RESOURCE AND PATIENT MANAGEMENT SYSTEM

Immunization Interface Management

(BYIM)

Technical Manual

Version 3.0 Patch 8
November 2025

Office of Information Technology
Division of Information Technology

Table of Contents

Revision History

Version	Date	Author	Section	Summary of Change
1.0	August 2005	N/A	N/A	Initial version
1.01	June 2008	N/A	N/A	Provides additional data structure and programming to allow automated exchange of the files created by the interface with the state immunization registries; allows for automatic importation of state immunization data into RPMS.
2.0	April 2010	N/A	N/A	Added the ability to expand age groups included in export to include 65 and older or all ages; the ability to exit (^) the manual export process; the ability to sort the NO MATCH report by patient name, date of birth, or import file date, and include a reason for each No Match; new statistical report for the number of children and immunizations in both the export and import processes, including the VFC status. Retitled manual from Immunization Data Exchange to Immunization Interface Management (BYIM)
2.08	July 2017	N/A	N/A	The following sections were modified based on changes for BYIM Version 2.0 patch 8 • Section 2.2 (System Requirements)–Update Generic Interface version • Section 3.0 (BYIM Menu)–Add new options • Section 4.0 (Routines)–Add new routines • Section 5.0 (Files and Tables)–Add new files • Section 9.1 (System Documentation)–Change %XINDEX to XINDEX Update for 508 compliance
2.10	September 2019	N/A	N/A	The following sections were modified based on changes for BYIM Version 2.0 patch 10 • Section 2.2 (System Requirements)–Update patch levels • Section 2.3 (Security Keys)–Add new security key • Section 4.0 (Routines)–Add new routines • Section 5.0 (Files and Tables)–Add new files Section 7.2 (Callable Routines)–Add new entry points

Version	Date	Author	Section	Summary of Change
3.0	September 2020	N/A	N/A	The following sections were modified based on changes for BYIM Version 3.0 • Section 2.3 (Security Keys)–Add new security key • Section 4.0 (Routines)–Add new routines • Section 5.0 (Files and Tables)–Add new files Section 7.2 (Callable Routines)–Add new entry points
3.8	April 2025	N/A	N/A	The following sections were modified based on changes for BYIM Version 3.0 patch 8: • 1.0 (Introduction)–Added information about patch 8 • 3.2 (System Requirements)–Added new requirement • 5.0 (Routines)–Added new routines • 6.0 (Files and Tables)–Added new file • 7.2 (Callable Routines)–Added new entry points • 9.0 (Archiving and Purging)–Updates and additions • 10.0 (Documentation Resources)–Added sections 10.3 and 10.4 Appendices–Added Appendices A and B

Preface

This manual contains the complete technical programming information related to the updates to this version of the Indian Health Service Resource and Patient Management System Immunization Interface Management system.

1.0 Introduction

Immunization Interface Management (namespace BYIM), also known as Immunization Data Exchange, allows a two-way exchange of immunization data between facilities running the Resource and Patient Management System (RPMS) Patient Care Component (PCC) and State Immunization Information Systems (SIIS). Immunization Interface Management Menu (BYIM) uses secured data exchange via secure Internet protocols to meet Health Insurance Portability and Accountability Act (HIPAA) data security requirements for exchange of information between Indian Health Service (IHS) and Tribal facilities and state registries.

Version 3.0 provides new functionality for Centers for Disease Control and Prevention (CDC) Immunization Guide 2.5.1 R1.5 Query and Response capabilities to send both patient's immunizations to the SIIS and to query the SIIS to determine which immunizations the SIIS has listed for the patient.

Version 3.0 also ensures compliance with Certified Health Information Technology (CHIT) 15 National Institute of Standards and Technology (NIST) requirements and various state-specific message requirements.

Version 3.0 patch 8 moves the transmission functionality from the Simple Message Mover (SMM) third-party application to an IRIS production.

This manual provides IHS site managers with a technical description of the BYIM routines, files, menus, cross references, globals, and other necessary information required to effectively manage the system.

All routines, files, options, and keys are namespaced starting with the letters "BYIM."

The file number range for this package is 90480–90480.99.

2.0 Orientation

There is no special orientation for this package.

3.0 Implementation and Maintenance

3.1 General Information

The BYIM system resides in the BYIM namespace, and all related options, security keys, routines, and globals are namespaced BYIM.

3.2 System Requirements

- Kernel (namespace XU) v8.0 p1018 or later
- FileMan (namespace DI) v23 p18 or later
- Generic Interface (namespace GIS) v3.01 with the latest patches
- IHS Immunization System (namespace BI) v8.5 p28 or later
- Immunization Interface Management (namespace BYIM) v3.0 p7

> **Note:** The site must have an account with their state immunization registry for secured transfer of the immunization data to the state.

3.3 Package-wide Variables

BYIM has no package-wide variable.

3.4 Security Keys

Table 3-1 lists the BYIM security keys.

Table 3-1: Security keys by name with descriptions

Key Name	Description
BYIMZ IZ ADDITIONAL STATES	Controls access to the BYIM IZ ADDITIONAL STATES option, which is used to setup parameters for additional states.
BYIMZ IZ AUTO IMP DAILY RSP	Controls access to background process to import SIIS responses to the daily batch file exported to the SIIS.
BYIMZ IZ AUTO IMPORT	Controls access to background process to the auto import function. (No longer active.)
BYIMZ IZ BRIDGE MONITOR	(No longer active.)
BYIMZ IZ EXPORT	Controls access to the immunization export function.
BYIMZ IZ EXPORT SELECT PAT	Controls access to option to select and create VXU export for select patients.
BYIMZ IZ FACILITY EXPORT	Controls access to facility/division specific export.

Key Name	Description
BYIMZ IZ RT MESSAGES	Controls access to the option BYIM IZ RT MESSAGES which accesses the Query/Response real-time message functions.
BYIM IZ SYS STATUS	Controls access to the BYIM IZ SYS STATUS option, which reports on the health of the BYIM application
BYIMZ IZ TEST EXPORT	Controls access to the option to create an initial small immunization data export file in order to test the data exchange process.
BYIMZ SET PARAMETERS	Controls access to the option to set parameters for the Immunization Data Exchange.
BYIMZMENU	Control access to BYIM primary menu option.

4.0 BYIM Menu

Table 4-1 lists the BYIM menu options.

Table 4-1: BYIM menu options with menu text and keys

Name	Menu Text	Key
BYIMMENU	Immunization Interchange Management Menu	BYIMZMENU
BYIM IZ ADDITIONAL STATES	Define Additional Data Exchange States	BYIMZ IZ ADDITIONAL STATES
BYIM IZ AUTO EXPORT	Entry Point for Auto export	<No Security Key>
BYIM IZ AUTO IMP DAILY RSP	Auto Import Daily Batch Response	<No Security Key>
BYIM IZ AUTO IMPORT	Entry Point for Auto Import	<No Security Key>
BYIM IZ AUTO RESTART PST V3P8	Restart BYIM background jobs post V3P8 install	<No Security Key>
BYIM IZ EP ERROR 3 BULLETIN	Ensemble Production Error 3 Bulletin	<No Security Key>
BYIM IZ ERROR REPORT	Display ERRORS from State Response	<No Security Key>
BYIM IZ EXPORT	Start Immunization Data Export	BYIMZ IZ EXPORT
BYIM IZ EXPORT SELECTED PATIENTS	Export Selected Patients	<No Security Key>
BYIM IZ FACILITY EXPORT	Facility Specific Export	BYIMZ IZ FACILITY EXPORT
BYIM IZ FILE STATISTICS REPORT	File Statistics Report	<No Security Key>
BYIM IZ FLAG COVID IMMS	Flag COVID Immunizations for Export	<No Security Key>
BYIM IZ IMPORT	Import Immunizations from State Registry (no longer used)	<No Security Key>
BYIM IZ INVENTORY CONTROL CODE	Add/Edit IIS Assigned Vaccine Inventory Codes	<No Security Key>
BYIM IZ PURGE OLD QUERY/RESP	Purge old Query/Response Messages	<No Security Key>
BYIM IZ READY	Check Immunization Data Export Status	BYIMZ IZ EXPORT
BYIM IZ RT MESSAGES	Immunization Queries	BYIMZ IZ RT MESSAGES
BYIM IZ RWT FILES	Insights & Conditions Requirements	<No Security Key>
BYIM IZ SCHEDULED APPT QUERY	Daily Scheduled Appts Query	<No Security Key>
BYIM IZ SETUP MENU	SETUP Options	BYIMZ SET PARAMETERS

Name	Menu Text	Key
BYIM SET PARAMETERS	SET UP Immunization Data Exchange Parameters	BYIMZ SET PARAMETERS
BYIM IZ SHOW EXPORTS	Show Immunizations Exported for a Patient	<No Security Key>
BYIM IZ SYS STATUS	Show health of the BYIM application	BYIMZ IZ SYS STATUS
BYIM IZ TEST EXPORT FILE	Create TEST Export File	BYIMZ IZ TEST EXPORT
BYIM IZ V3P8 RESTART BKND JOBS	Restart background jobs post v3p8 install	<No Security Key>

5.0 Routines

5.1 Routines with Description

Table 5-1 lists the BYIM routines and their descriptions.

Table 5-1: Routines and descriptions

Routine	Description
BYIM3P08	Patch 8 post-install code
BYIMAPI	Manages external calls for query/response functionality.
BYIMBUSA	Process data to create BUSA log entries for patient exports/imports
BYIMCLASS	Ensemble production class processsing
BYIMCOV1	Covid processing
BYIMCOV2	Covid processing
BYIMCOV7	Covid processing
BYIMCOVD	Covid processing
BYIMD	BYIM Utility functions
BYIMIMM	Manages primary data export, import, and review functions
BYIMIMM1	Extension of BYIMIMM
BYIMIMM2	Extension of BYIMIMM
BYIMIMM3	Extension of BYIMIMM
BYIMIMM4	Extension of BYIMIMM
BYIMIMM5	Extension of BYIMIMM
BYIMIMM6	Extension of BYIMIMM
BYIMIMM7	Extension of BYIMIMM
BYIMIMM8	Extension of BYIMIMM
BYIMIMM9	Extension of BYIMIMM
BYIMMU2	Setup for MU2/NIST testing
BYIMMU21	Extension of BYIMMU2
BYIMMU22	Extension of BYIMMU2
BYIMPATC	Entry for all patch updates
BYIMPORT	Manages GIS installation process
BYIMPTC2	Extension of BYIMPATC
BYIMQSG	Manages creation of Query HL7 message content
BYIMRFCV	Utility to send messages to CAS for COVID reporting
BYIMRT	Manages Query/Response creation
BYIMRT1	Continuation of BYIMRT

Routine	Description
BYIMRT2	Continuation of BYIMRT
BYIMRT3	Continuation of BYIMRT
BYIMRT4	Continuation of BYIMRT
BYIMRTN	Utility for Ensemble production processing
BYIMRWO	Routine to produce Insights & Conditions report
BYIMRWT	Routine to produce Insights & Conditions report
BYIMRWTL	Extension of BYIMRWT
BYIMSEGS	Controls HL7 segment creation
BYIMSEG1	Extension of BYIMSEGS
BYIMSEG2	Extension of BYIMSEGS
BYIMSEG3	Extension of BYIMSEGS
BYIMSTAT	Routine for status report
BYIMUTIL	Utility for analysis and testing
BYIMUTTL	Utility for analysis and testing
BYIMVIS	Device Handling and Queuing
BYIMXIS	Device Handling and Queuing
BYIMXIS	Controls device handling

6.0 Files and Tables

6.1 File List

Table 6-1: File numbers, names, and descriptions

File #	Filename	Description
90480	IZ PARAMETERS	Data fields for all BYIM needed parameters
90480.1	IZ EXPORTS	Database of all BYIM exports
90480.2	IZ HL7 MESSAGES	Database for all HL7 messages sent and received via VXU and query and response messages
90480.3	IZ TRANSPORT FILES	Database for transported files. Included for backward compatibility
90480.4	IZ OBX SEGMENTS	Database of OBX segments. Included for backward compatibility
90480.5	IZ NOS TABLE	Database of vaccine NOS relations. Included for backward compatibility
90480.6	IZ RELATIONSHIP MAPPING	Database of CDC Guide relationship code cross walk
90480.7	IZ CDC RELATIONSHIP CODES	Database of CDC guide relationship codes
90480.8	IZ CONTRAINDICATION CODES	Database of CDC guide vaccine contraindications
90480.9	IZ HL7 SEGMENTS AND FIELDS	Database of HL7 segments and fields used for ACK message and error processing
90480.91	IZ TABLE VIS BARCODES	Database of CDC VIS barcodes and related vaccines
90480.93	IZ RWT FILES	Database for Insights & Conditions reporting
90480.94	IZ HL7 TRANSMISSION LOG	Database for transmission log
90480.95	BYIM CLASS TRANSPORT	Contains class definitions installed via KIDS

6.2 File Access

Table 6-2: Access by file numbers and file names

File #	File Name	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS	AUDIT ACCESS
90480	IZ PARAMETERS	@	M	M	@	M	@
90480.1	IZ EXPORTS	@	M	M	M	M	@
90480.2	IZ HL7 MESSAGES	@	M	M	M	M	@
90480.3	IZ TRANSPORT FILES	@	M	M	M	M	@
90480.4	IZ OBX SEGMENTS	@	@	@	@	@	@
90480.5	IZ NOS TABLE	@	@	@	@	@	@
90480.6	IZ RELATIONSHIP MAPPING	@	@	@	@	@	@
90480.7	IZ CDC RELATIONSHIP CODES	@	@	@	@	@	@
90480.8	IZ CONTRAINDICATION CODES	@	@	@	@	@	@
90480.9	IZ HL7 SEGMENTS AND FIELDS	@	@	@	@	@	@
90480.91	IZ TABLE VIS BARCODES	@	@	@	@	@	@
90480.93	IZ RWT FILES	@	@	@	@	@	@
90480.94	IZ HL7 TRANSMISSION LOG	@	@	@	@	@	@
90480.95	BYIM CLASS TRANSPORT	@	@	@	@	@	@

6.3 Cross-References

Table 6-3: Cross-references by file numbers, names, and fields

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480	IZ PARAMETERS	N/A	N/A	.01	SITE NAME	B

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480	IZ PARAMETERS	N/A	N/A	.14	NAME OF STATE FOR EXCHANGE	(TRIGGER of field .18 DESTINATION)
90480	IZ PARAMETERS	N/A	N/A	.14	NAME OF STATE FOR EXCHANGE	SITE
90480	IZ PARAMETERS	N/A	N/A	.18	DESTINATION	ADUP
90480	IZ PARAMETERS	LAST EXPORT	90480.01	.01	LAST EXPORT	B
90480	IZ PARAMETERS	FUNDING SOURCE CODES	90480.013	.01	FUNDING SOURCE CODE	B
90480	IZ PARAMETERS	FILE IMPORT/ EXPORT LOG	90480.02	.01	FILE IMPORTED/EXPORTED	B
90480	IZ PARAMETERS	FILE IMPORT/ EXPORT LOG	90480.02	.01	FILE IMPORTED/EXPORTED	FILE
90480	IZ PARAMETERS	FILE IMPORT/ EXPORT LOG	90480.02	.02	DATE OF IMPORT/EXPORT	DATE
90480	IZ PARAMETERS	ADDITIONAL DATA EXCHANGE SITES	90480.03	.01	NAME OF DATA EXCHANGE STATE	B
90480	IZ PARAMETERS	ADDITIONAL DATA EXCHANGE SITES	90480.03	.14	NAME OF STATE FOR EXCHANGE	(TRIGGER of field .18 DESTINATION)
90480	IZ PARAMETERS	ADDITIONAL DATA EXCHANGE SITES	90480.03	.14	NAME OF STATE FOR EXCHANGE	SITE2
90480	IZ PARAMETERS	NO MATCH NAMES	90480.04	.01	NO MATCH NAME	B
90480	IZ PARAMETERS	NO MATCH NAMES	90480.04	.01	NO MATCH NAME	NMNAME
90480	IZ PARAMETERS	NO MATCH NAMES	90480.04	.02	DOB	NMDOB
90480	IZ PARAMETERS	NO MATCH NAMES	90480.04	.03	IMPORT DATE	NMDATE

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480	IZ PARAMETERS	FACILITY FOR IIS RXA CODE	90480.05	.01	FACILITY FOR IIS RXA CODE	B
90480	IZ PARAMETERS	FACILITY FOR IIS RXA CODE	90480.05	.02	STATE IIS FACILITY CODE	RXA
90480	IZ PARAMETERS	HL7 COMPONENT CONTENT	90480.07	.01	SEGMENT	B
90480	IZ PARAMETERS	HL7 COMPONENT CONTENT	90480.07	.01	SEGMENT	SEG
90480	IZ PARAMETERS	HL7 COMPONENT CONTENT	90480.07	.02	COMPONENT	SEG2
90480	IZ PARAMETERS	HL7 COMPONENT CONTENT	90480.07	.03	SUB-COMPONENT	SEG3
90480	IZ PARAMETERS	FACILITIES TO INCLUDE IN EXP	90480.08	.01	FACILITIES TO INCLUDE IN EXP	B
90480.1	IZ EXPORTS	N/A	N/A	.01	NAME	B
90480.1	IZ EXPORTS	N/A	N/A	.02	EXPORT DATE	C
90480.1	IZ EXPORTS	N/A	N/A	.02	EXPORT DATE	AC
90480.1	IZ EXPORTS	N/A	N/A	.02	EXPORT DATE	ADTOO
90480.1	IZ EXPORTS	N/A	N/A	.03	V IMMUNIZATION	D
90480.1	IZ EXPORTS	N/A	N/A	.03	V IMMUNIZATION	AD
90480.1	IZ EXPORTS	N/A	N/A	.04	EXPORT OR IMPORT	DTOO
90480.1	IZ EXPORTS	V IMMUNIZATION	90480.11	.01	V IMMUNIZATION	B
90480.1	IZ EXPORTS	EXPORT STATE	90480.12	.01	EXPORT STATE	B
90480.1	IZ EXPORTS	EXPORT STATE	90480.12	.01	EXPORT STATE	DD
90480.2	IZ HL7 MESSAGES	N/A	N/A	.01	HL7 FILE NAME	B

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480.2	IZ HL7 MESSAGES	N/A	N/A	.01	HL7 FILE NAME	ACT2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.02	MESSAGE TYPE	ACT
90480.2	IZ HL7 MESSAGES	N/A	N/A	.02	MESSAGE TYPE	RSP
90480.2	IZ HL7 MESSAGES	N/A	N/A	.02	MESSAGE TYPE	TSTYP
90480.2	IZ HL7 MESSAGES	N/A	N/A	.02	MESSAGE TYPE	TSTYPDES
90480.2	IZ HL7 MESSAGES	N/A	N/A	.04	PATIENT	PAT
90480.2	IZ HL7 MESSAGES	N/A	N/A	.04	PATIENT	PAT2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.04	PATIENT	RSP2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.05	MESSAGE DATE/TIME	DT
90480.2	IZ HL7 MESSAGES	N/A	N/A	.05	MESSAGE DATE/TIME	RSP3
90480.2	IZ HL7 MESSAGES	N/A	N/A	.06	MESSAGE ID	MID
90480.2	IZ HL7 MESSAGES	N/A	N/A	.06	MESSAGE ID	MIDDES
90480.2	IZ HL7 MESSAGES	N/A	N/A	.06	MESSAGE ID	DESMID
90480.2	IZ HL7 MESSAGES	N/A	N/A	.08	TRANSMISSION STATUS	STAT
90480.2	IZ HL7 MESSAGES	N/A	N/A	.1	STATE	(TRIGGER of .12 DESTINATION)
90480.2	IZ HL7 MESSAGES	N/A	N/A	.12	DESTINATION	RSP4
90480.2	IZ HL7 MESSAGES	N/A	N/A	.12	DESTINATION	ACT3
90480.2	IZ HL7 MESSAGES	N/A	N/A	.12	DESTINATION	MIDDES2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.12	DESTINATION	DESMID2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.12	DESTINATION	TSTYPDES2
90480.2	IZ HL7 MESSAGES	N/A	N/A	.13	SITE	SITE
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.01	COMPILE END DATE/TIME	CEDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.01	COMPILE END DATE/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.02	TRANSMIT START DATE/TIME	TSDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.02	TRANSMIT START DATE/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.03	TRANSMIT END DATE/TIME	TEDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.03	TRANSMIT END DATE/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.03	TRANSMIT END DATE/TIME	ABUSATE
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.04	TRANS ACKNOWLEDGED DAT/TIME	TADT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.04	TRANS ACKNOWLEDGED DAT/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.04	TRANS ACKNOWLEDGED DAT/TIME	ABUSA
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.05	PROCESSED DATE/TIME	PRDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.05	PROCESSED DATE/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.05	PROCESSED DATE/TIME	TSPRDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.06	PURGED DATE/TIME	PUDT
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.06	PURGED DATE/TIME	(TRIGGER of 10.07 TRANSMISSION STATUS)
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.07	TRANSMISSION STATUS	TS
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.07	TRANSMISSION STATUS	TSTYP2
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.07	TRANSMISSION STATUS	TSPRDT2
90480.2	IZ HL7 MESSAGES	N/A	N/A	10.07	TRANSMISSION STATUS	TSTYPDES3
90480.2	IZ HL7 MESSAGES	HL7 MESSAGE	90482.21	.01	HL7 MESSAGE	B
90480.2	IZ HL7 MESSAGES	IMMUNIZATION DATA	90480.22	.01	CVX CODE	B
90480.2	IZ HL7 MESSAGES	IMMUNIZATION DATA	90480.22	.02	VACCINE NAME	VN
90480.2	IZ HL7 MESSAGES	IMMUNIZATION DATA	90480.22	.03	VISIT DATE	VD
90480.2	IZ HL7 MESSAGES	OBX DATA	90480.221	.01	LOINC CODE	B

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480.2	IZ HL7 MESSAGES	FORECAST DATA	90480.23	.01	SEGMENT	B
90480.2	IZ HL7 MESSAGES	FORECAST DATA	90480.23	.02	VACCINE NAME	B
90480.2	IZ HL7 MESSAGES	ERROR DATA	90480.24	.01	SEGMENT	B
90480.2	IZ HL7 MESSAGES	ERROR DATA	90480.24	1	MESSAGE ID	MMID
90480.2	IZ HL7 MESSAGES	WARNING DATA	90480.25	.01	SEGMENT	B
90480.2	IZ HL7 MESSAGES	SEGMENT ARRAY	90480.26	.01	SEGMENT	B
90480.2	IZ HL7 MESSAGES	SEGMENT ARRAY	90480.26	.01	SEGMENT	ARR
90480.2	IZ HL7 MESSAGES	SEGMENT ARRAY	90480.26	.03	LINE	ARR2
90480.3	IZ TRANSPORT FILES	N/A	N/A	.01	NAME	B
90480.3	IZ TRANSPORT FILES	FACILITY FOR IIS RXA CODE	90480.35	.01	FACILITY FOR IIS RXA CODE	B
90480.3	IZ TRANSPORT FILES	FACILITY FOR IIS RXA CODE	90480.35	.02	STATE IIS FACILITY CODE	RXA
90480.3	IZ TRANSPORT FILES	HL7 COMPONENT CONTENT	90480.37	.01	SEGMENT	B
90480.3	IZ TRANSPORT FILES	HL7 COMPONENT CONTENT	90480.37	.01	SEGMENT	SEG
90480.3	IZ TRANSPORT FILES	HL7 COMPONENT CONTENT	90480.37	.02	COMPONENT	SEG2
90480.3	IZ TRANSPORT FILES	HL7 COMPONENT CONTENT	90480.37	.03	SUB-COMPONENT	SEG3

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480.3	IZ TRANSPORT FILES	HL7 COMPONENT CONTENT	90480.37	.04	VALUE	SEG4
90480.3	IZ TRANSPORT FILES	FACILITIES TO INCLUDE IN EXP	90480.38	.01	FACILITIES TO INCLUDE IN EXP	B
90480.4	IZ OBX SEGMENTS	N/A	N/A	.01	OBX NAME	B
90480.5	IZ NOS TABLE	N/A	N/A	.01	IMMUNIZATION	B
90480.6	IZ RELATIONSHIP MAPPING	N/A	N/A	.01	RELATIONSONSHIP	B
90480.7	IZ CDC RELATIONSHIP CODES	N/A	N/A	.01	CDC HL7 TABLE 0063 CODE	B
90480.7	IZ CDC RELATIONSHIP CODES	N/A	N/A	.02	CDC RELATIONSHIP DESCRIPTION	C
90480.8	IZ CONTRAINDICATION CODES	N/A	N/A	.01	VACCINE	B
90480.9	IZ HL7 SEGMENTS AND FIELDS	N/A	N/A	.01	SEGMENT	B
90480.9	IZ HL7 SEGMENTS AND FIELDS	N/A	N/A	.01	SEGMENT	LU
90480.9	IZ HL7 SEGMENTS AND FIELDS	N/A	N/A	.02	FIELD	LU2
90480.9	IZ HL7 SEGMENTS AND FIELDS	N/A	N/A	.03	SUB-FIELD	LU3
90480.91	IZ TABLE VIS BARCODES	N/A	N/A	.01	VIS DOCUMENT TYPE	B
90480.91	IZ TABLE VIS BARCODES	N/A	N/A	.03	VIS TEXT STRING	BC
90480.91	IZ TABLE VIS BARCODES	RELATED IMMUNIZATION	90480.911	.01	RELATED IMMUNIZATION	B
90480.91	IZ TABLE VIS BARCODES	RELATED IMMUNIZATION	90480.911	.01	RELATED IMMUNIZATION	VIS
90480.92	IZ CDC LOT NUMBERS	N/A	N/A	.01	LOT NUMBER	B
90480.93	IZRWT FILES	N/A	N/A	.01	FILE NAME	B
90480.94	IZ HL7 TRANSMISSION LOG	N/A	N/A	.01	TRANSMISSION NAME	B

File #	Filename	Sub-File Name	Number	Field #	Field Name	Cross Reference
90480.94	IZ HL7 TRANSMISSION LOG	N/A	N/A	.02	CREATED DATE/TIME	TQ
90480.95	BYIM CLASS TRANSPORT	N/A	N/A	.01	PACKAGE NAME	B
90480.95	BYIM CLASS TRANSPORT	CLASS	90480.953	.01	CLASS	B

7.0 External Relations

7.1 External Calls

$$GETMCR^AGUTL(

ADDLOT^BIRPC5(

ADDEDIT^BIRPC3(

7.2 Callable Routines

Table 7-1: BYIM called routines

Routine Called	Invoked by
ENV^BYIMIMM	Installation process Environment Check
DE^BYIMIMM	Option IZDE Start Immunization Data Export
DATE^BYIMIMM	Option BYIM IZ AUTO EXPORT
DEX^BYIMIMM	Called by BYIMIMM3 and BYIMIMM5 for HL7 message creation
HFSA^BYIMIMM	Called internally for HL7 message creation
HFSARES^BYIMIMM	Programmer call for HL7 message creation restart
READY^BYIMIMM	Option BYIM IZ READY
EOJ^BYIMIMM	Internal call for EOJ cleanup
RESTART^BYIMIMM	Restart call moved to BYIMIMM7
PATH^BYIMIMM	Forward original call to BYIMIMM6
NOPATH^BYIMIMM	Forward original call to BYIMIMM6
PAUSE^BYIMIMM	Forward original call to BYIMIMM6
FN^BYIMIMM	Internal call to create export file name
DUZ^BYIMIMM	Determine primary DUZ(2)
IMPORT^BYIMIMM1	Option IZIM Import Immunizations from State Registry
I1^BYIMIMM1	Called by routine BYIMIMM2
IN^BYIMIMM1	Called for processing of inbound messages
SET^BYIMIMM1	Internal for ID of patients
SET1^BYIMIMM1	Internal processing of incoming messages
DEL^BYIMIMM1	Called from the BYIM DEL STATE IMMUNIZATIONS protocol
ADD^BYIMIMM1	Function to add immunizations from the state registry to RPMS.
FMINIT^BYIMIMM1	Called by lister to create list of kids and immunizations to list for display.
HDR^BYIMIMM1	Called by lister to create header for immunization list display.
START^BYIMIMM1	Called by lister to start immunization list display.

Routine Called	Invoked by
VALM^BYIMM1	Called by lister to control immunization list display.
PARAM^BYIMIMM1	Called from BYIM SET PARAMETERS option
PADD^BYIMIMM1	Called from within the BYIMIMM1 routine
ADDIMM^BYIMIMM1	Process additional import files
MATCH^BYIMIMM2	Called from routine BYIMIMM1
NN^BYIMIMM2	Internal select device for no match report
NONAME^BYIMIMM2	Call for no match report
AUTOIMP^BYIMIMM2	Called by option BYIM IZ AUTO IMPORT
FLIP^BYIMIMM2	Called by the package installation process
SHOW^BYIMIMM2	Called by the option BYIM IZ SHOW EXPORT
SDISP^BYIMIMM2	Called by report to display immunizations exported
SHEAD^BYIMIMM2	Called by report to display immunizations exported
INSET^BYIMIMM2	Called from routine BYIMIMM1
LOG^BYIMIMM2	Called from routine BYIMIMM and BYIMIMM1
BULLETIN^BYIMIMM2	Called from routine BYIMIMM2
KILL^BYIMIMM2	Called from routine BYIMIMM1
SELECT^BYIMIMM3	Called by option BYIM IZ FILE STATISTICS REPORT
DISP^BYIMIMM3	Called from routine BYIMIMM3
OL^BYIMIMM3	Called from routine BYIMIMM3
HX1^BYIMIMM3	Called from GIS HL7 message
HX2^BYIMIMM3	Called from GIS HL7 message
VFC^BYIMIMM3	Called from GIS HL7 message
VFCD^BYIMIMM3	Called from GIS HL7 message
RT^BYIMIMM3	Called by option BYIM RT MESSAGES
VXQ^BYIMIMM3	Called from GIS HL7 message
VXU^BYIMIMM3	Called from GIS HL7 message
MULT^BYIMIMM4	Process inbound messages
ASITE^BYIMIMM4	Process multiple site exports
ASE^BYIMIMM4	Primary site edit
CP^BYIMIMM4	Determine varicella exposure
IMMDUP^BYIMIMM4	Deduplication Immunizations
DEXIT^BYIMIMM4	Clean-up after immunization add
ALOT^BYIMIMM4	Activate lot number
ILOT^BYIMIMM4	Deactivate lot number
LV^BYIMIMM4	Calculate last V IMM for a patient
MAN^BYIMIMM4	Check immunization manufacturer

Routine Called	Invoked by
LOT^BYIMIMM4	Evaluate lot and manufacturer info
LOG^BYIMIMM4	Log auto import files
BULLETIN^BYIMIMM4	Create import/export bulletin
EXPBULL^BYIMIMM4	Export file creation failed bulletin
QPATH^BYIMIMM4	Pre-set query path
LOGDFN^BYIMIMM4	Log patients included in export
LOGD^BYIMIMM4	Log each imported or exported file
ASDISP^BYIMIMM4	Display additional state setup parameters
RXA^BYIMIMM5	Set IIS code for RXA-11.4
RXAE1^BYIMIMM5	Call to edit IIS
TEST^BYIMIMM5	Call to create and edit test messages
CLEAN^BYIMIMM5	Cleanup after test export
COMPSPEC^BYIMIMM5	Specify component content
CDISP^BYIMIMM5	Display components for primary site
CAS^BYIMIMM5	Display components for additional states
CSEL^BYIMIMM5	Display and add/edit site components
AGECHK^BYIMIMM5	Check age parameter
ASSET^BYIMIMM5	Set state specific variables
MENU^BYIMIMM6	Menu header display
ADDLOT^BYIMIMM6	Add lot
SCRN^BYIMIMM6	Screen immunizations to be included in export file
HFSA^BYIMIMM6	Find HL7 messages that have not been exported
RLSH^BYIMIMM6	Display and edit relationship
RUPD^BYIMIMM6	Update relationship file
RDISPLAY^BYIMIMM6	Display relationship
REDIT^BYIMIMM6	Edit relationship
PATH^BYIMIMM6	Set path and related variables
NOPATH^BYIMIMM6	Display no path message
PAUSE^BYIMIMM6	Pause call
NEW^BYIMIMM6	Determine if there are new immunizations to export for a patient
FAC^BYIMIMM7	Set Option and BYIMIMM4
RESTART^BYIMIMM7	Restart export
ASSET^BYIMIMM7	BYIMIMM5 and BYIMIMM8
HEADER^BYIMIMM7	BYIMIMM
LOG^BYIMIMM7	Log state/facility export
CPT^BYIMIMM7	Adjust RXA-5 for CVX or CPT or NDC

Routine Called	Invoked by
IISX^BYIMIMM7	Set RXA-11.4 to state specific code
ESSN^BYIMIMM7	Remove SSN if needed
MCR^BYIMIMM7	Remove MCR number if needed
OBX^BYIMIMM7	Evaluate if VIS barcode or NOS segments to be included
VISNOS^BYIMIMM7	Get VIS/NOS parameter
HFSA^BYIMIMM8	BYIMIMM
WRITE^BYIMIMM8	Final message configuration
PI^BYIMIMM8	Eliminate patient if privacy criteria not met
RXA^BYIMIMM8	Ensure each message has RXA segment
LOG^BYIMIMM8	Log state/facility export
IIEN^BYIMIMM8	Find IEN from ORC segment
BYIMPATC	Called by KIDS post-install routine
BYIMQSG	Call for query message creation
BYIMRT, BYIMRT1, BYIMRT2	Calls for real-time query and response message processing
BYIMSEGS, BYIMSEG1, BYIMSEG2	Calls for HL7 message segment creation
ZIS^BYIMXIS	Called by routine BYIMIMM2
SIEN^BYIMRTN	Processes the message corresponding to a given IEN, the method called by RPMS to send an IEN to the local production for processing.
DUP^BYIMRTN	Checks if new business operations need to be created in the IRIS production
DIE^BYIMRTN	Saves FileMan data from BYIM namespace
SENV^BYIMRTN	Sets up destination entries, notifications entries, and environmental variables
PREINS^BYIMRTN	Saves IRIS production settings
POSTINS^BYIMRTN	Restores IRIS production settings
GDEST^BYIMRTN	Identifies the State destinations defined within RPMS, for use within the Production update and STAT report
GDUZ^BYIMRTN	Identifies the DUZ value for the BYIM application
GETCS^BYIMRTN	Gathers the current status of the Output Controller and Format Controller within RPMSGETV^BYIMRTN, used within the STAT report
GETV^BYIMRTN	Gathers the HL7 version and BYIM application version within RPMS, used within the STAT report
GADATE^BYIMRTN	Gathers the date/time for the auto Export/Import/Query/purge options within RPMS, used within the STAT report
APPRPT^BYIMRTN	Calls the BYIM class that displays the STAT report information

Routine Called	Invoked by
STARTRPT^BYIMRTN	The routine call that the RPMS BYIM menu uses to begin the STAT report
PAGEBRK^BYIMRTN	Allow the STAT report to be shown with page breaks

7.3 Published Entry Points

Table 7-2: Callable routines and descriptions

Callable Routine	Description
QUERY^BYIMAPI	Called to create query message for patient(s)
SENDIMM^BYIMAPI	Called to create VXU message for patient(s)
RESPONSE^BYIMAPI	Called to create array of information from query response
RD^BYIMAPI	Called to return date of last response

7.4 Exported Options

There are no Interactive RPMS Server Menus.

7.5 Remote Procedure Calls

There are no remote procedure calls.

8.0 Internal Relations

There are no interactive RPMS Server Menus for this package. Users do not need access to the appropriate options and keys.

9.0 Archiving and Purging

9.1 RPMS Messages

The routine QPURGE^BYIMRT2 is scheduled to run daily and purges old, processed HL7 messages used for query/response processing.

9.2 IRIS Messages

A task named Purge Messages should be within the Task Manager of the IRIS Management portal. It uses the 'Ens.Util.Tasks.Purge' class to remove messages within the BYIM<RPMS> namespace. The recommended 'Days to Keep' is 90 and the schedule is once a week on Sunday.

10.0 Documentation Resources

10.1 System Documentation

Online VPS system documentation can be generated through the use of several Kernel options, including (but not limited to) the following:

- XINDEX
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

For more option listings and further information about other utilities that supply online technical information, see the Decentralized Hospital Computer Program Kernel Reference manual.

10.1.1 Index (XINDEX)

The XINDEX kernel option analyzes the structure of a routine to determine, in part, if the routine adheres to RPMS programming standards. The output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

Running XINDEX for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist, and to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run XINDEX for the VPS system, at the "Routine(s)?" prompt, type the BYIM namespace.

10.1.2 List File Attributes

Not applicable.

10.1.3 Inquire Option

Not applicable.

10.1.4 Print File Option

Not applicable.

10.2 RPMS Online Help

In addition to system documentation, RPMS includes special help displays for most menu options and data entry prompts. Typing a question mark (?) at the "Select . . . Option" prompt displays information related to the current option, as shown in Table.

Table 10-1: Online help prompts and options

Typing . . .	Displays . . .
A single question mark (?)	A list of all options accessible from the current option.
Two question marks (??)	A list of all accessible options and their formal names.
Three question marks (???)	A brief description for each option in a menu.
A single question mark (?) Followed by an option name (?option)	Extended help, if available, for that option.

10.3 IRIS Online Help

IRIS includes extensive online documentation for everything from the Caché ObjectScript language to IRIS system management. The online documentation can be accessed by clicking on the IRIS icon and selecting Documentation. The online documentation includes search functionality and a master index to aid in finding relevant documentation.

10.4 IRIS Class Documentation

Online documentation is available for IRIS classes. The documentation includes a page for each class, containing a listing and brief description of each parameter, property, method, and query in the class and optionally a description of the class. The class documentation can be viewed by clicking on the IRIS icon and selecting Class Reference.

Class information can also be obtained via the Class Browser, available on the Tools menu in IRIS's Studio. The Class Browser allows the user to view class information, such as property information, interactively.

11.0 SAC Requirements/Exemptions

There are no exemptions to the SAC standards for this version.

12.0 Local production

12.1 Business Services

12.1.1 API Inbound

The Business Service that processes an IEN received from RPMS when it calls the SIEN^BYIUMRTN routine call. An internal BYIM.Storage.Messages.Processed entry is created, then sent to the correct Business Process.

12.1.2 Global Inbound

The Business Service that processes an IEN received from the global adapter. The global adapter identifies entries for processing from ^BYIMRTN global index node, where the status is “CE”. An internal BYIM.Storage.Messages.Processed entry is created, then sent to the correct Business Process.

12.2 Business Processes

12.2.1 Ens.Alert

The Business service that processes all alerts created within the local production.

12.2.2 HL7 QBP

Receives Query Immunization request message types, directs the message to the correct Business Operation (BO). Processes the response received from the BO.

12.2.3 HL7 VXU

Receives Immunization Update message types, directs the message to the correct BO. Processes the response received from the BO.

12.2.4 Processing Issue

Receives all message types that encounter an error during processing.

12.3 Business Operations

Each destination will have a QBP and VXU outbound BO. If the RPMS environment is a production environment the <environment> value will be blank. If it is a Test environment the <environment> value will be ‘T’.

Table 12-1: Business Operation naming example

Test Environment sending to New Mexico
QBP Outbound ~ NM T VXU Outbound ~ NM T
Production environment sending to New Mexico
QBP Outbound ~ NM VXU Outbound ~ NM

12.3.1 Email Alerts

Sends email to the recipients list for the alert received.

12.3.2 QBP Outbound ~ <Destination> <environment>

Sends Query Immunization request message to the state destination, sends the reply back to the 'HL7 QBP' BP.

12.3.3 VXU Outbound ~ <Destination> <environment>

Sends Immunization Update message to the state destination, sends the reply back to the 'HL7 VXU' BP.

Appendix A IRIS Classes

A.1 Class Deployment

All IRIS classes included in the BYIM package are delivered to the RPMS sites in packed format as global data within a standard KIDS build. When the KIDS build is created, classes are packed into global nodes using a class exporter, which exports their definitions to a stream as XML, compresses the result, Base64-encodes it, and outputs it to a FileMan word-processing field in file 90480.95.

At the RPMS site, the post-installation part of the KIDS build invokes DO IMPORT^BYIMCLAS, which reverses the packing operation. The subroutine reads the data from the FileMan word-processing field in file 90480.95, Base64-decodes it, uncompresses the result to a stream, then recreates the class definitions from the stream. Even though the KIDS installation process takes place in the RPMS namespace, all BYIM classes are installed in the associated BYIM namespace due to package mapping.

A.2 List of BYIM Classes

A.2.1 BYIM.Adapter

The BYIM.Adapter classes are adapters used by the BYIM IRIS production.

- BYIM.Adapter.Inbound.Global

A.2.2 BYIM.Operations

The BYIM.Operations classes are business operations used by the IRIS production.

- BYIM.Operations.HTTPclient
- BYIM.Operations.SOAPclient
- BYIM.Operations.VPNclient

A.2.3 BYIM.Processes

The BYIM.Processes classes are business processes used by the IRIS production.

- BYIM.Processes.Alert
- BYIM.Processes.HL7
- BYIM.Processes.ProcessIssue

A.2.4 BYIM.Productions

The BYIM.Productions class is the IRIS production.

- BYIM.Productions.Local

A.2.5 BYIM.Services

The BYIM.Services classes are business services used by the IRIS production.

- BYIM.Services.API
- BYIM.Services.Global

A.2.6 BYIM.Storage

The BYIM.Storage classes store persistent data.

- BYIM.Storage.DD.Contact
- BYIM.Storage.DD.Credentials
- BYIM.Storage.DD.Destination
- BYIM.Storage.DD.Notifications
- BYIM.Messages.Processed

A.2.7 BYIM.Util

The BYIM.Util classes provide utility functionality.

- BYIM.Util.Functions
- BYIM.Util.Install
- BYIM.Util.STAT

A.2.8 BYIM.WebClient

The BYIM.WebClient classes provide SOAP web client functionality.

- BYIM.WebClient.CDCsoap
- BYIM.WebClient.KSsoap

A.2.9 BYIM.ZEN

The BYIM.ZEN classes support the Edit Destinations Zen page.

- BYIM.ZEN.DestinationsApp
- BYIM.ZEN.destModel

- BYIM.ZEN.editDestination

Appendix B BYIM IRIS Configuration and Management

B.1 Creation of BYIM Database, Namespace, and Mappings

The BYIM application adds a new IRIS database, namespace, CSP application, and set of global and package mappings to each RPMS namespace on the system. The new database and its settings are created by the KIDS build automatically and should not require manual intervention. This section describes how the same settings can be created manually.

B.1.1 Creating the BYIM Namespace

B.1.1.1 Naming the BYIM Namespace

The BYIM application resides in a separate IRIS namespace. There is one BYIM namespace for every RPMS namespace in the instance. If there are multiple RPMS namespaces running within the same IRIS instance, create a separate BYIM namespace for each RPMS namespace.

To determine the name of the new namespace, concatenate BYIM with the name of the RPMS namespace associated with it. For example, if the RPMS namespace is named TST, then the BYIM namespace should be named BYIMTST. If there is a second RPMS namespace named CHI, then its associated BYIM namespace should be named BYIMCHI.

Note: This naming convention is relied upon by the BYIM application. The BYIM application will not work if the BYIM namespace is given a different name.

B.1.1.2 Naming the BYIM Database

Each IRIS namespace will have an underlying IRIS database. To avoid confusion, give the database the same name as the associated BYIM namespace, unless there is a specific reason to use a different name. Table B-1 provides a sample table that may be used by sites with multiple RPMS namespaces to record the database information. Sites should enter data for one RPMS namespace per row.

Table B-1: Sample table for recording namespace, database, and directory information

RPMS namespace name	BYIM namespace name	BYIM database name	OS directory for BYIM database
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

RPMS namespace name	BYIM namespace name	BYIM database name	OS directory for BYIM database
N/A	N/A	N/A	N/A

B.1.1.3 Choosing the Storage Location

Select the disk drive (Windows) or file system (Unix) where each new BYIM database will be installed. Select the directory path and name to be used on that drive or file system. If the directory does not exist, create it and verify that IRIS can read from it and write to it.

B.1.1.4 Creating a New IRIS Database

1. Log into IRIS's Management Portal as an administrator.
2. Click on **System Administration** | **Configuration >** | **System Configuration >** | **Local Databases**. The **Local Databases** page displays.
3. Click the **Create New Databases** button. The **Database Wizard** dialog appears.

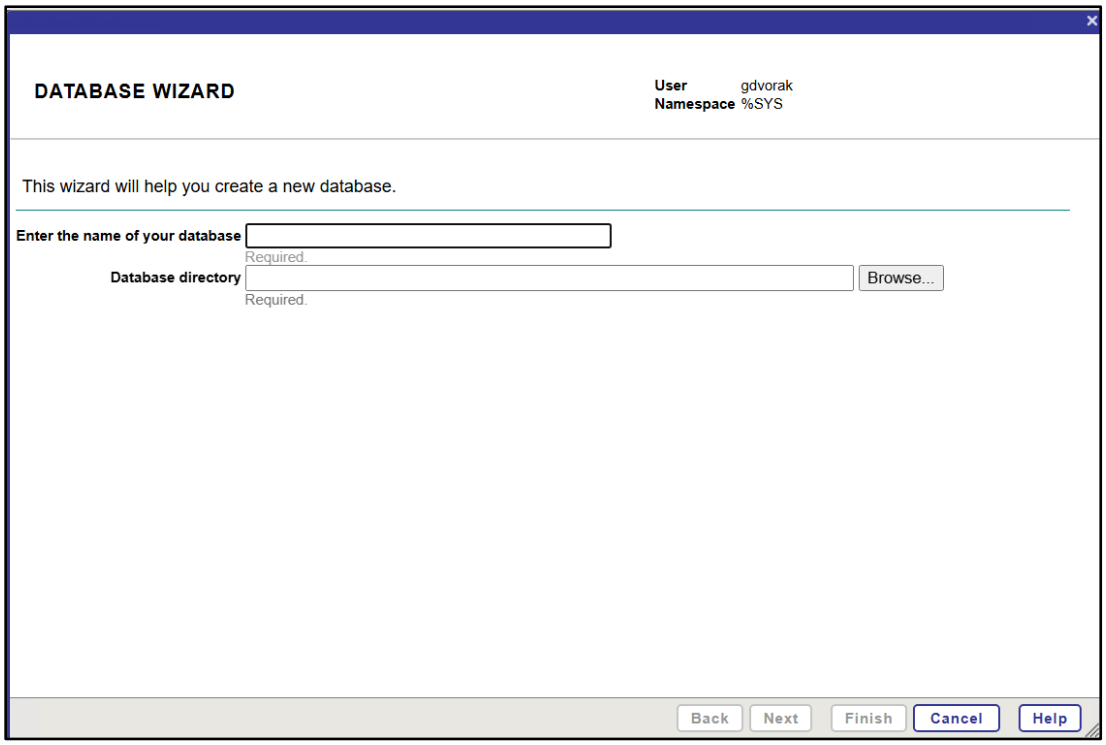

Figure B-1: First page of the Database Wizard

4. In the **Enter the name of your database** field, type the name of the database determined in Section B.1.1.2.

5. In the **Database directory** field, type the full path to the directory where the database will reside, as determined in Section B.1.1.3. Alternatively, click the **Browse…** button and navigate to the directory.

6. Click the **Next** button. The second page of the **Database Wizard** displays.

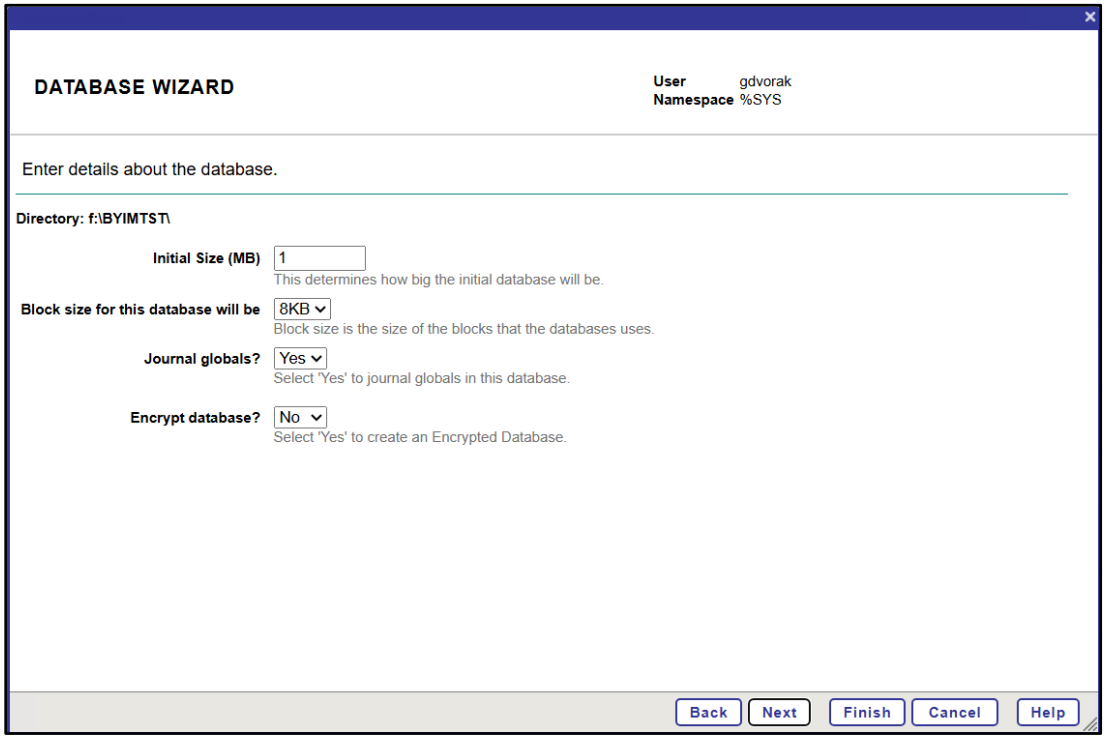

Figure B-1: Second page of the Database Wizard

7. Change the value of the **Journal globals?** field to **No**.

8. If the site uses database encryption, change the value of the **Encrypt database?** field to **Yes**.

9. Click the **Next** button. The third page of the **Database Wizard** displays.

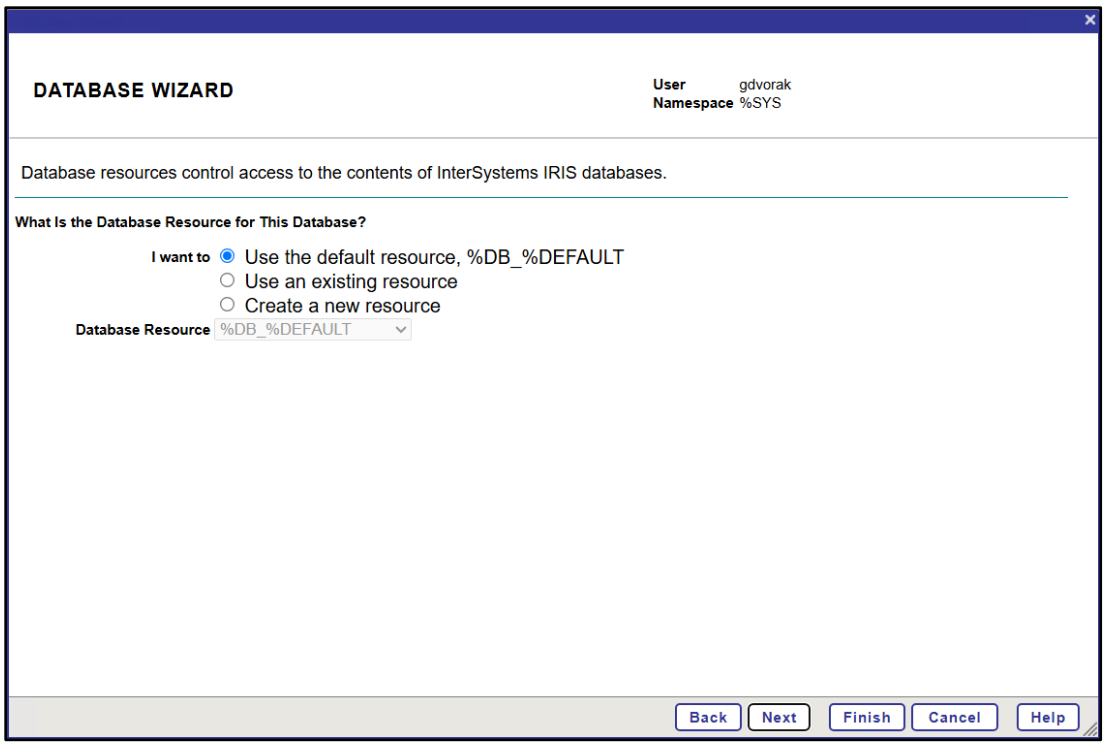

Figure B-2: Third page of the Database Wizard dialog

10. Choose the database resource for the new database. If the site does not have a policy on database resources, accept the default value of **Use the default resource, %DB_%DEFAULT**.

11. Click the **Next** button. The fourth page of the **Database Wizard** displays.

Figure B-3: Fourth page of the Database Wizard dialog

12. Review the settings. If any values are incorrect, click the **Back** button to edit them. If the settings are correct, click the **Finish** button.

13. On the **Local Databases** screen, click Home to return to IRIS's Management Portal.

B.1.1.5 Creating a New IRIS Namespace

1. From the main screen of IRIS's Management Portal, click **System Administration** | **Configuration >** | **System Configuration >** | **Namespaces**. The **Namespaces** page displays.

2. Click the **Create New Namespace** button. The **New Namespace** page displays.

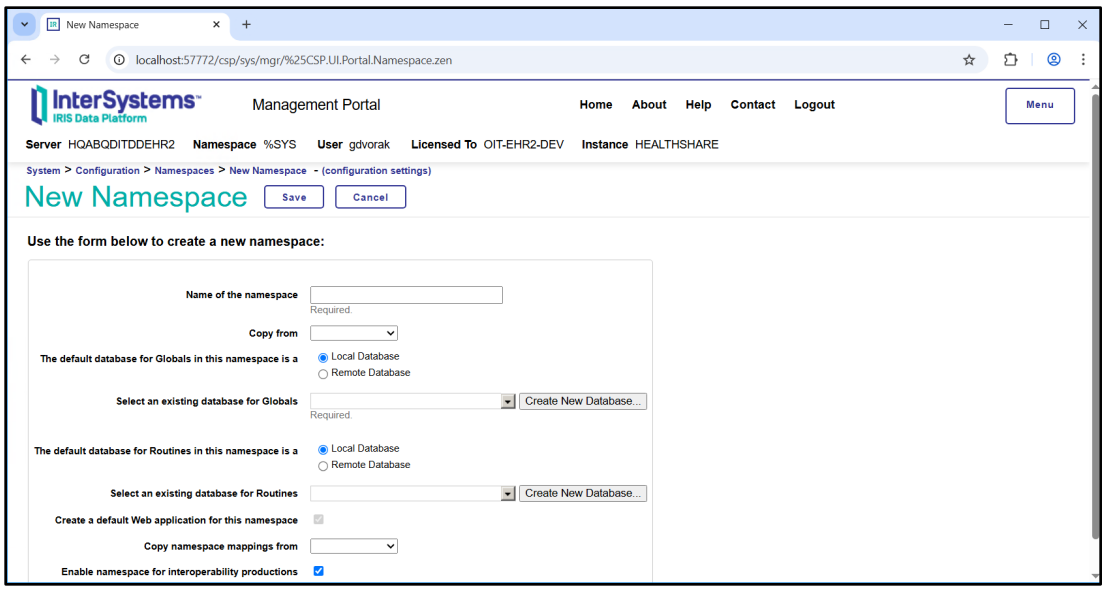

Figure B-4: New Namespace page

3. In the **Name of the namespace** field, enter the namespace name determined in Section B.1.1.1.
4. Leave the **Copy from** field blank.
5. In the **The default database for Globals in this namespace is a** field, select **Local Database**.
6. In the **Select an existing database for Globals** and **Select an existing database for Routines** fields, select the database created in Section B.1.1.4.
7. Leave the **Copy namespace mappings from** field blank.
8. Ensure the **Enable namespace for interoperability productions** box is checked.
9. Click the **Save** button. It may take IRIS several seconds to create the namespace.
10. On the next screen, verify no errors were encountered, then click the **Close** button.

B.1.2 Creating Mappings

B.1.2.1 Creating New Global Mappings

1. On the **Namespaces** screen in IRIS's Management Portal, locate the row for the newly created BYIM namespace and click **Global Mappings** in that row. The **Global Mappings** page displays.

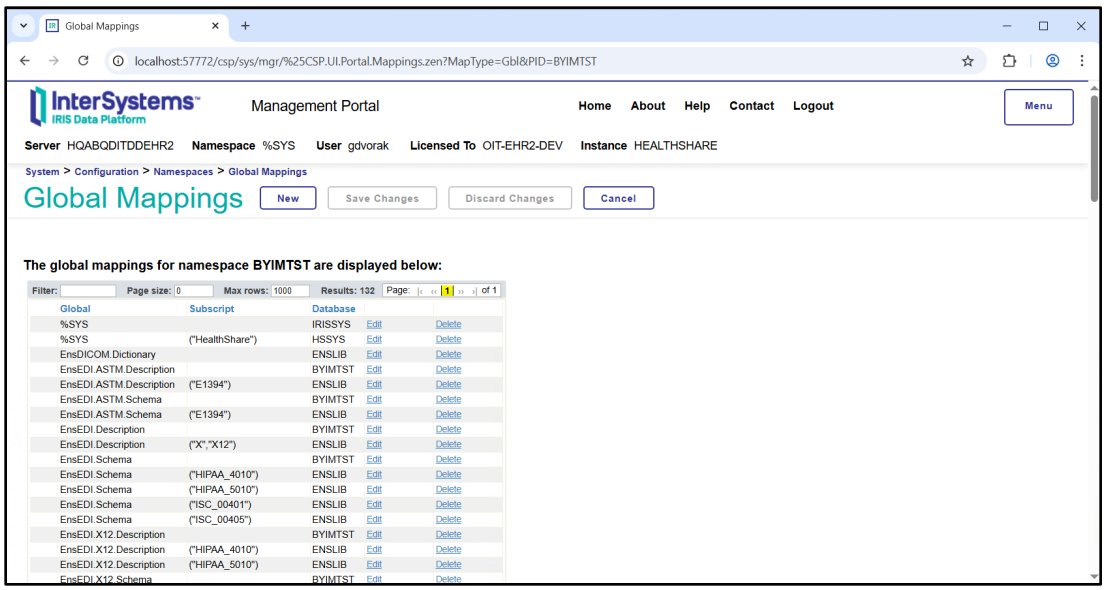

Figure B-5: Global mappings page

2. Click the **New** button. The **Global Mapping** dialog displays.

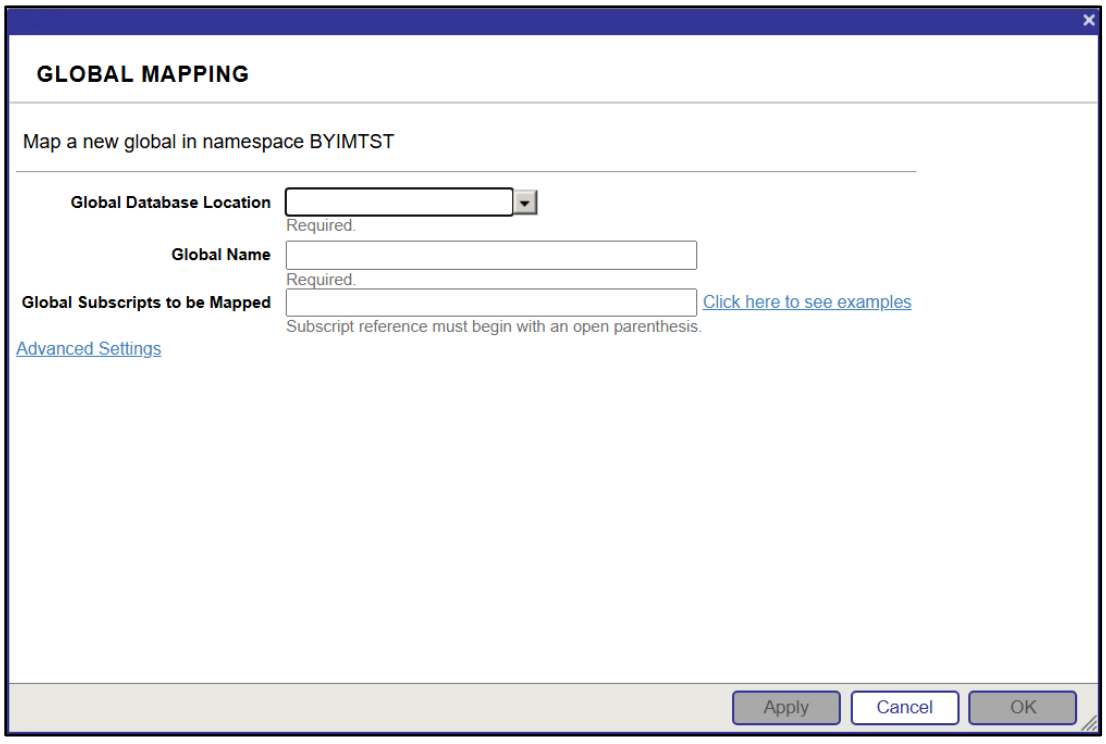

Figure B-6: Global Mapping dialog

3. For the **Global Database Location** field, select the RPMS namespace.

4. In the **Global Name** field, enter **BYIMPARA**.

5. Leave the **Global Subscripts to be Mapped** field blank.
6. Click the **Apply** button.
7. Change the value of the **Global Name** field to **BYIMRT**.
8. Click the **OK** button. The **Global Mappings** page displays with new entries for BYIMPARA and BYIMRT.

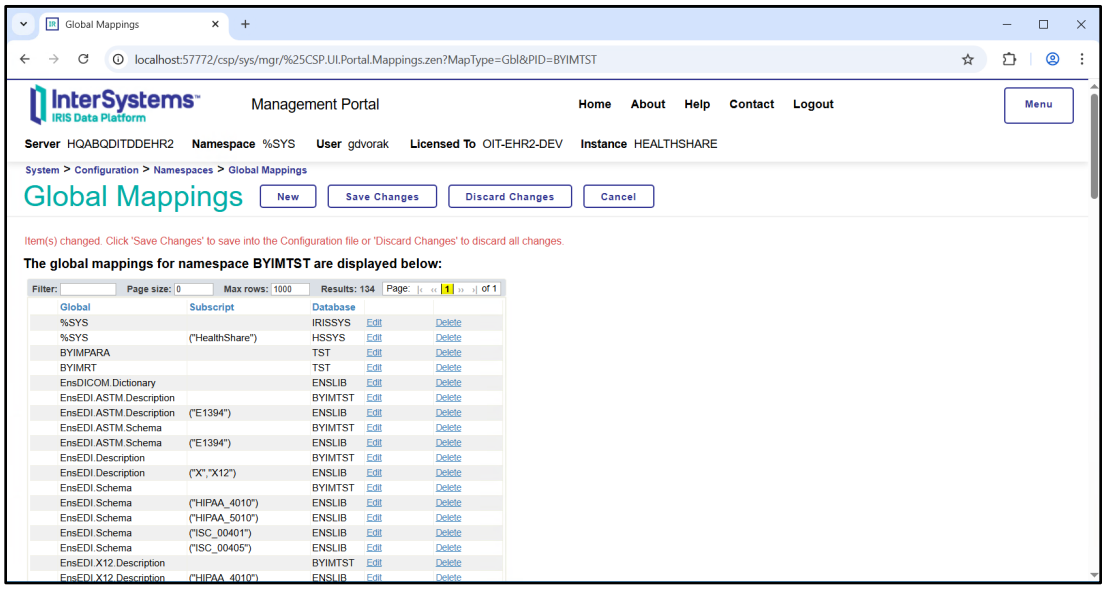

Figure B-7: Global Mappings page with new BYIM mappings

9. Click the **Save Changes** button to save the global mappings.
10. Click the **Namespaces** link in the **System > Configuration > Namespaces > Global Mappings** breadcrumbs to return to the **Namespaces** page.

B.1.2.2 Creating New Routine Mapping

1. On the **Namespaces** screen in IRIS's Management Portal, locate the row for the newly created BYIM namespace and click **Routine Mappings** in that row. The **Routine Mappings** page displays.

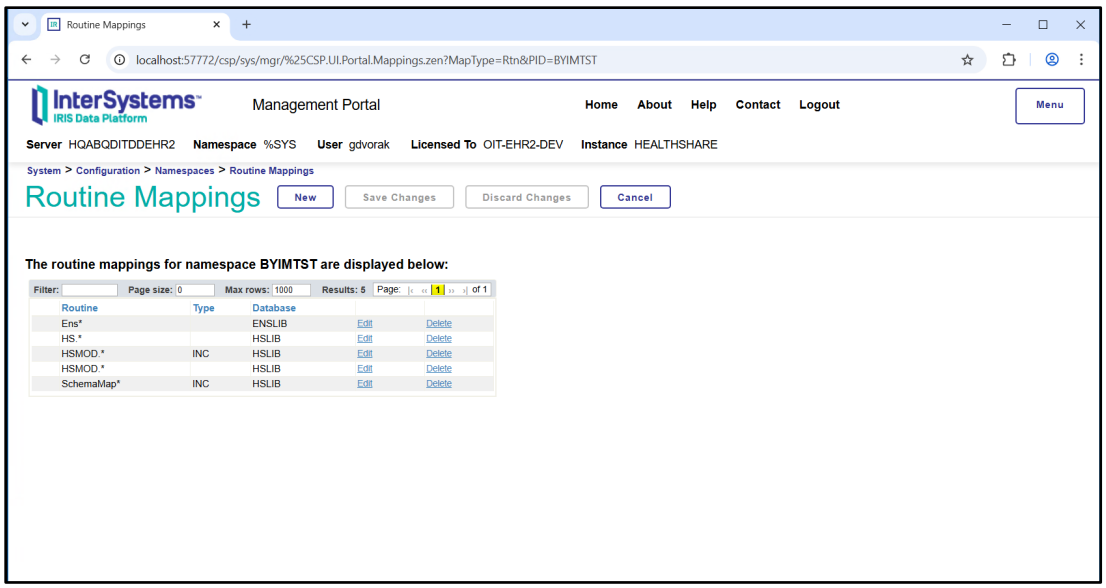

Figure B-8: Routine mappings page

2. Click the New button. The Routine Mapping dialog displays.

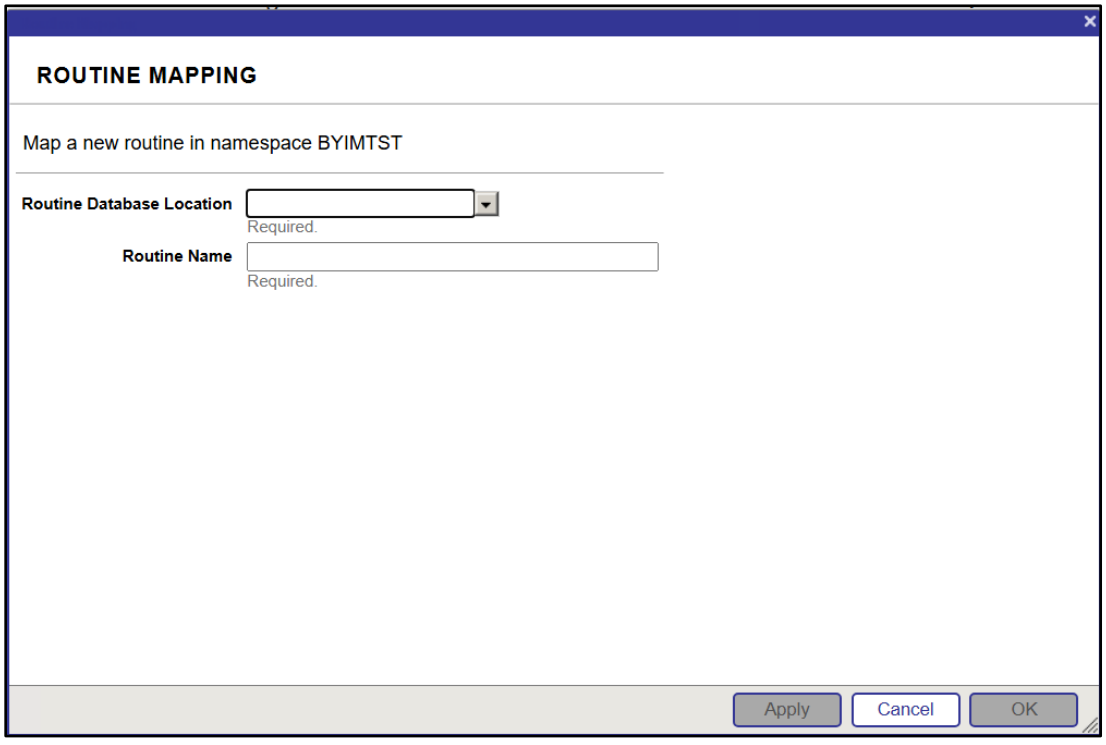

Figure B-9: Routine Mapping dialog

3. For the **Routine Database Location** field, select the RPMS namespace.

4. In the **Routine Name** field, enter **BYIMRTN**.

5. Click the **OK** button. The **Routine Mappings** page displays with a new entry for **BYIMRTN**.

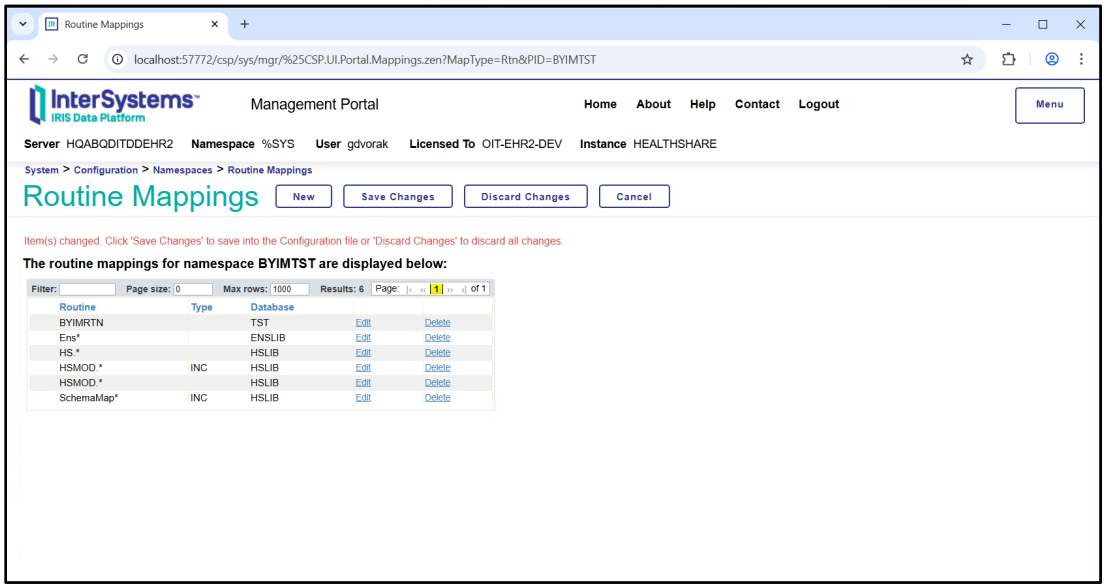

Figure B-10: Routine Mappings page with new BYIMRTN mapping

6. Click the **Save Changes** button to save the routine mapping.

7. Click the **Namespaces** link in the **System > Configuration > Namespaces > Routine Mappings** breadcrumbs to return to the **Namespaces** page.

B.1.2.3 Creating New Package Mapping

1. On the **Namespaces** screen in IRIS's Management Portal, locate the row for the RPMS namespace and click **Package Mappings** in that row.

> **Note**: Ensure the row corresponds to the RPMS namespace. This is not the namespace used for the other mappings.

The **Package Mappings** page displays.

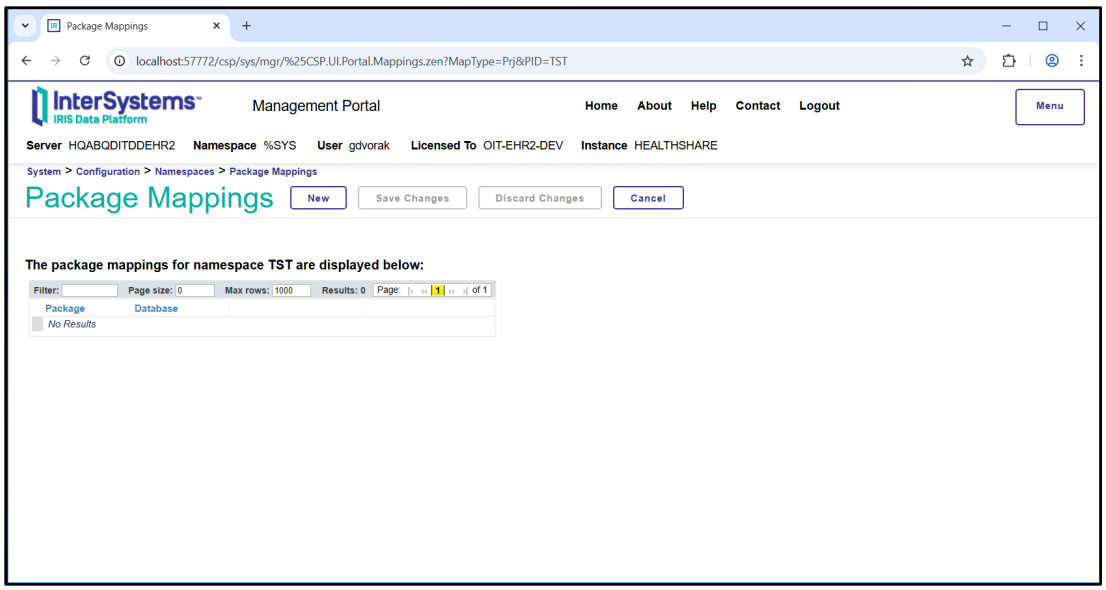

Figure B-11: Package Mappings page

2. Click the **New** button. The **Package Mapping** dialog displays.

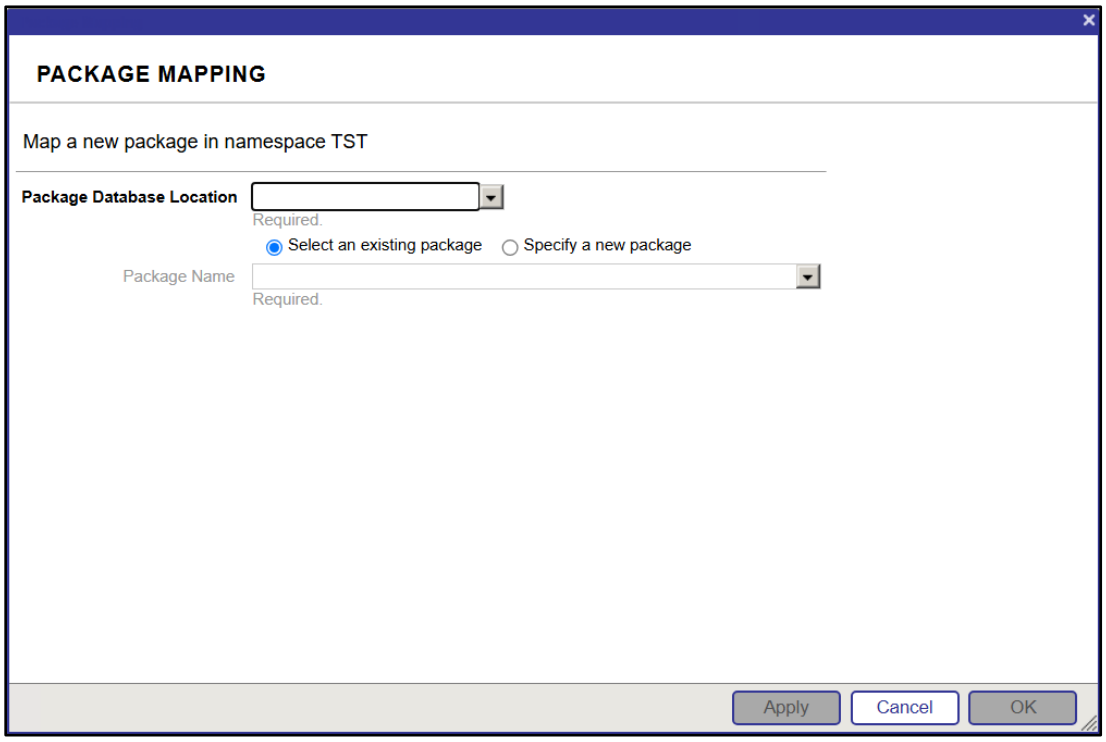

Figure B-12: Package Mapping dialog

3. For the **Package Database Location** field, select the BYIM namespace.

4. Click the radio button labeled **Specify a new package**.

5. In the **Package Name** field, enter **BYIM**.
6. Click the **OK** button. The Package Mappings page displays with a new entry for BYIM.

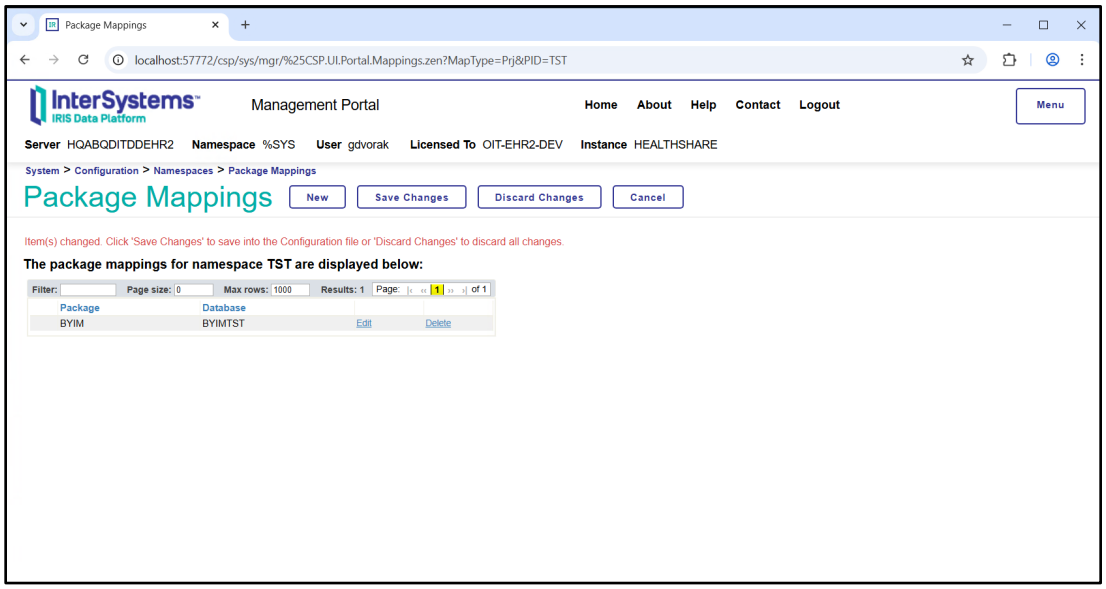

Figure B-13: Package Mappings page with a new BYIM mapping

7. Click the **Save Changes** button to save the package mapping.

B.2 Managing the BYIM IRIS Production

B.2.1 Stopping the BYIM IRIS Production

1. Log into IRIS's Management Portal as an administrator.
2. Click the **Switch** link near the top of the page. The **Namespace Chooser** dialog displays.

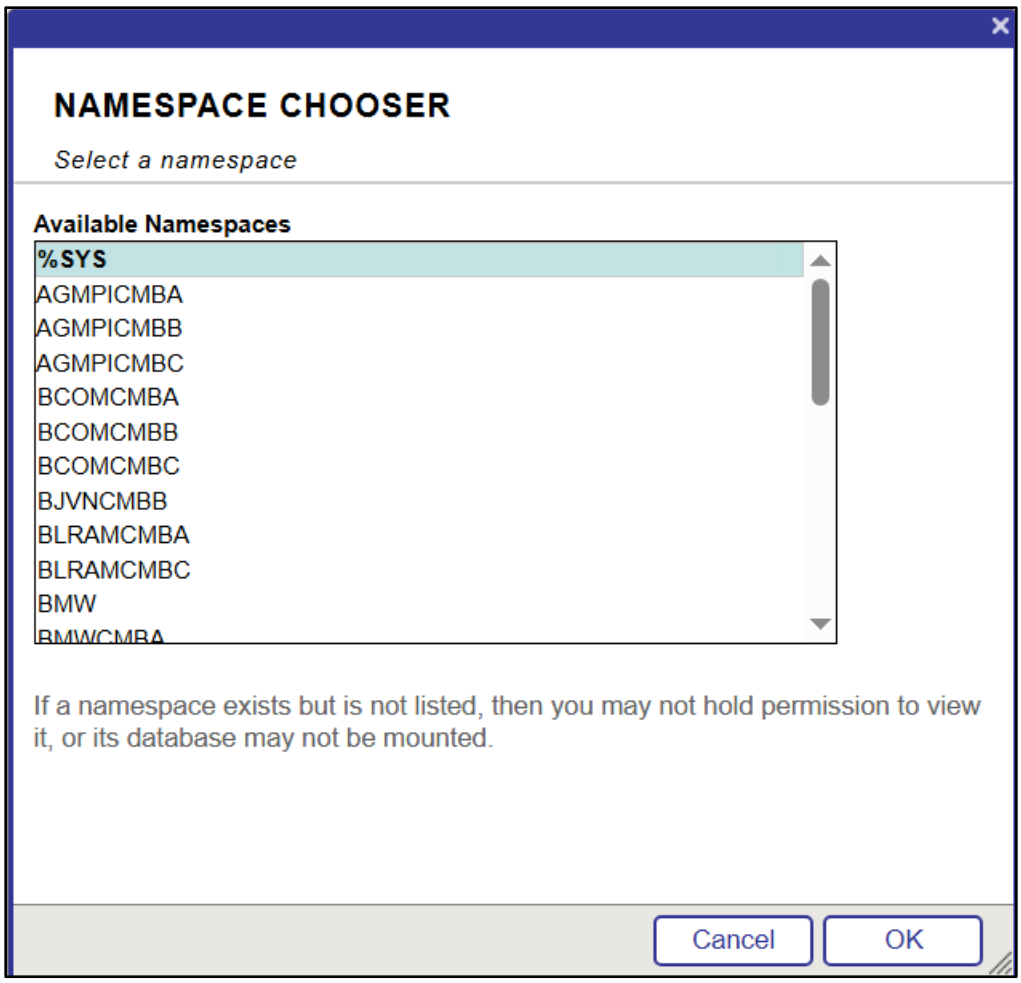

Figure B-14: Namespace Chooser dialog

3. Click on the BYIM namespace, then click the **OK** button. The main Management Portal page displays. The Namespace value near the top of the page updates to the BYIM namespace.

4. Click on **Interoperability** | **Configure >** | **Production**. The **Production Configuration** page displays.

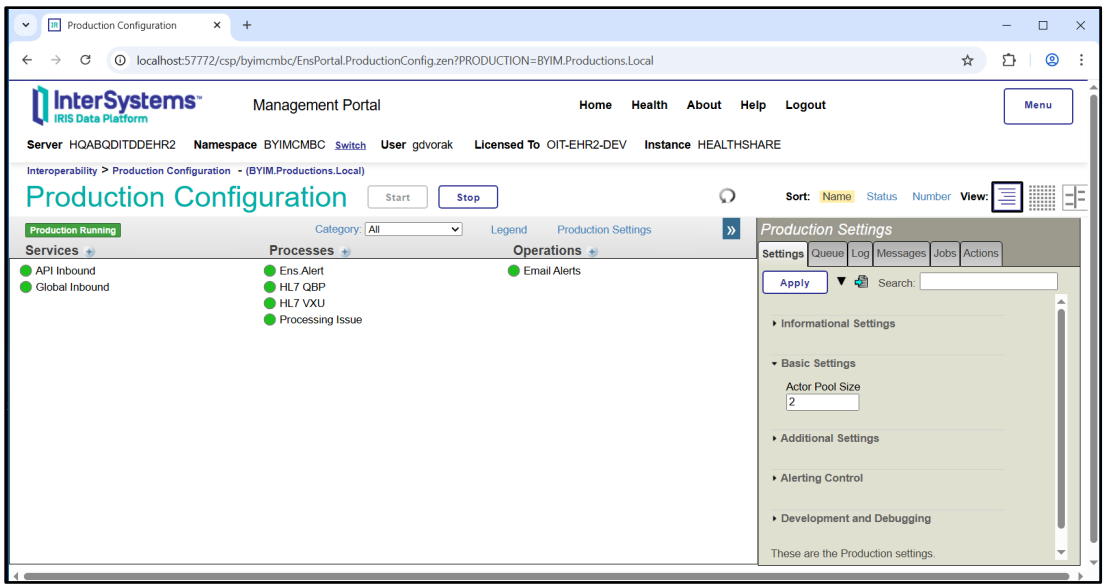

Figure B-15: Production Configuration page

5. Click the **Stop** button.
6. On the **Do you wish to stop this Production?** dialog, click the **OK** button.
7. On the **Stop Production** dialog, click the **OK** button. The **Production Configuration** page displays, showing the production stopped.

B.2.2 Starting the BYIM IRIS Production

1. Log into IRIS's Management Portal as an administrator.
2. Click the Switch link near the top of the page. The Namespace Chooser dialog displays.

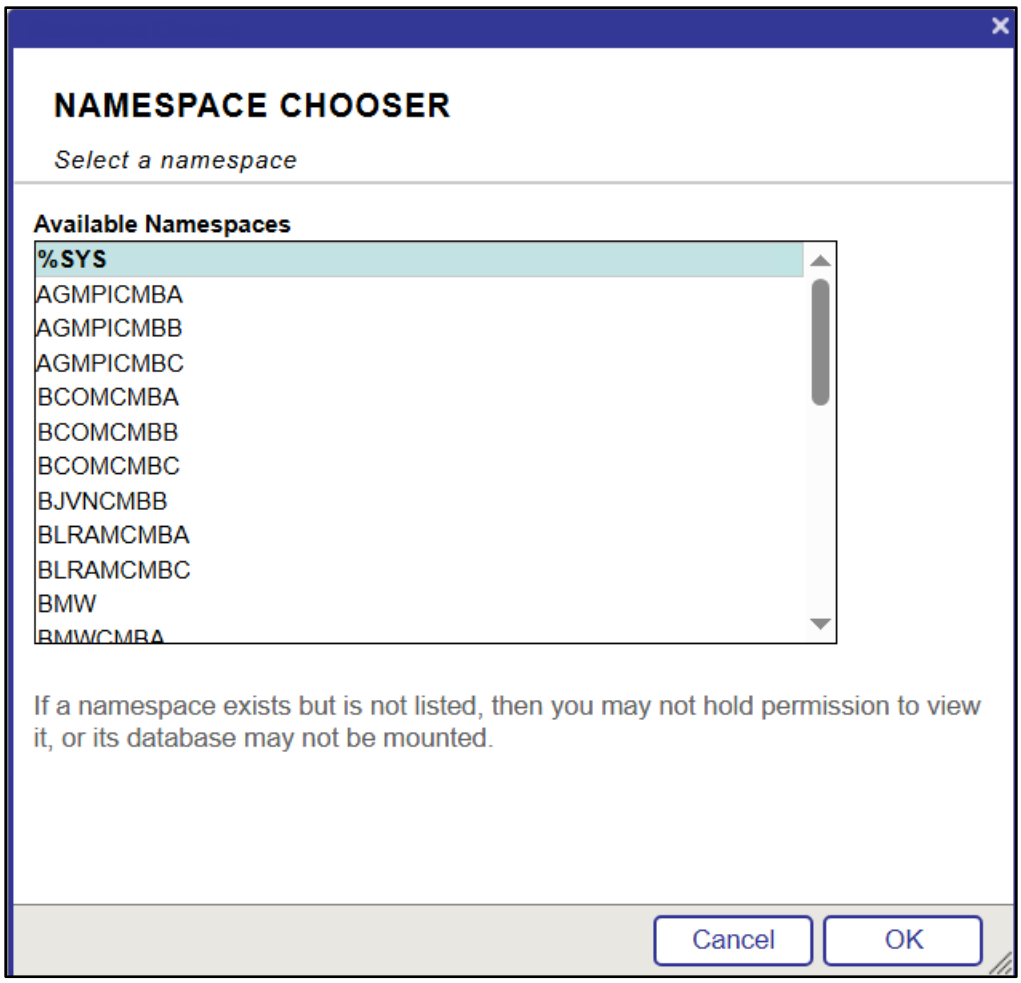

Figure B-16: Namespace Chooser dialog

3. Click on the BYIM namespace, then click the **OK** button. The main Management Portal page displays. The **Namespace** value near the top of the page updates to the BYIM namespace.

4. Click on **Interoperability** | **Configure >** | **Production**. The **Production Configuration** page displays.

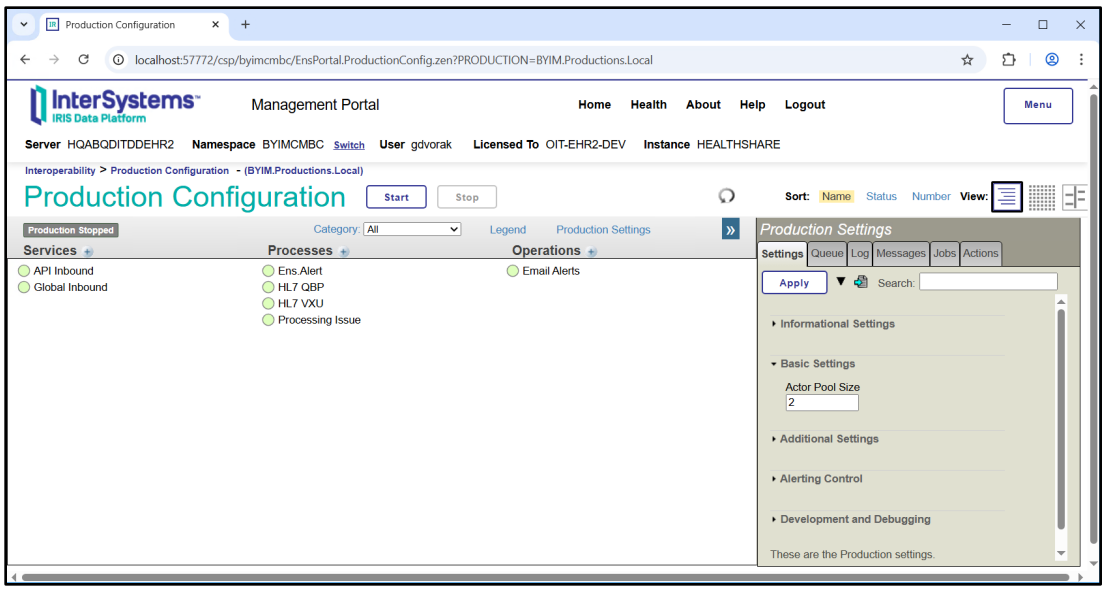

Figure B-17: Production Configuration page

5. Click the **Start** button.
6. On the **Do you wish to start this Production?** dialog, click the **OK** button.
7. On the **Start Production** dialog, click the **OK** button. The **Production Configuration** page displays, showing the production running.

B.3 Encrypting the BYIM Database

B.3.1 Stop the BYIM IRIS Production

1. Follow the steps in Section B.2.1 to stop the production.
2. Click the **Home** link to return to the main Management Portal page.

B.3.2 Dismount the BYIM Database

1. Click on **System Operation** | **Databases**. The **Databases** page displays.

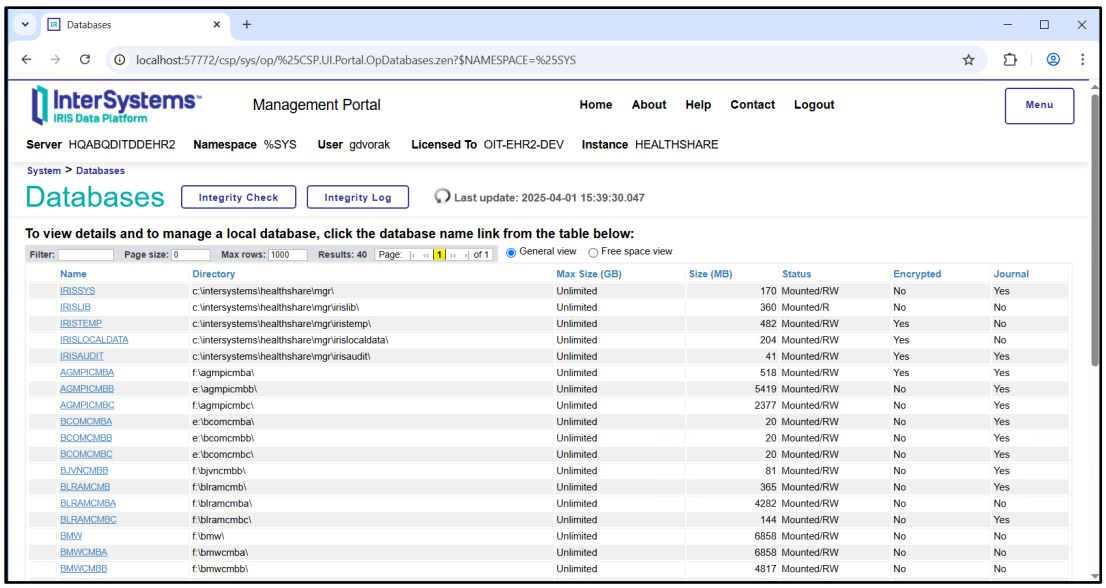

Figure B-18: Databases page

2. Click on the name of the BYIM database. The **Database Details** page displays.

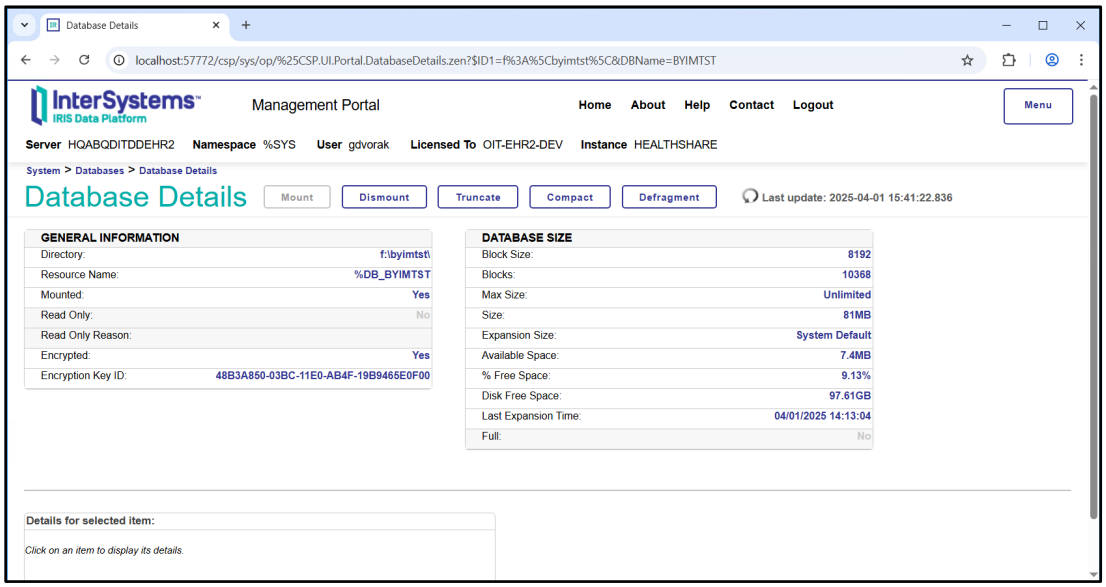

Figure B-19: Database Details page

3. Click the **Dismount** button.

4. On the **Are you sure you want to dismount database BYIM?** dialog, click the **OK** button. The **Database Details** page displays with the **Mounted** value updated to indicate the database has been dismounted.

B.3.3 Encrypt the Database

Encrypt the database following the instructions provided in the "How to Encrypt an RPMS Database" document. If you need a copy of the document, contact the IT Service Desk.

B.3.4 Re-mount the Database

1. From IRIS's Management Portal, click on **System Operation** | **Databases**. The **Databases** page displays.

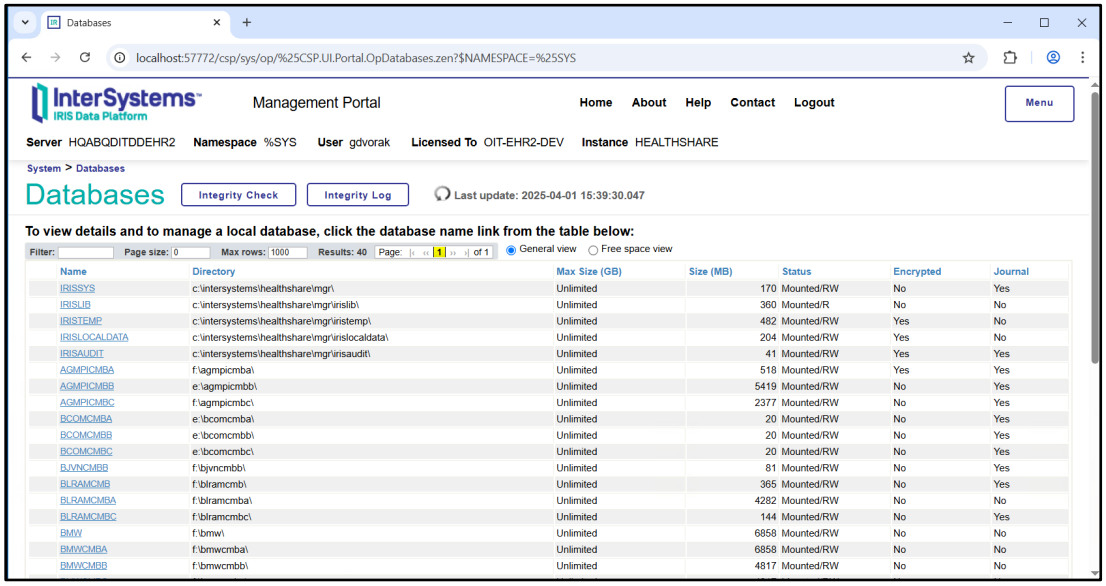

Figure B-20: Databases page

2. Click on the name of the BYIM database. The **Database Details** page displays.

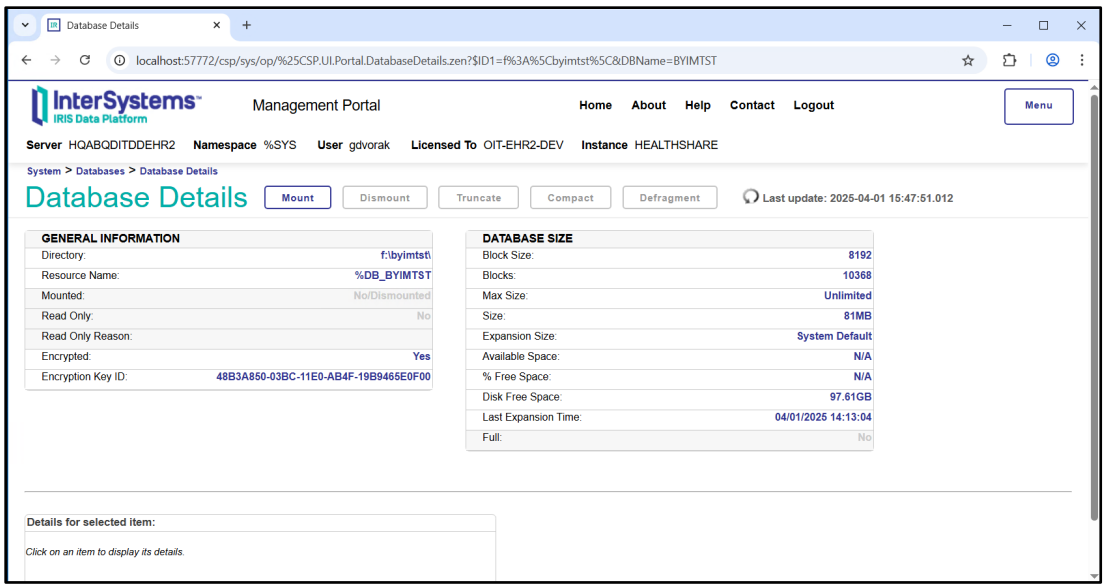

Figure B-21: Database details page

3. Click the **Mount** button. The **Mount Database** dialog displays.

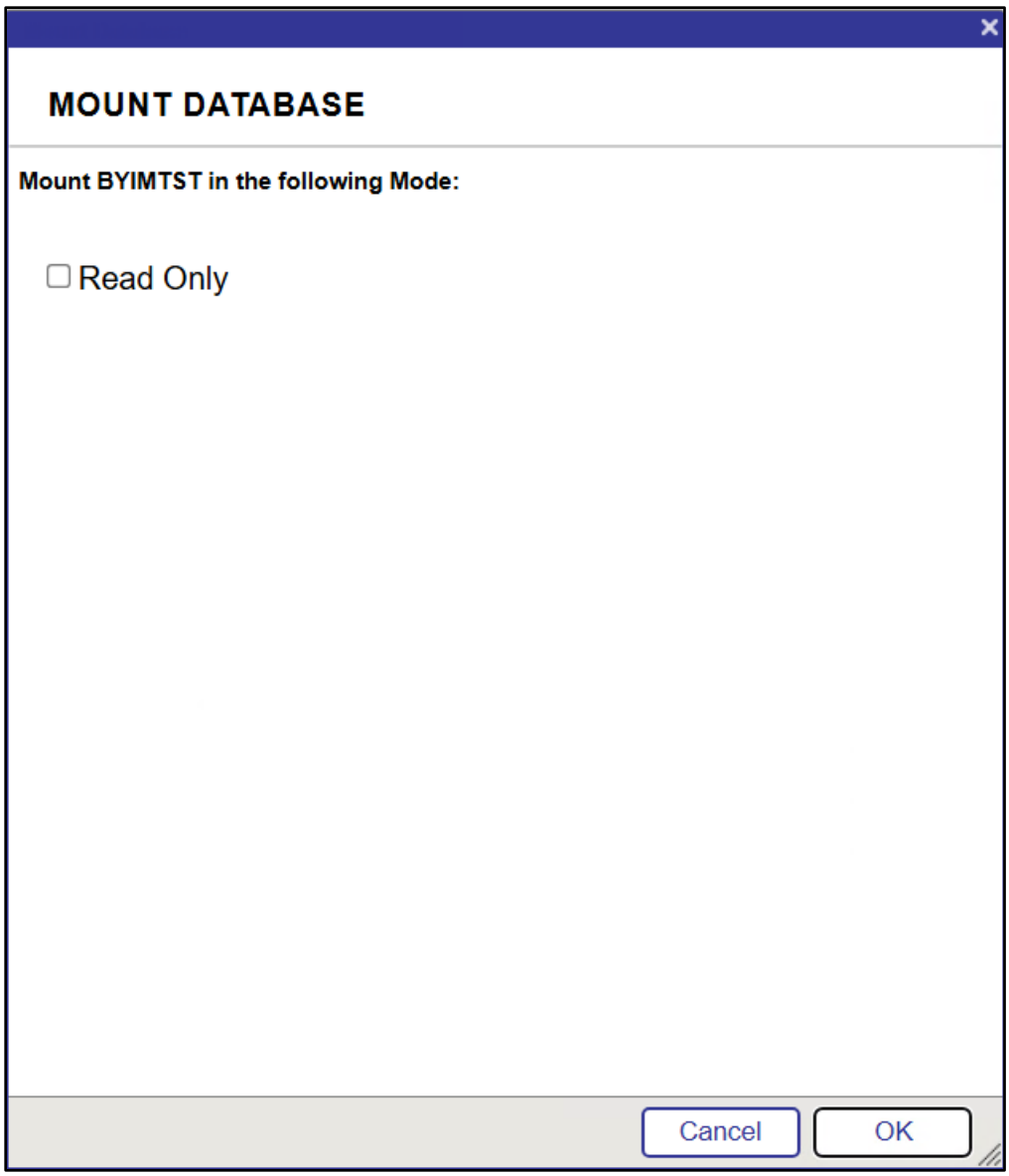

Figure B-22: Mount Database dialog

4. On the **Mount Database** dialog, leave the **Read Only** box unchecked. Click the **OK** button. The **Database Details** page displays with the **Mounted** value updated to indicate the database has been mounted.

B.3.5 Restart the BYIM IRIS Production

If the BYIM IRIS production was stopped in Section B.3.1, start the production following the steps in Section B.2.2.

Glossary

Archiving

The storing of historical or little-used data off-line (often on tape).

Banner

A line of text with a user's name and domain.

Callable Entry Points

Locations in a routine that can be called from an application program.

Caret (^)

A circumflex, also known as a "hat," that is used as a delimiter in a global. The caret is denoted as "^" and typed by pressing Shift+6 on the keyboard.

Cross-reference

An indexing method in which files can include pre-sorted lists of entries as part of the stored database. Cross-references (x-refs) facilitate look-up and reporting.

Entry Point

Entry point within a routine that is referenced by a "DO" or "GOTO" command from a routine internal to a package.

Event Type

A message that is sent, which signifies a particular event on the system (e.g., admit, discharge, etc.).

File

A set of related records or entries treated as a single unit.

FileMan

The database management system for RPMS.

Global

In MUMPS, global refers to a variable stored on disk (global variable) or the array to which the global variable may belong (global array).

Health Level 7

The generally accepted standard for the exchange of certain specified types of medical information between applications. HL7 is both the name of the standards developing organization and the collection of protocols that the organization has developed and published. For more information, refer to the HL7 Web site: http://www.hl7.org/.

INDEX (%INDEX)

A Kernel utility used to verify routines and other MUMPS code associated with a package. Checking is done according to current ANSI MUMPS standards and RPMS programming standards. This tool can be invoked through an option or from direct mode (>D ^%INDEX).

Information Resource Management

The IHS personnel responsible for information systems management and security.

Init

Initialization of an application package. The initialization step in the installation process builds files from a set of routines (the init routines). Init is a shortened form of initialization.

Kernel

The set of MUMPS software utilities that function as an intermediary between the host operating system and application packages, such as Laboratory and Pharmacy. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying MUMPS implementation. These utilities provide the foundation for RPMS.

Menu

A list of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in "Select Menu Management option:" (the menu's select prompt).

Namespace

A unique set of two to four alphabetic characters that are assigned by the database administrator to a software application.

Option

An entry in the Option file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.

Routine

A program or sequence of instructions called by a program that may have some general or frequent use. MUMPS routines are groups of program lines that are saved, loaded, and called as a single unit via a specific name.

Segment

A group of elements (also known as data fields) in an HL7 message that have been defined as logically belonging to the same category. Each segment contains a three-character Segment ID, the elements, administrative information (if applicable to that segment type), and designated delimiters between each element.

User Class Identification

A computing area

Utility

A callable routine line tag or function; a universal routine usable by anyone.

Variable

A character or group of characters that refers to a value. MUMPS recognizes three types of variables: local variables, global variables, and special variables. Local variables exist in a partition of the main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays.

Acronym List

Acronym	Meaning
CDC	Centers for Disease Control and Prevention
CHIT	Certified Health Information Technology
HIPAA	Health Insurance Portability and Accountability Act
HL7	Health Level 7
IHS	Indian Health Service
MU2	Meaningful Use 2
NIST	National Institute of Standards and Technology
PCC	Patient Care Component
RPMS	Resource and Patient Management System
SIIS	State Immunization Information Systems

Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

Phone: (888) 830-7280 (toll free)

Web: https://www.ihs.gov/itsupport/

Email: itsupport@ihs.gov