



IHS RPMS eLearning Training

Fundamentals of the RPMS EDR Interface

Presented By Ginny Bronson

September 30, 2020



Agenda

- Introduction
- Learning Objectives
- The RPMS EDR Interface
- Data Transmitted between RPMS and Dentrix
- Overview of the BADE Production
- The Management Portal
- RPMS Tasks and Alerts
- Common Issues
- Guides
 - Adding a Provider or Hygienist Handout
 - Troubleshooting Guide



Introduction

- The intent of this class is to provide basic technical information about the RPMS EDR Interface and focuses on the RPMS side.
- This course is intended for staff who provide support for RPMS applications & systems and dental staff involved in the day-to-day operations that would benefit from their knowledge of the EDR interface and how it functions.
- Management Portal access is necessary for supporting the interface as well as Dentrix administrator access for Dentrix system support.



Learning Objectives

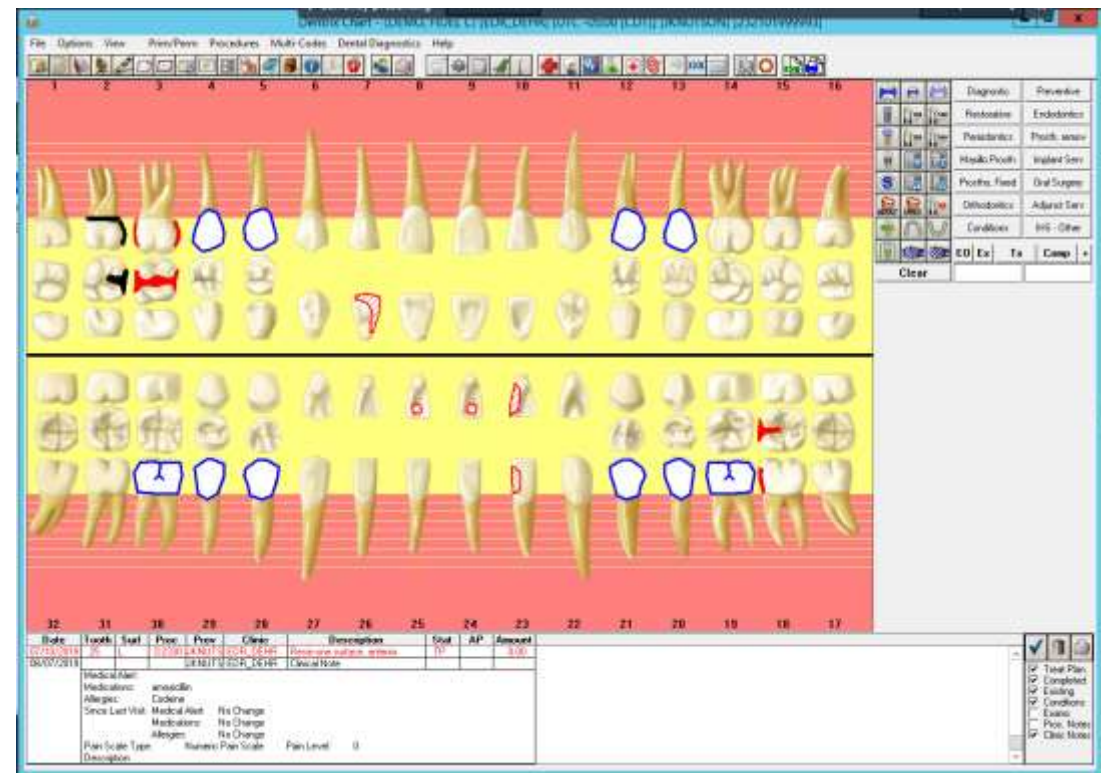
This course provides an introduction to the RPMS Electronic Dental Record (EDR) Interface. Course topics include the type of data transmitted, overview of the RPMS BADE Production, restarting the interface, common issues and problems, and the guides available for resolving issues.

Upon completion of this course, participants will be able to:

- Understand what type of data is being transmitted between RPMS and Dentrix
- Inspect the BADE production for errors/alerts
- Restart the production and Dentrix HL7 DXONE HL7Live services
- Identify common RPMS interface issues and problems
- Examine and correct common provider issues

RPMS EDR Interface

- Dentrax is a stand alone system that enables the creation of dental visit data through a graphical user interface (GUI).
- Dentrax is a separate system from RPMS.
- When utilizing RPMS with Dentrax, patient and provider information is transmitted to Dentrax and dental data is transmitted to RPMS utilizing HL7 formatted messages using TCP/IP protocols.





RPMS EDR Interface

- The Ensemble Bade Production is used to keep RPMS & Dentrix in sync after the initial setup and upload of patient & provider data.
- Data is transmitted via HL7 formatted messages between the two systems.
- Dental data is transmitted to RPMS creating visits in RPMS that can be used for patient care, reporting purposes (GPRA, national data warehouse, PCC reports, etc.) and Third Party billing for dental.
- Patient and provider data is transmitted to Dentrix from RPMS to keep the data in sync and to be able to utilize newly added patients and providers in Dentrix.



Data Transmitted Between RPMS & Dentrrix

Data is processed in the Ensemble Bade production utilizing HL7 messages (ADT-A28, ADT-A31, MFN-02)

Types of Messages currently being transmitted between RPMS & Dentrrix:

1. Outgoing Data from RPMS (what is transmitted to Dentrrix)

Patient & Provider Updates (Message types: ADT-A28, ADT-A31, MFN-02)

Type of Data in the HL7 message: New or Updated Patient or Provider data added in RPMS

2. Incoming data from Dentrrix (what is transmitted to RPMS)

Visit Data containing dental procedures added or deleted in Dentrrix (Message type: DFT-P03)

Type of Data in the HL7 message: Patient and provider information, dental procedures, visit date, facility/location, etc.

Each message type has required fields that must be present in order to be properly processed



Data Transmitted Between RPMS & Dentrix

- Visit data is transmitted across the interface via HL7 messages with each addition or deletion of a dental procedure in Dentrix.
- For each dental procedure, up to 4 ICD10 codes may be added (in Dentrix) and will be reflected in the RPMS visit (Dentrix v 8.0.5 or later)
- If the procedure does not include an ICD10 code with the dental procedure, a ZZZ.999 code will be added to the visit in RPMS. To correct this on the Dentrix side, you must remove the procedure and add the ICD10 code with the procedure or use RPMS to edit the visit and correct the. Assistance mapping the procedures to an ICD10 code can be requested through the IT Support desk.

It's important so ensure the ICD10 code is added before it's "completed" in Dentrix, otherwise a "ZZZ.999" code will be present in the visit in RPMS.



Data Transmitted Between RPMS & Dentrrix

HL7 ADT_A31 Message - Id = 265, DocType = 'BADE.RPMS:ADT_A31', DocType Category = "
'ADT message - Update person information', 7 Segments

1	MSH ^~\& RPMS-DEN 8999 ^ FACILITY-X-HQ.ABQ.IHS.GOV:5026 ^ DNS DENTRIX 8999 ^ :5012 ^ DNS 20180417151817-0500 _ ADT ^ A
2	EVN A31 20180417151817-0500 _ 01 ADT ^ A31
3	PID 1 7209 232101000456 232101000456 ^ _ ^ ASUFAC DEMO ^ BRETT ^ _ ^ _ ^ _ ^ _ ^ L HUMBLE ^ _ ^ _ ^ _ ^ _ ^ M 2014
4	PD1 _ _ _ _ ^ _
5	IN1 1
6	IN2 1
7	ZP2 1 20180417 _ _ _ _ _ _ _ _ _ ^ _ ^ FLINT ^ MI _ 267 ^ KIALEGEE TRIBAL TOWN ^ 99IHS FULL FULL 01



Data Transmitted Between RPMS & Dentrrix

HL7 DFT_P03 Message - Id = 299, DocType = '[BADE.EDR:DFT_P03](#)', DocType Category = 'BADE.EDR'
'Detail financial transactions - Post detail financial transaction', 5 Segments

1	MSH		^~\&		DENTRIX		Dental		RPMS-DEN		Medical		20180417143511+0000		:		DFT	^	P03		2095		P		2.4		:		:		AL						
2	EVN		P03		20180417143511+0000		:		01																												
3	PID		1		7209		232101000456		232101000456	^	232101121574	^	232101121575	^	232102121576		DEMO	^	BRETT	^	:	^	:	^	:												
4	PV1		1		:		232101		:		:		6373	^	SON	^	JO	^	:		:		:		:		:		:		:		:		:		:
5	FT1		1		1000754		:		20180417		20180417		CG		0000		First Visit (current fisc yr)		0		1		0.00		:		:		:		232101		:		:		



Overview of the Bade Production

- Access is obtained by installing the software client (Ensemble/Healthshare) on your laptop/PC or directly accessing the RPMS server via Remote Desktop.
- Right click on the “E” on your PC/Laptop or log into the RPMS server and use the “E” on the server desktop or from the Windows “Start” option (find the Ensemble application), then select “Management Portal”. For sites with Healthshare, use the Healthshare icon for the client or Remote Desktop.
- After logging into the Management Portal select “Ensemble”, then the EDR namespace (usually ENSRPMS or EDRXXXX, where XXXX is the site acronym), then Configure/Production to view the Bade Production.
- Site Managers/IT/User Support staff should have access to the management portal in order to support EDR.



Overview of the Bade Production

- The Ensemble Bade production is created on the RPMS server when a new EDR system is configured.
- The Bade production contains setup information for transmitting patient, provider and dental data to/from RPMS and Dentrix (includes the Dentrix server IP, port numbers used, type of data that is transmitted, and other information and configuration items). Setup information should not be altered, unless in coordination with IT Support. Updating the IP address of the Dentrix system is the most common change requested.
- The Bade production can be utilized to troubleshoot issues with the EDR interface (patient/provider updates are not crossing over to Dentrix, or dental visits are not being created in RPMS).



Overview of the Bade Production

Troubleshooting Bade Production Issues

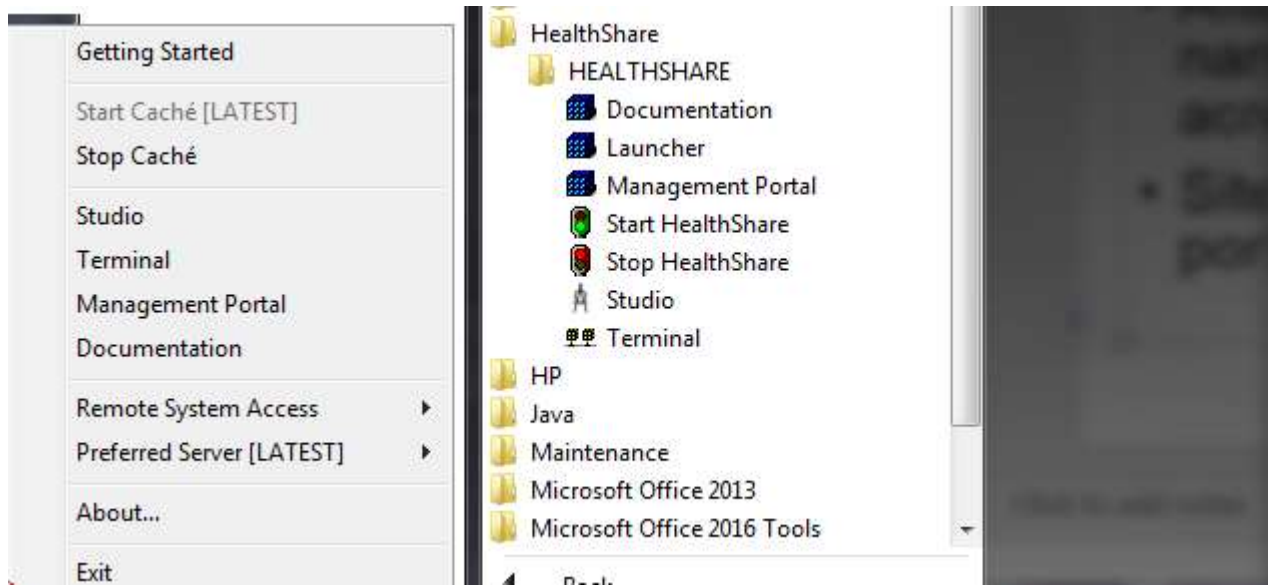
- * Check the “log” tab for errors or warnings
- * Check the “queue” to see if messages are backed up
- * Check the messages to see if a particular message was transmitted, or if it has issues
(common issue: RPMS word processing fields)
- * Restart the Bade Production (red lights, suspended error, etc.)
- * Restart Dentrix services (DXONEHL7Live services)

RPMS Support staff should be checking ALL productions daily as part of RPMS system maintenance.

Current versions are: Bade v 1.0 patch 6 and Dentrix Enterprise v 8.0.96.630.



Overview of the Bade Production





The Management Portal

-  Home
-  DeepSee
-  Ensemble
-  System Operation
-  System Explorer
-  System Administration

Welcome to the Management Portal

Please select one of the categories on the left or one of the options below

Favorites

Go to a favorite page

Did you know?

You can login as a different user by clicking on the Logout link at the top of the page.

Recent

Go to a recently viewed page

- Queues 
- Production Configuration 

Links

Pages you may be interested in

- Samples
- Documentation
- Support
- InterSystems
- Developer Connection

System Information

General details on this system

[View System Dashboard](#)

System Up Time
0d 3h 38m

Ensemble Productions

Productions running on this system

AGMPI.PatientRegistration in AGMPIRMSDEV
Stopped
[View details](#)

BCCD.Prod.Production in CCDARMSDEV
Stopped
[View details](#)

BADE.IHSProduction in ENSRMS
Stopped
[View details](#)



The Management Portal

The screenshot displays the Ensemble Management Portal interface for the 'BADE.IHSProduction' instance. The top navigation bar includes a 'Menu' dropdown, links for 'Home', 'About', 'Help', and 'Logout', and the current path 'Ensemble > Production Configuration'. The instance name 'BADE.IHSProduction' is prominently displayed in a blue box. To the right, system information is shown: 'Server: DITDEVDENTAL-2', 'Namespace: EDRDEHR', 'User: UnknownUser', 'Licensed to: Property of the Indian Health Service', and 'Instance: ENSEMBLE'. A 'This is a Test System' warning is present, along with the 'Ensemble by InterSystems' logo.

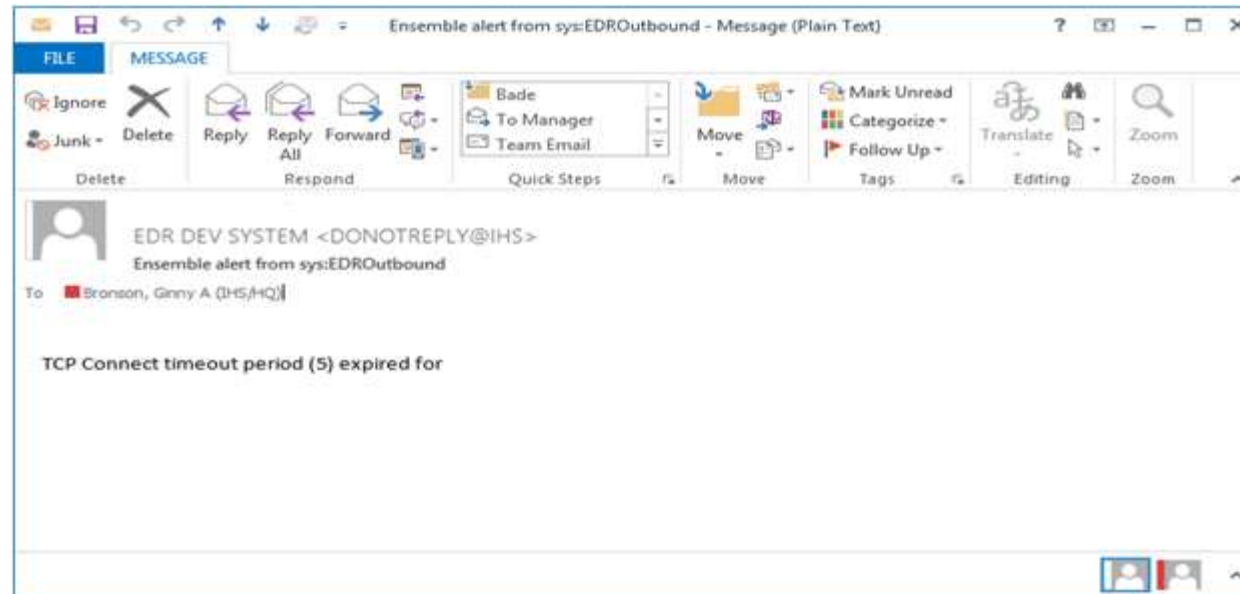
The main interface features a 'View' section with icons for list, grid, and tree views, and 'Start' and 'Stop' buttons. A 'Refresh' control is set to 'off'. The 'Sort' options are 'Name', 'Status', and 'Number'. The 'Production Configuration' tab is active.

The central area is divided into three columns: 'Services', 'Processes', and 'Operations'. Each column contains a list of items with green status indicators. The 'Operations' column has 'EmailAlert' highlighted. A 'Production Running' indicator is visible at the top left of the main content area.

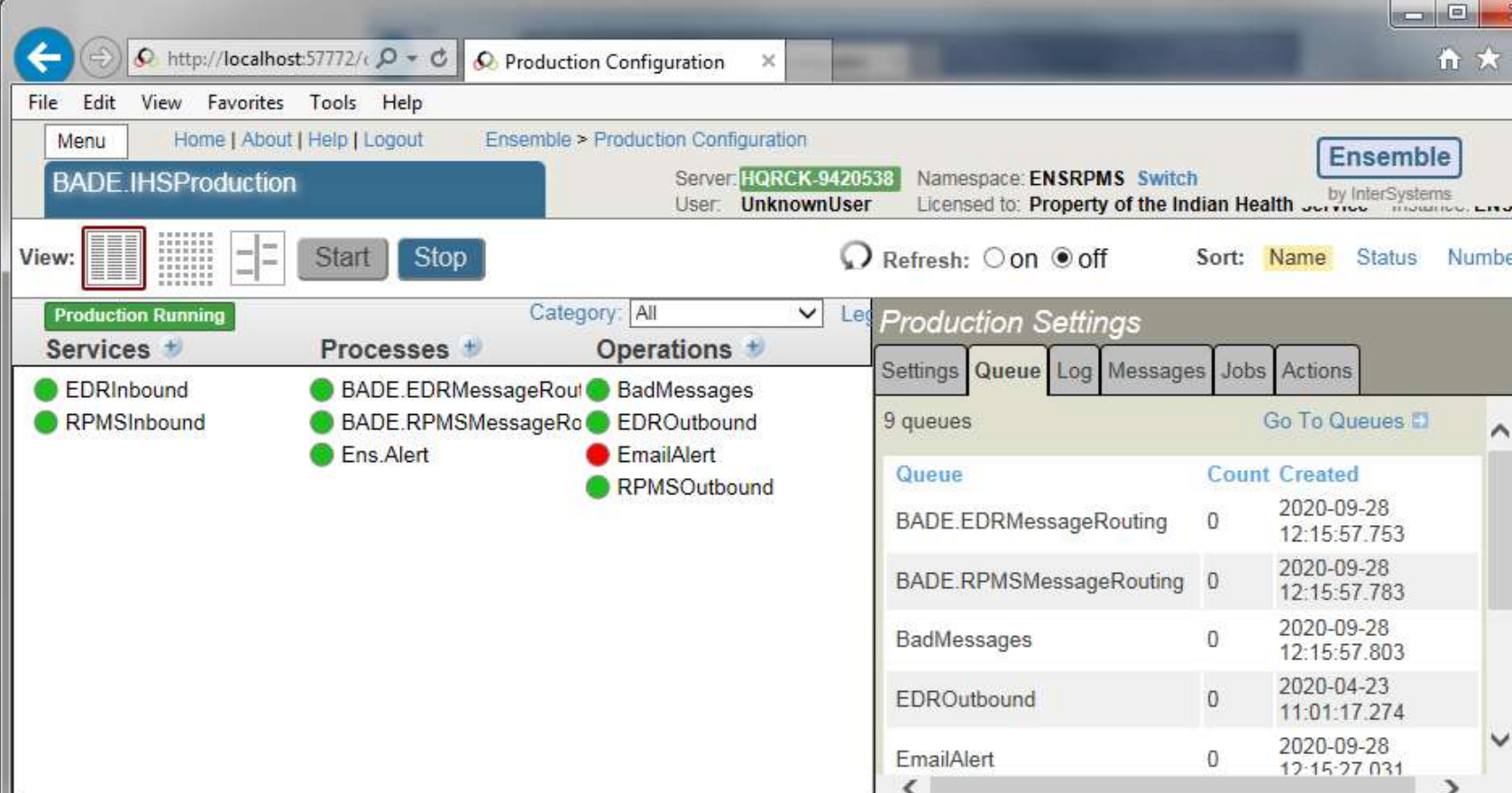
The right-hand pane shows the configuration for the selected 'EmailAlert' operation. It includes tabs for 'Settings', 'Queue', 'Log', 'Messages', 'Jobs', and 'Actions'. The 'Settings' tab is active, showing a search field, a dropdown menu, and 'Additional Settings' for 'Schedule' (with a dropdown), 'Pool Size' (set to 1), and 'Recipient' (set to 'ginny.bronson@ihs.gov'). A 'Cc' field is also visible at the bottom of the configuration pane.



The Management Portal



The Management Portal



Production Configuration

BADE.IHSProduction

Server: **HQRCK-9420538** Namespace: **ENSRPMS** Switch
User: **UnknownUser** Licensed to: **Property of the Indian Health Service**

View: [List View] [Grid View] [Start] [Stop] Refresh: on off Sort: **Name** Status Number

Production Running Category: All

Services	Processes	Operations
● EDRInbound	● BADE.EDRMessageRout	● BadMessages
● RPMSInbound	● BADE.RPMSMessageRo	● EDROutbound
	● Ens.Alert	● EmailAlert
		● RPMSOutbound

Production Settings

Settings Queue Log Messages Jobs Actions

9 queues [Go To Queues](#)

Queue	Count	Created
BADE.EDRMessageRouting	0	2020-09-28 12:15:57.753
BADE.RPMSMessageRouting	0	2020-09-28 12:15:57.783
BadMessages	0	2020-09-28 12:15:57.803
EDROutbound	0	2020-04-23 11:01:17.274
EmailAlert	0	2020-09-28 12:15:27.031



The Management Portal

Menu Home | About | Help | Logout

Welcome, UnknownUser

Server: **HQRCK-9420538** Namespace: ENSRPMS Switch
User: UnknownUser Licensed to: Property of the Indian Health Service

View: [Grid View] [List View] [Table View]

Search:

Management Portal

Home	Configure »	System Monitor
	Build »	Production Monitor
	View »	Queues
	List »	Jobs
	Monitor »	
	Manage »	
	Interoperate »	
	Test »	



The Management Portal

The screenshot shows a web browser window displaying the Ensemble Queues management interface. The browser address bar shows the URL <http://10.10.10.10:5777>. The page title is "Queues" and the breadcrumb navigation is "Ensemble > Queues". The server is identified as "DITDEV DENTAL-2" and the namespace is "EDRDEHR". The user is "UnknownUser" and the license is "Property of the Indian Health Service".

Navigation links include Home, About, Help, and Logout. A "View Contents" button is visible. The main content area displays a table of queues:

Name	Count	Creation Time
BADE.EDRMessageRouting	0	2018-04-17 15:02:05.032
BADE.RPMSMessageRouting	0	2018-04-17 15:02:05.047
BadMessages	0	2018-04-17 15:02:05.094
EDROutbound	0	2018-04-17 15:02:10.180
EmailAlert	0	2018-04-17 15:02:05.110
Ens.Actor	0	2018-04-17 15:02:05.141
Ens.Alarm	0	2018-04-17 15:02:05.188
Ens.ScheduleHandler	0	2018-04-17 15:02:05.266
RPMSOutbound	0	2018-04-17 15:02:05.313



The Management Portal

The screenshot displays the Ensemble Production Configuration Management Portal. The main interface shows a list of services under the 'Production Running' status. The 'Operations' column includes 'EDROutbound', which is highlighted in yellow. A detailed view of the 'EDROutbound' process is shown on the right, displaying a log of events.

Type	Time	Text
Alert	2018-04-17 15:02:22.442	TCP Connect timeout period (5) expired for 10.15.1.73:73 (alert request ID: 10.15.1.73:73)
Info	2018-04-17 15:02:22.442	Alerting at expiration of retry grace period (5) expired for 10.15.1.73:73
Error	2018-04-17 15:02:16.280	Not Alerting during retry grace period (5) expired for 10.15.1.73:73
	2018-04-17	ConfigItem



RPMS Tasks & Alerts

1. RPMS Taskman

Check RPMS Taskman to ensure the BADE task is running and has a future date (this task processes Dentrix incoming HL7 messages)

Taskman Management/Schedule/Unschedule Options:

BADE TSK HLO IB FILER

2. Alerts in RPMS

Login to RPMS and View Alerts to see if there are any patient or provider issues



RPMS Tasks & Alerts

```
Select IHS Kernel <TEST ACCOUNT> Option: taskman Management
```

```
WARNING -- TASK MANAGER DOESN'T SEEM TO BE RUNNING!!!!
```

```
Schedule/Unschedule Options  
One-time Option Queue  
Taskman Management Utilities ...  
List Tasks
```

```
Select Taskman Management <TEST ACCOUNT> Option: taskman Management Utilities
```

```
MTM    Monitor Taskman  
        Check Taskman's Environment  
        Edit Taskman Parameters ...  
        Restart Task Manager
```



RPMS Tasks & Alerts

```
Select IHS Kernel <TEST ACCOUNT> Option: taskman Management
```

```
    Schedule/Unschedule Options
```

```
    One-time Option Queue
```

```
    Taskman Management Utilities ...
```

```
    List Tasks
```

```
Select Taskman Management <TEST ACCOUNT> Option: schedule/Unschedule Options
```

```
Select OPTION to schedule or reschedule: bade TSK HLO IB FILER          BADE  
EDR TSK HLO IB FILER
```

```
    ...OK? Yes//
```



RPMS Tasks & Alerts

Edit Option Schedule

Option Name: BADE TSK HLO IB FILER

Menu Text: BADE EDR TSK HLO IB FILER

TASK ID: 1585683

QUEUED TO RUN AT WHAT TIME: SEP 27,2020@13:54

DEVICE FOR QUEUED JOB OUTPUT:

QUEUED TO RUN ON VOLUME SET:

RESCHEDULING FREQUENCY: 120S

TASK PARAMETERS:

SPECIAL QUEUEING: Startup Persistent

Exit Save Next Page Refresh

Enter a command or '^' followed by a caption to jump to a specific field.



RPMS Tasks & Alerts

```
Select IHS Kernel <TEST ACCOUNT> Option: manage mailman
```

```
    Check MailMan Files for Errors  
    Create a Mailbox for a user  
    Disk Space Management ...  
    Group/Distribution Management ...
```

```
Select Manage Mailman <TEST ACCOUNT> Option: group/Distribution Management
```

```
    Bulletin edit  
    Edit Distribution List  
    Enroll in (or Disenroll from) a Mail Group  
    Mail Group Coordinator's Edit  
    Mail Group Coordinator's Edit W/Remotes  
    Mail Group Edit
```

```
Select Group/Distribution Management <TEST ACCOUNT> Option: Mail Group Edit
```

```
Select MAIL GROUP NAME:    RPMS DENTAL  
MAIL GROUP NAME: RPMS DENTAL//  
Select MEMBER: BRONSON,GINNY//  
    MEMBER: BRONSON,GINNY//  
    TYPE: INFO//  
Select MEMBER:
```



Helpful Guides

Adding a Provider or Hygienist for EDR

- Adding a dental provider in RPMS using the AVA option and how to activate in Dentrix
- Process to add a hygienist in Dentrix

RPMS (EDR) Troubleshooting How-To-Guide

- Ensemble EDR Operations (restarting, checking the queue, errors, etc.)
- Alert/Error Types (Production issues, RPMS, Functional errors)
- Ensemble Email Modifications
- System Issues



QUESTIONS?