE: W *27,"E",*27,"&k3G"
CLOSE EXECUTE: W *27,"E" U IO K IO(1,IO) C IO ZSYSTEM "lpr -lr "_IO
```

```
NAME: P-SLAVE TEXT GTM/LINUX          RIGHT MARGIN: 80
FORM FEED: #                          PAGE LENGTH: 60
BACK SPACE: $C(8)
CLOSE EXECUTE: U IO K IO(1,IO) C IO ZSYSTEM "lpr -r "_IO
```

Network printer:

From the Linux menu:

1. select *System Settings* then *Printing*
2. In the Red Hat printer config windows click *New* to create a new printer queue
3. read the instructions then click *Forward* to continue
4. specify the name of the new printer (example: A405) and select either the *Unix Printer* or *Jetdirect Printer* radio button as type (NOTE: Unix printer uses port 515 and Jetdirect uses port 9100) then click *Forward* to continue
 - a. if Unix printer: enter the printer hostname or IP in the *Server* box - no need to enter queue information
 - b. if Jetdirect printer: enter the printer hostname or IP in the *Printer IP* box - accept 9100 as the port value then click *Forward* to continue.
5. Select the driver for your network printer then click *Forward* to continue. *Postscript Printer* is usually acceptable for HP printers.
6. click *Apply* button to restart LPD
7. You may test the printer by selecting it in the Red Hat printer config window then selecting *Test* from the horizontal menu.

From within Contingency Workstation (VISTA)

1. P-TCP * GTM/LINUX entries are already pre-defined in VISTA TERMINAL TYPE file. You may use TRANSFER FILE ENTRIES FileMan option to create new terminal types using these as templates. Edit the OPEN EXECUTE fields accordingly to vary print characteristics
2. Create a new DEVICE file entry.
 - a. Note: The name of the new DEVICE must begin with the name of the Linux printer created above FOLLOWED BY A SPACE then a description (example:

Technical Information

- "A405 - ADMIN 10/6/UP"). The CLOSE EXECUTE field of the TERMINAL TYPE being used parses the queue name from the first space backward)
- b. I\$'s for network printers are normally */home/Linux bcma mgr acct/hfs/devicename.txt*
 - c. Device TYPE - HFS
3. test the printer through **VISTA**

Examples:

DEVICE file entries:

```
NAME: A405 10/6/UP          $I: /home/gtmgr/hfs/A405.dat
ASK DEVICE: NO             ASK PARAMETERS: NO
LOCATION OF TERMINAL: A405   ASK HOST FILE: NO
SUPPRESS FORM FEED AT CLOSE: YES OPEN PARAMETERS: newversion
SUBTYPE: P-TCP 10/6/UP GTM/LINUX TYPE: HOST FILE SERVER
```

```
NAME: A405 16/6/UP          $I: /home/gtmgr/hfs/A405.dat
ASK DEVICE: NO             ASK PARAMETERS: NO
LOCATION OF TERMINAL: A405   ASK HOST FILE: NO
SUPPRESS FORM FEED AT CLOSE: YES OPEN PARAMETERS: newversion
SUBTYPE: P-TCP 16/6/UP GTM/LINUX TYPE: HOST FILE SERVER
```

TERMINAL TYPE file entries:

```
NAME: P-TCP 10/6/UP GTM/LINUX SELECTABLE AT SIGN-ON: NO
RIGHT MARGIN: 80           FORM FEED: #
PAGE LENGTH: 60           BACK SPACE: $C(8)
OPEN EXECUTE: W *27,"E",*27,"&k3G"
CLOSE EXECUTE: W *27,"E" U IO K IO(1,IO) C IO ZSYSTEM "lpr -lrP
"_$E(ION,1,$F(ION," ")-1)" "_IO
```

```
NAME: P-TCP 16/6/UP GTM/LINUX SELECTABLE AT SIGN-ON: NO
RIGHT MARGIN: 132         FORM FEED: #
PAGE LENGTH: 60           BACK SPACE: $C(8)
OPEN EXECUTE: W *27,"E",*27,"(s16.7H",*27,"&k3G"
CLOSE EXECUTE: W *27,"E" U IO K IO(1,IO) C IO ZSYSTEM "lpr -lrP
"_$E(ION,1,$F(ION," ")-1)" "_IO
```

Technical Information

Workstation Queued Tasks

The following tasks should be queued to run on the workstation. All except XMMGR-PURGE-AI-XREF (which has a rescheduling frequency of 7D) should have a rescheduling frequency of 1D. The GT.M and Cache dat files were released with these jobs scheduled properly but they should be checked, once TaskMan is started, to make sure they have run and are being rescheduled.

The following capture shows how to list the currently queued workstation tasks and verifies that the HL PURGE TRANSMISSIONS task has been rescheduled. Check the TaskMan error log should the jobs not appear to be run or scheduled properly.

```
Select Systems Manager Menu Option:

    Core Applications ...
    Device Management ...
    Menu Management ...
    Programmer Options ...
    Operations Management ...
    Spool Management ...
    Information Security Officer Menu ...
    Taskman Management ...
    User Management ...
    Application Utilities ...
    Capacity Management ...
    HL7 Main Menu ...

Select Systems Manager Menu Option: TASKman Management

    Schedule/Unschedule Options
    One-time Option Queue
    Taskman Management Utilities ...
    List Tasks
    Dequeue Tasks
    Requeue Tasks
    Delete Tasks
    Print Options that are Scheduled to run
    Cleanup Task List
    Print Options Recommended for Queueing

Select Taskman Management Option: SCHEdule/Unschedule Options

Select OPTION to schedule or reschedule: ?
    Answer with OPTION SCHEDULING NAME
    Choose from:
    XQBUILDTREEQUE      (R)
    XQ XUTL $J NODES   (R)
    XUTM QCLEAN        (R)
    XUERTRP AUTO CLEAN (R)
    XMCLEAN            (R)
    XMAUTOPURGE       (R)
```

Technical Information

```
XMMGR-PURGE-AI-XREF      (R)
HL PURGE TRANSMISSIONS  (R)
HL TASK RESTART         (R)
HL AUTOSTART LINK MANAGER (R)
```

You may enter a new OPTION SCHEDULING, if you wish
Enter OPTION to schedule.

Only allow Action, Print, and Run type options.

Answer with OPTION NAME

Do you want the entire OPTION List? **N** (No)

Select OPTION to schedule or reschedule: **HL PURGE TRANSMISSIONS** Purge
Messages

...OK? Yes// **<ENTER>** (Yes)

(R)

Edit Option Schedule

Option Name: **HL PURGE TRANSMISSIONS**

Menu Text: Purge Messages

TASK ID: 433

QUEUED TO RUN AT WHAT TIME: JUN 3,2003@04:00

DEVICE FOR QUEUED JOB OUTPUT:

QUEUED TO RUN ON VOLUME SET:

RESCHEDULING FREQUENCY: 1D

TASK PARAMETERS:

SPECIAL QUEUEING:

Quick Reference Installation Checklist

Event	Where	Completed
1. Install patch PSB*2.0*17 A. FTP Software from an OI Field Office B. Install using Kids	VISTA	_____ _____ _____
2. Workstation Setup NOTE: Ensure that the workstation has a static IP Address	Workstation	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
A. Windows/Cachè 1. Setup Cachè – InterSystems supplies software. Example of install can be found in the manual, "Bar Code Medication Administration Backup System (BCBU) InterSystems Cache Installation Setup". 2. Shutdown Cachè 3. Copy cache.dat file that was downloaded from the FTP site into C:\CACHESYS\folder. (If asked to replace file, answer yes.) 4. Remove the Read-Only attribute from the cache.dat file. 5. Ensure telnet is enabled in Cachè Configuration. 6. Move ZSTU routine from VISTA namespace to %SYS namespace. 7. Setup Telnet and Terminal users using Cachè Control Panel. 8. Stop and Restart Cachè. 9. Create BCMA Backup shortcut.	Workstation	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
B. Linux/GT.M 1. Install Linux onto clean system 2. Example of install can be found in the manual, "Bar Code Medication Administration Backup System (BCBU) Linux Installation Setup. Make note of username entered and its password for future use. Also, remember the root password.	Workstation	_____

Sample PC Workstation Database Initialization

Event	Where	Completed
3. Sign into Linux using the user created during the installation.		_____
4. Enter super user mode (\$ <u>su</u>)		_____
5. Copy downloaded Linux files to an accessible location.		_____
6. Ensure downloaded file has correct permissions.		_____
7. Run the install script. (./install_bcma) – NOTE: BCMA manager account will be the user you created during the Linux install.		_____
8. Edit the TaskMan Site Parameters to enter the correct Box-Volume pair.		_____
9. Restart TaskMan.		_____
3. Workstation Database Initialization		_____
A. On new installs check the parameter PSB BKUP ONLINE VALUE=yes	VISTA	_____
B. Check the HL7 Site Parameter to make sure the field, "Is this a Production or Test Account", is set correctly.	VISTA	_____
C. Add a new link using HL7 options.	VISTA	_____
D. Associate the new link to a division using PSB BCBU VISTA MAIN option.	VISTA	_____
E. Start the new link using HL7 options.	VISTA	_____
F. Start the LISTNER link using HL7 options.	Workstation	_____
G. Initialize the workstation using Default or Divisional Workstation initialize option.	VISTA	_____

Contingency PC Workstation Reports

List/Display Orders

```
Select BCMA Backup System (Wrkstn) Option: SO <ENTER> List/Display Orders

BCMAbu Patient List (All) Jun 06, 2003@07:26:48 Page: 1 of 2
BCMA Backup System :: Patient Listing

Patient          SSN          Ward          Room          Bed
PATIENT,TEST    000000000 10W           NW1003A      3
PATIENT,TEST2   000000002 4 MED         M20           A
PATIENT,TEST3   000000003 TICU          656           8
PATIENT,TEST4   000000004 3E SUBACUTE  A330          A
PATIENT,TEST5   000000005 3W ORTHO     SW309         1
PATIENT,TEST6   000000006 4E M         SE403         3
PATIENT,TEST7   000000007 4 SURG       M30           A
PATIENT,TEST8   000000008 3W GS        NW304         2
PATIENT,TEST9   000000009 2B APCU     B218          A
PATIENT,TEST10  000000010 3E GEM       A345          C
PATIENT,TEST11  000000011 2B APCU     B215          A
PATIENT,TEST 1  000000001 TICU          656           9

Enter ?? for more actions

SP Select Patient    LW List by Ward    LA List All Patients
Select Item(s): Next Screen// SP <ENTER> Select Patient
Select PATIENT: PATIENT,TEST

BCMAbu ALL Orders List Jun 06, 2003@07:27:23 Page: 1 of 1
PATIENT,TEST SSN: 000000000 Ward: 10W
This record last updated: Apr 30, 2003@09:38:02 Room: NW1003A Bed: 3
-----
Order No.  Status  Type  Medication(s)
57225P    Pending P    ACETAMINOPHEN TAB (325MG ORAL QID PRN)

Enter ?? for more actions

SO Select Order      L1 List Active Orders  L2 List All Orders
Select Action: Quit// SO <ENTER> Select Order
Select order number, more than one separated by a comma, or 'ALL':
```

Contingency PC Workstation Reports

Select ORDER#: ALL// 57225P

BCMAbu Selected Order(s) Jun 06, 2003@07:27:51 Page: 1 of 1
PATIENT,TEST SSN: 000000000 Ward: 10W
This record last updated: Apr 30, 2003@09:38:02 Room: NW1003A Bed: 3

Order Number: 57225P Start: Apr 12, 2002@09:35
Type: PENDING Stop: May 12, 2002@15:00
Status: IP~pending
Drug: ACETAMINOPHEN TAB
Give: 325MG ORAL QID PRN
Provider: PROVIDER,MD RPh/Entry by: PHARMACIST
Admin. Times:
CAUTION! THIS IS A PENDING ORDER :: CHECK WITH PROVIDER!

Enter ?? for more actions

Select Action:Quit// <ENTER> QUIT

BCMAbu Patient List (All) Jun 06, 2003@07:28:42 Page: 1 of 2
BCMA Backup System :: Patient Listing

Patient	SSN	Ward	Room	Bed
PATIENT,TEST	000000000	10W	NW1003A	3
PATIENT,TEST2	000000002	4 MED	M20	A
PATIENT,TEST3	000000003	TICU	656	8
PATIENT,TEST4	000000004	3E SUBACUTE	A330	A
PATIENT,TEST5	000000005	3W ORTHO	SW309	1
PATIENT,TEST6	000000006	4E M	SE403	3
PATIENT,TEST7	000000007	4 SURG	M30	A
PATIENT,TEST8	000000008	3W GS	NW304	2
PATIENT,TEST9	000000009	2B APCU	B218	A
PATIENT,TEST10	000000010	3E GEM	A345	C
PATIENT,TEST11	000000011	2B APCU	B215	A
PATIENT,TEST 1	000000001	TICU	656	9

Enter ?? for more actions

SP Select Patient LW List by Ward LA List All Patients

Select Item(s): Next Screen// LW <ENTER> List by Ward

Wards with BCMA Backup Data on this workstation:

10W
2B APCU
3E GEM
3E SUBACUTE
3W GS
3W ORTHO
4 MED
4 SURG
4E ENT
4E M
4E ON
MICU
TICU

Contingency PC Workstation Reports

Select WARD: 10W

BCMAbu Patient List (Ward)

Jun 06, 2003@07:29:08

Page: 1 of 1

BCMA Backup System :: Patient Listing

Patient	SSN	Ward	Room	Bed
PATIENT,TEST	000000000	10W	NW1003A	3
PATIENT,TEST13	000000013	10W	NW1003	2

Enter ?? for more actions

SP Select Patient LW List by Ward LA List All Patients

Select Item(s): Quit// **SP <ENTER>** Select Patient

Select PATIENT: PATIENT,TEST

Contingency PC Workstation Reports

BCMabu ALL Orders List Jun 06, 2003@07:29:45 Page: 1 of 1
PATIENT,TEST SSN: 000000000 Ward: 10W
This record last updated: Apr 30, 2003@09:38:02 Room: NW1003A Bed: 3

Order No.	Status	Type	Medication(s)
57225P	Pending	P	ACETAMINOPHEN TAB (325MG ORAL QID PRN)

Enter ?? for more actions

SO Select Order L1 List Active Orders L2 List All Orders
Select Action: Quit// <ENTER>

Contingency PC Workstation Reports

Print MAR for All Wards

Select BCMA Backup System (Wrkstn) Option: PA Print MAR for All Wards
 Inpatient Pharmacy Orders for all wards

Report [A]LL or [C]URRENT orders? CURRENT//

Print how many days MAR? 7// 3

Select beginning date for BCMA Medication Log history: Jun 03, 2003// (JUN 03, 2003)

MAR Ran: Jun 06, 2003@07:18:38 Inpatient Pharmacy Orders (Backup) Page: 1
 PATIENT,TEST10 SSN: 000000010 DOB: Jan 03, 1949 Sex: M
 Ward: 3E GEM Room: A345 Bed: C
 This record last updated: Jun 04, 2003@15:22:38

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Jun 04, 2003@09:50	Jun 09, 2003@24:00					
<<AMPICILLIN/SULBACTAM INJ>> Additive(s): <<AMPICILLIN/SULBACTAM BOTTLE: 1 75GM>> Solution(s): <<D-5-W 100ML>> <<0.9% NAACL 250ML>> Give: INTRAVENOUS 125 ml/hr Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 14V Type: IV Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.						
May 19, 2003@14:04	Jun 15, 2003@24:00	0230				
<<ACETAMINOPHEN 500MG TAB>> Give: 500MG ORAL Q3H PRN Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 72U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) Log Date Message Log Entry Person PRN Effectiveness: No entries since the above date are on file.						
May 28, 2003@10:48	Jun 15, 2003@24:00	0200				
<<TRACE ELEMENTS 5ML INJ>> Give: 25CC SUBCUTANEOUS Q3H Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 74U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) Special Instructions:TESTING BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.						
May 28, 2003@10:49	Jun 15, 2003@24:00	0500				
<<IBUPROFEN 600MG TAB>> Give: 600MG ORAL TID FILL ON REQUEST Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 76U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.						
Jun 02, 2003@16:27	Jun 15, 2003@24:00	1400				
<<ACETOHEXAMIDE 250MG TAB>> Give: 250MG ORAL ONCE ONE TIME Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 77U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.						

Contingency PC Workstation Reports

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Jun 02, 2003@16:27	Jun 15, 2003@24:00	0500 1100 1700 2300				<<ALOH/MGOH/SIMTH XTRA STRENGTH CHEW TAB>> Give: 1 TABLET ORAL Q6H PRN Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 78U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 02, 2003@16:28	Jun 15, 2003@24:00	0100 0300 0500 0700 0900 1100 1300 1500 1700 1900 2100 2300				<<TRAMADOL HCL 50MG TAB>> Give: 50MG ORAL Q2H FILL ON REQUEST Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 79U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 02, 2003@16:29	Jun 15, 2003@24:00					<<SALSALATE 750MG TAB>> Give: 750MG ORAL ON CALL ON CALL Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 80U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
		SIGNATURE/TITLE INIT INJECTION SITES (Right or Left) VA FORM 10-2970 1. DELTOID 4. MED (ANTERIOR) THIGH 7. ABDOMEN 2. VENTRAL GLUTEAL 5. VASTUS LATERALIS 8. THIGH 3. GLUTEUS MEDIUS 6. UPPER ARM 9. BUTTOCK 10. UPPER BACK PRN: E=Effective N=Not Effective* [H* [J* [2J* [H				
MAR Ran: Jun 06, 2003@07:18:39 Inpatient Pharmacy Orders (Backup) Page: 1 OHIO,RAYMOND SSN: 000004545 DOB: Aug 09, 1911 Sex: M Ward: 3E GEM Room: A342 Bed: C This record last updated: Jun 05, 2003@12:21:04						
Jun 05, 2003@11:52	Jul 02, 2003@24:00	0200 0500 0800 1100 1400 1700 2000 2300				<<ASCORBIC ACID 100MG TAB>> Give: 100MG ORAL Q3H Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 36U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 05, 2003@12:09	Jul 02, 2003@24:00	0200 0500 0800 1100 1400 1700 2000 2300				<<TOCAINIDE HCL 400MG TAB>> Give: 400MG ORAL Q3H Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 37U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 05, 2003@13:09	Jul 02, 2003@24:00	0900				<<SALICYLIC ACID 2/SULFUR 2% SHAMPOO>> Give: SHAMPOO TOPICAL QD FILL ON REQUEST Provider: PHARM,STAFF1 RPh/Entry by: PHARM,STAFF1

Contingency PC Workstation Reports

```

Verified by: NURSE,VOLUNTEER
Order #: 38U      Type: UNIT DOSE
Status: CM-finished/verified by pharmacist(active)
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)
No Medication Log entries are on file for this order.
-----
|      SIGNATURE/TITLE      | INIT | INJECTION SITES (Right or Left) | VA FORM | 10-2970
|      |                    |      | 1. DELTOID                    | 4. MED (ANTERIOR) THIGH | 7. ABDOMEN
|      |                    |      | 2. VENTRAL GLUTEAL            | 5. VASTUS LATERALIS     | 8. THIGH
|      |                    |      | 3. GLUTEUS MEDIUS            | 6. UPPER ARM            | 9. BUTTOCK
|      |                    |      | 10. UPPER BACK                |                          |
|      |                    |      |                               | PRN: E=Effective N=Not Effective* [H* [J* [2J* [H
-----

MAR Ran: Jun 06, 2003@07:18:39  Inpatient Pharmacy Orders (Backup)                               Page: 1
PATIENT, TEST 1                  SSN: 000000001  DOB: Jun 17, 1948  Sex: M
Ward: TICU                        Room: 656      Bed: 9
This record last updated: Apr 30, 2003@09:38:41

Start          Stop          Admin Times  06/06  06/07  06/08  Notes
-----
May 07, 2003@10:19:41  Jul 01, 2003
<<TRIAMCINOLONE INJ,SUSP>>
Additive(s): <<TRIAMCINOLONE DIACETATE 50MG>>
Solution(s): <<0.9% NACL 100ML>>
Give: INTRAVENOUS 50 ml/hr
Provider: PROVIDER,MD
RPh/Entry by: PHARM,STAFF1
Order #: 63V      Type: IV
Status: CM-finished/verified by pharmacist(active)
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)
No Medication Log entries are on file for this order.
-----
|      SIGNATURE/TITLE      | INIT | INJECTION SITES (Right or Left) | VA FORM | 10-2970
|      |                    |      | 1. DELTOID                    | 4. MED (ANTERIOR) THIGH | 7. ABDOMEN
|      |                    |      | 2. VENTRAL GLUTEAL            | 5. VASTUS LATERALIS     | 8. THIGH
|      |                    |      | 3. GLUTEUS MEDIUS            | 6. UPPER ARM            | 9. BUTTOCK
|      |                    |      | 10. UPPER BACK                |                          |
|      |                    |      |                               | PRN: E=Effective N=Not Effective
-----

```

Contingency PC Workstation Reports

Print MAR for Selected Patient

Select BCMA Backup System (Wrkstn) Option: PP Print MAR for Selected Patient

Inpatient Pharmacy Orders for a selected patient
Select PATIENT NAME: PATIENT, TEST

Report [A]LL or [C]URRENT orders? CURRENT//

Print how many days MAR? 7// 3

BCMA Medication Log history: this patient has no history on file.

MAR Ran: Jun 06, 2003@07:20:26 Inpatient Pharmacy Orders (Backup) Page: 1

PATIENT,TEST SSN: 000004444 DOB: Mar 29, 1935 Sex: M
Ward: TICU Room: 656 Bed: 8

This record last updated: Apr 30, 2003@09:38:46

Allergies: CIPROFLOXACIN

SIGNATURE/TITLE	INIT	INJECTION SITES (Right or Left)	VA FORM	10-2970
		1. DELTOID	4. MED (ANTERIOR) THIGH	7. ABDOMEN
		2. VENTRAL GLUTEAL	5. VASTUS LATERALIS	8. THIGH
		3. GLUTEUS MEDIUS	6. UPPER ARM	9. BUTTOCK
		10. UPPER BACK	PRN: E=Effective N=Not Effective	

Inpatient Pharmacy Orders for a selected patient
Select PATIENT NAME: PATIENT,TEST

Report [A]LL or [C]URRENT orders? CURRENT// ALL

Print how many days MAR? 7// 3

BCMA Medication Log history: this patient has no history on file.

MAR Ran: Jun 06, 2003@07:20:52 Inpatient Pharmacy Orders (Backup) Page: 1

PATIENT,TEST SSN: 000004444 DOB: Mar 29, 1935 Sex: M
Ward: TICU Room: 656 Bed: 8

This record last updated: Apr 30, 2003@09:38:46

Allergies: CIPROFLOXACIN

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Feb 12, 2003@11:09	Feb 13, 2003@14:00	0900	*****	*****	*****	
<<ADENOSINE INJ,SOLN>>						
Give: 4 MG INTRAVENOUS QD						
Provider: PROVIDER,MD						
RPh/Entry by: TEAGUE,LYN D						
Order #: 57367P Type: PENDING						
Status: IP~pending						
CAUTION! THIS IS A PENDING ORDER :: CHECK WITH PROVIDER!						
BCMA MEDICATION LOG HISTORY						
No Medication Log entries are on file for this order.						

SIGNATURE/TITLE	INIT	INJECTION SITES (Right or Left)	VA FORM	10-2970
		1. DELTOID	4. MED (ANTERIOR) THIGH	7. ABDOMEN
		2. VENTRAL GLUTEAL	5. VASTUS LATERALIS	8. THIGH
		3. GLUTEUS MEDIUS	6. UPPER ARM	9. BUTTOCK
		10. UPPER BACK	PRN: E=Effective N=Not Effective	

Contingency PC Workstation Reports

Print MAR for Selected Ward

Select BCMA Backup System (Wrkstn) Option: PW Print MAR for Selected Ward
 Inpatient Pharmacy Orders for a selected ward
 Select WARD: 3E GEM

Report [A]LL or [C]URRENT orders? CURRENT//

Print how many days MAR? 7// 3

Select beginning date for BCMA Medication Log history: Jun 03, 2003// (JUN 03, 2003)

MAR Ran: Jun 06, 2003@07:24:36 Inpatient Pharmacy Orders (Backup) Page: 1
 PATIENT,TEST10 SSN: 000000010 DOB: Jan 03, 1949 Sex: M
 Ward: 3E GEM Room: A345 Bed: C
 This record last updated: Jun 04, 2003@15:22:38

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Jun 04, 2003@09:50	Jun 09, 2003@24:00					
<<AMPICILLIN/SULBACTAM INJ>>						
Additive(s): <<AMPICILLIN/SULBACTAM BOTTLE: 1 75GM>>						
Solution(s): <<D-5-W 100ML>>						
<<0.9% NAACL 250ML>>						
Give: INTRAVENOUS 125 ml/hr						
Provider: PROVIDER,MD						
RPh/Entry by: PHARM,STAFF1						
Verified by: NURSE,VOLUNTEER						
Order #: 14V Type: IV						
Status: CM-finished/verified by pharmacist(active)						
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)						
No Medication Log entries are on file for this order.						

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
May 19, 2003@14:04	Jun 15, 2003@24:00	0230				
<<ACETAMINOPHEN 500MG TAB>>						
Give: 500MG ORAL Q3H PRN						
Provider: PROVIDER,MD						
RPh/Entry by: PHARM,STAFF1						
Order #: 72U Type: UNIT DOSE						
Status: CM-finished/verified by pharmacist(active)						
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)						
Log Date	Message	Log Entry Person	PRN Effectiveness:			
No entries since the above date are on file.						

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
May 28, 2003@10:48	Jun 15, 2003@24:00	0200				
<<TRACE ELEMENTS 5ML INJ>>						
Give: 25CC SUBCUTANEOUS Q3H						
Provider: PROVIDER,MD						
RPh/Entry by: PHARM,STAFF1						
Order #: 74U Type: UNIT DOSE						
Status: CM-finished/verified by pharmacist(active)						
Special Instructions:TESTING						
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)						
No Medication Log entries are on file for this order.						

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
May 28, 2003@10:49	Jun 15, 2003@24:00	0500				
<<IBUPROFEN 600MG TAB>>						
Give: 600MG ORAL TID FILL ON REQUEST						
Provider: PROVIDER,MD						
RPh/Entry by: PHARM,STAFF1						
Order #: 76U Type: UNIT DOSE						
Status: CM-finished/verified by pharmacist(active)						
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)						
No Medication Log entries are on file for this order.						

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Jun 02, 2003@16:27	Jun 15, 2003@24:00	1400				
<<ACETOHEXAMIDE 250MG TAB>>						
Give: 250MG ORAL ONCE ONE TIME						
Provider: PROVIDER,MD						
RPh/Entry by: PHARM,STAFF1						
Verified by: NURSE,VOLUNTEER						
Order #: 77U Type: UNIT DOSE						
Status: CM-finished/verified by pharmacist(active)						
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)						
No Medication Log entries are on file for this order.						

Contingency PC Workstation Reports

Start	Stop	Admin Times	06/06	06/07	06/08	Notes
Jun 02, 2003@16:27	Jun 15, 2003@24:00	0500 1100 1700 2300				<<ALOH/MGOH/SIMTH XTRA STRENGTH CHEW TAB>> Give: 1 TABLET ORAL Q6H PRN Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 78U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 02, 2003@16:28	Jun 15, 2003@24:00	0100 0300 0500 0700 0900 1100 1300 1500 1700 1900 2100 2300				<<TRAMADOL HCL 50MG TAB>> Give: 50MG ORAL Q2H FILL ON REQUEST Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Order #: 79U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 02, 2003@16:29	Jun 15, 2003@24:00					<<SALSALATE 750MG TAB>> Give: 750MG ORAL ON CALL ON CALL Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 80U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
SIGNATURE/TITLE		INIT	INJECTION SITES (Right or Left)			VA FORM 10-2970
			1. DELTOID	4. MED (ANTERIOR) THIGH	7. ABDOMEN	
			2. VENTRAL GLUTEAL	5. VASTUS LATERALIS	8. THIGH	
			3. GLUTEUS MEDIUS	6. UPPER ARM	9. BUTTOCK	
			10. UPPER BACK	PRN: E=Effective N=Not Effective~[H~[J~[2J~[H		
MAR Ran: Jun 06, 2003@07:24:36 Inpatient Pharmacy Orders (Backup) Page: 1						
OHIO,RAYMOND SSN: 000004545 DOB: Aug 09, 1911 Sex: M						
Ward: 3E GEM Room: A342 Bed: C						
This record last updated: Jun 05, 2003@12:21:04						
Jun 05, 2003@11:52	Jul 02, 2003@24:00	0200 0500 0800 1100 1400 1700 2000 2300				<<ASCORBIC ACID 100MG TAB>> Give: 100MG ORAL Q3H Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 36U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 05, 2003@12:09	Jul 02, 2003@24:00	0200 0500 0800 1100 1400 1700 2000 2300				<<TOCAINIDE HCL 400MG TAB>> Give: 400MG ORAL Q3H Provider: PROVIDER,MD RPh/Entry by: PHARM,STAFF1 Verified by: NURSE,VOLUNTEER Order #: 37U Type: UNIT DOSE Status: CM-finished/verified by pharmacist(active) BCMA MEDICATION LOG HISTORY (since Jun 03, 2003) No Medication Log entries are on file for this order.
Jun 05, 2003@13:09	Jul 02, 2003@24:00	0900				<<SALICYLIC ACID 2/SULFUR 2% SHAMPOO>> Give: SHAMPOO TOPICAL QD FILL ON REQUEST Provider: PHARM,STAFF1

Contingency PC Workstation Reports

RPh/Entry by: PHARM,STAFF1
Verified by: NURSE,VOLUNTEER
Order #: 38U Type: UNIT DOSE
Status: CM-finished/verified by pharmacist(active)
BCMA MEDICATION LOG HISTORY (since Jun 03, 2003)
No Medication Log entries are on file for this order.

SIGNATURE/TITLE	INIT	INJECTION SITES (Right or Left)	VA FORM 10-2970
		1. DELTOID	4. MED (ANTERIOR) THIGH 7. ABDOMEN
		2. VENTRAL GLUTEAL	5. VASTUS LATERALIS 8. THIGH
		3. GLUTEUS MEDIUS	6. UPPER ARM 9. BUTTOCK
		10. UPPER BACK	PRN: E=Effective N=Not Effective

Contingency PC Workstation Reports

Print Blank MAR for Selected Patient

Blank 3 Day MAR for Selected Patient

MAR Ran: Apr 30, 200309:47:30 Inpatient Pharmacy Orders (Backup) Page: 1
 PATIENT TEST SSN: 00004444 DOB: Mar 29, 1935 Sex: M
 Ward: TICU-00 Room: 656 Bed: 8
 BCBU Record Last Updated: Apr 30, 200309:38:46
 Allergies: CIPROFLOXACIN

Order	Start	Stop	Admin Times	APR 30	MAY 1	MAY 2	Notes
_____	_____	_____					
RPH Verify: _____		Nurse Verify: _____					
_____	_____	_____					
RPH Verify: _____		Nurse Verify: _____					
_____	_____	_____					
RPH Verify: _____		Nurse Verify: _____					
_____	_____	_____					
RPH Verify: _____		Nurse Verify: _____					

SIGNATURE/TITLE	INIT	INJECTION SITES	MED/DOSE OMITTED	REASON
_____	_____	Indicate RIGHT (R) or LEFT (L)	_____	_____
_____	_____	(IM) (SUB Q)	_____	_____
_____	_____	1. DELTOID 6. UPPER ARM	_____	_____
_____	_____	2. VENTRAL GLUTEAL 7. ABDOMEN	_____	_____
_____	_____	3. GLUTEUS MEDIUS 8. THIGH	_____	_____
_____	_____	4. MED (ANTERIOR) THIGH 9. BUTTOCK	_____	_____
_____	_____	5. VASTUS LATERALIS 10. UPPER BACK	_____	_____
_____	_____	PRN: E=Effective N=Not Effective	_____	_____

Contingency PC Workstation Reports

List of Wards in BCMA Backup File

Select BCMA Backup System (Wrkstn) Option: WL List of Wards in BCMA Backup File

Wards with BCMA Backup Data on this workstation:

10W
2B APCU
3E GEM
3E SUBACUTE
3W GS
3W ORTHO
4 MED
4 SURG
4E ENT
4E M
4E ON
MICU
TICU

Trouble Shooting Guide

The messages are building on the VISTA side, but I see an open fail in the link monitor.

Check the following areas:

The IP address on both and make sure they match.

The Port numbers on both and make sure they match.

The Fire Wall on the Linux Workstation.

The Filers on the PC Workstation

The Link Manager on the Workstation.

The messages appear to be transmitting but no data is filing on the workstation.

Verify that the HL COMMUNICATION SERVER PARAMETERS field, "DEFAULT PROCESSING ID" is set correctly. This field must match the value of the sending VISTA system. In addition, verify that INCOMING and OUTGOING HL7 filers are running on the workstation.

I don't see the message queue increase for my HL7 link when I run the 'Initialize Workstation' option or during activity on the VISTA side?

The following two places need to be checked:

Make sure the Link is enabled on the VISTA side. [HL MAIN MENU HL7 Main Menu]

Make sure the Workstation Link is associated to the correct division or Default parameter.

[XPAR MENU TOOLS General Parameter Tools Option]

I'm able to start TaskMan up with the Taskman_start script, but I notice that the HL7 link jobs do not start. What could be the problem?

Linux requires root privs to start listener jobs on TCPIP ports. TaskMan needs to be started by the root user so its submanagers (which start the listener) can have those privs as well. To do this, login as the BCMA Manager the issue the command "su -m" and enter the root password. Once you're logged in as root, start TaskMan by issuing the command "./taskman_start". The HL7 link manager and the listener link should start automatically. NOTE: Netmail startup has root requirements as well.

Running the netmail_start script does not start netmail. What could be the problem?

Linux requires root privs to start listener jobs on TCPIP ports. To start up the network mail listener job, log in as the BCMA Manager, then issue the command "su -m" and enter the root password. Once you're logged in as root, start network mail by issuing the command "./netmail_start". NOTE: HL7 links have root requirements as well.

Trouble Shooting Guide

How can I verify the TCPIP listening jobs on Linux?

As root, issue the "netstat -tlp" command. This will provide information similar to the following:

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State	PID/Program name
tcp	0	0	*:32768	*:*	LISTEN	523/rpc.statd
tcp	0	0	BCMA.med.va.gov:32769	*:*	LISTEN	628/xinetd
tcp	0	0	*:printer	*:*	LISTEN	658/lpd Waiting
tcp	0	0	*:sunrpc	*:*	LISTEN	504/portmap
tcp	0	0	*:10000	*:*	LISTEN	1174/mumps
tcp	0	0	*:5904	*:*	LISTEN	13884/Xvnc
tcp	0	0	*:x11	*:*	LISTEN	813/X
tcp	0	0	*:ftp	*:*	LISTEN	628/xinetd
tcp	0	0	*:ssh	*:*	LISTEN	614/sshd
tcp	0	0	*:telnet	*:*	LISTEN	628/xinetd
tcp	0	0	*:smtp	*:*	LISTEN	1390/mumps

Ports of primary interest are 10000 (HL7 listener link) and smtp (port 25-netmail).

To see the numeric ports for common TCPIP protocols, issue the "netstat -tlp - numeric" command.

What is the best way to shut GT.M down?

\$HOME of the BCMA manager account contains the script zgstop. This script is customized to shutdown the BCMA configuration cleanly and run the GT.M database down (to ensure database integrity). To use this script properly, it must be run as root (the BCMA manager will not be able to shutdown HL7 link, netmail and TaskMan jobs started as root - this will prevent the database to rundown properly). To do this, login as the BCMA manager then issue the command "su -m" and enter the root password. Once you're logged in as root, issue the command './zgstop'.

How do I start GT.M up?

There is no single GT.M daemon. This means that each GT.M process 'starts' GT.M for itself. GT.M processes (TaskMan, netmail, HL7 jobs) should start automatically with a system reboot provided the /etc/init.d/gtm script was enabled when BCMA was installed using the install_bcma script.

From within GT.M, how can I view system status (like when I D ^%SS in Cache)?

GT.M does not provide a utility of it's own to provide this functionality. However, SD&D have provided the ^ZSY routine to accomplish this. As with other BCMA tasks, it is best to run this as the root user otherwise not all process information will be accessible. To do this, login as the BCMA manager then issue the command "su -m" and enter the root password. Drop into GT.M, issue the ZSY command as follows, and select the type of display desired:

```
GTM>D ^ZSY
```

```
1 pid
```

Trouble Shooting Guide

2 cpu time
 3 image/pid
 4 image/cpu
 1// 1

INTRPT issued to process 1409
 INTRPT issued to process 1148
 INTRPT issued to process 1390
 INTRPT issued to process 1315
 INTRPT issued to process 1307
 INTRPT issued to process 1295
 INTRPT issued to process 1291
 INTRPT issued to process 1239
 INTRPT issued to process 1229
 INTRPT issued to process 1225
 INTRPT issued to process 1222
 INTRPT issued to process 1216
 INTRPT issued to process 1213
 INTRPT issued to process 1189
 INTRPT issued to process 1179
 INTRPT issued to process 1177
 INTRPT issued to process 1174
 INTRPT issued to process 1157
 INTRPT issued to process 1145

GT.M Mumps users on 18-Mar-03 11:11:10

Proc. id	Proc. name	PS	Terminal	Routine	Mode	CPU time
1145	TaskMan VISTA 1	S	?	IDLE+1^%ZTM	-direct	
1148		S	pts/2		-direct	
1157	HLmgr:538	S	?	LOOP+3^HLCSLM	-direct	
1174	HLSrv:182	S	?		-direct	
1177		S	?	SUB+1^%ZTMS1	-direct	
1179	BTask 546	S	?	STARTIN+17^HLCSIN	-direct	
1189	BTask 545	S	?	STARTIN+17^HLCSIN	-direct	
1213	BTask 547	S	?	STARTOUT+16^HLCSOUT	-direct	
1216	BTask 548	S	?	STARTOUT+16^HLCSOUT	-direct	
1222	BTask 550	S	?	STARTIN+17^HLCSIN	-direct	
1225	BTask 551	S	?	STARTIN+17^HLCSIN	-direct	
1229	BTask 552	S	?	STARTOUT+16^HLCSOUT	-direct	
1239	BTask 553	S	?	STARTOUT+16^HLCSOUT	-direct	
1291	Sub 1291	S	?	GETTASK+3^%ZTMS1	-direct	
1295	Sub 1295	S	?	SUB+1^%ZTMS1	-direct	
1307	Sub 1307	S	?	GETTASK+3^%ZTMS1	-direct	
1315	Sub 1315	S	?	SUB+1^%ZTMS1	-direct	
1390		S	?		-direct	
1409		S	pts/3	jobset+4^ZSY	-direct	

Trouble Shooting Guide

I'm getting <RECOMPILE> errors when working on the Cachè system.

If you are getting this error, the routines need to be recompiled on the workstation. There are two different methods you can use to accomplish this.

CHUI

1. Get to the programmer prompt on the workstation
2. D ^%RCOMPIL
3. At the routine selection prompt select %*, hit enter
4. Repeat the D ^%RCOMPIL command and select * at the routine selection prompt

GUI

1. Right click on the Cache cube and select Explorer
2. On the left side of the screen expand **VISTA** under the Local Databases, select routines
3. In the routine selection box enter %*
4. From the Edit menu click on Select All
5. In the Contents screen on the right, right click, click Advanced/Compile
6. Repeat step 3-5 selecting * in the routine selection

