RESOURCE AND PATIENT MANAGEMENT SYSTEM

Electronic Dental Interface

(EDRI)

Installation Guide & Release Notes

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Preface

The purpose of this document is to provide the user with information about the import, export, configuration, and function of the IHSProduction. The IHSProduction has a package name of BADE and allows for the transportation of messages between the EDR and RPMS systems. Included with the production is a portal for monitoring and managing the production.

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1.0   Introduction

For over a decade, hospitals and health centers of the Indian Health Service (IHS) and numerous tribal health programs have utilized an information system called the Resource and Patient Management System (RPMS). The RPMS is a highly integrated system consisting of some fifty health care and administrative applications. Virtually all of these applications directly interact with one or more, and sometimes many, of the other RPMS applications.

During this same period, IHS and tribal dental programs have made use of the RPMS Dental Data System (DDS) as their primary system for maintaining a history of individual patient services; contributing dental data to the RPMS electronic clinical record; producing provider and department workload data; and contributing statistical data to the national data center located in Albuquerque, New Mexico. At many sites, data captured in the DDS has also been utilized in the RPMS Third Party Billing System.

With the replacement of the RPMS Dental Data System with an Electronic Dental Record (EDR), it is required that RPMS applications interact with the EDR to meet the needs of both the Dental Department and the local health program as a whole.

The IHSProduction for the Ensemble Interface Engine (EIE) provides transportation of messages between the RPMS system and the EDR system. It accepts DFT_P03 messages from the EDR system and delivers them to the RPMS system. It accepts MFN_M02, ADT_A31 and ADT_A28 messages from the RPMS system and delivers them to the EDR system.

If an error occurs in receiving a valid EDR or RPMS HL7 message, if there is a connection issue between EIE and either system, or if any other error occurs, an alert is sent from the EIE to the appropriate administrators.

2.0 IHSProduction Import

This section describes the process of importing the IHSProduction into Ensemble Studio from an XML document.

2.1   Open Ensemble Studio

- In a Windows environment, right-click the Ensemble Cube in the lower right corner and click **Studio**. Type your login ID and password.
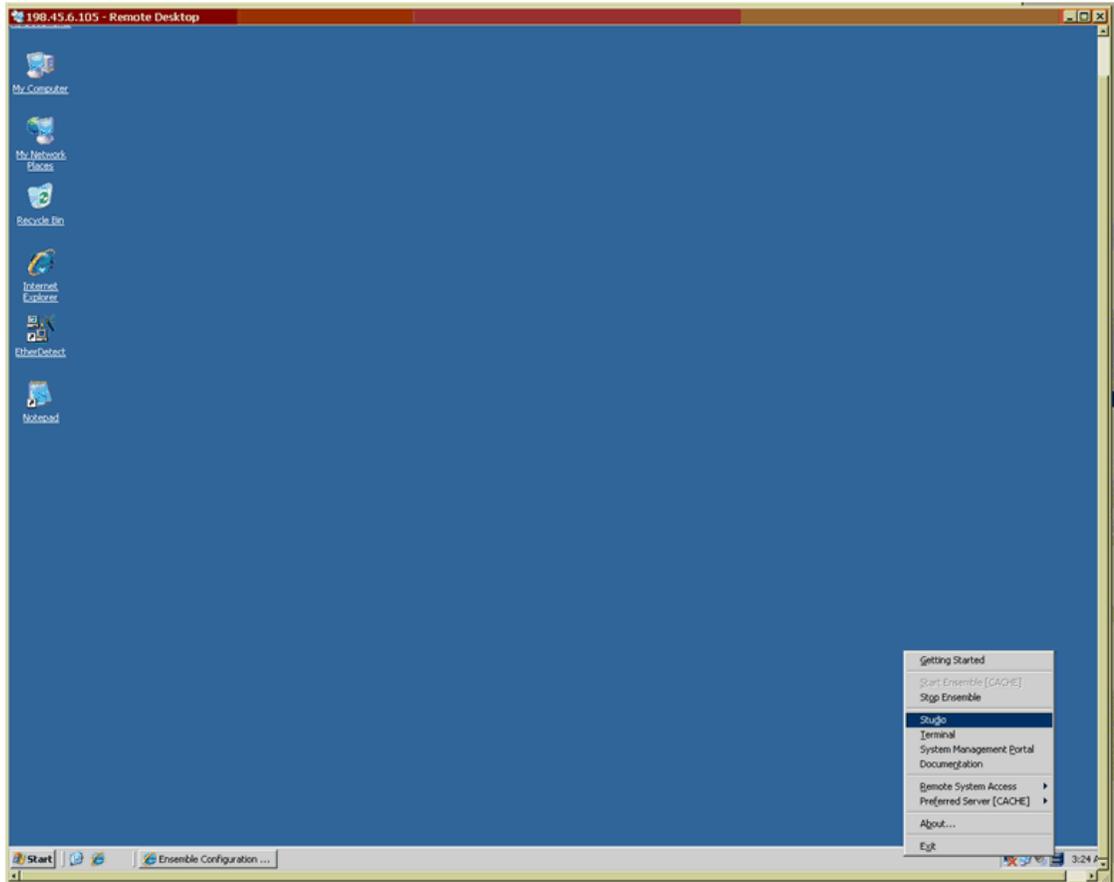
Figure 2-1: Opening Ensemble Studio

2.2   Select the proper namespace

The namespace should be ENSRPMS.

1.   On the **File** menu, click **Change NameSpace**.
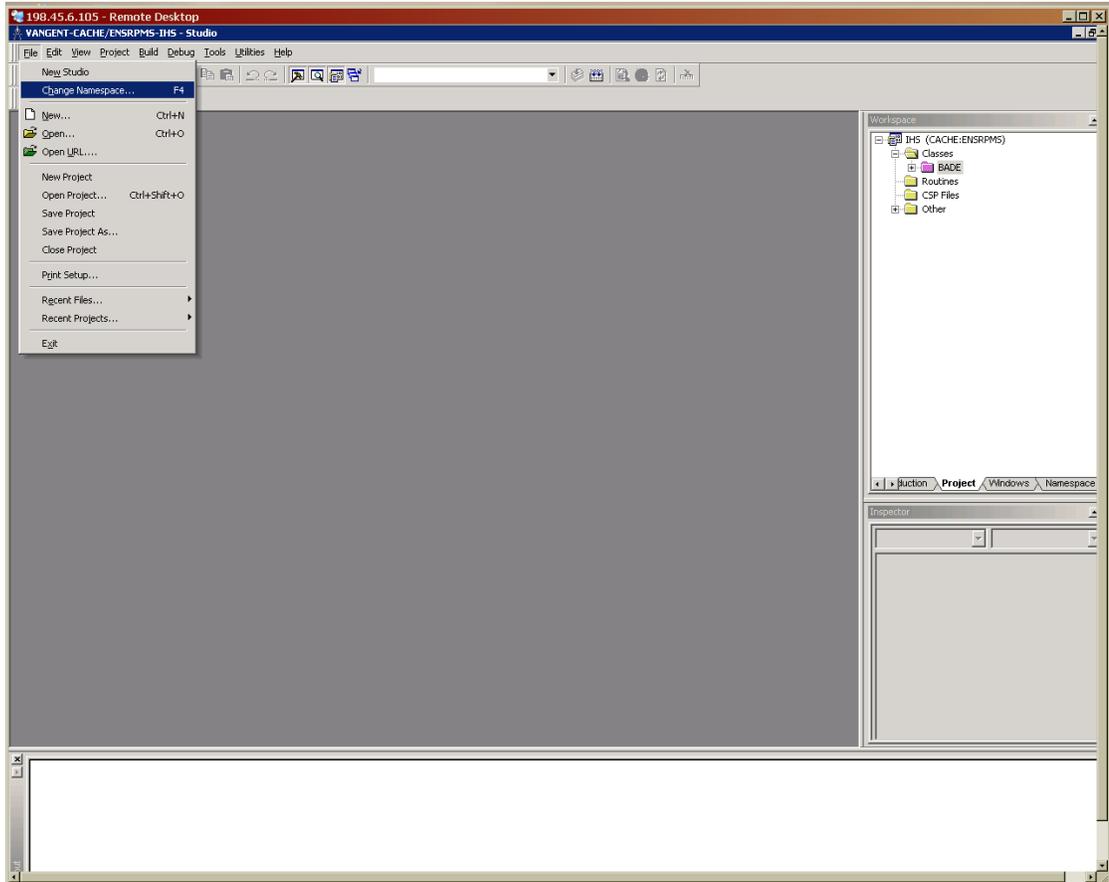
Figure 2-2: **Change Namespace** menu option

2. In the **Namespace** list, click **ENSRPMS**.
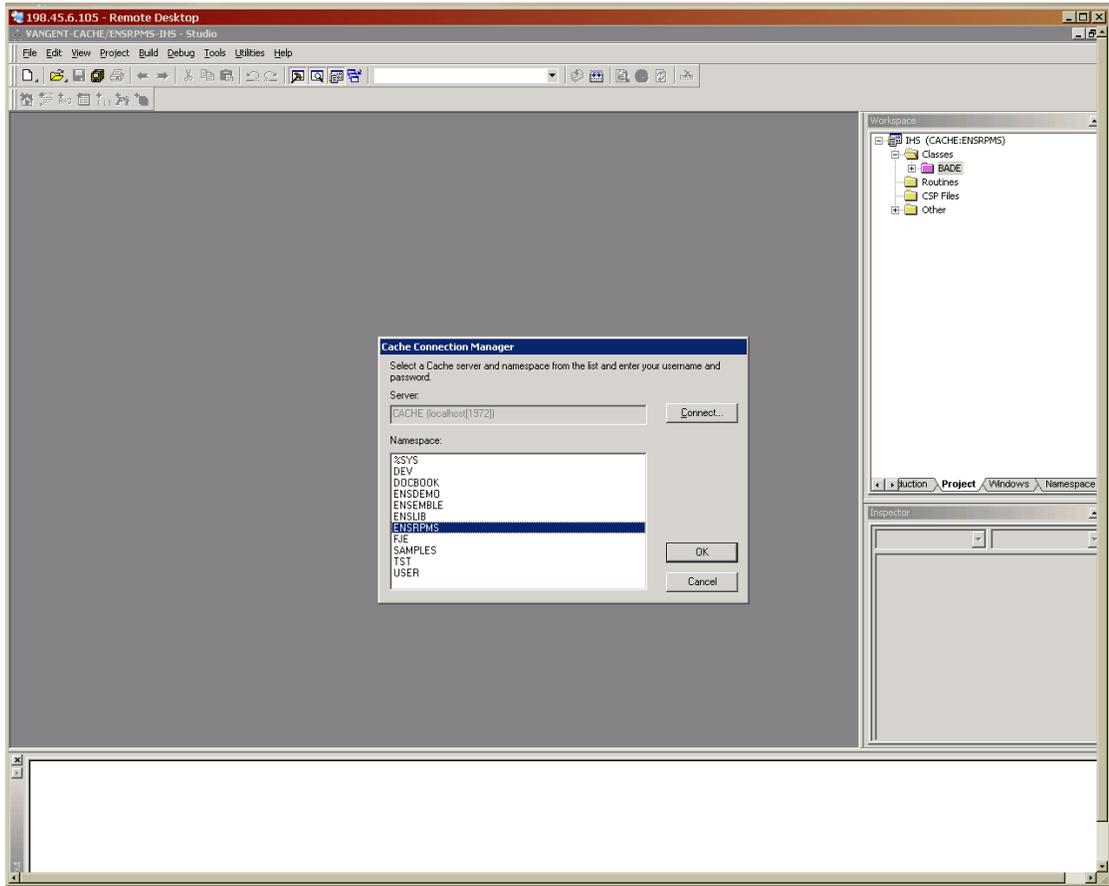
Figure 2-3: Selecting the **ENSRPMS** namespace

2.3   Import the IHSProduction

1. On the **Tools** menu, click **Import Local**.
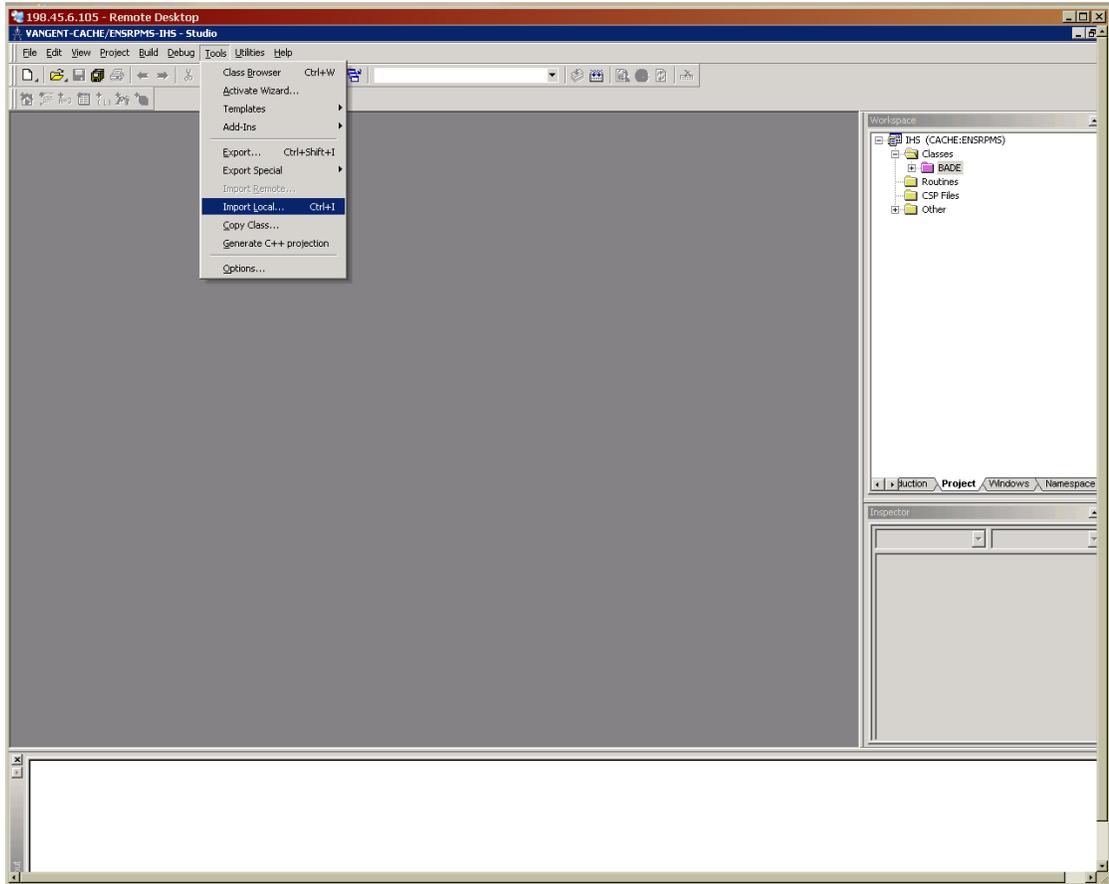
Figure 2-4: **Import Local** menu option

2. Select the file named EDR_ENSRPMS.xml on your network or local machine and click **Open**.

3. In the **Import** dialog box, ensure that all items in the list are selected and that both the **Add Imported Items to Project** and **Compile Imported Items** options are selected.
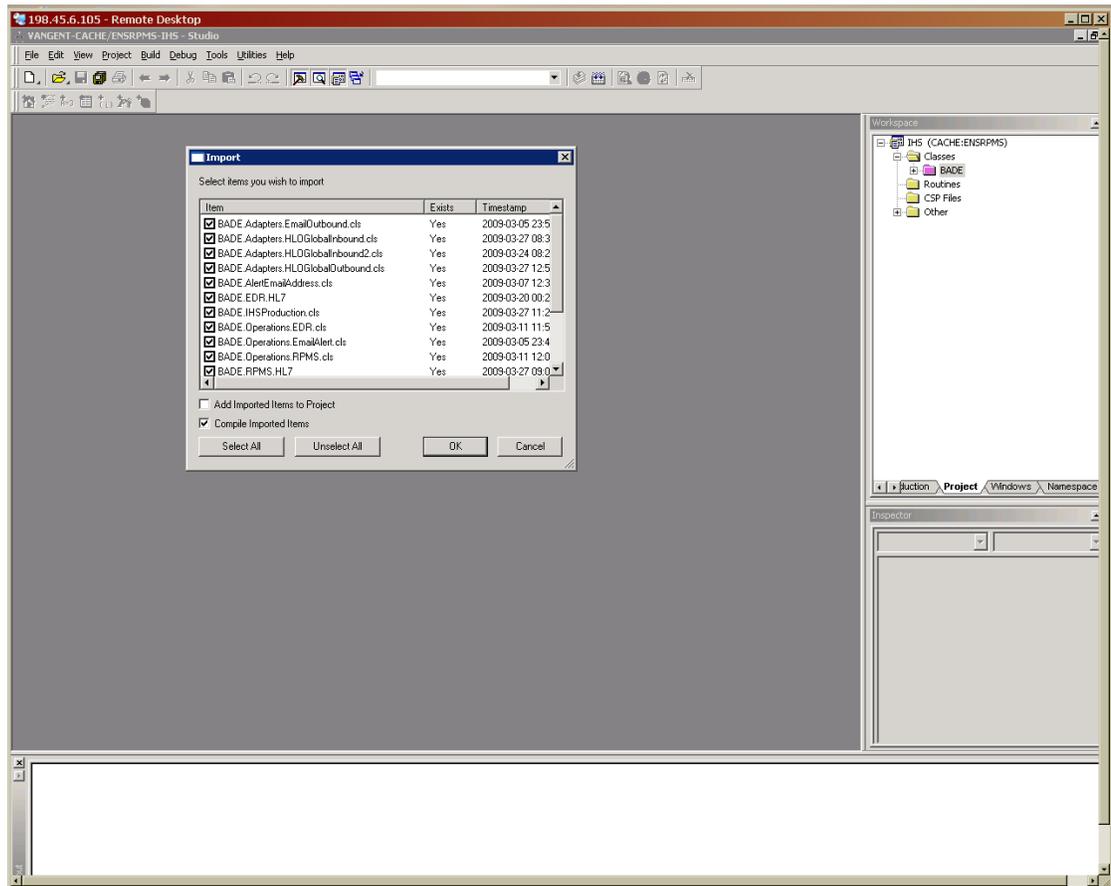
Figure 2-5: **Import** dialog box

4. Click **OK.**

When the system finishes compiling, "Compilation finished successfully in…" is displayed in the **Result** pane.

2.4   Select the system namespace

1. On the **File** menu, click **Change Namespace**.
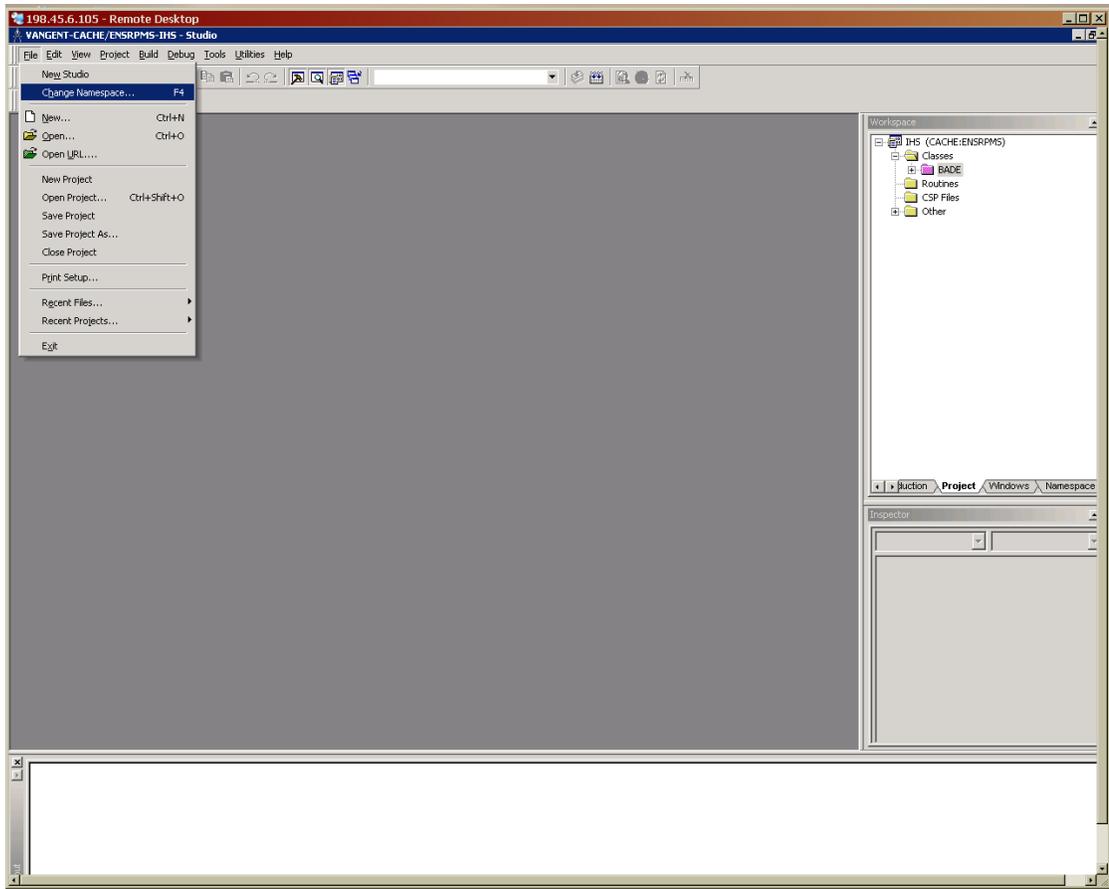
Figure 2-6: **Change Namespace** menu option

2. In the **Namespace** list, click **%SYS.**
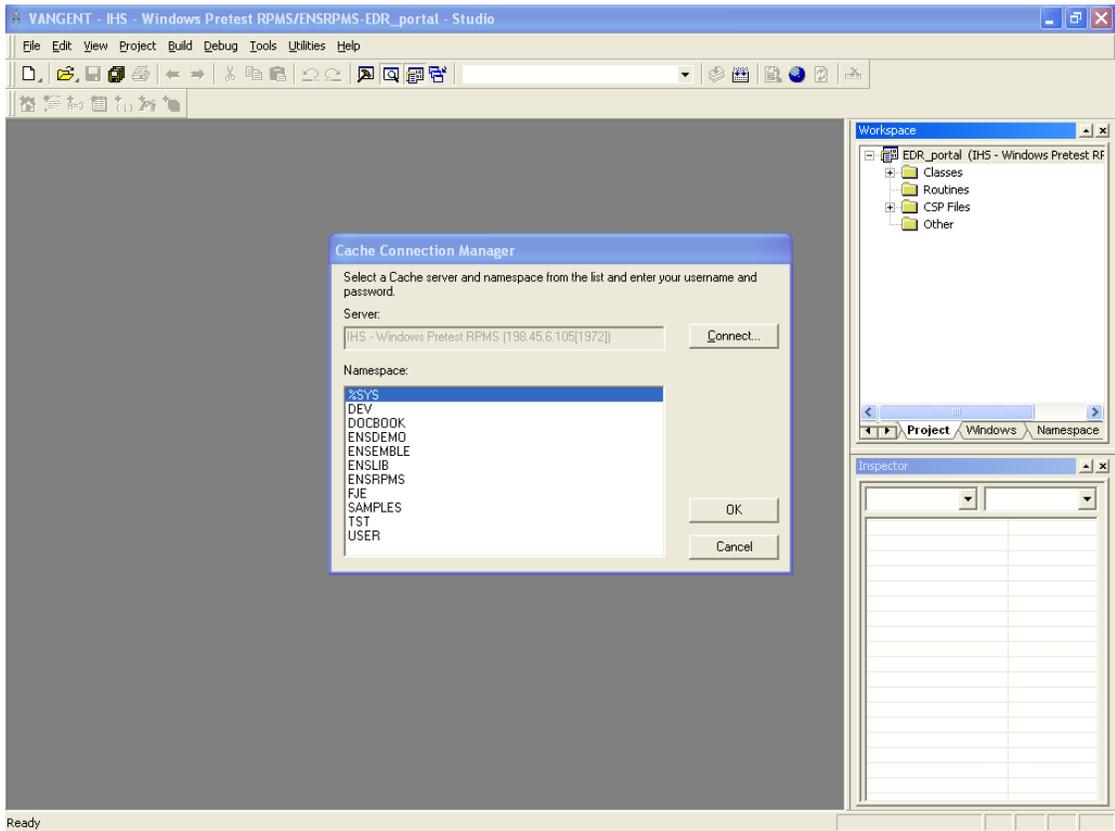
Figure 2-7: Selecting the **%SYS** namespace

2.5   Import the EDR system items

1. On the **Tools** menu, click **Import Local**.
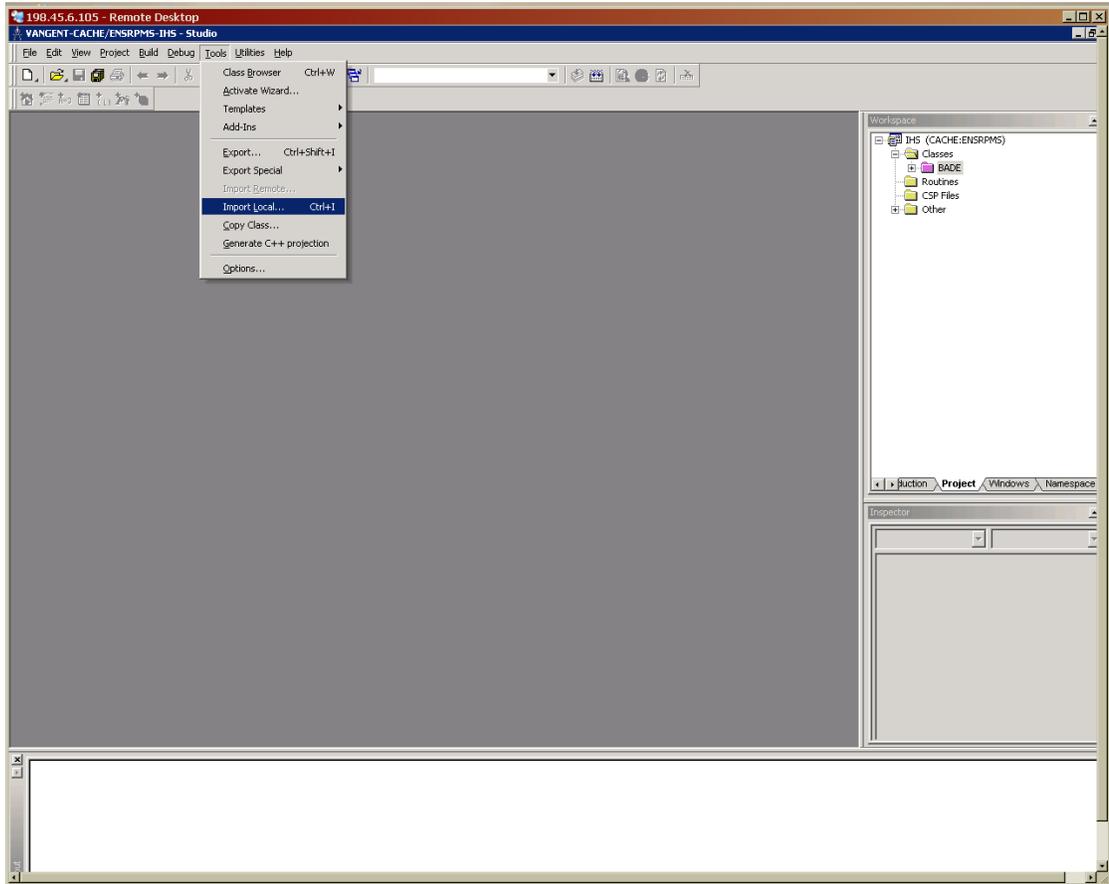
Figure 2-8: **Import Local** menu option

2. On your network or local machine, select the EDR_SYS.xml file and click **Open**.

3. In the **Import** dialog box, ensure that all items within the list are selected and that both the **Add Imported items to Project** and **Compile Imported Items** options are selected.
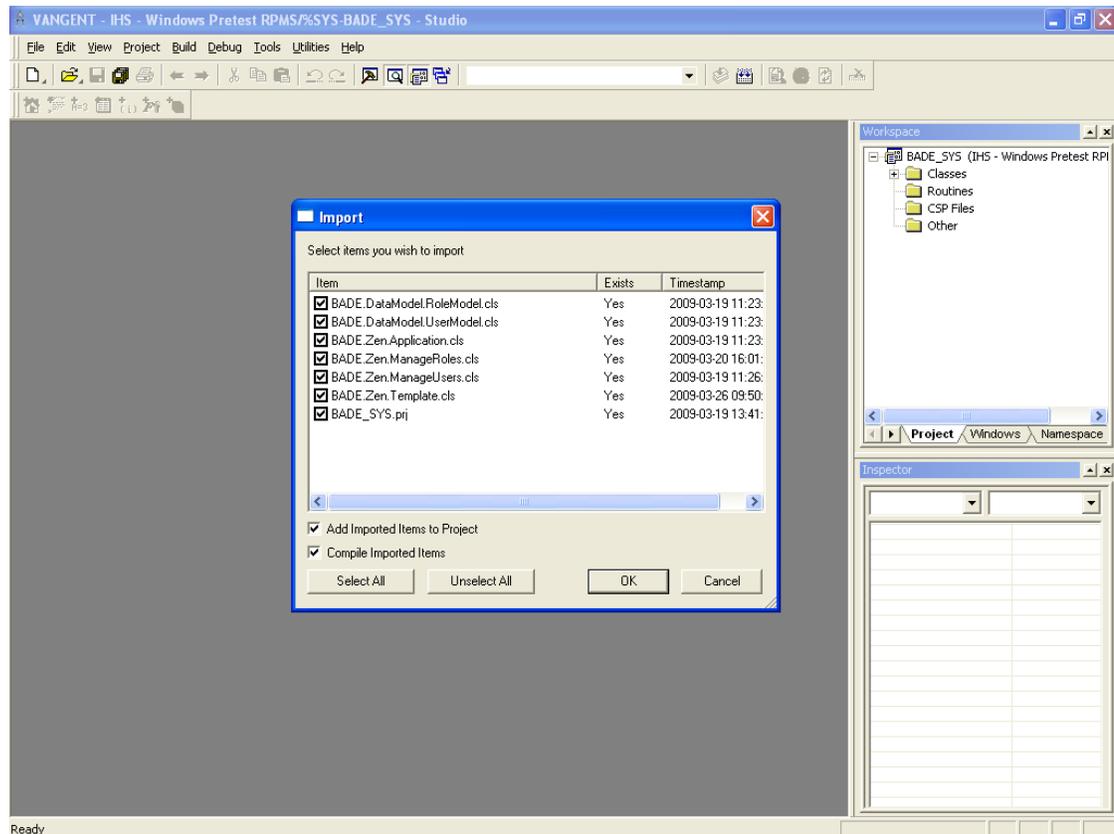
Figure 2-9: **Import** dialog box

4. Click **OK.**

When the system finishes compiling, "Compilation finished successfully in…" is displayed in the **Result** pane.

3.0   EDR Installation Script

3.1   Open a Terminal window

1. In a Windows environment, right-click the Ensemble Cube in the lower right corner and click **Terminal**. Type your login ID and password.
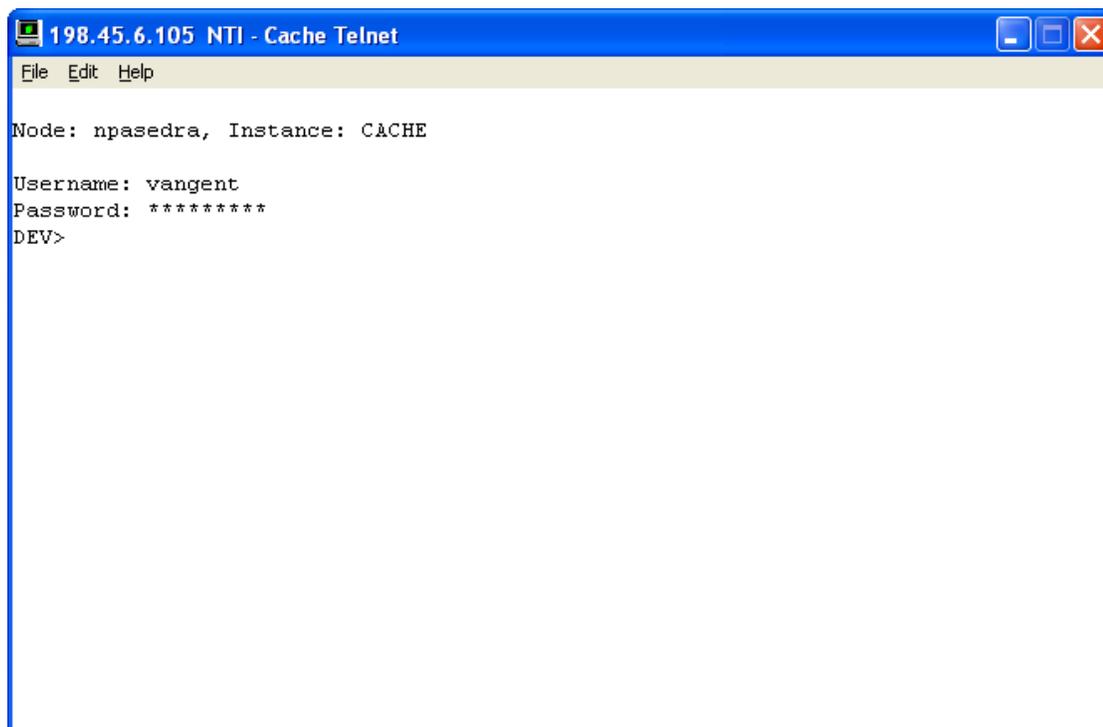
Figure 3-1: Logging on

2. At the "DEV" prompt, type **zn "ensrpms"** to change to the ENSRPMS namespace.
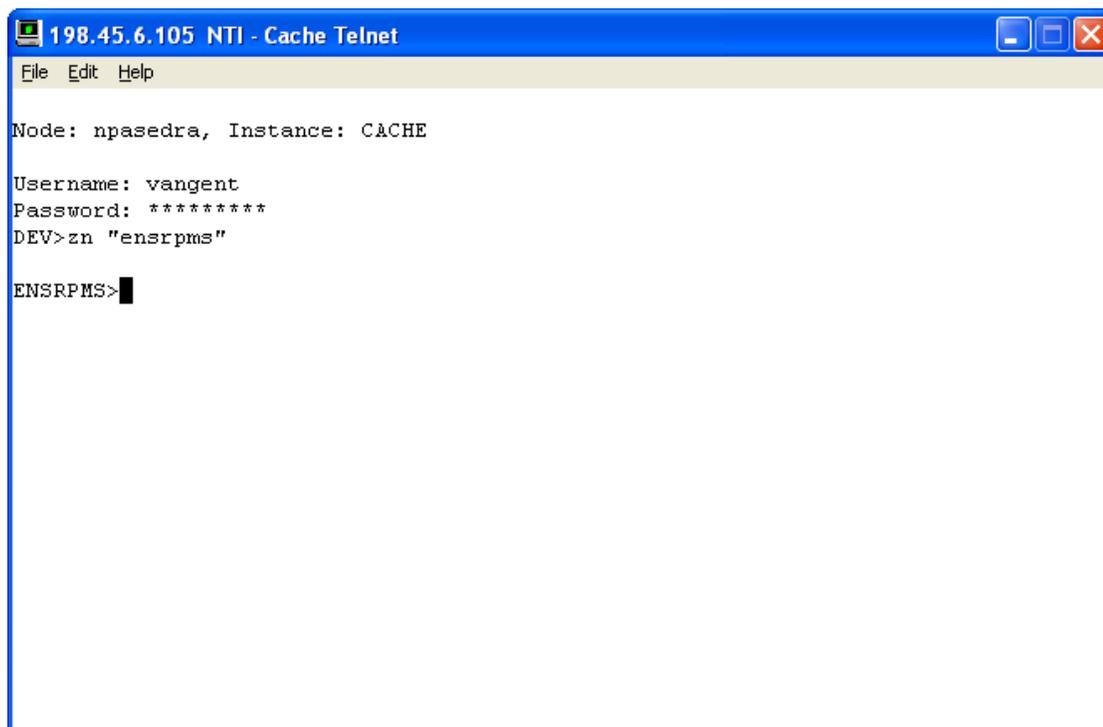

```
198.45.6.105 NTI - Cache Telnet
File   Edit   Help

Node: npasedra, Instance: CACHE

Username: vangent
Password: *********
DEV>zn "ensrpms"

ENSRPMS>█
```

Figure 3-2: Changing to the **ENSRPMS** namespace

3.2   Run the Installation Script

- At the "ENSRPMS" prompt, type **do ##class(BADE.Install).Installation()**.

Figure 3-3: Running the installation script

4.0   IHSProduction Configuration

When the production is installed, the settings listed in Table 5-1 *must* be configured before the production can be run.

> **NOTE:** *The settings listed in Table 5-1 are the **only** settings that should be changed. **All other settings are configured correctly and should not be changed.***

Table 5-1: Settings that must be configured before IHSProduction can be run

Business Host	Host Type	Setting
RPMSInbound	Business service	ReceivingFacilityName
RPMSInbound	Business service	MaxNmbrMsgs
RPMSInbound	Business service	Throttle
	Business service	IP Address
EDRInbound	Business service	Port
RPMSOutbound	Business operation	SiteID
RPMSOutbound	Business operation	LLink
BadMessages	Business operation	FilePath
EDROutbound	Business operation	IPAddress
EDROutbound	Business operation	Port

4.1   Open the Ensemble Management Portal

To open the Ensemble Management Portal, do one of the following:

- In Ensemble Studio, click **Ensemble Management** on the **Utilities** menu.
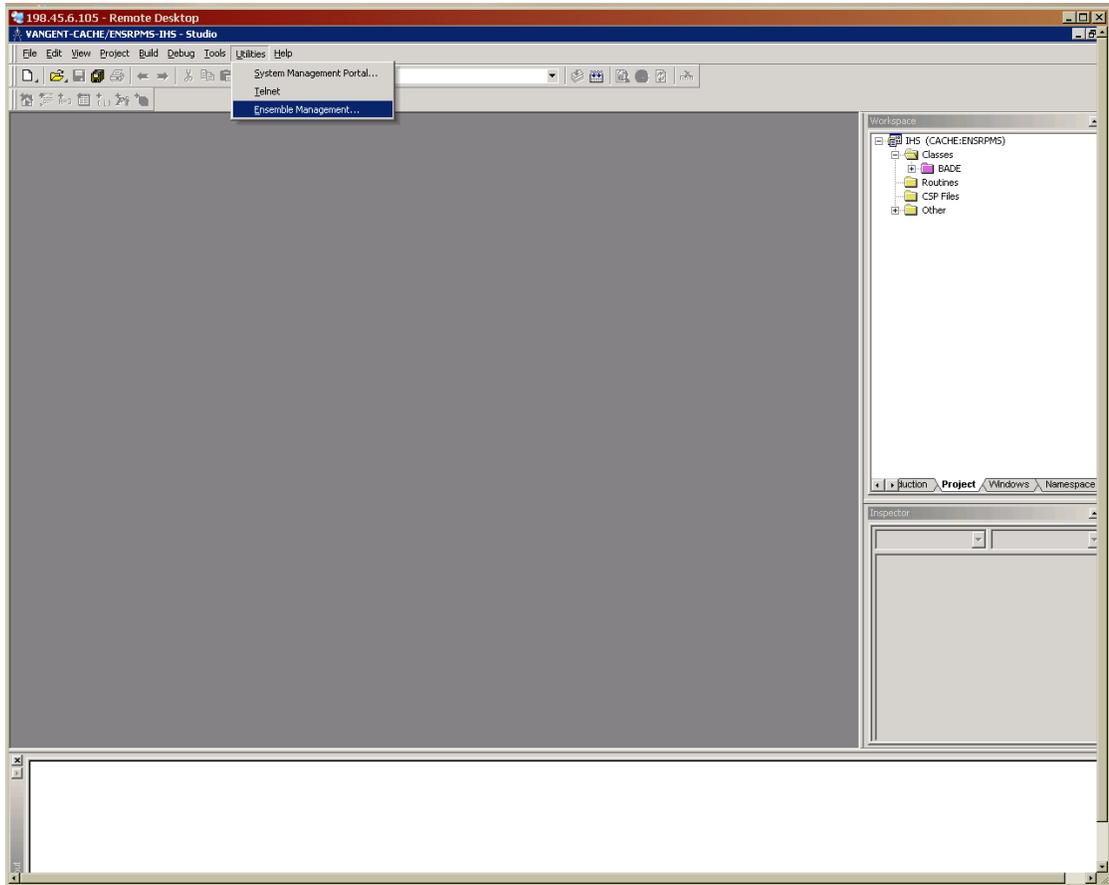
Figure 4-1: **Ensemble Management** menu option

- In the System Management Portal, click **Ensemble Management Portal** under **System Administration**.
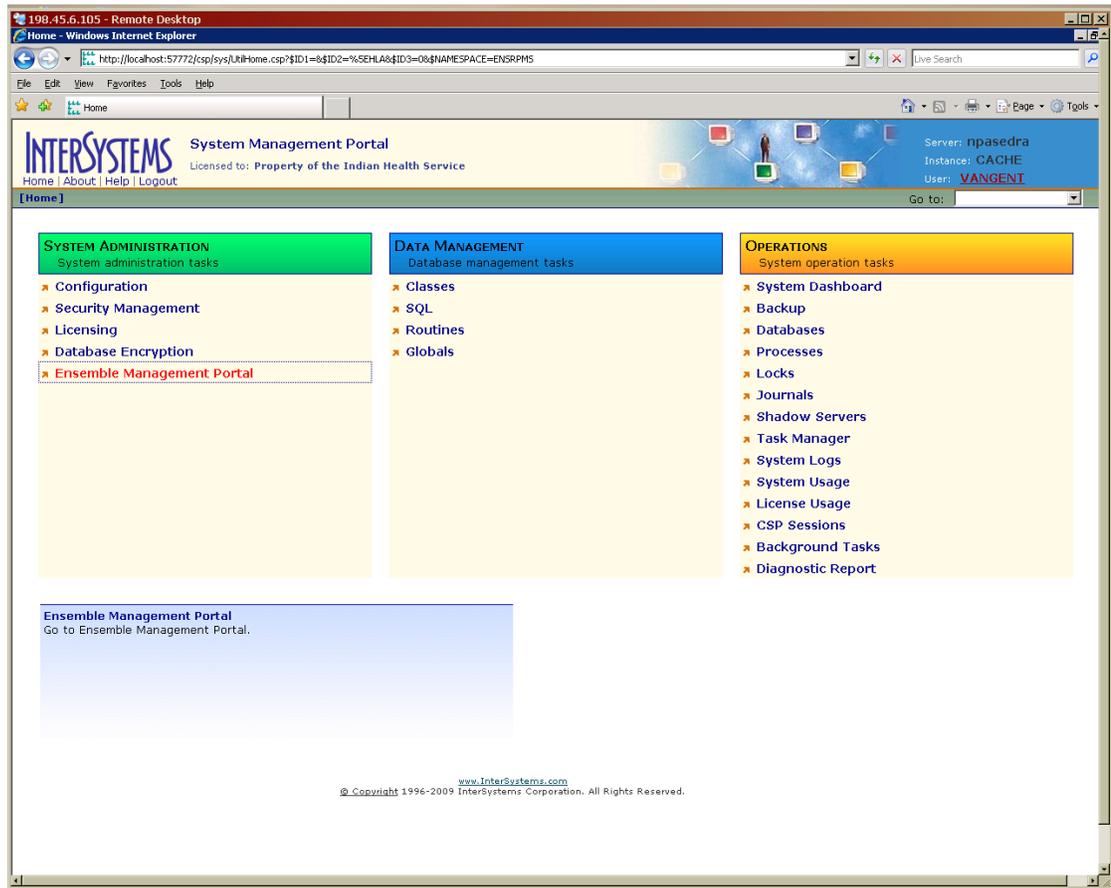
Figure 5-2: Selecting **Ensemble Management Portal** in the System Management Portal

4.2   Change the namespace to ENSRPMS

The namespace should be ENSRPMS.

- In the **Namespace** list, click **ENSRPMS**.
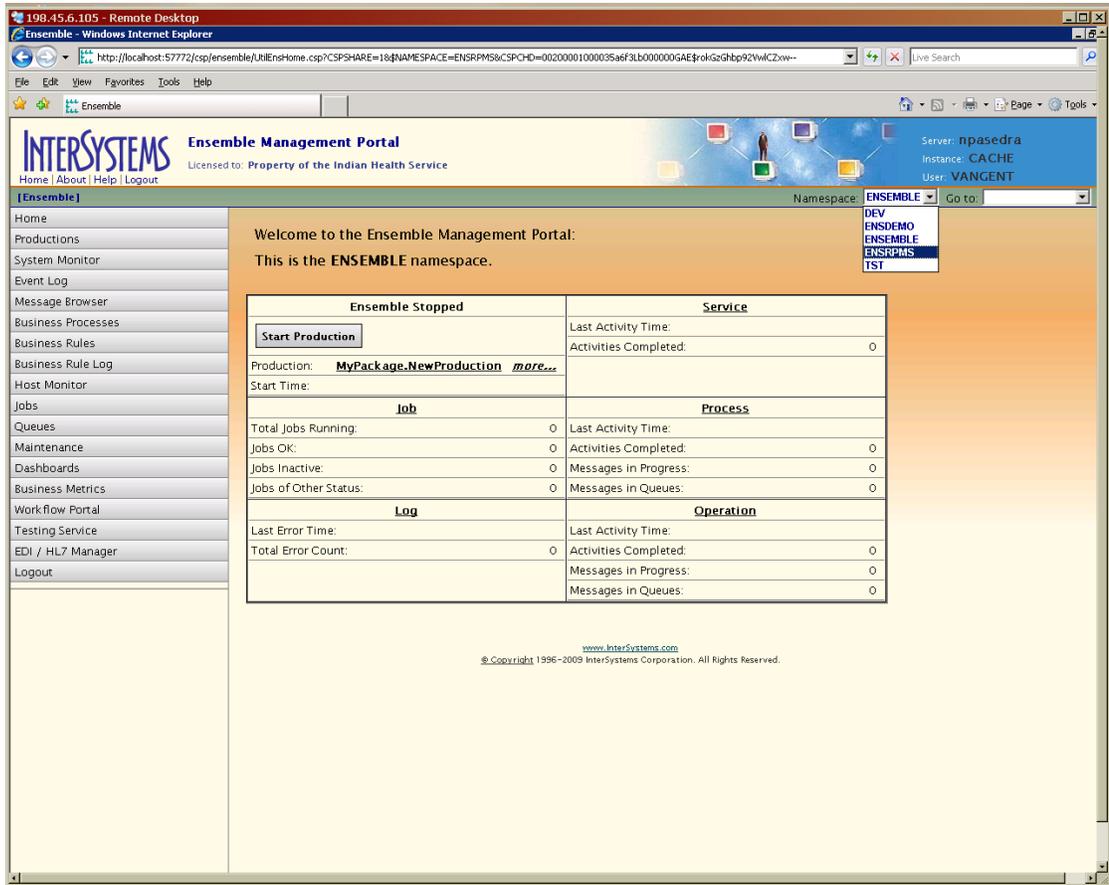
Figure 5-3: Selecting the **ENSRPMS** namespace

4.3   Open the IHSProduction configuration page

1. In the menu on the left side of the page, click **Productions**.
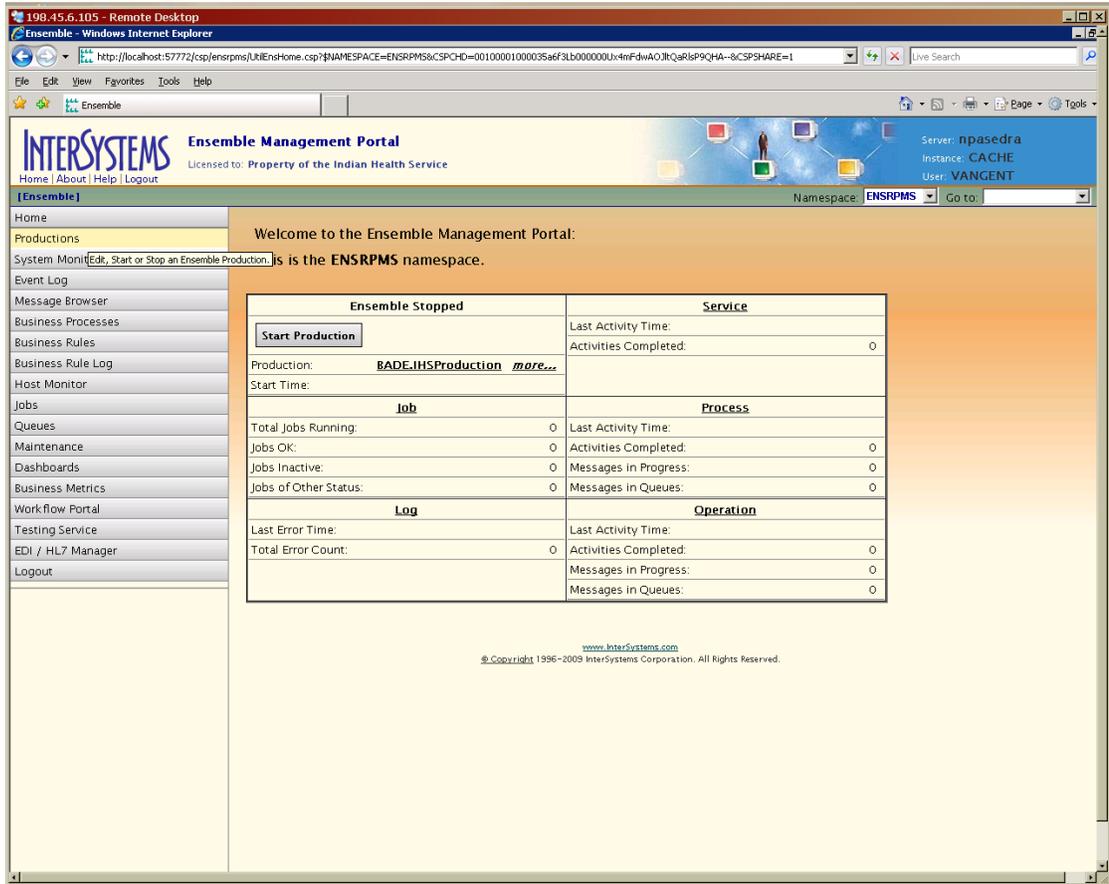
Figure 5-4: **Productions** option

2. In the **BADE.IHSProduction** row, click **Configure**.
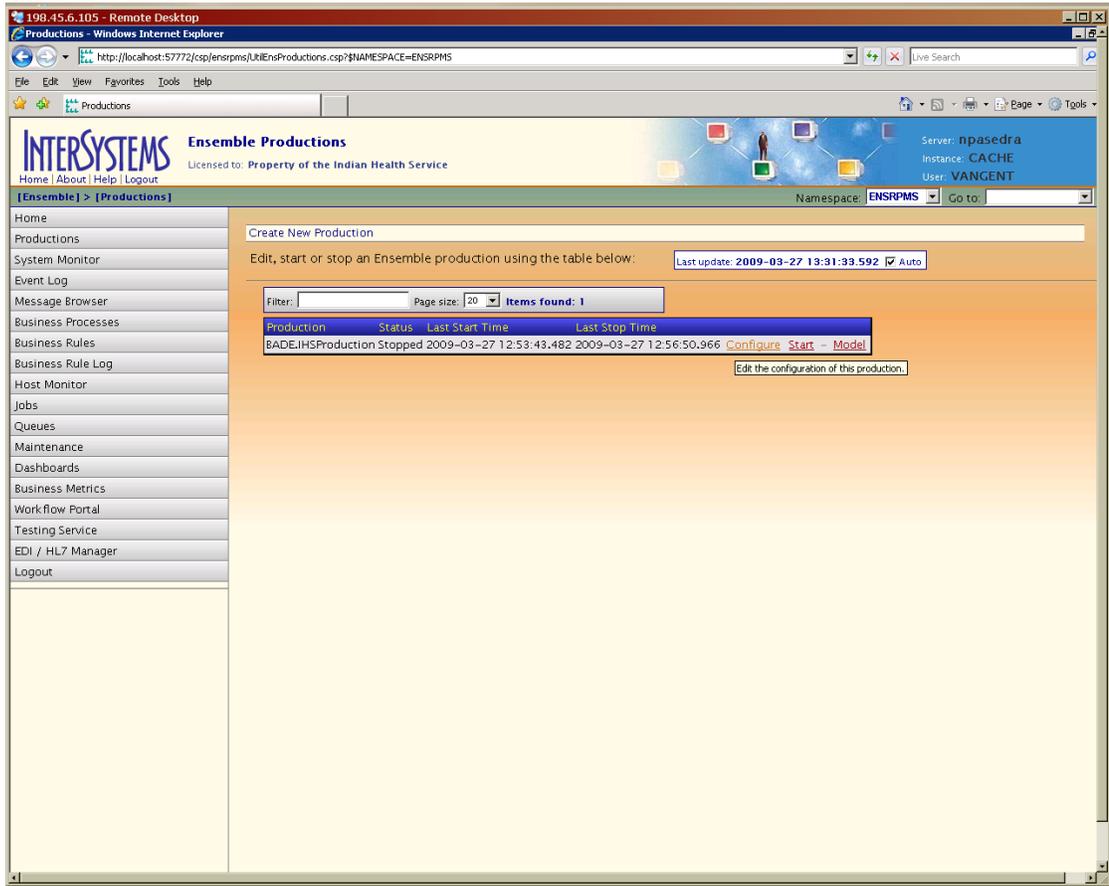
Figure 5-5: Selecting the **Configure** option for BADE.IHSProduction

4.4   BADE.IHSProduction Settings
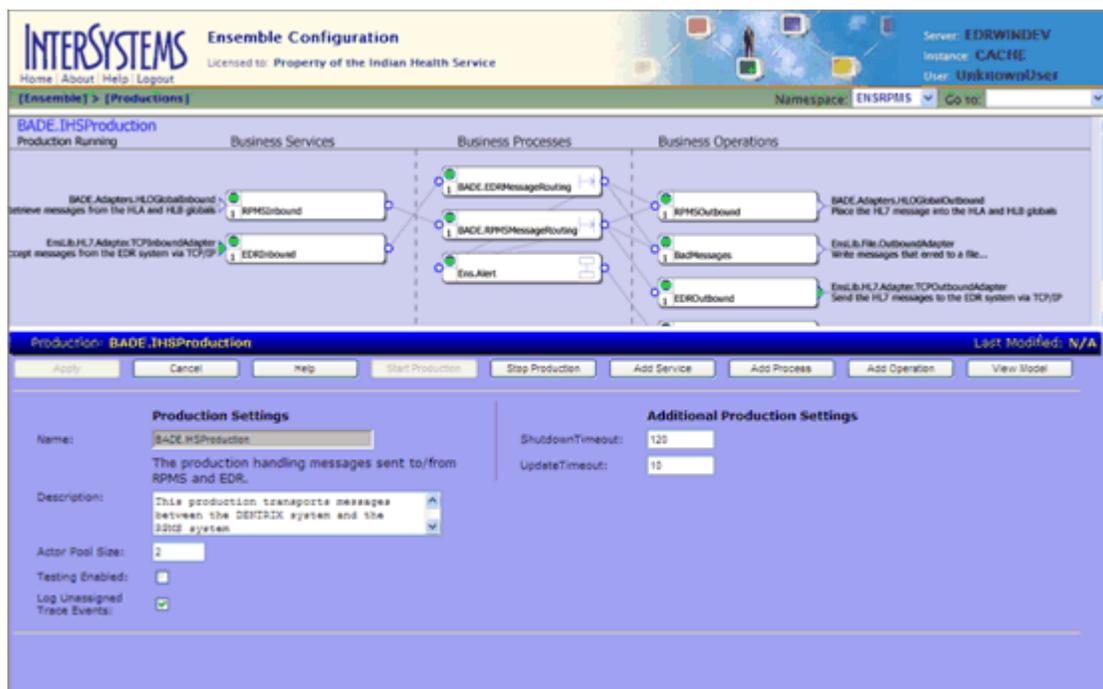
Figure 5-6: BADE.IHSProduction configuration screen

> NOTE: Table 5-2 is provided for information only. ***The default settings on the BADE.IHSProduction configuration screen should not be changed.***

Table 5-2: BADE.IHSProduction settings

Setting	Value	Comments
Name	BADE.IHSProduction	The package name (BADE) and the production name (IHSProduction) separated by a period. (This setting should not be changed.)
Description	This production transports messages between the DENTRIX system and the RPMS system.	(This setting should not be changed.)
Actor Pool Size	2	The number of Actor jobs available to execute Business Process (BP) instances. (This setting should not be changed.)

Setting	Value	Comments
Testing Enabled	Unchecked	The Testing Service is not enabled for this production. (This setting should not be changed.)
Log Unassigned Trace Events	Checked	Trace events that do not belong to any configuration item are logged. (This setting should not be changed.)
ShutdownTimeout	120	The amount of time required for a click on **Stop Production** to succeed. (This setting should not be changed.)
UpdateTimeout	10	The amount of time required for production updates to succeed. (This setting should not be changed.)

4.5   Business Services

4.5.1   RPMSInbound Settings

Figure 5-7: RPMSInbound configuration screen

NOTE: In Table 5-3, only the settings shown in *italics* (*Receiving Facility Name*, *MaxNmbrMsgs*, and *Throttle*) should be changed.

All other settings are configured correctly. The default values should not be changed.

Table 5-3: RPMSInbound settings

Setting	Value	Comments
Name	RPMSInbound	(This setting should not be changed.)
Comment	Retrieve messages from the HLA and HLB globals	(This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. This setting should not be changed. (This setting should not be changed.)
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	BADE.Services.RPMS	(This setting should not be changed.)
Description	A business service that receives messages from the RPMS system via the HLOGlobal Inbound Adapter	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	This item is not run in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)

Setting	Value	Comments
Adapter Class	BADE.Adapters. HLOGlobalInbound	Name of the Adapter class declared in the Business class for this item. (This setting should not be changed.)
Target Config Names	BADE. RPMSMessageRouting	The Business host where messages are sent. (This setting should not be changed.)
Search Table Class	EnsLib.HL7. SearchTable	The set of searchable properties associated with each HL7 message processed. (This setting should not be changed.)
Local Facility Application	ISC:EnsembleHL7	The LocalFacility:LocalApplication codes representing this (receiving) facility and application, separated by a colon. Used as SendingFacility and SendApplication in reply ACK message headers. (This setting should not be changed.)
Framing	Flexible	The HL7 inbound message framing protocol. Flexible = Determine framing style from the content of received data. (This setting should not be changed.)
Ack mode	Never	Controls ACK handling. Never = do not send back any ACK. (This setting should not be changed.)
Use Ack Commit Codes	False	Use legacy-mode 'Ax' codes. (This setting should not be changed.)
IgnoreInboundAck	False	Ignore inbound ACK messages to avoid ACK feedback loop. This setting has no effect on this inbound adapter/service since it does not receive or send ACK messages to RPMS. (This setting should not be changed.)
AddNackERR	False	Do not add an ERR error code segment when generating NACK messages. (Not used for this service since it does not send NACK/ACK messages.) (This setting should not be changed.)
BatchHandling	Single-Session Batch	RPMS is not sending batched messages. (This setting should not be changed.)

Setting	Value	Comments
Message Schema Category	BADE.RPMS	Category to apply to incoming message types to produce a complete DocType specification. Combines with document type name (MSH:9) to produce a MessageType specification, which is used to look up a MessageStructure/DocType in the MessageTypes section of the given HL7 schema category. (This setting should not be changed.)
DefCharEncoding	Latin1	The default character encoding used when reading or writing HL7 messages. (This setting should not be changed.)
Alert Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Alert On Error	True	Send an alert message whenever an error occurs. (This setting should not be changed.)
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
Receiving Facility Name	*DENTRIX*	*Name of receiving facility on which to filter HL7 messages within the HLOGlobalInbound adapter.*
MaxNmbrMsgs	*50*	*Maximum number of messages processed in each polling interval. This value may need to be adjusted depending on the number of messages received and/or processed and the processing power of the server running the EIE. In most cases, this setting will only affect the initial patient upload when large numbers of records may be processed.* *This value can also be modified using the EIE Management Portal.*

Setting	Value	Comments
Throttle	*1000*	*The amount of time to delay after processing each message; used to manage throughput. 1000 = 1 second of delay between each message processed.* *This value can also be modified using the EIE Management Portal.*
Site ID	*<Installation site ID>*	*Numeric DUZ(2) value*
Call Interval	5	Minimum interval between invocations of the adapter by the Ensemble framework. For adapters that poll for external events, this is the polling interval. This value can also be modified using the EIE Management Portal. (This setting should not be changed.)

4.5.2   EDRInbound Settings

Figure 5-8: EDRInbound configuration screen

> NOTE: In Table 5-4, only the setting shown in *italics* (IP Address
>   and *Port*) should be changed.
>
> ***All other settings are configured correctly. The default
> values should not be changed.***

Table 5-4: EDRInbound settings

Setting	Value	Comments
Name	EDRInbound	(This setting should not be changed.)
Comment	Accept messages from the EDR system via TCP/IP	(This setting should not be changed.)

Setting	Value	Comments
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.HL7.Service. TCPService	(This setting should not be changed.)
Description	<blank>	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	This item is not run in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Adapter Class	EnsLib.HL7.Adapter. TCPInboundAdapter	Name of the Adapter class declared in the Business class for this item. (This setting should not be changed.)
Target Config Names	BADE. EDRMessageRouting	The business host where messages are sent. (This setting should not be changed.)

Setting	Value	Comments
Search Table Class	EnsLib.HL7.SearchTable	The set of searchable properties associated with each HL7 message processed. (This setting should not be changed.)
Local Facility Application	ISC:EnsembleHL7	The LocalFacility:LocalApplication codes representing this (receiving) facility and application, separated by a colon. Used as SendingFacility and SendApplication in reply ACK message headers. (This setting should not be changed.)
Framing	Flexible	The HL7 inbound message framing protocol. Flexible = Determine framing style from the content of received data. (This setting should not be changed.)
Ack mode	Immediate	Controls ACK handling. Immediate = Send back (commit) ACK reply message immediately upon receipt of the inbound message. (This setting should not be changed.)
Use Ack Commit Codes	True	If HL7 message VersionID is 2.3 or higher, use the "enhanced-mode" ACK "Commit" codes ("Cx") in MSA:1 ("AcknowledgementCode"). (This setting should not be changed.)
IgnoreInboundAck	True	Set to True to avoid ACK feedback loop. (This setting should not be changed.)
AddNackERR	True	If a Nack message is sent (ACK with an error), the ERR code segment is added. (This setting should not be changed.)
BatchHandling	Single-Session Batch	EDR is not sending batched HL7 messages. (This setting should not be changed.)

Setting	Value	Comments
Message Schema Category	BADE.EDR	Category to apply to incoming message types to produce a complete DocType specification. Combines with document type name (MSH:9) to produce a MessagType specification, which is used to look up a MessageStructure/DocType in the MessageTypes section of the given HL7 schema category. (This setting should not be changed.)
DefCharEncoding	Latin1	The default character encoding used when reading or writing HL7 messages. (This setting should not be changed.)
Alert Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Alert On Error	True	Send an alert message whenever an error occurs. (This setting should not be changed.)
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
Job Per Connection	False	A new job is not spawned to handle each incoming TCP connection. Multiple connections are not handled simultaneously. (This setting should not be changed.)
Allowed IP Addresses	IP Address of Dentrix Server	Must be set to the IP address of DENTRIX dental server.
QSize	0	Number of incoming connections for the operating system to hold open on behalf of EDR. Set to 0 if only one connection at a time is expected. Set to a large number if many clients will be connecting rapidly. (This setting should not be changed.)

Setting	Value	Comments
Call Interval	5	Minimum interval between invocations of the adapter by the Ensemble framework. For adapters that poll for external events, this is the polling interval. (This setting should not be changed.)
Port	*5028*	TCP port that listens for and accepts connections.This must match the Dentrix Servers outbound message port. The Default is 5028.
Stay Connected	-1	-1 = never disconnect. (This setting should not be changed. Note that the setting is *negative* 1.)
Read Timeout	5	Number of seconds to wait for each successive incoming TCP read following receipt of initial data from remote TCP port. (This setting should not be changed.)
SSL Config	<blank>	(This setting should not be changed.)

4.6   Business Processes

4.6.1   BADE.EDRMessageRouting Settings

Figure 5-9: BADE.EDRMessageRouting configuration screen

> NOTE: Table 5-5 is provided for information only. ***The default settings on the BADE.EDRMessageRouting configuration screen should not be changed.***

Table 5-5: BADE.EDRMessageRouting settings

Setting	Value	Comments
Name	BADE.EDRMessageRouting	(This setting should not be changed.)
Comment	Routes messages received from the EDR system.	(This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)

Setting	Value	Comments
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.HL7.MessageRouter. RoutingEngine	(This setting should not be changed.)
Description	<blank>	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Local Facility Application	ISC:EnsembleHL7	The LocalFacility:LocalApplication codes representing this (receiving) facility and application, separated by a colon. Used as SendingFacility and SendApplication in reply ACK message headers. (This setting should not be changed.)
Ack Type	<blank>	Determines the ACK type (e.g., AA vs. CA) if constructing an ACK or NACK reply message locally. (This setting should not be changed.)

Setting	Value	Comments
NackCode	<blank>	Determines the NACK code type (e.g., AE vs. AR) if constructing a NACK reply message locally to report an error. (This setting should not be changed.)
AddNackERR	False	Do not add an ERR code segment to Nack (ACK with an error) messages. (This setting should not be changed.)
Validation	dm-z	d = require a DocType; m = do not tolerate BuildMap errors; -z = do not tolerate unrecognized trailing Z-segments. (This setting should not be changed.)
Business Rule Name	BADE.EDRMessageRouting	 (This setting should not be changed.)
Alert on Bad Message	True	Send an alert if validation blocks a message. (This setting should not be changed.)
Bad Message Handler	BadMessages	Name of host that handles messages blocked by validation. (This setting should not be changed.)
Response From	<blank>	No reply will be requested from any target. A message is ACKed when it is received from the DENTRIX system. (This setting should not be changed.)
Response Target Config Names	<blank>	Names a destination or destinations, in addition to the caller, to which responses are forwarded. Left blank because no ACKs are being received or created. (This setting should not be changed.)
Response Timeout	-1	This setting has no effect if **ResponseFrom** is empty. (This setting should not be changed. Note that the setting is *negative* 1.)
ForceSyncSend	False	Do not make synchronous calls for "send" actions. (This setting should not be changed.)

Setting	Value	Comments
Alert On Error	True	Send an alert message whenever an error occurs. (This setting should not be changed.)

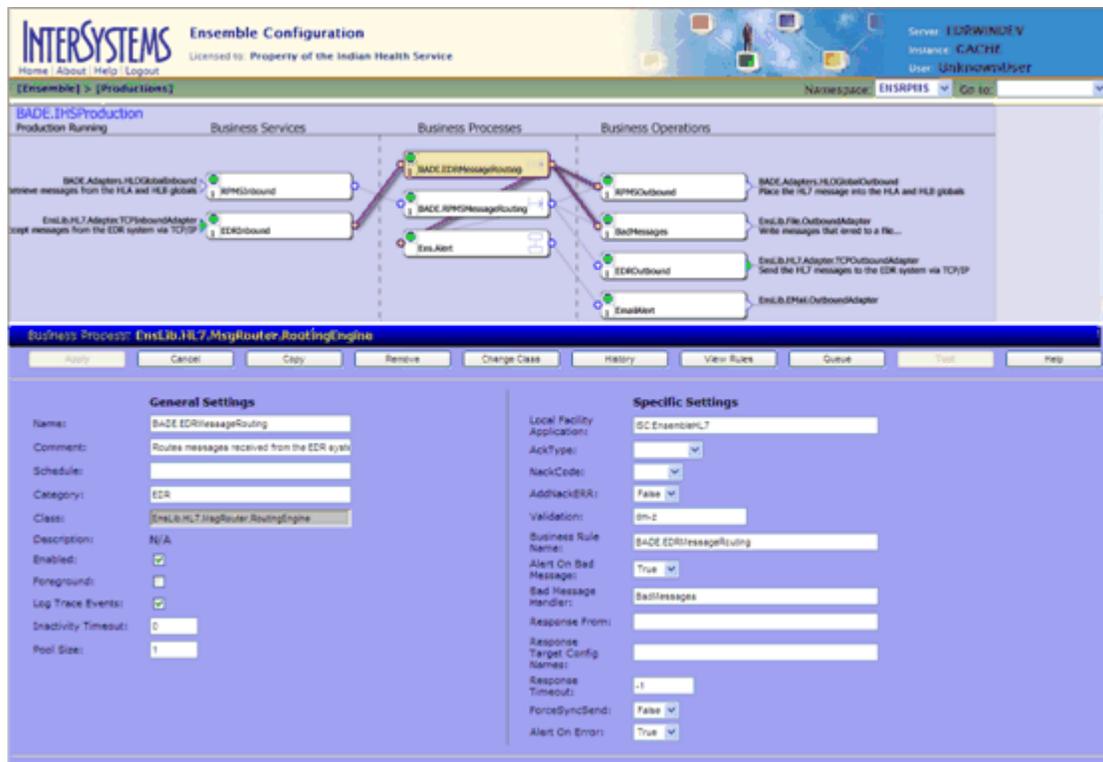## 4.6.2   BADE.RPMSMessageRouting Settings
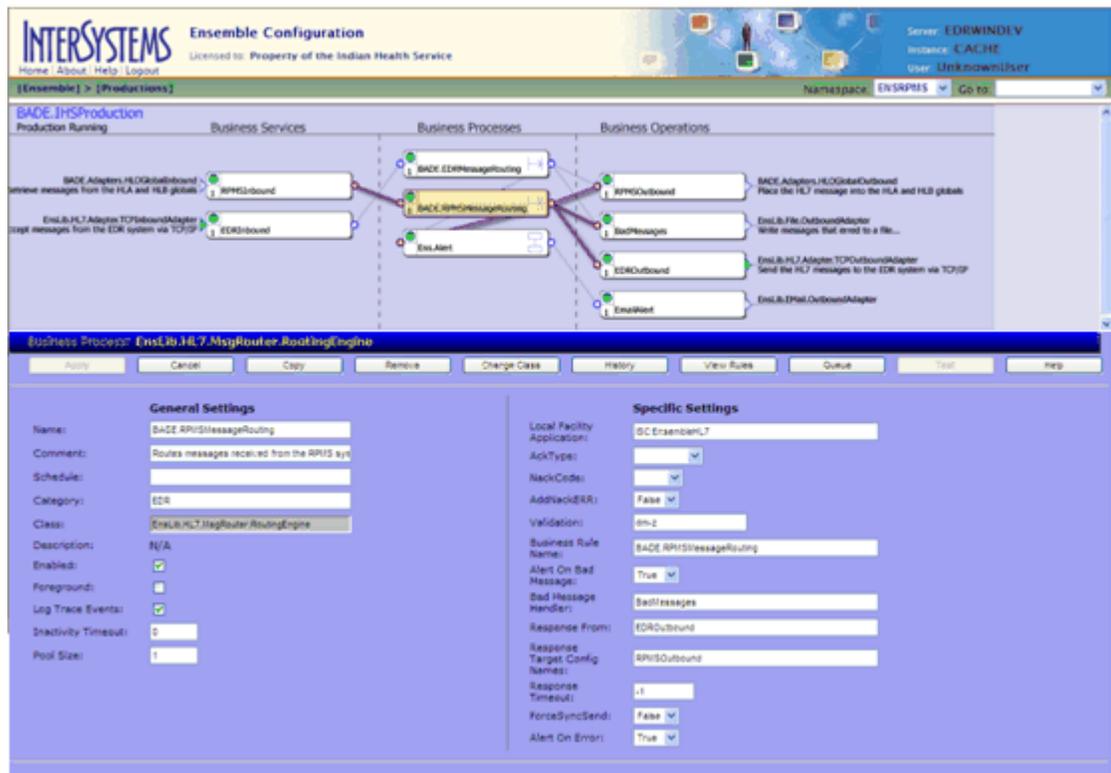
Figure 5-10: BADE.RPMSMessageRouting configuration screen

NOTE: Table 5-6 is provided for information only. ***The default settings on the BADE.RPMSMessageRouting configuration screen should not be changed.***

Table 5-6: BADE.RPMSMessageRouting settings

Setting	Value	Comments
Name	BADE. RPMSMessageRouting	(This setting should not be changed.)
Comment	Routes messages received from the RPMS system	(This setting should not be changed.)

Setting	Value	Comments
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.HL7.MsgRouter. RoutingEngine	(This setting should not be changed.)
Description	<blank>	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Local Facility Application	ISC:EnsembleHL7	The LocalFacility:LocalApplication codes representing this (receiving) facility and application, separated by a colon. Used as SendingFacility and SendApplication in reply ACK message headers. (This setting should not be changed.)

Setting	Value	Comments
Ack Type	<blank>	Determines the ACK type (e.g., AA vs. CA) if constructing an ACK or NACK reply message locally. (This setting should not be changed.)
NackCode	<blank>	Determines the NACK code type (e.g., AE vs. AR) if constructing a NACK reply message locally to report an error. (This setting should not be changed.)
AddNackErr	False	Do not add an ERR code segment to Nack (ACK with an error) messages. (This setting should not be changed.)
Validation	dm-z	d = require a DocType; m = do not tolerate BuildMap errors; -z = do not tolerate unrecognized trailing Z-segments. (This setting should not be changed.)
Business Rule Name	BADE. RPMSMessageRouting	(This setting should not be changed.)
Alert on Bad Message	True	Send an alert if validation blocks a message. (This setting should not be changed.)
Bad Message Handler	BadMessages	Name of host that handles messages blocked by validation. (This setting should not be changed.)
Response From	EDROutbound	The target an ACK response should be forwarded to. (This setting should not be changed.)
Response Target Config Names	RPMSOutbound	The destination or destinations, in addition to the caller, to which responses are forwarded. (This setting should not be changed.)
Response TimeOut	-1	This setting has no effect if **ResponseFrom** is empty. (This setting should not be changed. Note that the setting is *negative* 1.)
ForceSyncSend	False	Do not make synchronous calls for "send" actions. (This setting should not be changed.)

| Setting	Value	Comments
Alert On Error	True	Send an alert message whenever an error occurs. (This setting should not be changed.)

4.6.3   ENS.Alert Settings
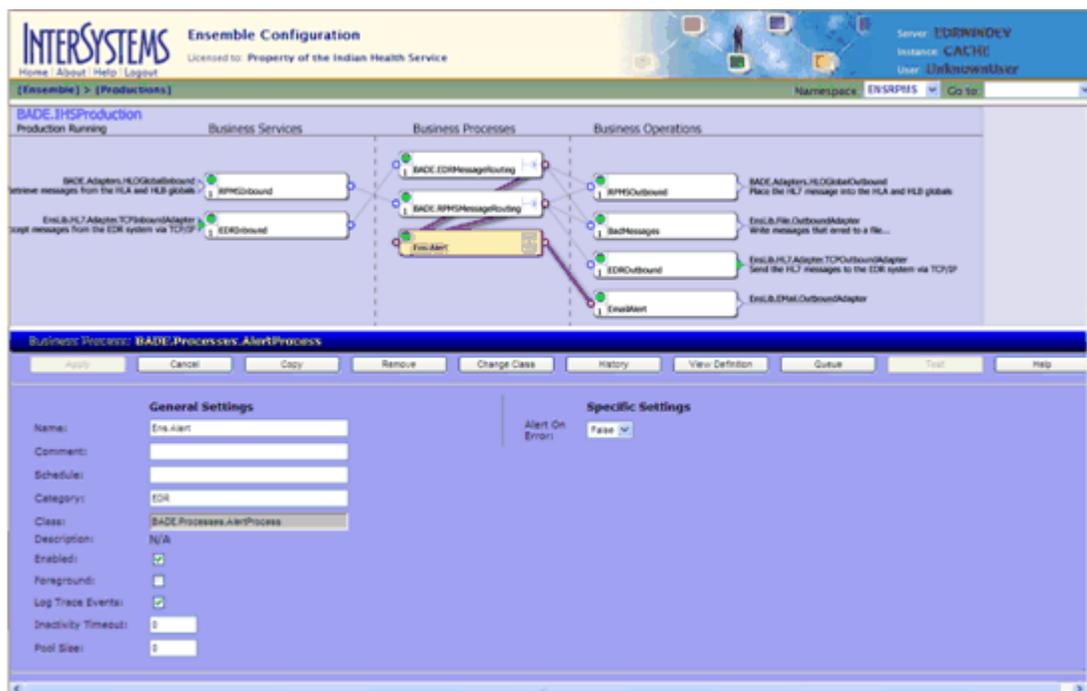
Figure 5-11: ENS.Alert configuration screen

> NOTE: Table 5-7 is provided for information only. ***The default settings on the ENS.Alert configuration screen should not be changed.***

Table 5-7: ENS.Alert settings

Setting	Value	Comments
Name	ENS.Alert	(This setting should not be changed.)
Comment	<blank>	(This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)

Setting	Value	Comments
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	BADE.Processes. AlertProcess	(This setting should not be changed.)
Description	<blank>	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	0	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Alert On Error	False	Do not send an alert message when an error occurs. (This setting should not be changed.)

4.7　　Business Operations

4.7.1　　RPMSOutbound Settings
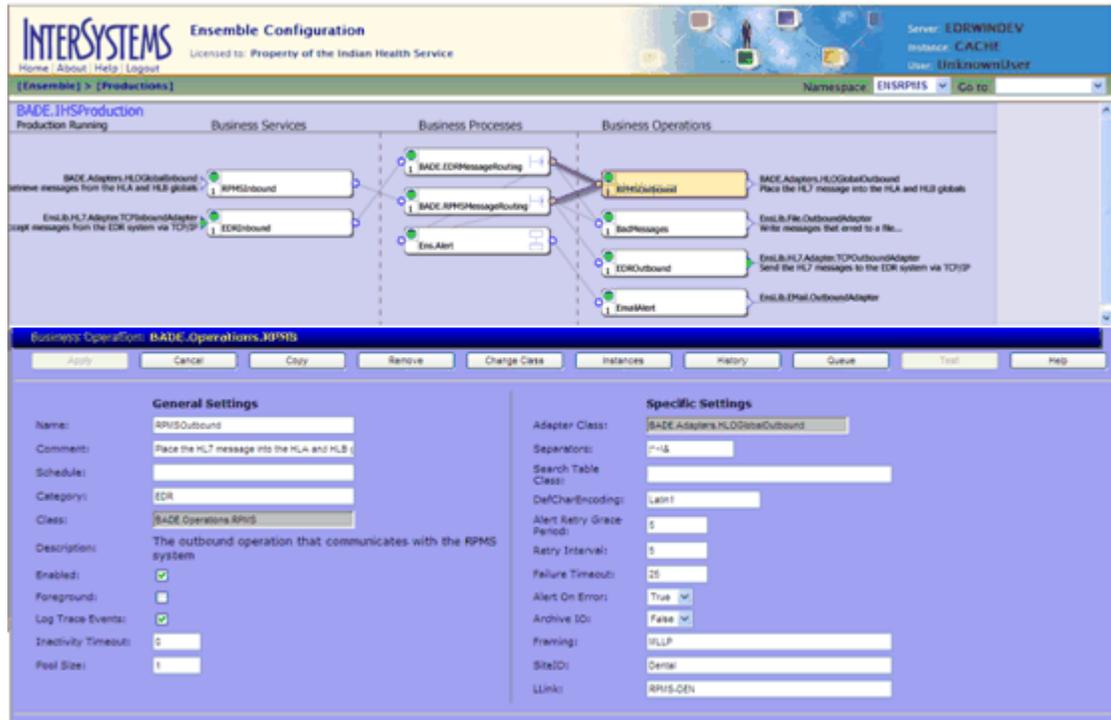
Figure 5-12: RPMSOutbound configuration screen

> NOTE: In Table 5-8, only the setting shown in *italics* (*SiteID* and
> *LLink*) should be changed.
>
> ***All other settings are configured correctly. The default
> values should not be changed.***

Table 5-8: RPMSOutbound settings

Setting	Value	Comments
Name	RPMSOutbound	(This setting should not be changed.)
Comment	Place the HL7 message into the HLA and HLB globals	(This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)

Setting	Value	Comments
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	BADE.Operations. RPMS	(This setting should not be changed.)
Description	The outbound operation that communicates with the RPMS system	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Adapter Class	BADE.Adapters. HLOGlobal Outbound	The name of the Adapter class declared in the Business class for this item. (This setting should not be changed.)
Separators	|^~\&	The string of separator characters to use in encoding outbound messages. The order is FS, CS, RS, ESC, SS. (This setting should not be changed.)
Search Table Class	<blank>	No search table is being used. (This setting should not be changed.)

Setting	Value	Comments
DefCharEncoding	Latin1	The default character encoding used when reading or writing HL7 messages. (This setting should not be changed.)
Alert Retry Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Retry Interval	5	How frequently to retry access to the output system. (This setting should not be changed.)
Failure Timeout	25	How long to keep retrying before giving up and returning an error code. (This setting should not be changed.)
Alert On Error	True	Send an alert message whenever an error occurs here. (This setting should not be changed.)
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
Framing	MLLP (HL7 message outbound protocol)	Minimal Lower Level Protocol. Frame each HL7 message with ASCII(11) prefix and ASCII(28,13) suffix. (This setting should not be changed.)
SiteID	*Dental*	Facility number. Either Numeric site ID for the facility or Name. This field is used to append the IEN for use with the HLO message lookup. It generates the NAME field of the HLO Message file .The Default is Dental
LLink	*RPMS-DEN*	Logical link between the two systems. This value should match the name used in the HLO Application Registry file. The default is RPMS-DEN

4.7.2   EDROutbound Settings

Figure 5-13: EDROutbound configuration screen

> NOTE: In Table 5-9, only the settings shown in *italics* (*IPAddress* and *Port*) should be changed.
>
> *All other settings are configured correctly. The default values should not be changed.*

Table 5-9: EDROutbound settings

Setting	Value	Comments
Name	EDROutbound	(This setting should not be changed.)
Comment	Sends the HL7 messages to the EDR system via TCP/IP	(This setting should not be changed.)

Setting	Value	Comments
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.HL7.Operation. TCPOperation	(This setting should not be changed.)
Description	Accepts HL7 Messages and forwards them to a remote IP address, reading a response HL7 Message object returned from the remote IP address if the GetReply setting is enabled.	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)

Setting	Value	Comments
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Adapter Class	EnsLib.HL7.Adapter. TCPOutboundAdapter	(This setting should not be changed.)
ReplyCodeActions	<blank>	List of codes specifying actions to take on receipt of various types of ACK response messages. When left blank, DENTRIX default action is to send "AA" in the MSA:1 field. (This setting should not be changed.)
NoFailwhileDisconnected	False	Do not suspend counting seconds toward FailureTimeout when disconnected. (This setting should not be changed.)
Separators	|^~\&	The string of separator characters to use in encoding outbound messages. The order is FS, CS, RS, ESC, SS. (This setting should not be changed.)
Search Table Class	<blank>	No search table is being used. (This setting should not be changed.)
DefCharEncoding	Latin1	The default character encoding used when reading or writing HL7 messages. (This setting should not be changed.)

Setting	Value	Comments
Alert Retry Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Retry Interval	5	How frequently to retry access to the output system. (This setting should not be changed.)
Failure Timeout	-1	How long to keep retrying before giving up and returning an error code. (This setting should not be changed. Note that the setting is *negative* 1.)
Alert On Error	True	Send an alert message whenever an error occurs here.
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
Framing	MLLP	Minimal Lower Level Protocol. Frame each HL7 message with ASCII(11) prefix and ASCII(28,13) suffix. (This setting should not be changed.)
IP Address	*198.45.6.101*	*IP address of the Dentrix Server*
Port	*5027*	Port number for the Dentrix Server Inbound messages. The default setting is 5027
Response Timeout	5	Number of seconds to wait for a response to begin arriving from the remote system after sending a request. (This setting should not be changed.)

| Setting	Value	Comments
Stay Connected	-1	Never disconnect (This setting should not be changed. Note that the setting is *negative* 1.)
Connect Timeout	5	Number of seconds to wait on each connection attempt. (This setting should not be changed.)
Reconnect Retry	5	Number of retries before dropping the connection and trying to reconnect again. If set to 0, never disconnect. (This setting should not be changed.)
Get Reply	True	Wait to read ACK or other reply message from socket before returning. (This setting should not be changed.)
Read Timeout	5	Number of seconds to wait for each successive incoming TCP read, following receipt of initial data from remote TCP port. (This setting should not be changed.)
SSL Config	<blank>	The name of an existing Secure Socket Layer/Transport Layer Security (SSL/TLS) system configuration set to use SSL/TLS, configured using the system portal's Security Management page. May include a certificate password after a "|" character for inbound connections. Left blank because SSL is not being used. (This setting should not be changed.)

4.7.3   BadMessages Settings
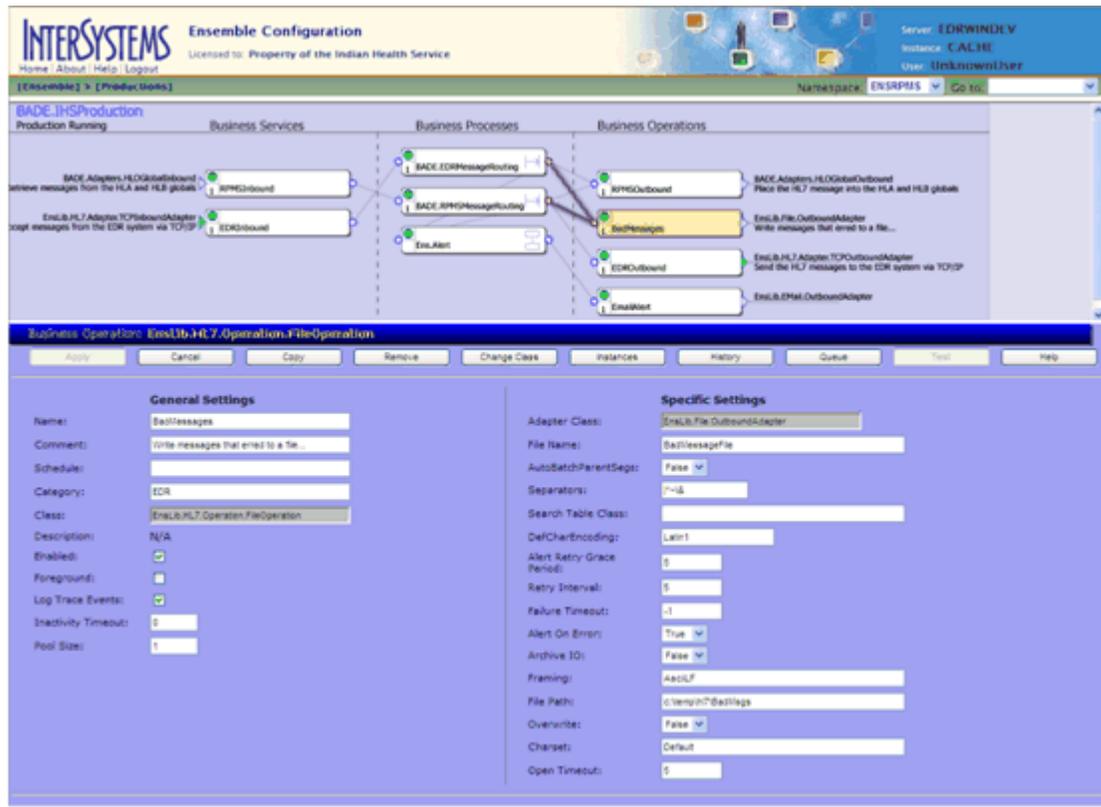
Figure 5-14: BadMessages configuration screen

> NOTE: In Table 5-10, only the setting shown in *italics* (*FilePath*)
>   should be changed.
>
> ***All other settings are configured correctly. The default
> values should not be changed.***

Table 5-10: BadMessages settings

Setting	Value	Comments
Name	BadMessages	(This setting should not be changed.)
Comment	Write messages that erred to a file.	(This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)

Setting	Value	Comments
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.HL7.Operation.FileOperation	(This setting should not be changed.)
Description	<blank>	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Adapter Class	EnsLib.File.OutboundAdapter	(This setting should not be changed.)
File Name	BadMessageFile	Name of output file for bad messages. The default is blank.
AutoBatchParentSegs	False	No batch messages. (This setting should not be changed.)
Separators	|^~\\&	The string of separator characters to use in encoding outbound messages. The order is FS, CS, RS, ESC, SS. (This setting should not be changed.)

Setting	Value	Comments
Search Table Class	<blank>	No search table being used. (This setting should not be changed.)
DefCharEncoding	Latin1	The default character encoding used when reading or writing HL7 messages. (This setting should not be changed.)
Alert Retry Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Retry Interval	5	How frequently to retry access to the output system. (This setting should not be changed.)
Failure Timeout	-1	How long to keep retrying before giving up and returning an error code. (This setting should not be changed.)
Alert On Error	True	Send an Alert message whenever an error occurs here. (This setting should not be changed.)
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
Framing	AsciiLF	Frame each HL7 message with ASCII(10) (Linefeed) separating each message from the next. (This setting should not be changed.)
File Path	*<path to server where EIE resides.>*	Path where bad messages can be stored for later review. In Windows the default is C☺TEMP and in UNIX the default is /tmp
Overwrite	False	Append the file. (This setting should not be changed.)
Charset	Default	Character set used to translate output to the file. (This setting should not be changed.)

Setting	Value	Comments
Open Timeout	5	Number of seconds to wait on each attempt to open the output file. (This setting should not be changed.)

4.7.4   EmailAlert Settings

Figure 5-15: EmailAlert configuration screen

NOTE: In Table 5-11, only the settings shown in *italics* (*SMTP Server, Credentials, Recipient,* and *Cc*) should be changed.

All other settings are configured correctly. The default values should not be changed.

Table 5-11: EmailAlert settings

Setting	Value	Comments
Name	EmailAlert	(This setting should not be changed.)

Setting	Value	Comments
Comment	<blank>	Additional information pertaining to this business class. (This setting should not be changed.)
Schedule	<blank>	The Start/Stop schedule associated with this item. (This setting should not be changed.)
Category	EDR	A grouping for pieces of a production that can be used to filter views for a production. (This setting should not be changed.)
Class	EnsLib.Email.AlertOperation	(This setting should not be changed.)
Description	Simple EMail Alert Operation. To handle Alert messages by sending an EMail, configure an Operation in your Production named Ens.Alert using this class. Ensemble sends all AlertRequest messages to whatever Production Item is named Ens.Alert. (If there is no item named Ens.Alert then all AlertRequest messages are merely recorded in the Ensemble Event Log.)	(This setting should not be changed.)
Enabled	Checked	This item is enabled when this production is started. (This setting should not be changed.)
Foreground	Unchecked	Do not run this item in a foreground process. (This setting should not be changed.)

Setting	Value	Comments
Log Trace Events	Checked	Logging of trace events is enabled for troubleshooting purposes. A global variable is used in conjunction with this setting to enable trace events for this production. (This setting should not be changed.)
Inactivity Timeout	0	Number of seconds that can elapse without activity before this item is marked inactive. A setting of 0 disables the inactivity timeout function. (This setting should not be changed.)
Pool Size	1	Number of system jobs that must be allocated to run this business service. (This setting should not be changed.)
Adapter Class	EnsLib.File.OutboundAdapter	(This setting should not be changed.)
Alert Retry Grace Period	5	When **Alert On Error** is set to True, refrain from alerting if the error is not from ProcessInput() and the service succeeds again within this number of seconds. (This setting should not be changed.)
Retry Interval	5	How frequently to retry access to the output system. (This setting should not be changed.)
Failure Timeout	25	How long to keep retrying before giving up and returning an error code. (This setting should not be changed.)

Setting	Value	Comments
Alert On Error	False	Do not send an Alert message when an error occurs here. (This setting should not be changed.)
Archive IO	False	The adapter does not log each input and output communication with the external system to the Ensemble I/O archive. (This setting should not be changed.)
SMTP Server	SMTPRE.IHS.GOV	IP address of SMTP server to send mail to. For HIS Direct Sites connected to the HIS.GOV Intranet, the default is SMTPRE.IHS.GOV Note: Timeouts for connecting and sending mail can be more than 10 minutes.
SMTP Port	25	The Port ID on the SMTP server to send mail to. (This setting should not be changed.)
Credentials	<ID>	ID name of the credential set used to access the SMTP server.The default is blank
Recipient	<one or more e-mail addresses>	E-mail address(es) of a recipient or list of recipients that will be added to the To: list of each e-mail message sent. This is automatically generated when e-mail addresses are entered using the EIE Management Portal.Multiuple addresses can be included. Addresses should be separated by commas.

Setting	Value	Comments
CC	*<one or more e-mail addresses>*	*E-mail address(es) of a recipient or list of recipients that will be added to the To: list of each e-mail message sent. This is automatically generated when e-mail addresses are entered using the EIE Management Portal. Multiuple addresses can be included. Addresses should be separated by commas.*
From	EnsembleEDR@RPMS.WINDOWS	The Site should be identified in the email address. Example: EnsembleEDR@MySiteName.IHS.GOV

5.0   IHSProduction Export

> NOTE: Once your production is fully operational, each site should produce an export of their IHSProduction and save the file in a safe location. In the event that your site has a full system failure, you can recover all of your default operation settings by importing this saved file. You should make sure the file name contains the date and time stamp of the export.

5.1   Open Ensemble Studio

In a Windows environment, right-click the Ensemble Cube in the lower right corner and click **Studio**. Type your login ID and password.
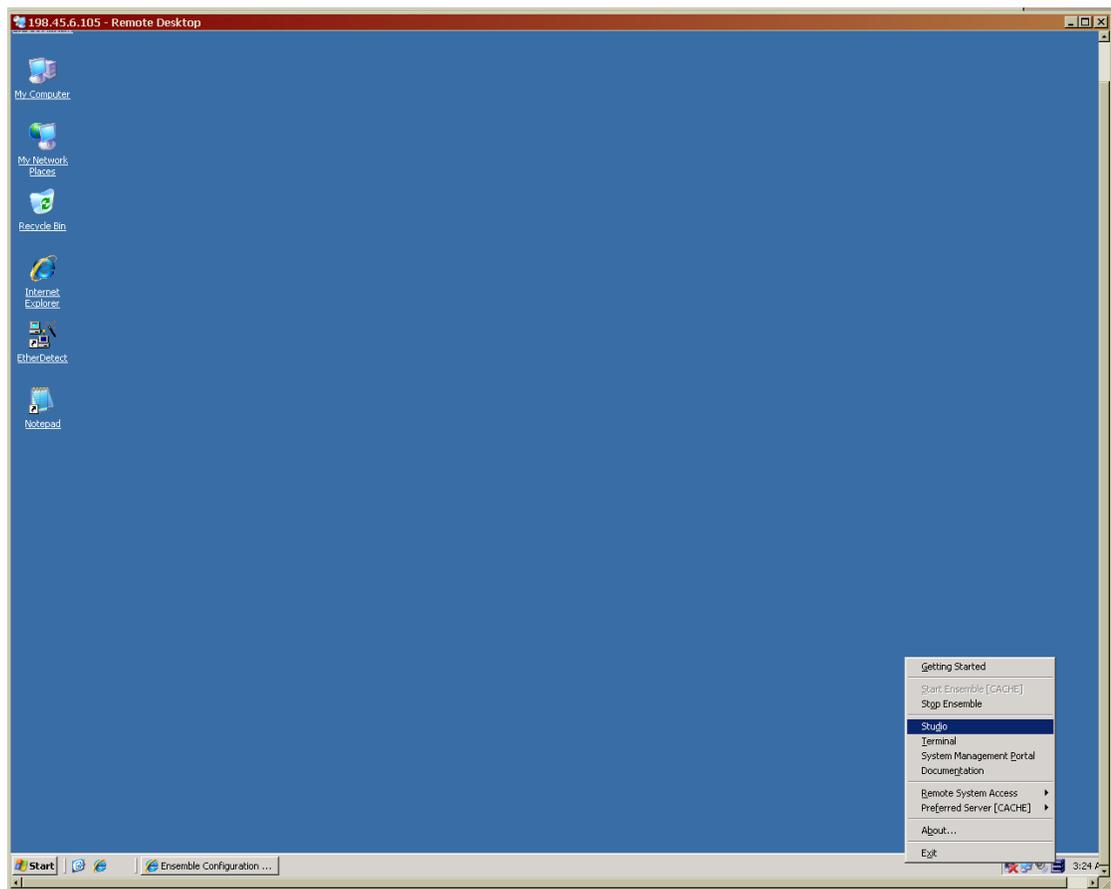
Figure 6-1: Opening Ensemble Studio

5.2   Select the Proper Namespace

The namespace should be ENSRPMS.

1. On the **File** menu, click **Change Namespace**.
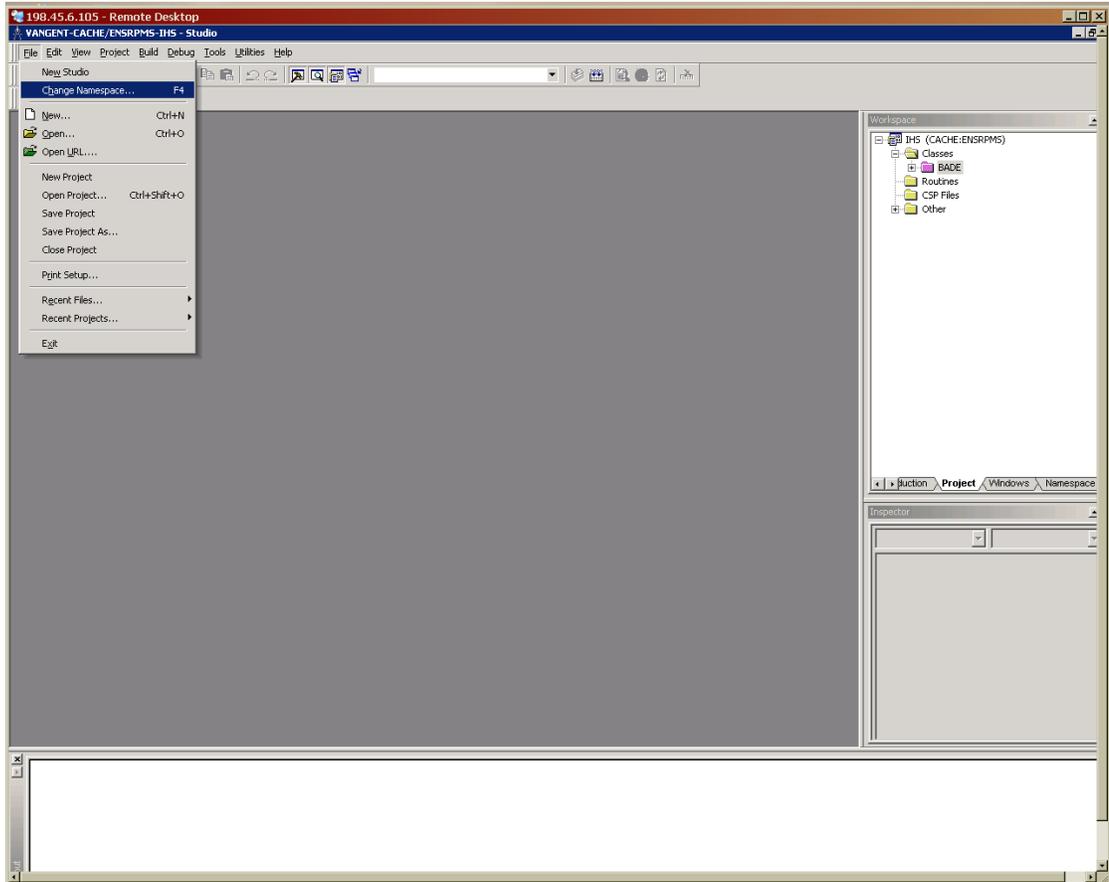
Figure 6-2: **Change Namespace** menu option

2. In the **Namespace** list, click **ENSRPMS**.
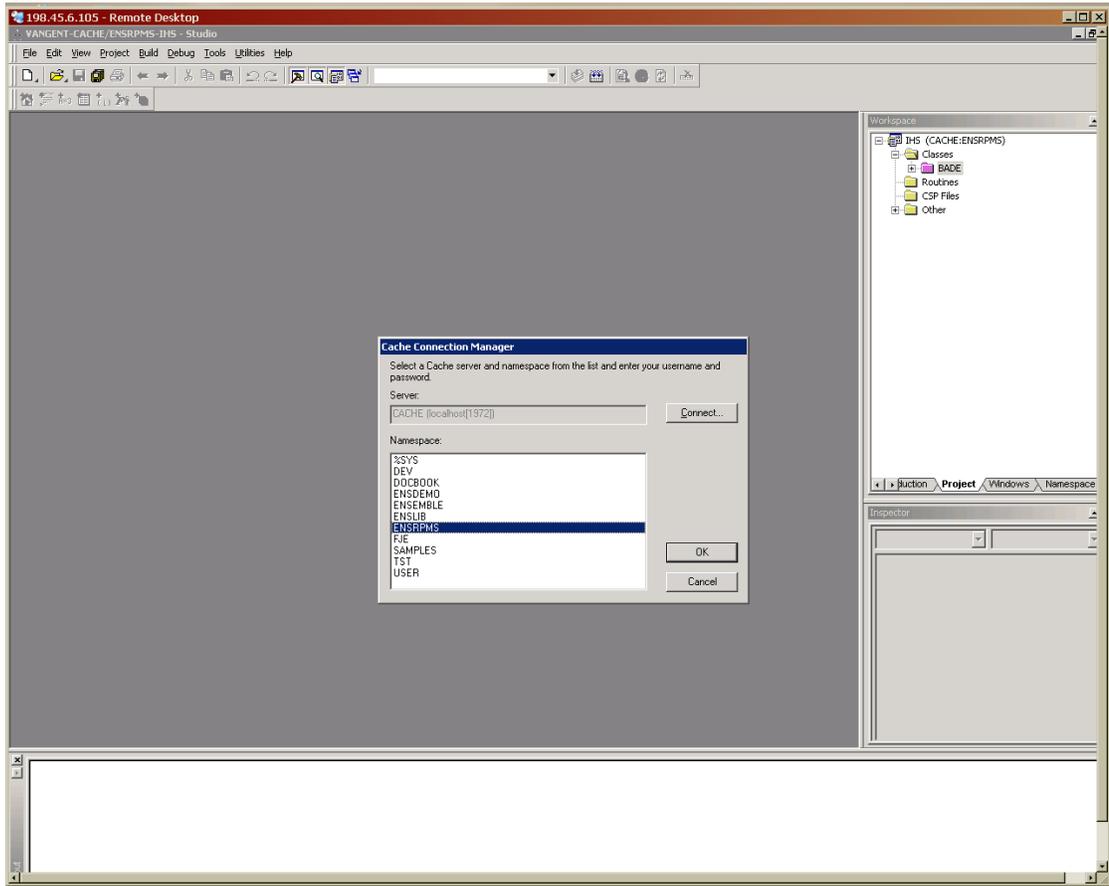
Figure 6-3: Selecting the **ENSRPMS** namespace

5.3   Open the project

Ensure that the EDR_ENSRPMS project is open.

1. On the **File** menu, click **Open Project**.

2. In the **Open** dialog box, select **EDR_ENSRPMS**, and click **Open**.
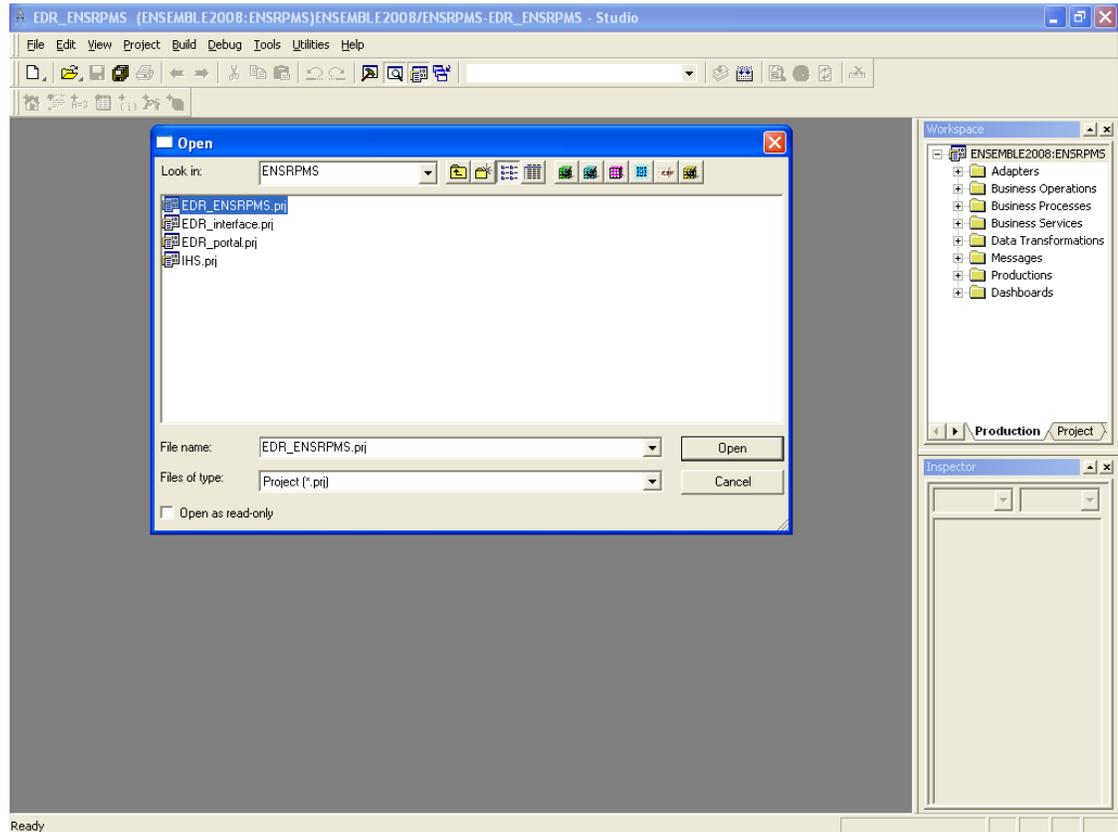
Figure 6-4: Opening the **EDR_ENSRPMS** project

5.4   Export the IHSProduction

1. On the Tools menu, click Export.
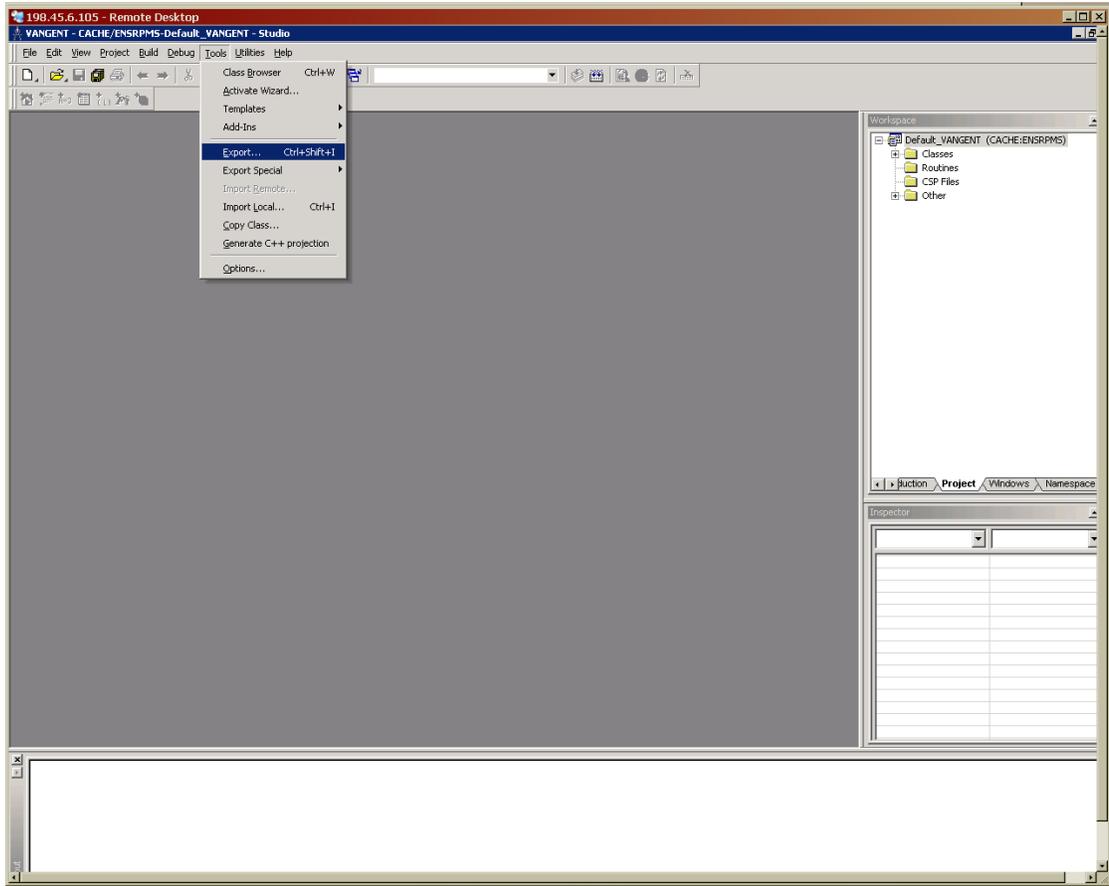
Figure 6-5: **Export** menu option

2. In the **Export** dialog box, ensure that the **Export current Project** box is selected.

3. Click **Export to Local File**. Type the path and file name in the text box, and then click **OK**..
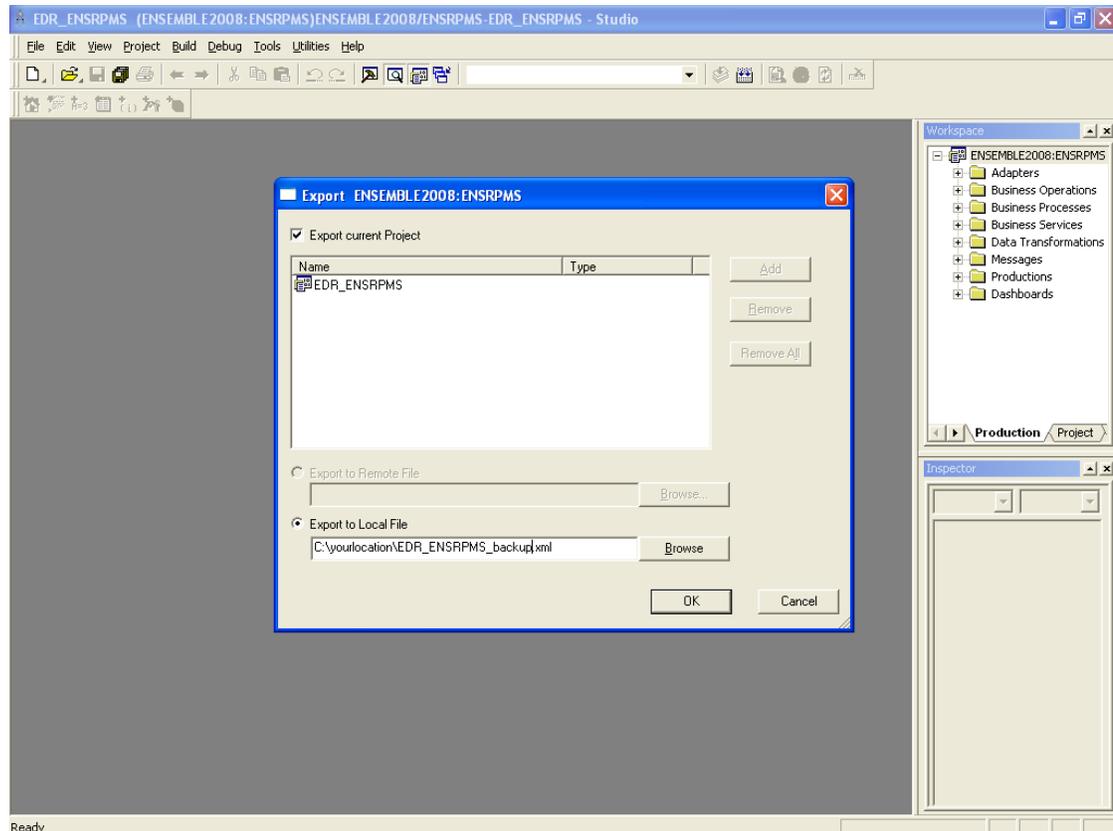
Figure 6-6: **Export** dialog box

When the system finishes compiling, "Export finished successfully" is displayed in the **Result** pane.

For completeness, this process may also be performed in the %SYS namespace for the project EDR_SYS. This is not necessary, however, because the production settings will not be modified in the %SYS namespace, so the export file will be identical to the EDE_SYS.XML file used to import the system items.

6.0   IHSProduction Start

6.1   Starting the production

Log on to the EIE Management Portal by opening Internet Explorer and navigating to
http://(server:port)/csp/ensrpms/BADE.Zen.Home.cls
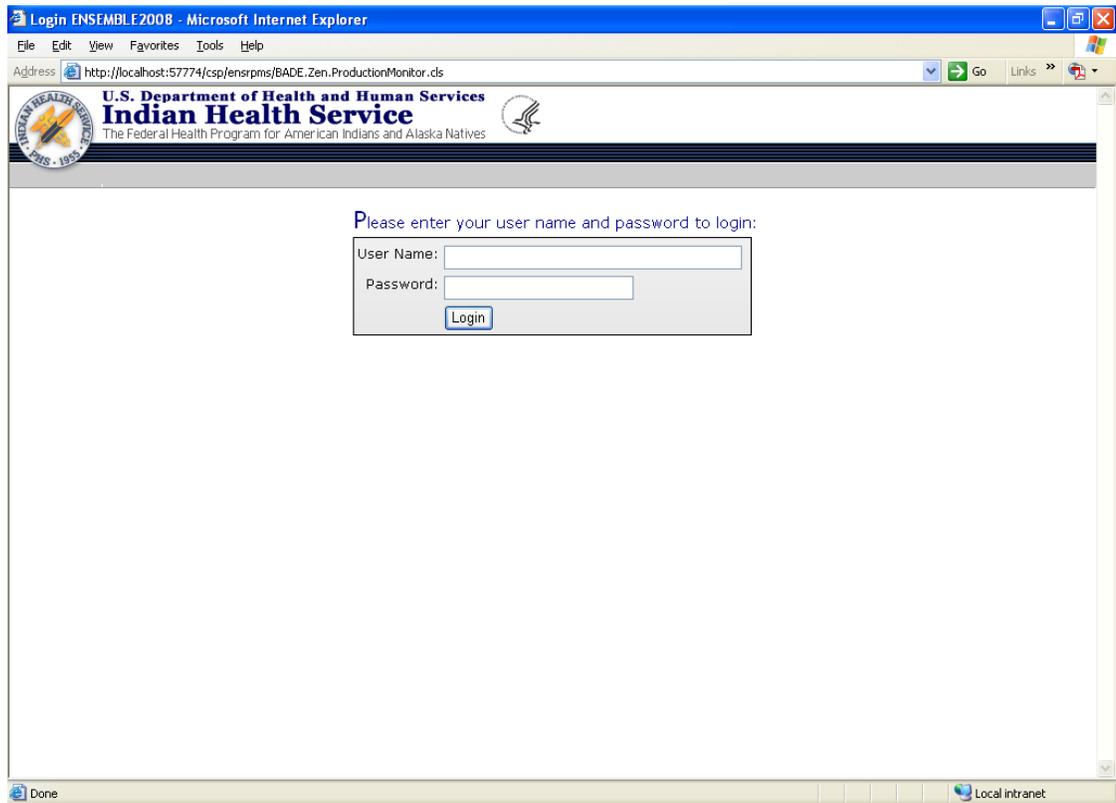
Figure 8-1: EIE Management Portal logon page

Log in as a user with sufficient privilege to access the EIE Management Portal and
manage the production. (A super user login will have these privileges.)

On the **Production Monitor** page, click **Start Production** to start the
BADE.IHSProduction.

6.2   Alternative method for starting the production

An alternative method for starting the production is provided by the Ensemble
Management Portal.

In Ensemble Studio, click **Ensemble Management** on the **File** menu.
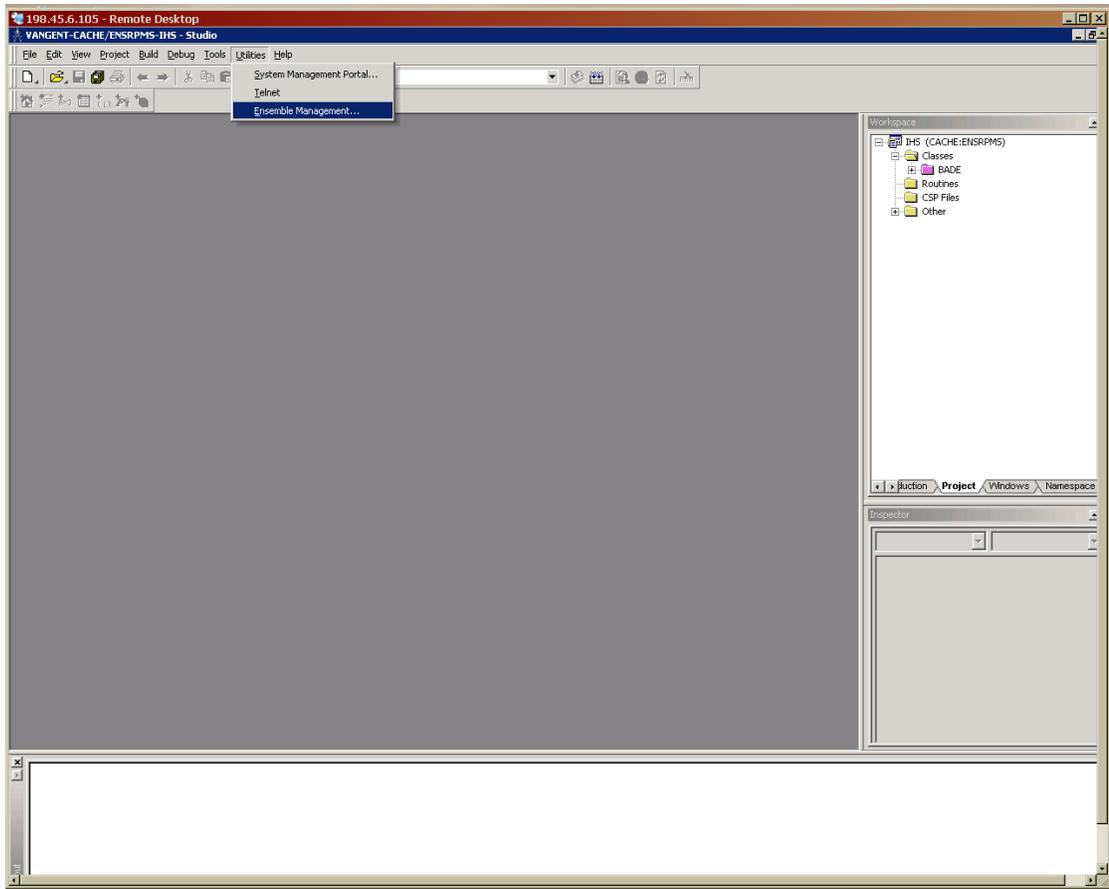
Figure 8-2: **Ensemble Management** menu option

Or, In the System Management Portal, click **Ensemble Management Portal** under **System Administration**.
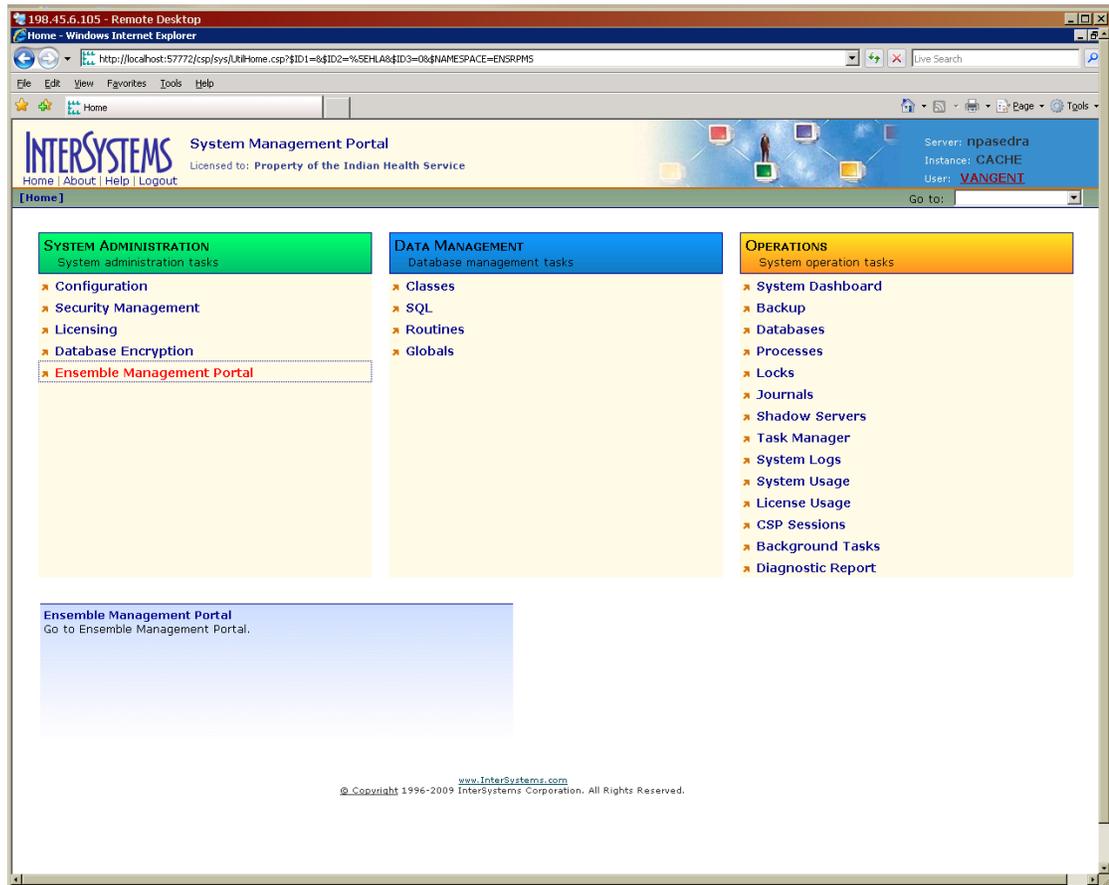
Figure 8-3: Starting the Ensemble Management Portal

The namespace should be ENSRPMS.

- In the **Namespace** list, click **ENSRPMS**.
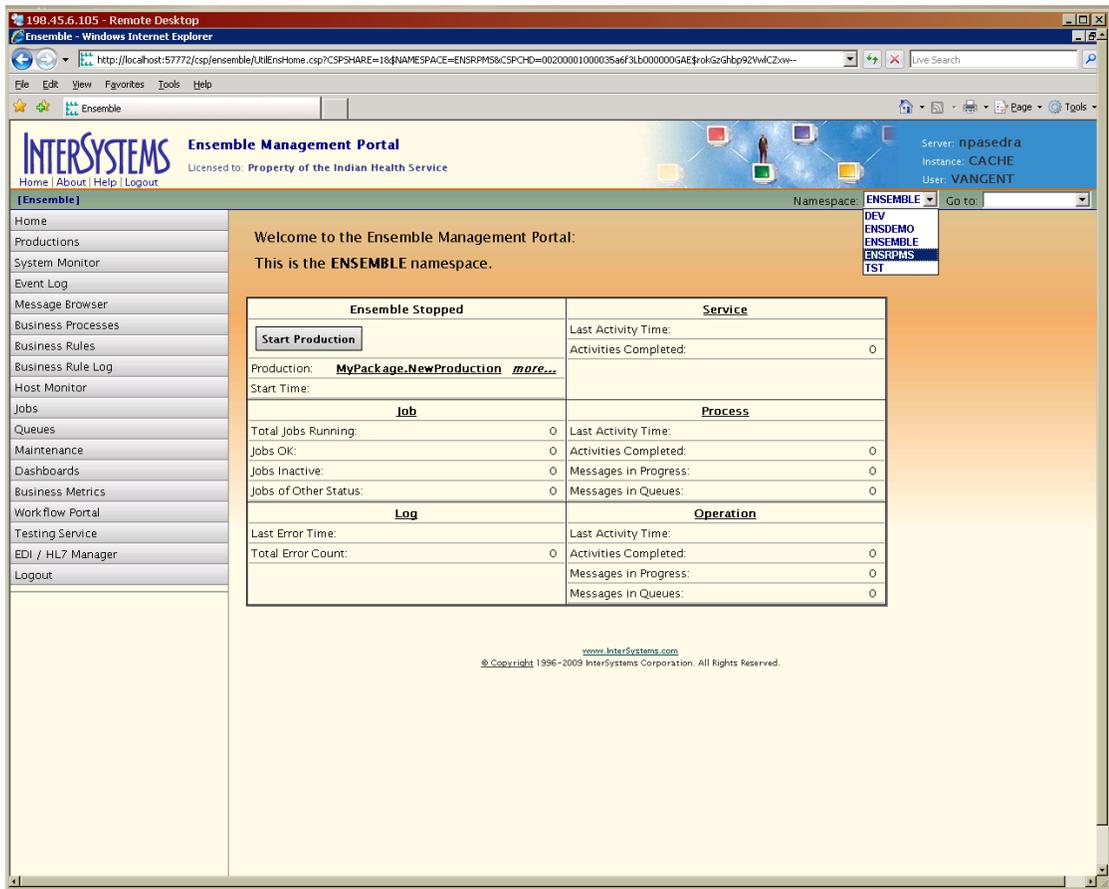
Figure 8-4: Selecting the **ENSRPMS** namespace

If the BADE.IHSProduction is listed next to **Production** (just below the **Start Production** button), click **Start Production**.
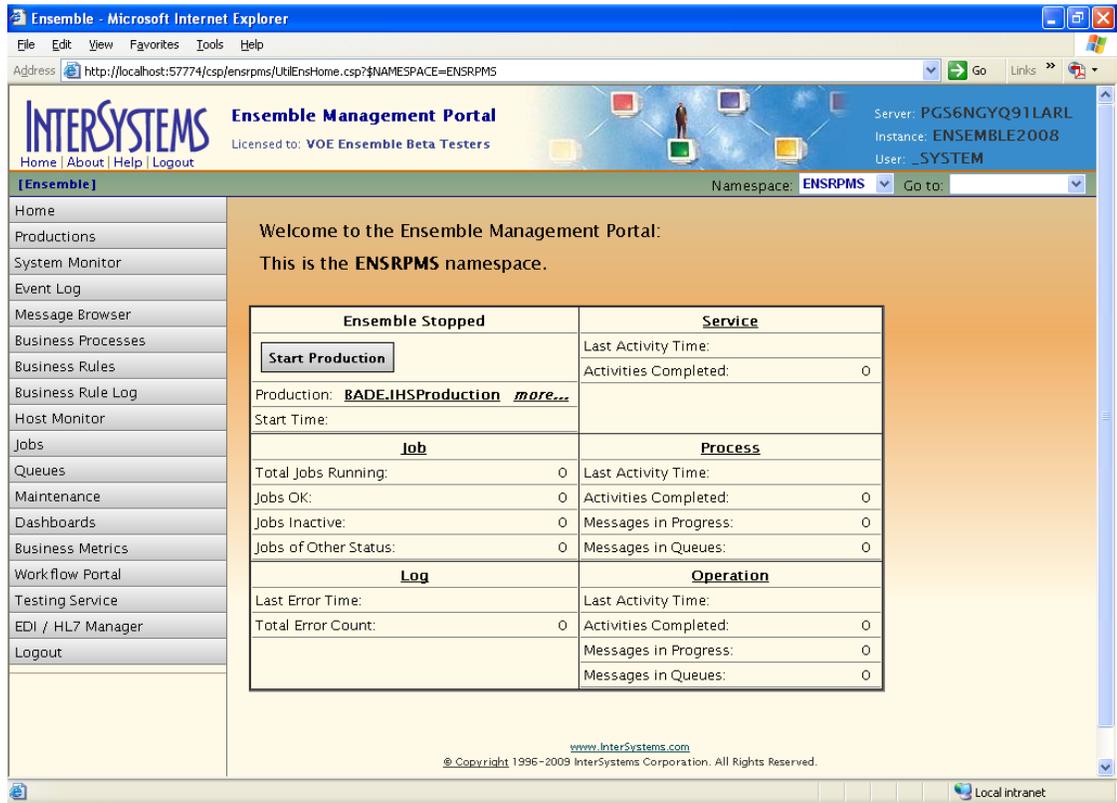

Figure 8-5: Selecting BADE.IHSProduction

If the production is blank, or if it is a different production, click the ***more*** link:
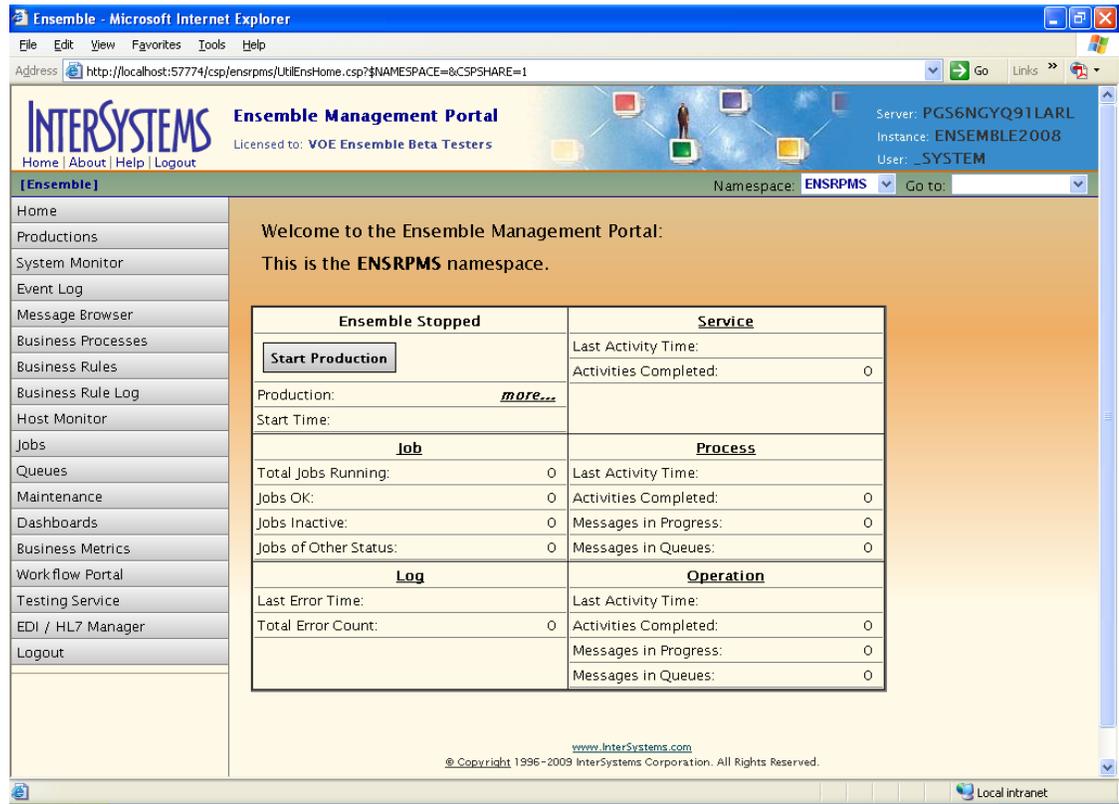
Figure 8-6: ***more*** link

On the Ensemble Productions page, find the row for the BADE.IHSProduction.

Figure 8-7: Configuring BADE.IHSProduction

Click **Start**, then click **OK** in the confirmation dialog box.

Click **OK** on the **Ensemble Production Start** screen to return to the Ensemble Management Portal.
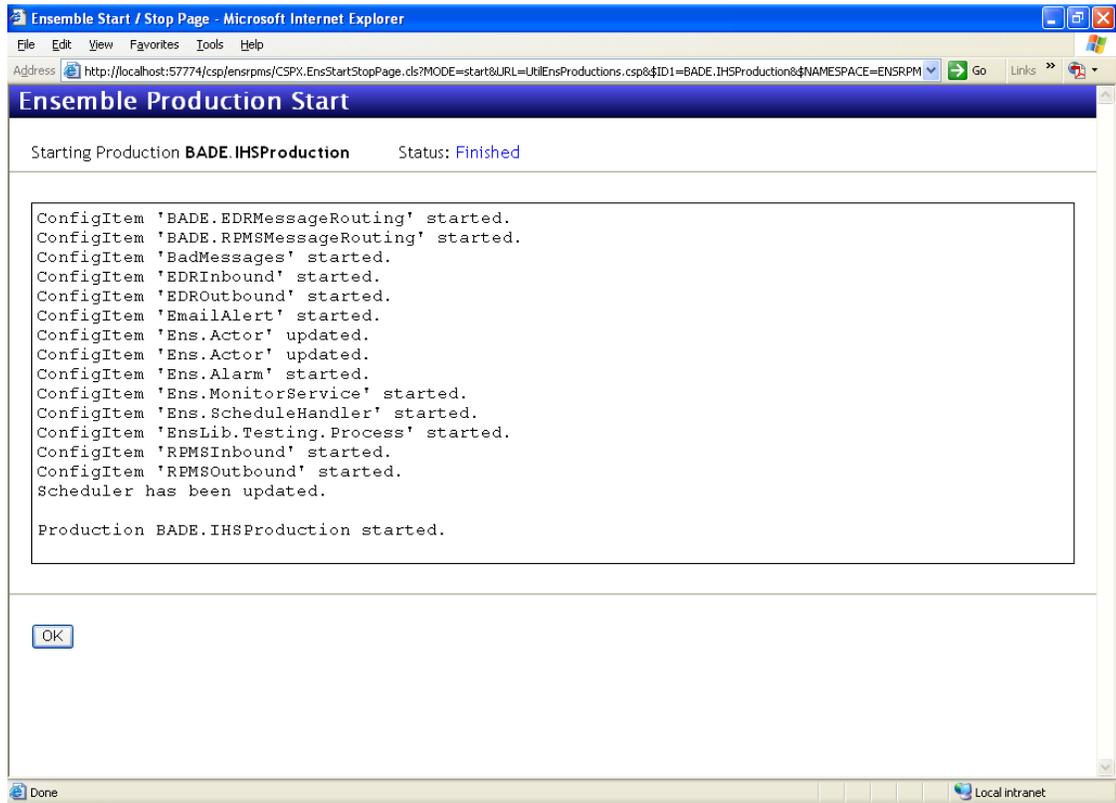

Figure 8-8: Ensemble Production Start screen

7.0   Contact Information

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

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

Fax: (505) 248-4363

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

Email: support@ihs.gov