



Centers for Medicare & Medicaid Services

Electronic Submission of Medical Documentation (esMD)

Review Contractor (RC) Client Java User Guide and Installation Handbook

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1. Introduction

The Centers for Medicare & Medicaid Services (CMS) is a federal agency that ensures health care coverage for more than 100 million Americans. The CMS administers Medicare and provides funds and guidance for all of the 50 states in the nation, for their Medicaid programs and Children's Health Insurance Program (CHIP). The CMS works together with the CMS community and organizations in delivering improved and better coordinated care.

1.1 Overview of the esMD

Each year, the Medicare Fee-For-Service (FFS) Program makes billions of dollars in estimated improper payments. The CMS employs several types of Review Contractors (RCs) to measure, prevent, identify, and correct these improper payments. RCs find improper payments and manually review claims against medical documentation obtained to verify the providers' compliance with Medicare rules. The RCs request medical documentation by sending a paper letter to the provider. In the past, medical documentation providers had only two options for delivering the medical documentation requested by sending it by letter or fax.

The Electronic Submission of Medical Documentation (esMD) system gives providers the option of sending medical documentation electronically to a requesting RC, instead of sending the documentation by letter or fax.

Many providers use a Health Information Handler (HIH) organization to perform tasks, such as submitting claims and providing electronic health record systems. Any organization that handles health information on behalf of a provider is an HIH. Some HIHs are beginning to offer esMD gateway services; Claim Clearinghouses, Release of Information vendors, Health Information Exchanges, and Electronic Health Record vendors are often referred to as HIHS.

The esMD system allows providers and HIHs use gateway services to send responses for requests for additional documentation electronically to an RC during the claims review process.

1.1.1 The esMD Claim Review Contractors

Under the authority of the Social Security Act, CMS employs a variety of contractors to process and review claims in accordance with Medicare rules and regulations. Table 1: Medicare Contractors, Responsibilities and Contact Information lists the review contractors referenced in this implementation guide.

Table 1: Medicare Contractors, Responsibilities, and Contact Information

| Type of Contractor | Responsibilities | Contact Information |
|---|---|--|
| Medicare Administrative Contractors (MACs) | Process claims submitted by physicians, hospitals, and other health care professionals, and submit payment to those providers in accordance with Medicare rules and regulations. This includes identifying and correcting underpayments and overpayments. | http://www.cms.gov/ Research-Statistics-Data- and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Review-Contractor-Directory- Interactive-Map |
| Zone Program Integrity Contractors (ZPICs), formerly Program Safeguard Contractors (PSCs) | Identify cases of suspected fraud and take appropriate corrective actions. | http://www.cms.gov/ Research-Statistics-Data- and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Review-Contractor-Directory- Interactive-Map |
| Supplemental Medical Review Contractor (SMRC) | Conduct nationwide medical review, as directed by CMS. This includes identifying underpayments and overpayments. | http://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Medical-Review/SMRC.html |
| Contractor (CERT DC), CERT Review Contractor (CERT RC), and CERT Statistical Contractor (CERT SC) | Collect documentation and perform reviews on a statistically-valid random sample of Medicare FFS claims to produce an annual improper payment rate. | https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/CERT/index.html?redirect=/cert |
| Recovery Auditors | Identify underpayments and overpayments, as part of the Recovery Audit Program. | http://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/Recovery-Audit-Program/ |

1.2 System Overview

The esMD system provides a mechanism for exchanging medical documentation and responses for Cross-Enterprise Document Reliable Interchange (XDR) and X12N 278 requests between the Medicare Provider community and the Medicare RC community. The purpose is to enable the electronic transmission of information between HIHs who represent Providers and the Medicare RCs, replacing paper documents where possible.

The RC Client is a utility that enables RCs to communicate with esMD by exchanging files via TIBCO® Managed File Transfer (MFT) server.

Note: The esMD system identifies submissions and requests sent from HIHs to RCs as inbound files, and identifies transactions and responses for XDR and X12N 278 sent from RCs to HIHs as outbound files.

1.3 System Requirements

See Section 8, System Requirements for the system requirements for installing a Microsoft Java version of the RC Client.

Section 8, System Requirements provides the requirements needed for the computer system where the RC Client will be installed, including the computer system's processor, amount of disk space and free memory needed, permissions, minimum internet connectivity Kilobits Per Second (Kbps) transfer speeds, and the Microsoft Java Framework version needed to run the RC Client properly.

Refer to the EIDM Instructions in the link below on details on how to obtain an EIDM login: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Downloads/EIDMInstructions.docx>

1.4 RC Client Overview

Since September 2011, the CMS has implemented the esMD program for providers to submit medical documentation in response to requests from Medicare RCs and also enhanced the esMD Gateway to support electronic responses to requests.

In September 2012, the CMS implemented a Prior Authorization (PA) process via the esMD Gateway for Power Mobility Devices (PMD) for FFS Medicare beneficiaries who reside in seven states with high populations of error prone providers (California, Florida, Illinois, Michigan, New York, North Carolina, and Texas).

In January 2013, CMS expanded the CMS esMD Gateway to allow Durable Medical Equipment (DME) suppliers and providers to send electronic PA Requests to Medicare RCs.

In June 2013, CMS enabled automated "Prior Authorization Review Results Responses" from Medicare RCs to HIHs via the esMD Gateway.

In June 2014, the "RC Client" application was implemented to allow data exchanges between HIHs and facilitate Medicare RCs electronically receiving PA requests to the RC's computer system and allow RCs to electronically enter a decision on a PA request.

In June 2015, the "RC Client" application will be extended to allow RCs to enter a Reject Error Code for a PA request electronically received, or electronically submit that there was an error in receiving the PA request's response that was transmitted to the RC Client installed on the Medicare RC's computer system or network. The RC will be able to submit responses for PA programs, such as the Ambulance and Hyperbaric Oxygen (HBO) and PMD programs.

1.4.1 RC Client Pull/Push Functionality

The RC Client provides the following functionality:

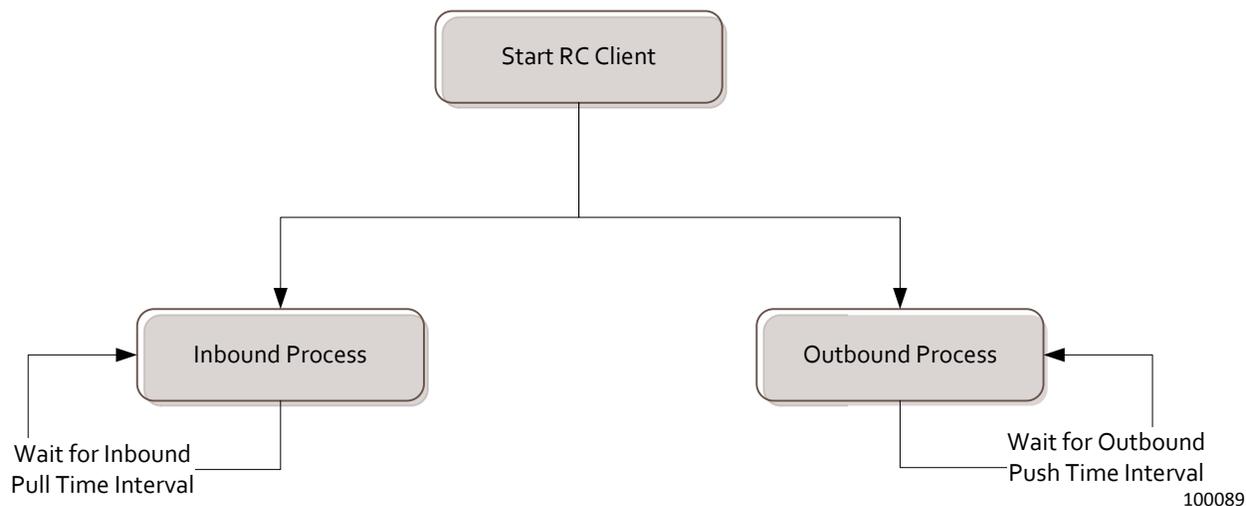
- Pull:
 - Inbound documents (submitted by HIHs) from the TIBCO MFT server;
 - HIH acknowledgements indicating receipt of pick up notifications and PA review result responses; and
 - Data Element Validation results for the outbound process.
- Push:
 - PA review decision responses to PA Requests for XDR and X12N 278 to esMD;
 - Error responses to PA Requests for XDR and X12N 278 to esMD;
 - Administrative Error response for XDR and X12N 278 to esMD;
 - Error messages generated due to file decompression and checksum verification;
 - Acknowledgement messages for receipt of documents and authorization requests; and
 - Site-Specific Configuration settings:
 - Push frequency/Pull frequency; and
 - Folder locations for both Inbound and Outbound files.

1.4.2 RC Client Application Overview

The esMD RC Java Client is a standalone Java Windows desktop application that runs outside the CMS network on the RC's machine, computer, or server. The purpose of the RC Java Client is to connect to the TIBCO MFT server at the Baltimore Data Center (BDC) and push and pull files. The RC Java Client uses the Enterprise Identity Management (EIDM) System login credentials to authenticate with the TIBCO MFT server. The RC Client users (at the RC site) provide their login credentials when they start the RC Client on their machines.

Users enter their login credentials only once at the program startup. When the RC Client starts, it initiates and then continuously runs two parallel threads as shown in Figure 1: RC Client Inbound and Outbound Process. When a user starts the RC Client, it will run continuously and will push and pull files automatically without continual user intervention, based on the frequencies set by the RC.

Figure 1: RC Client Inbound and Outbound Process



In the inbound process, when the RC Client connects to the TIBCO MFT server, the RC Client immediately executes a pull cycle. The documents are pulled into the RC's inbound user directory for the authenticated user, and then the RC Client disconnects and waits for the next cycle, as determined by the Inbound Pull Time Interval setting.

In the outbound process when the RC Client connects to the TIBCO MFT server, the RC Client executes a push cycle. The documents are pushed from the RC's outbound user directory to the TIBCO MFT server, and then the RC Client disconnects and waits for the next cycle as determined by the Outbound Push Time Interval setting.

The inbound pull frequency is independent of the outbound push frequency. After each successful push or pull process, the RC Client thread disconnects from the TIBCO MFT server. To ensure continuous operation of the RC Client, it must preserve each user's EIDM login credentials during the program execution.

Note: Running multiple instances of the Java RC Client for the same jurisdiction could result in errors while pulling the files.

The RC Client has been updated as part of esMD Release 4.0 to allow RCs to submit review responses for the new PA programs using the Graphical User Interface (GUI). The RC does not need to login to the TIBCO MFT Server in order to create Review Responses, Error Responses and Administrative Error Responses. The login is necessary only to pull or push files from or to TIBCO MFT Server.

1.4.3 RC Client Operation Overview

The RC Client runs in a cyclical manner sleeping for a specified time interval between the operating cycles. The sleep intervals are configured in the "checkFrequency" parameter for the Inbound Process and the "pushFrequency" parameter for the Outbound process. The RC is

advised to use the default of 240 minutes (4 hours) for the Inbound process and 15 minutes for the Outbound process.

The RC Client operation is interrupted in two events:

1. EIDM passwords that have expired (Note: EIDM passwords expire every 60 days, if not changed); and
2. A Virus Scan error notification is received from the esMD.

In the first scenario, when the EIDM password expires, the RC Client suspends its operation and is terminated. The RC must restart the RC Client and the user must provide the right credentials to login to the TIBCO MFT server. The EIDM notifies the user 15 days prior to the password expiring. For more information on the EIDM User Credentials and how to reset the password, please refer to the EIDM Instructions document in the esMD Downloads section, using the link below:

http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_Review-Contractors.html

In the second scenario, when a Virus Scan error notification has been received from esMD, all the processes of the RC Client are suspended and the RC Client is terminated. In addition, the RC Client is locked and cannot pull/push files even if the RC Client is restarted. The RC is advised to contact the esMD helpdesk (refer to Section 17. Contacts for more details) to unlock the RC Client.

2. Overview of How This Document is Structured

This document is structured into the following two primary sections.

1. First primary section of this document provides the following:

- How to start and log into the RC Client;
- How to enter a Review Response decision;
- How to enter an error code for a PA request;
- How to submit Inbound Submissions errors; and
- Advanced debugging, which shows how to test to see if your RC Client application can connect to the TIBCO MFT server and if you have any inbound files ready for downloading.

❖ The audience for this first section is intended for the **RC business users**.

2. How to install and configure a Java version of RC Client.

❖ The audience for this second section is intended for the **person(s) installing the RC Client application**.

This section provides the technical specifications for installing and configuring RC Client on a computer system or network and includes the following:

- Overview of the installation process;
- Systems Requirements for a Java installation;
- Installing an Out-of-Box Java version of the RC Client application;
- TIBCO MFT file transfers;
- XML Messages, including Outbound, Inbound, and Error messages;
- Inbound Processes and Files;
- Outbound Processes and Files;
- Configuring the RC Client application;
- RC Client Components;
- RC Client Workflow;
- RC Client application Utilities, Components, Schedulers, and Encryption;

- Release 4.0 Changes to the Application Programming Interface (API);
- Using API;
- Configuring the RC Client application for notifications;
- Processing and pulling in documents; and
- Security.

3. How to Start the RC Client and Log In

The following are the step-by-step instructions for starting the RC Client and logging in.

Step 1. Start the RC Client by selecting the **rcclient.bat** in the RC Installation folder or directory.

Starting the RC Client and Logging In

Step 2. The **Login** screen is displayed.

Enter your EIDM **User ID** and **password** and then select **Login and Run RC Client**.

Note: The EIDM login credentials are confidential and should not be shared with others. (For more information on EIDM login credentials, see EIDM's Frequently Asked Questions (FAQs) <https://portal.cms.gov/wps/portal/unauthportal/faq>.)

RC CLIENT

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES
OFFICE OF FINANCIAL MANAGEMENT

esMD RC Client

Login | Review Decision Response to PA Request | Error Response to PA Request | Administrative Error Response to Inbound

Login

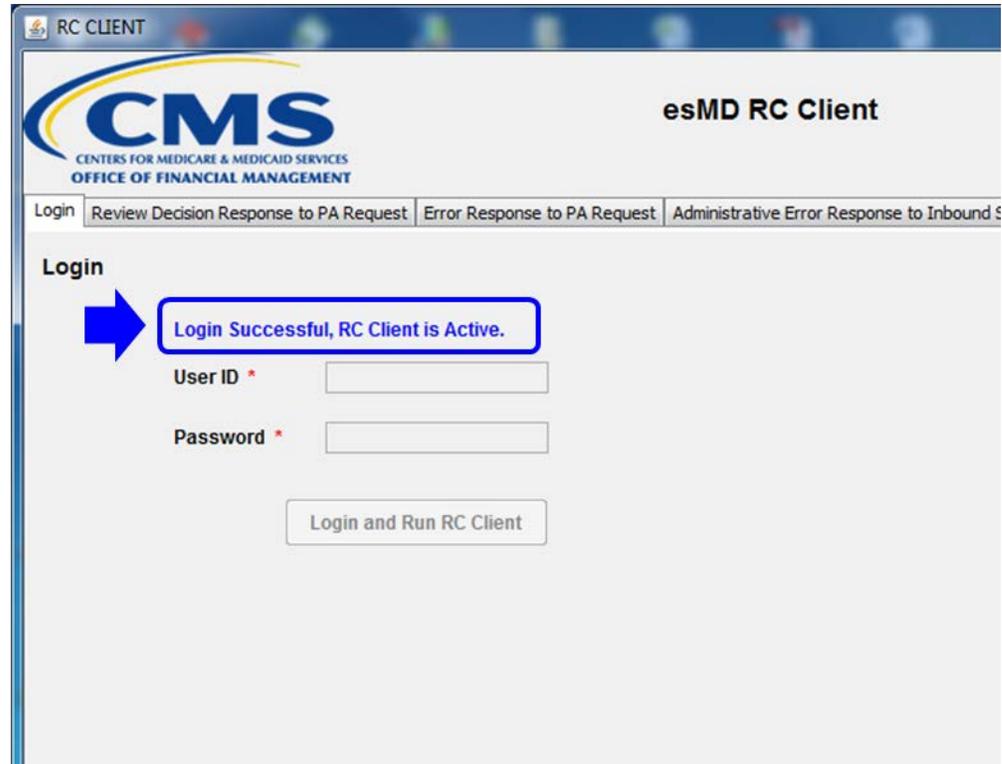
User ID * PKSL947

Password *

Login and Run RC Client

Step 3.
Starting the
RC Client and
Logging In

After a successful log in, the **Login Successful, RC Client is Active.** message is displayed.



4. How to Enter a Decision on the Review Decision Response to Prior Authorization (PA) Request Tab

This section provides step-by-step instructions on how to enter a decision on the **Review Decision Response to PA Request** tab for the following:

- How to Enter an A-Affirmed Decision
- How to Enter a M-Affirmed with Change Decision
- How to Enter a N-Non Affirmed Decision

Note: An RC has up to ten business days to process and respond to a PA Request.

4.1 How to Enter an A-Affirmed Decision

This section provides step-by-step instructions on how to enter an Affirmed decision on the **Review Decision Response to PA Request** tab.

Step 1.

Entering an
A-Affirmed
Decision

Select the **Review Decision Response to PA Request** tab.

❖ After a successful log in, another log in is not required to navigate to and use the Review Decision Response to PA Request tab.



Step 2.
Entering an
A-Affirmed
Decision

The fields for the **Review Decision Response to PA Request** tab are displayed.

❖ **Before You Begin:** If you need a brief description of any of the fields on the tabs, see Appendix A: [Description of Fields on RC Client Tabs](#) on page [105](#).

Enter the **Transaction ID** and the **Procedure Code**.

The screenshot shows the 'esMD RC Client' interface. At the top, there is a navigation bar with tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbound'. The 'Review Decision Response to PA Request' tab is selected. Below the navigation bar, the title 'Review Decision Response to PA Request' is displayed. The main form area contains several fields: 'Transaction ID *' (text input with value '1517975'), 'Procedure Code *' (text input with value 'K0802'), 'Procedure Level Decision' (dropdown menu with 'Select' selected), 'Procedure Level UTN *' (text input), 'Number of Approved Units' (text input), 'Approved Service Date' (radio button), 'Approved Service Date Range' (radio button), 'Start Date' (text input), and 'End Date' (text input). Below these fields is the 'Industry Code(s)' section with a large empty text area, 'Add' and 'Remove' buttons, and a 'Reason Code(s)' section with several empty text boxes and an 'Add' button. At the bottom of the form are 'Clear' and 'Save' buttons. A blue arrow points to the 'Transaction ID' and 'Procedure Code' fields, which are enclosed in a blue rounded rectangle.

Step 3.
Entering an
A-Affirmed
Decision

Select the **A-Affirmed** decision from the **Procedure Level Decision** drop down menu and enter the **Procedure Level UTN**.

The screenshot displays the 'esMD RC Client' interface for the 'Review Decision Response to PA Request' tab. The form contains the following fields and options:

- Transaction ID ***: 1517975
- Procedure Code ***: K0802
- Procedure Level Decision ***: A - Affirmed (highlighted with a blue box and arrow)
- Procedure Level UTN ***: A0014280106600
- Number of Approved Units**: [Empty field]
- Approved Service Date**: [Empty field]
- Approved Service Date Range**: [Empty field]
- Start Date**: [Empty field]
- End Date**: [Empty field]
- Industry Code(s)**: [Empty list area with 'Add' and 'Remove' buttons]
- Reason Code(s)**: [Empty list area with 'Add' button]

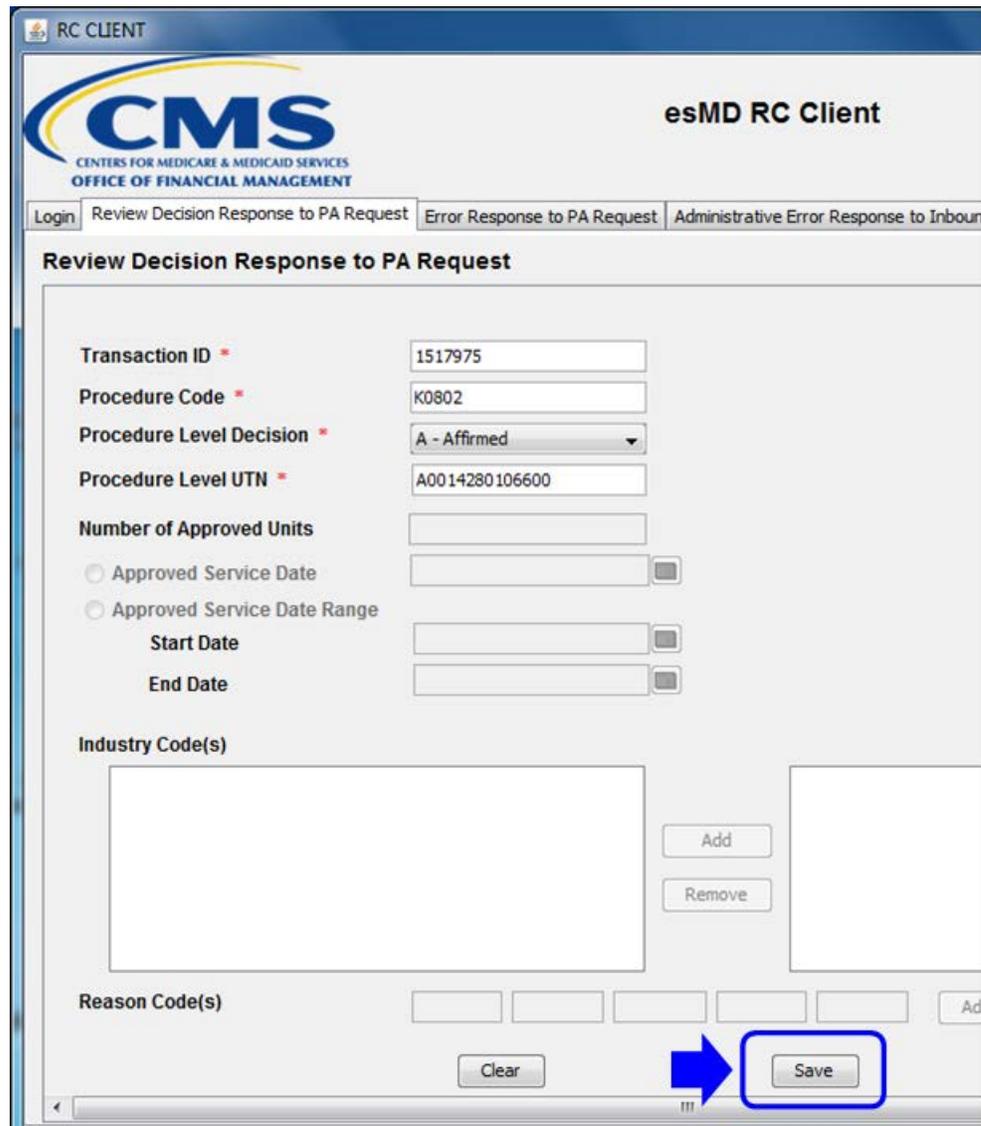
Buttons for 'Clear' and 'Save' are located at the bottom of the form.

Step 4.

Entering an
A-Affirmed
Decision

Select **Save** to save the A-Affirmed decision for submission.

 **Technical Note:** After selecting Save, an Extensible Markup Language (XML) message will be created to be sent to the esMD system and will be packaged into a compressed zip file. The zip file will be placed in a directory specified in the OutboundConfig/outputDirectory of the esmd-rc-client-config.xml. The outbound thread running on the RC Client will push the file to the TIBCO Managed File Transfer (MFT) server.



The screenshot shows the 'esMD RC Client' window with the 'Review Decision Response to PA Request' tab selected. The form contains the following fields and controls:

- Transaction ID ***: Text box containing '1517975'
- Procedure Code ***: Text box containing 'K0802'
- Procedure Level Decision ***: Dropdown menu showing 'A - Affirmed'
- Procedure Level UTN ***: Text box containing 'A0014280106600'
- Number of Approved Units**: Text box (empty)
- Approved Service Date**: Radio button (unselected) and text box (empty)
- Approved Service Date Range**: Radio button (unselected)
- Start Date**: Text box (empty)
- End Date**: Text box (empty)
- Industry Code(s)**: Large empty text area with 'Add' and 'Remove' buttons to its right.
- Reason Code(s)**: Row of five empty text boxes with an 'Add' button to the right.
- Clear**: Button at the bottom center.
- Save**: Button at the bottom right, highlighted with a blue box and a blue arrow pointing to it.

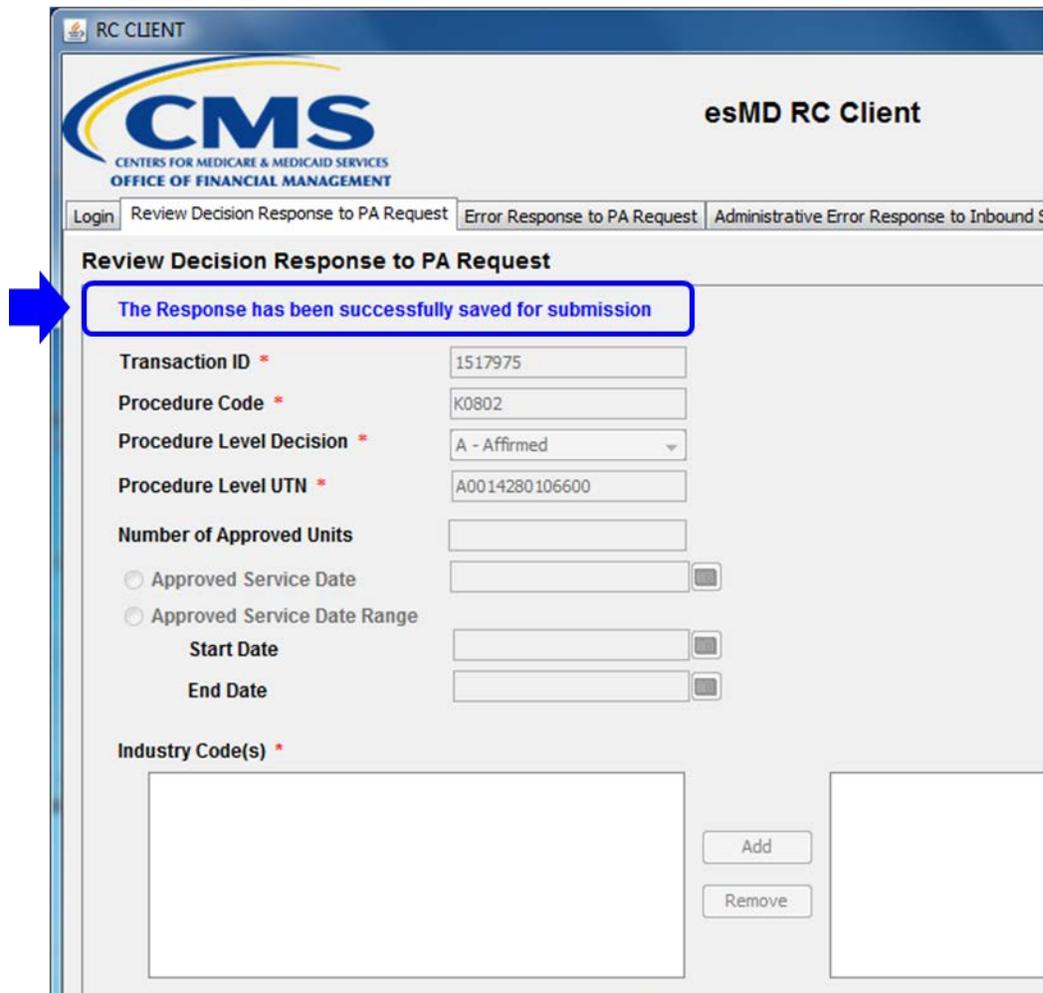
Step 5.
Entering an
A-Affirmed
Decision

After selecting Save, the **“The Response has been successfully saved for submission”** message is displayed.

 **Technical Note:** After selecting Save, the RC Client validates the data entered and displays errors messages, as applicable.

If the data validation is successful, the A-Affirmed decision is created, and the **“The Response has been successfully saved for submission”** message is displayed.

Note: After successfully saving a decision for submission, all information in the fields are cleared and another response may be entered.



4.2 How to Enter a M-Affirmed with Change Decision

This section provides step-by-step instructions on how to enter an M-Affirmed with Change decision on the **Review Decision Response to PA Request** tab.

Step 1.

Entering a
**M-Affirmed
with Change
Decision**

Select the **Review Decision Response to PA Request** tab.

❖ After a successful log in, another log in is not required to navigate to and use the Review Decision Response to PA Request tab.



Step 2.
Entering a
M-Affirmed
with Change
Decision

The fields for the **Review Decision Response to PA Request** tab are displayed.

❖ **Before You Begin:** If you need a brief description of any of the fields on the tabs, see Appendix A: [Description of Fields on RC Client Tabs](#) on page [105](#).

Enter the **Transaction ID** and the **Procedure Code**.

The screenshot displays the 'esMD RC Client' interface. At the top, the CMS logo and 'esMD RC Client' title are visible. Below the logo, there are navigation tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbound'. The 'Review Decision Response to PA Request' tab is active. The form contains several fields: 'Transaction ID *' (text input with value '1517979'), 'Procedure Code *' (text input with value 'A0426'), 'Procedure Level Decision *' (dropdown menu with 'Select' selected), 'Procedure Level UTN *' (text input), 'Number of Approved Units' (text input), 'Approved Service Date' (radio button), 'Approved Service Date Range' (radio button), 'Start Date' (text input), and 'End Date' (text input). Below these are 'Industry Code(s)' and 'Reason Code(s)' sections, each with a list box and 'Add'/'Remove' buttons. At the bottom, there are 'Clear' and 'Save' buttons. A blue arrow points to the 'Transaction ID' field.

Step 3.
Entering a
**M-Affirmed
with Change
Decision**

Select the **M-Affirmed with Change** decision from the **Procedure Level Decision** drop down menu.

Note: After selecting an M-Affirmed **with Change** decision, the "**Decision M is not valid decision for the PMD PA review result response**" message is displayed. An **M-Affirmed with Change** decision selected and saved for submission for a PMD PA review result response will be treated as an invalid response in the esMD system.

Enter the **Procedure Level Universal Tracking Number (UTN)**.

Enter the **Number of Approved Units**, when you also have to submit this information. (This is not a required field.)

The screenshot shows the 'esMD RC Client' window with the 'Review Decision Response to PA Request' tab selected. The form contains the following fields and values:

- Transaction ID: 1517979
- Procedure Code: A0426
- Procedure Level Decision: M - Affirmed with Change (highlighted with a blue box and error message: "Decision M is not valid decision for the PMD PA review result response")
- Procedure Level UTN: A0014280106601
- Number of Approved Units: 5
- Approved Service Date: (radio button selected)
- Approved Service Date Range: (radio button unselected)
- Start Date: (empty field)
- End Date: (empty field)
- Industry Code(s): (empty list)
- Reason Code(s): (empty list)

Buttons for 'Add', 'Remove', 'Clear', and 'Save' are visible at the bottom of the form.

Step 4a.
 Entering a
M-Affirmed
with Change
 Decision

Enter a single **Approved Service Date** or an **Approved Service Date Range**.

To enter a single **Approved Service Date**, select the date on the Approved Service Date calendar, as illustrated below.

The screenshot shows the 'esMD RC Client' interface. The main window title is 'RC CLIENT'. The CMS logo is visible, along with the text 'CENTERS FOR MEDICARE & MEDICAID SERVICES OFFICE OF FINANCIAL MANAGEMENT'. The current tab is 'Review Decision Response to PA Request'. The form contains the following fields and values:

- Transaction ID *: 1517979
- Procedure Code *: A0426
- Procedure Level Decision *: M - Affirmed with Change (with a warning: Decision M is not valid decision for)
- Procedure Level UTN *: A0014280106601
- Number of Approved Units: 5
- Approved Service Date: (Selected, highlighted with a blue circle and arrow)
- Approved Service Date Range: (Not selected)
- Start Date: (Calendar pop-up open for March 2015, with date 20 highlighted)
- End Date: (Empty)
- Industry Code(s): (Empty)
- Reason Code(s): (Empty)

Buttons for 'Add', 'Remove', 'Clear', and 'Save' are visible at the bottom of the form.

Step 4b.
Entering a
M-Affirmed
with Change
Decision

The **date selected** is then placed in the Approved Service Date field.

❖ To enter an **Approved Service Date Range**, see Step 5.

The screenshot shows the 'esMD RC Client' interface for 'Review Decision Response to PA Request'. The form contains the following fields and values:

- Transaction ID *: 1517979
- Procedure Code *: A0426
- Procedure Level Decision *: M - Affirmed with Change (dropdown menu)
- Procedure Level UTN *: A0014280106601
- Number of Approved Units: 5
- Approved Service Date: 03/20/2015 (radio button selected, highlighted with a blue box and arrow)
- Approved Service Date Range: (radio button unselected)
- Start Date: (empty field)
- End Date: (empty field)
- Industry Code(s): (empty list)
- Reason Code(s): (empty list)

Buttons: Add, Remove, Clear, Save.

Step 5.
Entering a
**M-Affirmed
with Change
Decision**

To enter an **Approved Service Date Range** (i.e. a Start Date and an End Date), first, select the date on the Approved Service Date calendar for the **Start Date**, as illustrated below.

Note: An RC has to provide either **Approved Service Date** or **Approved Service Date Range** as they are mutually exclusively.

The screenshot shows the 'esMD RC Client' interface. The main title is 'esMD RC Client' and the logo for CMS (Centers for Medicare & Medicaid Services, Office of Financial Management) is visible. The current tab is 'Review Decision Response to PA Request'. The form contains the following fields:

- Transaction ID *: 1517979
- Procedure Code *: A0426
- Procedure Level Decision *: M - Affirmed with Change (with a warning: Decision M is not valid decision for)
- Procedure Level UTN *: A0014280106601
- Number of Approved Units: 5
- Radio buttons for 'Approved Service Date' and 'Approved Service Date Range' (the latter is selected).
- Start Date: A calendar is open showing March 2015. The date '12' is highlighted with a blue circle and a blue arrow.
- End Date: A date picker showing March 2015.
- Industry Code(s): A large empty text area.
- Reason Code(s): A row of five empty text boxes.

Buttons for 'Add', 'Remove', 'Clear', and 'Save' are located at the bottom of the form.

Step 5a.
Entering a
M-Affirmed
with Change
Decision

Now, select the **date** on the Approved Service Date calendar for the **End Date**.

Note: The End Date cannot be the same date as the Start Date.

The screenshot shows the 'esMD RC Client' interface. The main window title is 'RC CLIENT'. The CMS logo is visible, along with the text 'CENTERS FOR MEDICARE & MEDICAID SERVICES OFFICE OF FINANCIAL MANAGEMENT'. The current tab is 'Review Decision Response to PA Request'. The form contains the following fields:

- Transaction ID: 1517979
- Procedure Code: A0426
- Procedure Level Decision: M - Affirmed with Change (with a note: 'Decision M is not valid decision for')
- Procedure Level UTN: A0014280106601
- Number of Approved Units: 5
- Approved Service Date Range (selected):
 - Start Date: 03/12/2015
 - End Date: (highlighted with a blue box and arrow)
- Industry Code(s): (empty)
- Reason Code(s): (empty)

A calendar is open for March 2015. The date 23 is selected and highlighted with a blue box and arrow. The calendar shows days of the week (Sun to Sat) and dates from 1 to 31. There are 'Add' and 'Remove' buttons next to the calendar. At the bottom of the form are 'Clear' and 'Save' buttons.

Step 5b.
Entering a
M-Affirmed
with Change
Decision

The **Start Date** and **End Date** are added to the Start Date and End Date fields, as illustrated below.

The screenshot displays the 'esMD RC Client' interface for reviewing a decision response to a prior authorization request. The form is titled 'Review Decision Response to PA Request' and includes several input fields and a dropdown menu. A blue box highlights the 'Approved Service Date Range' section, which contains 'Start Date' (03/12/2015) and 'End Date' (03/23/2015) fields. A blue arrow points to the 'Start Date' field. Other fields include 'Transaction ID' (1517979), 'Procedure Code' (A0426), 'Procedure Level Decision' (M - Affirmed with Change), 'Procedure Level UTN' (A0014280106601), and 'Number of Approved Units' (5). The 'Industry Code(s)' section is empty, and the 'Reason Code(s)' section contains five empty input boxes. The 'Save' button is visible at the bottom right.

Step 6.**Entering a
M-Affirmed
with Change
Decision**

Enter a **Reason Code** or multiple **Reason Codes**.

For information on how to access an up-to-date list of PA Reason Codes, see Appendix D: PA Reason Codes.

Note: When you have to enter more than five Reason Codes, select **Add** at the end of the row of Reason Code fields to add a new row. Continue to select Add at the end of the each row, until all of your Reason Codes have been entered. You may enter a maximum of 25 Reason Codes.

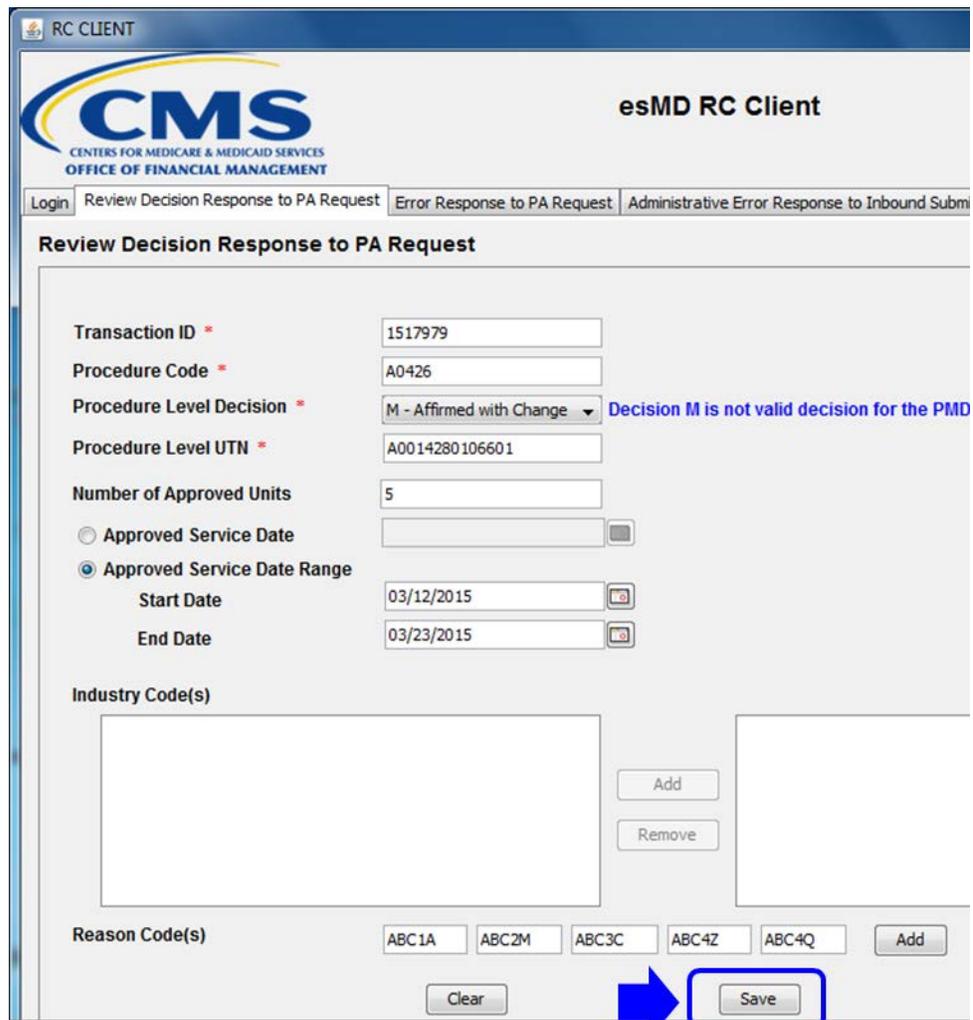
The screenshot displays the 'esMD RC Client' interface for reviewing a decision response to a prior authorization request. The form is titled 'Review Decision Response to PA Request' and contains the following fields and controls:

- Transaction ID ***: 1517979
- Procedure Code ***: A0426
- Procedure Level Decision ***: M - Affirmed with Change (Dropdown menu). A red error message states: "Decision M is not valid decision for the PMD".
- Procedure Level UTN ***: A0014280106601
- Number of Approved Units**: 5
- Approved Service Date**: Radio button (unselected)
- Approved Service Date Range**: Radio button (selected)
 - Start Date**: 03/12/2015
 - End Date**: 03/23/2015
- Industry Code(s)**: Two empty text boxes with 'Add' and 'Remove' buttons.
- Reason Code(s)**: A row of five text input fields containing 'ABC1A', 'ABC2M', 'ABC3C', 'ABC4Z', and 'ABC4Q', followed by an 'Add' button. A blue arrow points to this section.
- Clear** and **Save** buttons are located at the bottom of the form.

Step 7.
Entering a
**M-Affirmed
with Change
Decision**

Select **Save** to save the M-Affirmed with Change decision for submission.

 **Technical Note:** After selecting Save,, an Extensible Markup Language (XML) message will be created to be sent to the esMD system and will be packaged into a compressed zip file. The zip file will be placed in a directory specified in the OutboundConfig/outputDirectory of the esmd-rc-client-config.xml. The outbound thread running on the RC Client will push the file to the TIBCO Managed File Transfer (MFT) server.



The screenshot shows the 'esMD RC Client' window with the 'Review Decision Response to PA Request' tab selected. The form contains the following fields and values:

- Transaction ID: 1517979
- Procedure Code: A0426
- Procedure Level Decision: M - Affirmed with Change (with a blue error message: "Decision M is not valid decision for the PMD")
- Procedure Level UTN: A0014280106601
- Number of Approved Units: 5
- Approved Service Date Range:
 - Start Date: 03/12/2015
 - End Date: 03/23/2015
- Industry Code(s): (Empty list with Add and Remove buttons)
- Reason Code(s): ABC1A, ABC2M, ABC3C, ABC4Z, ABC4Q (with an Add button)

The 'Save' button at the bottom right is highlighted with a blue box, and a blue arrow points to it from the left.

Step 8.
Entering a
**M-Affirmed
with Change
Decision**

After selecting Save, the **“The Response has been successfully saved for submission”** message is displayed.

🔒 **Technical Note:** After selecting Save, the RC Client validates the data entered and displays errors messages, as applicable.

If the data validation is successful, the M-Affirmed with Change decision is created, and the **“The Response has been successfully saved for submission”** message is displayed.

Note: After successfully saving a decision for submission, all information in the fields are cleared and another response may be entered.

The screenshot displays the RC CLIENT interface for the 'Review Decision Response to PA Request' tab. A blue arrow points to a message box that reads: 'The Response has been successfully saved for submission'. Below the message, the form fields are populated with the following data:

| | |
|--|--------------------------|
| Transaction ID * | 1517979 |
| Procedure Code * | A0426 |
| Procedure Level Decision * | M - Affirmed with Change |
| Procedure Level UTN * | A0014280106601 |
| Number of Approved Units | 5 |
| <input type="radio"/> Approved Service Date | |
| <input checked="" type="radio"/> Approved Service Date Range | |
| Start Date | 03/12/2015 |
| End Date | 03/23/2015 |

4.3 How to Enter a N-Non Affirmed Decision

This section provides step-by-step instructions on how to enter an N-Non Affirmed decision on the **Review Decision Response to PA Request** tab.

Step 1. Select the **Review Decision Response to PA Request** tab.

Entering a
**N-Non
Affirmed
Decision**

❖ After a successful log in, another log in is not required to navigate to and use the Review Decision Response to PA Request tab.



Step 2.
Entering a
N-Non
Affirmed
Decision

The fields for the **Review Decision Response to PA Request** tab are displayed.

❖ **Before You Begin:** If you need a brief description of any of the fields on the tabs, see Appendix A: [Description of Fields on RC Client Tabs](#) on page [105](#).

Enter the **Transaction ID** and the **Procedure Code**.

The screenshot shows the 'esMD RC Client' interface. At the top, there is a navigation bar with tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbo'. The active tab is 'Review Decision Response to PA Request'. Below the navigation bar, the form title is 'Review Decision Response to PA Request'. The form contains several fields: 'Transaction ID *' (text input with value '1542313'), 'Procedure Code *' (text input with value 'K0802'), 'Procedure Level Decision *' (dropdown menu with 'Select' selected), 'Procedure Level UTN *' (text input), 'Number of Approved Units' (text input), 'Approved Service Date' (radio button), 'Approved Service Date Range' (radio button), 'Start Date' (text input), and 'End Date' (text input). Below these fields are 'Industry Code(s)' and 'Reason Code(s)' sections, each with a list box and 'Add'/'Remove' buttons. At the bottom of the form are 'Clear' and 'Save' buttons. A blue arrow points to the 'Transaction ID' field.

Step 3.
Entering a
**N-Non
Affirmed
Decision**

Select the **N-Non Affirmed** decision from the **Procedure Level Decision** drop down menu and enter the **Procedure Level Universal Tracking Number (UTN)**.

The screenshot shows the 'esMD RC Client' interface. At the top, there is a navigation bar with tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbo'. The main title is 'Review Decision Response to PA Request'. The form contains several fields:

- Transaction ID ***: 1542313
- Procedure Code ***: K0802
- Procedure Level Decision ***: N - Non Affirmed (highlighted with a blue box and arrow)
- Procedure Level UTN ***: A0014280106710
- Number of Approved Units**: [Empty field]
- Approved Service Date**: [Radio button]
- Approved Service Date Range**: [Radio button]
- Start Date**: [Empty field]
- End Date**: [Empty field]
- Industry Code(s) ***: [List of codes including 'Additional Patient Information required', 'Ambulance Certification Segment information doesn't correspond t', 'Authorized Quantity Exceeded', 'Certification Not Required for this Service', 'Duplicate Request', 'Inappropriate facility type', 'Level of Care Not Appropriate']
- Reason Code(s) ***: [Empty fields]

Buttons for 'Add', 'Remove', 'Clear', and 'Save' are visible at the bottom of the form.

Step 4.
Entering a
N-Non
Affirmed
Decision

Select an **Industry Code** from the list of Industry Codes available and then select **Add**. This will move the selection to the list of Industry Codes to be included in the response. Continue to select an **Industry Code** and then **Add**, until all of the Industry Codes have been added for this N-Non Affirmed decision.

In the example below, the “Not Medically Necessary” Industry Code will be the Industry Code added to this N-Non Affirmed decision.

Note: The Appendix C: Industry Codes provides a list all of the Industry Codes available in esMD. A maximum of five Industry Codes can be selected for a Review Decision Response to PA Request.

The screenshot displays the 'esMD RC Client' interface for a 'Review Decision Response to PA Request'. The form contains the following fields and elements:

- Transaction ID ***: 1542313
- Procedure Code ***: K0802
- Procedure Level Decision ***: N - Non Affirmed
- Procedure Level UTN ***: A0014280106710
- Number of Approved Units**: (empty)
- Approved Service Date**: (empty)
- Approved Service Date Range**: (empty)
- Start Date**: (empty)
- End Date**: (empty)
- Industry Code(s) ***: A list of codes including 'Additional Patient Information required', 'Ambulance Certification Segment information doesn't correspond t', 'Authorized Quantity Exceeded', 'Certification Not Required for this Service', 'Duplicate Request', 'Inappropriate facility type', and 'Level of Care Not Appropriate'. The code 'Not Medically Necessary' is selected in a separate box, and the 'Add' button is highlighted with a blue arrow.
- Reason Code(s) ***: (empty)

Buttons for 'Clear' and 'Save' are located at the bottom of the form.

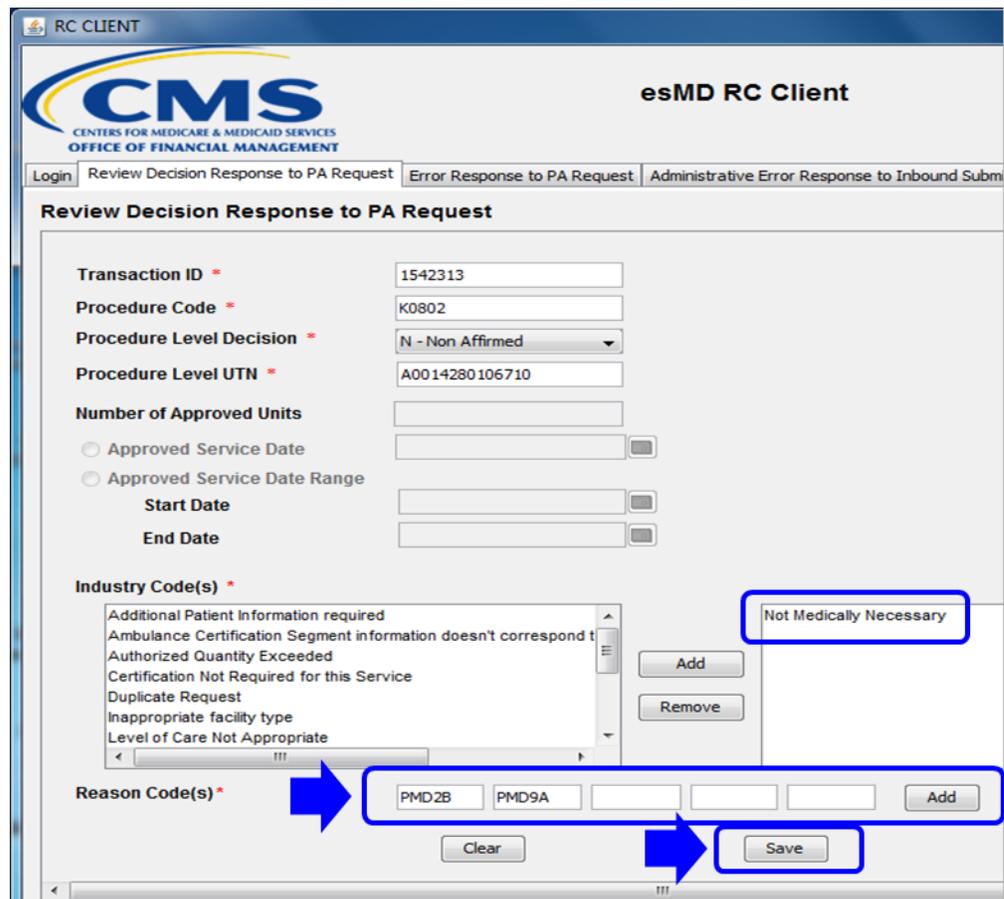
Step 5.
Entering a
N-Non
Affirmed
Decision

After selecting Add, the Industry Code is added to the N-Non Affirmed decision, as illustrated below.

Enter the **Reason Code** or **Reason Codes** and then select **Save** to save the N-Non Affirmed decision for submission. You may enter a maximum of 25 Reason Codes.

For information on how to access an up-to-date list of PA Reason Codes, see Appendix D: PA Reason Codes.

📄 **Technical Note:** After selecting Save, an Extensible Markup Language (XML) message will be created to be sent to the esMD system and will be packaged into a compressed zip file. The zip file will be placed in a directory specified in the OutboundConfig/outputDirectory of the esmd-rc-client-config.xml. The outbound thread running on the RC Client will push the file to the TIBCO Managed File Transfer (MFT) server.



Step 6.
Entering a
**N-Non
Affirmed
Decision**

After selecting Save, the **“The Response has been successfully saved for submission”** message is displayed.

 **Technical Note:** After selecting Save, the RC Client validates the data entered and displays errors messages, as applicable.

If the data validation is successful, the N-Non Affirmed decision is created, and the **“The Response has been successfully saved for submission”** message is displayed.

Note: After successfully saving a decision for submission, all information in the fields are cleared and another response may be entered.



5. How to Enter an Error Code on the Error Response to PA Request Tab

This section provides step-by-step instructions on how to enter an error code on the **Error Response to PA Request** tab.

Step 1. Select the **Error Response to PA Request** tab.

Entering an
Error Code

❖ After a successful log in, another log in is not required to navigate to and use the Error Response to PA Request tab.



Step 2.
Entering an
Error Code

The fields for the **Error Response to PA Request** tab are displayed.

❖ **Before You Begin:** If you need a brief description of any of the fields on the tabs, see Appendix A: [Description of Fields on RC Client Tabs](#) on page [105](#).

Enter the **Transaction ID** and select a **Reject Error Category**.

RC CLIENT

CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES
OFFICE OF FINANCIAL MANAGEMENT

esMD RC Client

Login Review Decision Response to PA Request **Error Response to PA Request** Administrative Error Response to Inbo

Error Response to PA Request

Transaction ID * 1542314

Reject Error Category * Requester

Reject Error Code(s) *

- An address component is missing or invalid
- First and/or Last name is/are missing
- Not a pilot participant State
- NPI does not match the Name of the Physician
- NPI is missing or invalid

Add Remove

Reason Code(s) *

Request Level UTN

Clear Save

Step 3.
Entering an Error Code

Select a **Reject Error Code** and then **Add** to add the Reject Error Code.

For information on how to access an up-to-date list of Reject Error Codes, see Appendix B: Reject Error Codes.

The screenshot shows the 'esMD RC Client' interface. The main title is 'esMD RC Client' and the logo is 'CMS CENTERS FOR MEDICARE & MEDICAID SERVICES OFFICE OF FINANCIAL MANAGEMENT'. The navigation tabs include 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbo'. The current view is 'Error Response to PA Request'. The form contains the following fields and elements:

- Transaction ID ***: 1542314
- Reject Error Category ***: Requester
- Reject Error Code(s) ***: A list of error codes with an 'Add' button to the right. The codes are:
 - An address component is missing or invalid
 - First and/or Last name is/are missing
 - Not a pilot participant State
 - NPI does not match the Name of the Physician
 - NPI is missing or invalid
- Reason Code(s) ***: Five empty input boxes with an 'Add' button to the right.
- Request Level UTN**: An empty input box.
- Buttons: 'Clear' and 'Save' at the bottom.

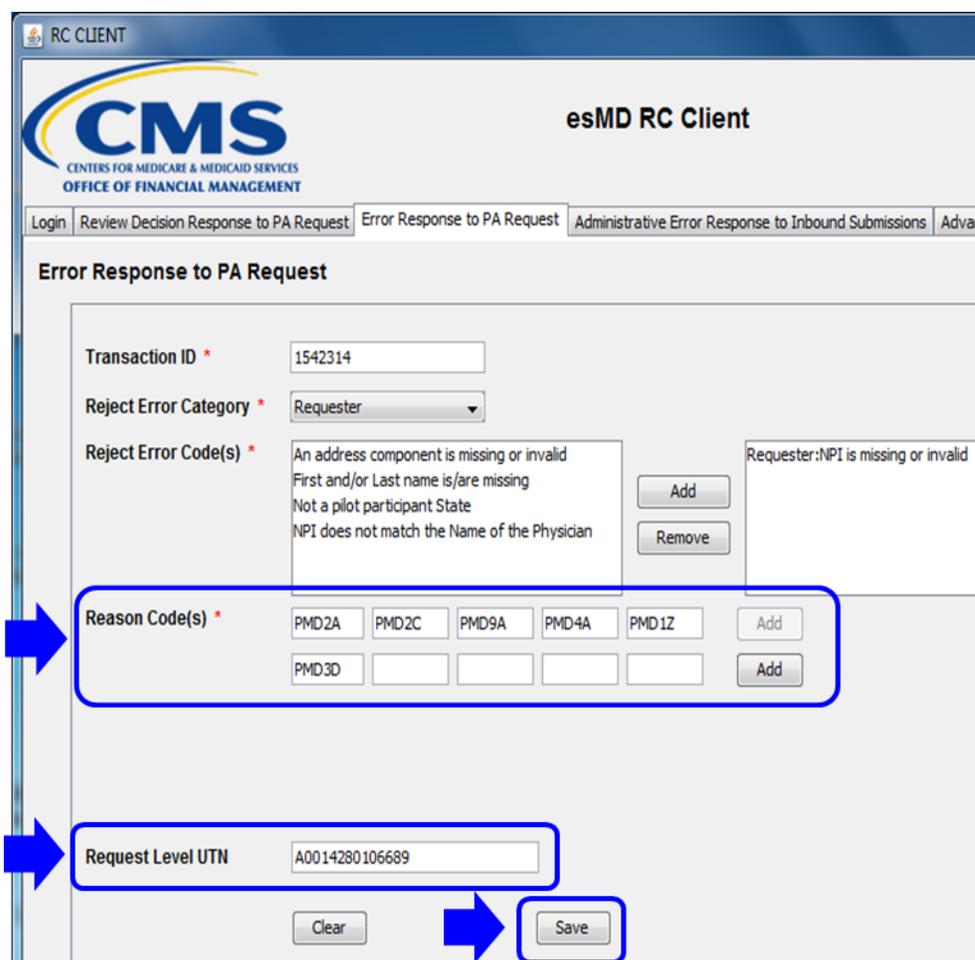
Step 4.
Entering an
Error Code

Enter the **Reason Code** or **Reason Codes**. Select Add at the end of the row of Reason Code fields to add additional rows of Reason Codes, as needed.

Enter the **Request Level UTN** and then select **Save** to submit the Error Code for submission.

For information on how to access an up-to-date list of Reason Codes, see Appendix D: PA Reason Codes.

 **Technical Note:** After selecting **Save**, an Extensible Markup Language (XML) message will be created to be sent to the esMD system and will be packaged into a compressed zip file. The zip file will be placed in a directory specified in the OutboundConfig/outputDirectory of the esmd-rc-client-config.xml. The outbound thread running on the RC Client will push the file to the TIBCO Managed File Transfer (MFT) server.



The screenshot displays the 'esMD RC Client' interface. The main title is 'esMD RC Client' and the logo for CMS (Centers for Medicare & Medicaid Services, Office of Financial Management) is visible. The navigation tabs include 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', 'Administrative Error Response to Inbound Submissions', and 'Advanced'. The 'Error Response to PA Request' tab is active.

The form contains the following fields and controls:

- Transaction ID ***: Text box containing '1542314'.
- Reject Error Category ***: Dropdown menu set to 'Requester'.
- Reject Error Code(s) ***: A list of error codes with a description: 'An address component is missing or invalid', 'First and/or Last name is/are missing', 'Not a pilot participant State', and 'NPI does not match the Name of the Physician'. There are 'Add' and 'Remove' buttons.
- Reason Code(s) ***: A row of buttons for 'PMD2A', 'PMD2C', 'PMD9A', 'PMD4A', 'PMD1Z', and 'PMD3D', each followed by an 'Add' button.
- Request Level UTN**: Text box containing 'A0014280106689'.
- Clear** and **Save** buttons at the bottom.

Blue arrows point to the 'Reason Code(s)' section, the 'Request Level UTN' field, and the 'Save' button.

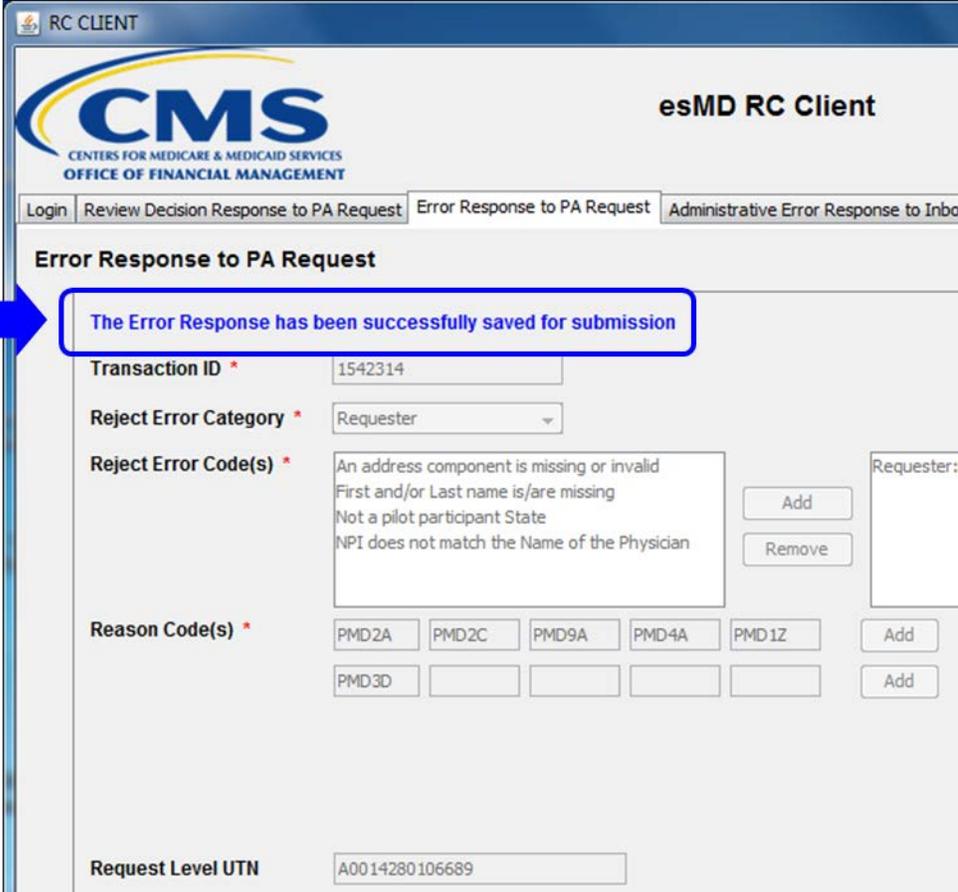
Step 5.
Entering an
Error Code

After selecting Save, the **“The Error Response has been successfully saved for submission”** message is displayed.

 **Technical Note:** After selecting Save, the RC Client validates the data entered and displays errors messages, as applicable.

If the data validation is successful, the Error Code is created, and the **“The Error Response has been successfully saved for submission”** message is displayed.

Note: After successfully saving a decision for submission, all information in the fields are cleared and another response may be entered.



The screenshot shows the 'esMD RC Client' window with the 'Error Response to PA Request' tab selected. A blue arrow points to a message box that reads: "The Error Response has been successfully saved for submission". Below the message, the form contains the following fields:

- Transaction ID ***: 1542314
- Reject Error Category ***: Requester
- Reject Error Code(s) ***: A text area containing the message: "An address component is missing or invalid. First and/or Last name is/are missing. Not a pilot participant State. NPI does not match the Name of the Physician." There are "Add" and "Remove" buttons to the right.
- Reason Code(s) ***: A grid of buttons for selecting codes: PMD2A, PMD2C, PMD9A, PMD4A, PMD1Z, PMD3D, and two empty boxes. "Add" buttons are to the right of each row.
- Request Level UTN**: A0014280106689

6. How to Submit an Inbound Submission Error on the Administrative Error Response to Inbound Submissions Tab

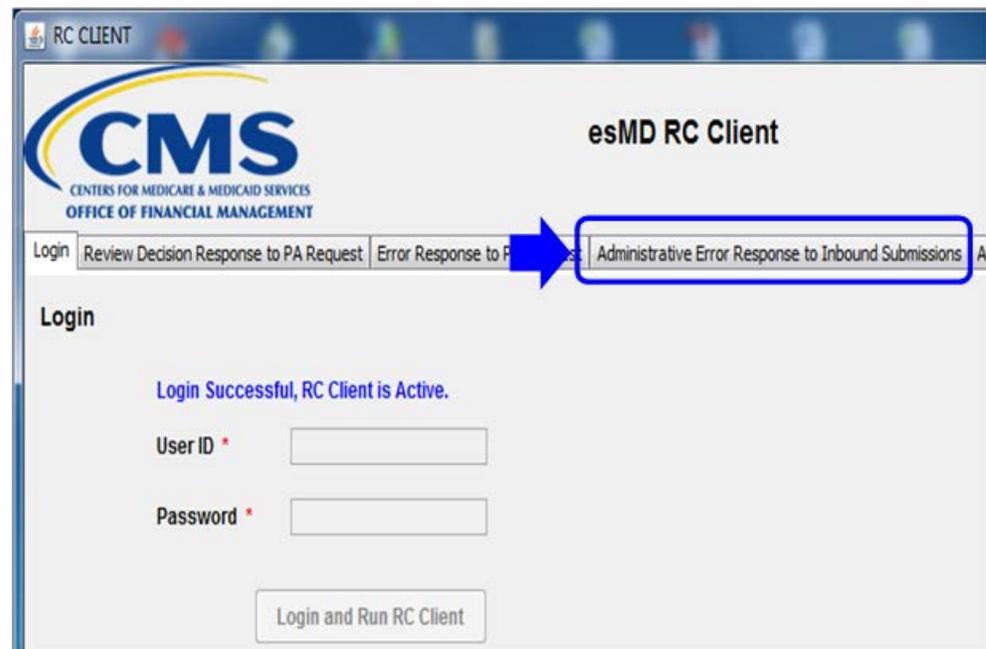
This section provides step-by-step instructions on how to enter an inbound submission error on the **Administrative Error Response to Inbound Submissions** tab.

Step 1.

Entering an Inbound Submissions Error

Select the **Administrative Error Response to Inbound Submissions** tab.

❖ After a successful log in, another log in is not required to navigate to and use the Administrative Error Response to Inbound Submissions tab.



Step 2.
Entering an
Inbound
Submissions
Error

The fields for the **Administrative Error Response to Inbound Submissions** tab are displayed.

❖ **Before You Begin:** If you need a brief description of any of the fields on the tabs, see Appendix A: [Description of Fields on RC Client Tabs](#) on page [105](#).

Enter the **Transaction ID**, select an **Error Situation** or **Error Code** from the Error Situations/Codes drop down menu, and then select **Save** to submit the Inbound Submissions error for submission.

🔗 **Technical Note:** After selecting Save, an Extensible Markup Language (XML) message will be created to be sent to the esMD system and will be packaged into a compressed zip file. The zip file will be placed in a directory specified in the OutboundConfig/outputDirectory of the esmd-rc-client-config.xml. The outbound thread running on the RC Client will push the file to the TIBCO Managed File Transfer (MFT) server.

The screenshot shows the RC CLIENT web application interface. At the top, the CMS logo is displayed with the text 'CENTERS FOR MEDICARE & MEDICAID SERVICES OFFICE OF FINANCIAL MANAGEMENT'. Below the logo, there are navigation tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbound Submissions'. The main content area is titled 'Administrative Error Response To Inbound Submissions'. A blue arrow points to the 'Transaction ID' field, which contains the value '1527485'. Another blue arrow points to the 'Error Situations/Codes' dropdown menu, which is currently set to 'Cannot Read Files / Corrupt Files'. Below these fields are 'Clear' and 'Save' buttons. A blue arrow points to the 'Save' button.

Step 3.
Entering an
Inbound
Submissions
Error

After selecting Save, the **“The Administrative Error Response to Inbound Submissions has been successfully saved for submission”** message is displayed.

✓ Technical Note: After selecting Save, the RC Client validates the data entered and displays errors messages, as applicable.

If the data validation is successful, the Inbound Submissions Error is created, and the **“The Administrative Error Response to Inbound Submission has been successfully saved for submission”** message is displayed.

Note: After successfully saving a decision for submission, all information in the fields are cleared and another response may be entered.



The screenshot displays the 'esMD RC Client' interface. At the top, the CMS logo is visible, along with the text 'CENTERS FOR MEDICARE & MEDICAID SERVICES OFFICE OF FINANCIAL MANAGEMENT'. The main title is 'esMD RC Client'. Below this, there is a navigation bar with tabs: 'Login', 'Review Decision Response to PA Request', 'Error Response to PA Request', and 'Administrative Error Response to Inbound Submissions'. The current tab is 'Administrative Error Response To Inbound Submissions'. A blue arrow points to a message box that reads: 'The Administrative Error Response to Inbound Submissions has been successfully saved for submission'. Below the message box, there are two input fields: 'Transaction ID *' with the value '1527485' and 'Error Situations/Codes *' with a dropdown menu showing 'Cannot Read Files / Corrupt Files'. At the bottom, there are 'Clear' and 'Save' buttons.

7. How to Verify Connection to TIBCO MFT server, Using the Advanced/Debugging Tab

This section provides step-by-step instructions on how to verify connection to the TIBCO MFT server, using the **Advanced/Debugging** tab.

Step 1.

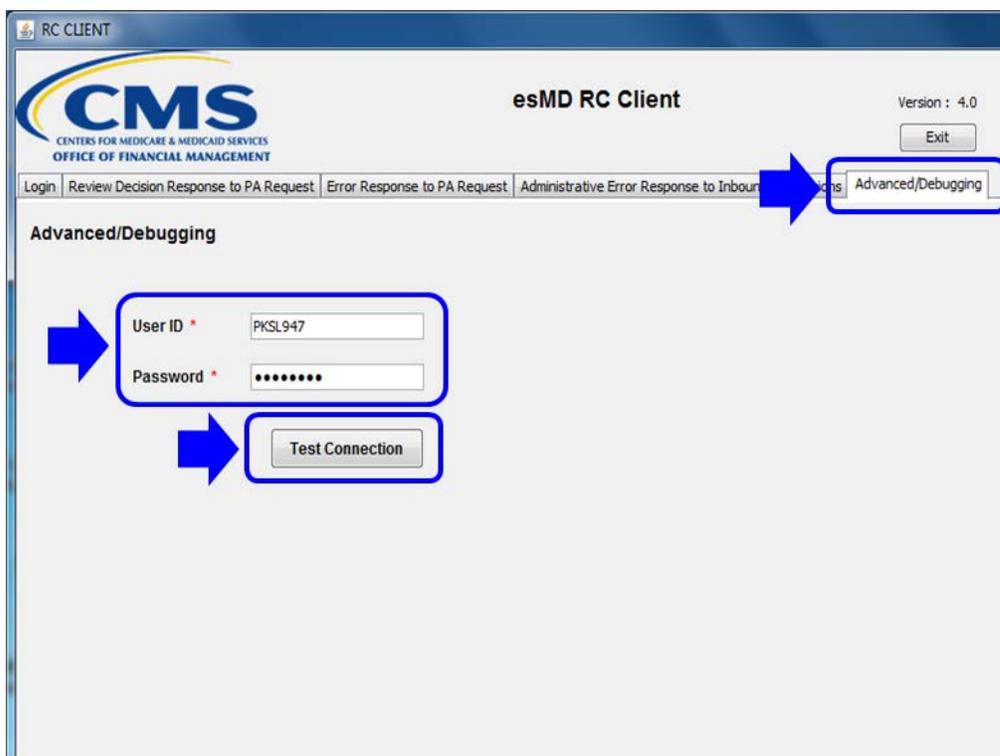
Checking
Connection
to TIBCO
MFT Server

Select the **Advanced/Debugging** tab.

The Advanced/Debugging tab fields are displayed.

On the Advanced/Debugging tab, enter your EIDM **User ID** and **password**.
(This is required on the Advanced/Debugging tab.)

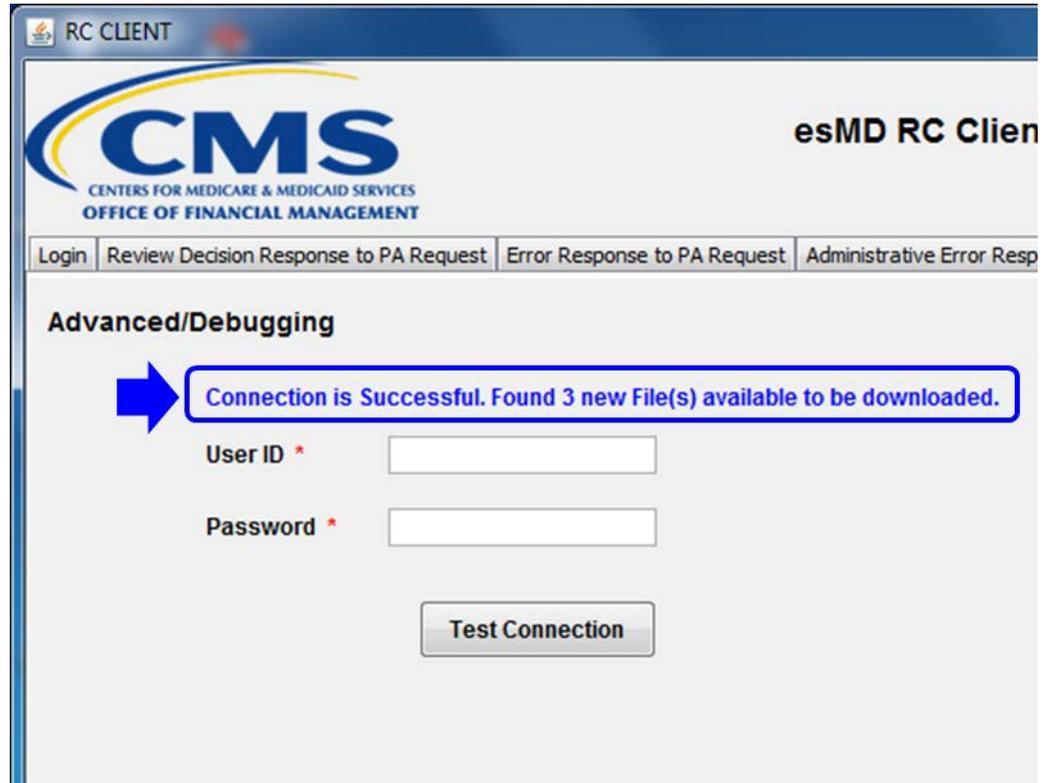
Select **Test Connection**.



Step 2.
Checking
Connection
to TIBCO
MFT Server

After selecting Test Connection, the **“Connection is Successful. Found 3 new File(s) available to be downloaded.”** message is displayed.

Note: After successfully testing your connection, you may select another tab.



8. System Requirements

The following are the system requirements for installing a Java version of the RC Client.

8.1 Processor

The RC Client requires a Pentium 2 266-Megahertz (MHz) processor or greater.

8.2 Disk Space

The disk requirement for the RC Java Client is 10 Megabytes (MB). The documents the RC Client pulls from the TIBCO MFT server may require additional disk space.

8.3 Memory

The RC Java Client requires a minimum of 50 MB of free memory.

8.4 Permissions

The RC Client must have read, write, and execute permissions on all the directories under the installation home.

8.5 Network

The RC Client requires internet connectivity that supports more than 32-Kilobits Per Second (Kbps) transfer speeds.

8.6 Java Framework

The RC Client requires Java Runtime Environment (JRE) 1.6 or greater to run properly.

8.7 Libraries

The Table 2: Libraries lists all the third-party libraries used by the RC Client along with their corresponding versions and a brief description of how the RC Client uses them.

Table 2: Libraries

| Library | Version | Description |
|-------------------------|----------------|---|
| commons-codec | 0.1.51 | Used for Encoded and Decoding |
| commons-compress | 1.2.17 | Used for Extraction and compression of the packages. |
| commons-io | 2.4 | Used for reading and writing files to the Filesystem. |
| commons-lang | 1.7 | Used by the Java Secure Channel for Helper Utilities |
| commons-logging | 1.7 | Logging Framework used by the Jsch. |
| Jcalendar | 1.0 | Used for the popup Calendar in the GUI |
| Jsch | 1.1 | Java Secure Channel for SFTP Connection |
| log4j | 4.0 | Logging Framework |

9. How to Install and Configure a Java Version of RC Client

Review the System Requirements in Section 8. System Requirements to make sure the machine that will host the RC Client meets the necessary requirements.

You can install the RC Client in two ways:

1. Out of the box; or
2. Custom RC Client (Java).

9.1 Out-of-the-Box

The RC Java Client API comes packaged with a sample client. To run this sample client out-of-the-box, the RCs need to follow the procedures in the following sections.

9.1.1 Keystore Set Up

Important: The RC Client uses asymmetric encryption to store the EIDM user credentials securely. For this encryption to work, you will need a secure Java KeyStore (JKS) with Public and Private keys of 2048 length. If you already have a JKS, you only need to update the configuration file with this information. Please refer to Section 15.1 Security for more details on the Security framework used by the RC Client.

1. If you do not have a JKS, create one for the RC Client to use. (Required.)
2. Type the following command to create a new keystore for the RC Client.

```
keytool -genkey -keyalg RSA -keystore <keystore> -alias <alias> -storepass <storepassword> -
keypass <keypassword> -dname "CN=<commonName>, OU=<organizationalUnit>,
O=<organizationName>, L=<localityName>, S=<stateName>, C=<country>" -keysize 2048 -
validity 360
```

Note: Replace <parameter> with the value of the parameter from the list in Table 3: Keystore Creation Parameters.

This command creates the Public and Private keys, using the Rivest, Shamir & Adleman (RSA) Algorithm with a key size of 2048 and validity of one year.

Important: After the Public and Private keys have expired, you must re-create both keys to continue to use the RC Client.

Table 3: Keystore Creation Parameters

| Where | Means |
|-----------------------------------|---|
| <keystore> | The keystore is the home location. If you do not specify the <keystore> option, the default keystore file named <i>keystore.jks</i> in the user's home directory will be created, if it does not already exist. For example, the <i>config/keystore.jks</i> will be created. |
| <alias> | The certificate chain and the private key are stored in a new keystore entry, identified by <i>alias</i> . |
| <storepassword> | The store password is used to protect the integrity of the keystore. It must be at least six characters long. |
| <keypassword> | The key password is used to protect the private key of the generated key pair. If a password is not provided by the user, the user is prompted to provide it. If you press Enter at the prompt for the key password, the key password is set to the same password that was used for the keystore. The <keypassword> must be at least six characters long. |
| <commonName> | The common name is the name for any entity, such as the name of a person (for example, Susan Jones) or the name of your company. |
| <organizationalUnit> | The organizational unit can be used for a small organization, department, or division of an organization (for example, Purchasing). |
| <organizationName> | The organization name is for a large organization or company (for example, ABC Systems, Inc.). |
| <localityName> | The locality name can be for a city (for example, Palo Alto). |
| <stateName> | The state name can be for a U.S. state or province of another country (for example, California or Ontario in Canada). |
| <country> | The country is a two-letter code (for example, US). |

9.1.2 Integrity Verification

The command below will print the public key from the keystore and verify the keystore integrity.

1. Type the following command:

```
keytool -list -v -keystore <keystore> -storepass <storepassword> -alias <alias>
```

Note: Replace <parameter> with the value for the parameter listed in Table 3: Keystore

Creation Parameters.

9.1.3 Java Cryptography Extension (JCE) Policy Update

In addition to creating and providing the keystore, you may need to override the Java Cryptography Encryption (JCE) security policy files if these files were not already overridden.

9.1.3.1 Understanding the JCE Security Policy Files

Due to import control restrictions, the version of the JCE security policy files that are bundled in the Java Development Kit™ (JDK) environment allow "strong" but limited cryptography to be used. To run the RC Client, this security policy must be overridden with the "unlimited strength" policy files that contain no restrictions on cryptographic strengths. If the RC Client is run with the default JCE security policy files, it will cause an error similar to the following:

```
java.security.InvalidKeyException: Illegal key size at
javax.crypto.Cipher.a(DashoA13*...)
```

New JCE security policy files are packaged along with the RC Client and are in the "setup" subdirectory of the installation directory.

Note: These files do not contain additional encryption functionality because such functionality is supported in Sun's JDK.

9.1.3.2 Understanding the Export/Import Issues

JCE for JDK has been through the U.S. export review process. The JCE framework, along with the Sun JCE provider that comes standard with it, is exportable. The JCE architecture allows flexible cryptographic strength to be configured via jurisdiction policy files. Due to the import restrictions of some countries, the jurisdiction policy files distributed with the JDK software have built-in restrictions on available cryptographic strength.

9.1.3.3 JCE Policy Files

The setup directory in the RC Client installation contains the policy files listed in Table 4: JCE Policy Files.

Table 4: JCE Policy Files

| Policy File | Description |
|-----------------------------|--|
| local_policy.jar | Unlimited strength local policy file |
| US_export_policy.jar | Unlimited strength U.S. export policy file |

9.1.3.4 Installation Locations for Windows and UNIX

<java-home> refers to the directory where the JRE was installed. It is determined based on whether you are running JCE on a JRE with the JDK installed. The JDK contains the JRE, but at a different level in the file hierarchy. Table 5: Java Development Kit and Table 6: Java Runtime Environment show examples of the installation for Java version 1.6, but this will work for Java version 7, as well.

Table 5: Java Development Kit

| Environment | Example JDK Installation Directory | JAVA_HOME |
|-------------|------------------------------------|--------------------------|
| Windows | C:\jdk1.6.0 | C:\jdk1.6.0\jre |
| Unix | /home/user1/jdk1.6.0 | /home/user1/jdk1.6.0/jre |

Table 6: Java Runtime Environment

| Environment | Example JRE Installation Directory | JAVA_HOME |
|-------------|------------------------------------|----------------------|
| Windows | C:\jre1.6.0 | C:\jre1.6.0 |
| Unix | /home/user1/jre1.6.0 | /home/user1/jre1.6.0 |

Notes:

1. UNIX (Solaris/Linux) and Windows use different pathname separators; use the appropriate one ("\" or "/") for your environment; and
2. On Windows, for each JDK installation, there may be an additional JRE installed under the "Program Files" directory. Ensure you install the unlimited strength policy Java Archive (JAR) files for all JREs that you plan to use.

9.1.3.5 Setting Up Encryption/Decryption without Limitation

To use the encryption/decryption functionalities of the JCE framework without any limitation:

1. Make a copy of the original JCE policy files (US_export_policy.jar and local_policy.jar in the standard place for JCE jurisdiction policy JAR files) in case you later decide to revert to these "strong" versions; and
2. Copy the policy files with the unlimited strength versions from the "setup" directory per the version of Java to be used (java6 or java7) under the installation directory to the security directory shown in Table 7: Security Directory.

Table 7: Security Directory

| Environment | Installation Directory |
|-------------|--------------------------|
| Windows | <java-home>/lib/security |
| Unix | <java-home>/lib/security |

9.1.4 Configuring the RC Client

Once the keystore is created and the policy files are installed, the RC Client is ready to be configured to use the keystore.

1. Update the keystore information in the configuration file (Required); and

Important: The XML configuration file (i.e. config/esmd-rc-client-config.xml) is used by the RC Client to retrieve important configuration parameters necessary for its operation.

2. Use the comments for each configuration parameter shown in Table 8: Sample RC Client Configuration File as a guide in entering your data.

Table 8: Sample RC Client Configuration File

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:ESMDCConfig xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc/config"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance
xsi:schemaLocation="http://esmd.ois.cms.hhs.gov/v1/rc/config esmd-config.xsd
">

  <!--The TIBCO MFT server Configuration-->
  <ESMDSFTPServer>
    <!--TIBCO MFT Sever host name or IP -->
    <host>eftp2.cms.hhs.gov</host>
    <!--The TIBCO MFT SFTP PORT-->
    <port>11022</port>
    <!-- Update: Use T for VAL, P for PROD-->
    <environmentId>T</environmentId>
    <!--The EFT File Name Prefix-->
    <eftFilePrefix>#EFT</eftFilePrefix>
  </ESMDSFTPServer>
  <!--The Keystore information for Encryption and Security-->
  <KeyStoreInfo>
    <!-- Update: The JKS Keystore Path-->
    <keyStoreLocation>/RCClient/config/keystore.jks</keyStoreLocation>
    <!-- Update: The Encrypted Keystore Password-->
    <encKeyInfo>ItwdafsdviaZNpvV54aRM9ZzQiw==</encKeyInfo>
    <!-- Update: The Encrypted Private Key Password-->
    <encKeyInfoExt>srs8adsfasRtLEB2I=</encKeyInfoExt>
    <!-- Update: The Certificate Alias-->
    <certAlias>selfsigned</certAlias>
  </KeyStoreInfo>
```

```

<!--The Inbound Process Configuration-->
<InboundConfig>
  <!-- Update: Enable the Inbound Process? true/false-->
  <enabled>true</enabled>
  <!--The Pull Frequency for the Inbound Process in minutes; the
default is 240 minutes i.e., 4 hours-->
  <checkFrequency>30</checkFrequency>
  <!-- Update: The RC Client installation/home directory-->
  <rcHomeDirectory>/RCClient</rcHomeDirectory>
  <!-- Update: The target directory to extract the downloaded inbound
files before routing-->
  <targetDirectory>/RCClient/data/download</targetDirectory>
  <!-- Update: The input directory where the inbound payloads and the
metadata will be routed after the extraction-->
  <inputDirectory>/RCClient/data/input</inputDirectory>
  <!-- Update: The temp directory where the files are pulled from TIBCO
MFT-->
  <tempDirectory>/RCClient/data/temp</tempDirectory>
  <!-- Update: The Error directory for routing the inbound error
notifications from esMD/HIH-->
  <errorDirectory>/RCClient/data/error</errorDirectory>
  <!-- Update: The configuration directory for RC Client-->
  <configDirectory>/RCClient/data/conf</configDirectory>
  <!-- Update: The notifications directory for routing the inbound
notifications from esMD/HIH-->
<notificationsDirectory>/RCClient/data/notification</notificationsDirectory>
  <!-- Update: The Remote Inbound Directory path on the TIBCO MFT
server-->
  <remoteInboundDir>/ES####</remoteInboundDir>
  <!--Update: The mail box number for the inbound files used to pick
the inbound files to pull-->
  <inboundRoutingId>ES####</inboundRoutingId>
</InboundConfig>
<!--The Outbound Process Configuration-->
<OutboundConfig>
  <!-- Update: Enable the Outbound Process? true/false-->
  <enabled>true</enabled>
  <!--The push frequency for the Outbound process in minutes default is
15 minutes-->
  <pushFrequency>15</pushFrequency>
  <!-- Update: The temp directory to use for the outbound process for
creating the PMPDA/Notification files-->
  <tempDirectory>/RCClient/data/temp</tempDirectory>
  <!-- Update: The local outbound directory to push the outbound files
from-->
  <outputDirectory>/RCClient/data/output</outputDirectory>
  <!-- Update: The Remote Outbound directory to push files-->
  <remoteOutboundDir>/ES####_UPLOAD</remoteOutboundDir>
  <!--The Remote Outbound mail box number to push files onto esMD
servers via TIBCO MFT-->
  <outboundRoutingId>ESMD2</outboundRoutingId>
  <!--The Outbound File name prefix-->

```

```

<outboundFilePrefix>ON</outboundFilePrefix>
</OutboundConfig>
</ns2:ESMDCConfig>

```

9.1.4.1 Configuring Your Password Encryption

1. Run the encryptConfig.bat script to update the KeystoreInfo section with the encrypted keystore and private key password;
2. When the script prompts, enter your keystore and private key passwords, as shown in Figure 2: Keystore Password Encryption and Figure 3: Private Key Password Encryption, and click **OK** in each Input window; and

Figure 2: Keystore Password Encryption

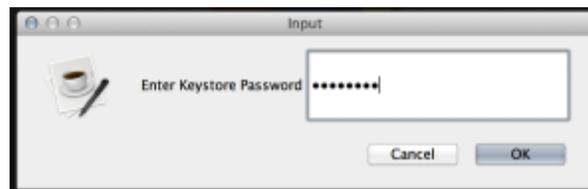


Figure 3: Private Key Password Encryption



3. Update the XML configuration file parameter "`certAlias`" with the alias of the certificate you created in Section 9.1.1 Keystore Set Up .

The KeystoreInfo section of the XML Configuration file is now updated with the encrypted passwords and the certificate information required for the RC Client operation.

9.1.5 Running the RC Client

Before you, as the RC, run the sample RC Client, you must double-check all the configuration parameters in the XML configuration file, especially the ones with the "Update" prefix in the comments of the sample XML configuration file, as shown in Table 8: Sample RC Client Configuration File.

1. To run the sample RC Client, run the "RcClientUI.exe" utility provided in the distribution package.
2. Start the RC Client by providing login credentials for the Login tab and select the "Login and Run RC Client" button.

9.2 Custom RC Client

The RC Java Client provides an API, so the RC can extend the RC Client to fit the RC's environmental needs. The API enables the RC to perform the following functions:

- Log in to the TIBCO MFT server (See Section 1.4.3 RC Client Operation Overview);
- Get Notifications from the TIBCO MFT server using the Secure Shell (SSH) File Transfer Protocol (SFTP). (Refer to Section 15.2.2 Inbound);
- Decrypt/encrypt and store the login credentials using a secure RSA algorithm. (Refer to Section 15.2.7 Utilities - Encryption);
- Pull medical documentation from the TIBCO MFT server. (Refer to Section 15.2.2 Inbound);
- Extract the downloaded packages. (Refer to Section 15.2.2 Inbound);
- Check the payloads using checksums in the metadata. (Refer to Section 15.2.2 Inbound);
- Push the outbound files from the "output" directory. (Refer to Section 15.2.3 Outbound); and
- Create custom files (for example, the custom PMD PA files. Refer to Section 15.2.4).

Note: The procedures for customizing the RC Client API are beyond the scope of this document. (The source code that will be packaged along with the RC Client contains the documentation needed for integrating the API.)

10. TIBCO® MFT File Transfers

The RC Client uses a TIBCO MFT server to interact with esMD. It uses the SFTP to connect to the TIBCO MFT server and uses the Is/Get/Put commands to interact with the files. There are four types of inbound files that RC Client pulls from the TIBCO MFT server, described in Table 9: Inbound Files.

Note: “ES0001” is a sample mailbox number that the TIBCO MFT server uses to identify the RC and “0977890” is a sample Transaction ID, which is shown in Table 9: Inbound Files and Table 10: Outbound Files. The final two qualifiers in the file name that are prefixed with “D” and “T” are the Date and Timestamp, respectively. The Validation files will have a “T” prefix and the Production files will have a “P” prefix.

Only 1,022 files will be visible in the TIBCO MFT server at one time by the MFT Mailbox Routing number. As each file is pulled, the TIBCO MFT server will bring new files from the mainframe and place them at the bottom of the queue.

Table 9: Inbound Files

| Type | Example File Name | Delivery Type Description |
|---------|------------------------------------|---|
| Inbound | T.ES0001.E0977890.D140116.T1033445 | The E in prefix to the 0977890 Transaction ID indicates an esMD payload. |
| Inbound | T.ES0001.A0977890.D140116.T1033445 | Successful Acknowledgement that the HIH has received the pickup notification. |
| Inbound | T.ES0001.R0977890.D140116.T1033445 | Validation Error received by the RC for the Pickup Notification sent to esMD. |
| Inbound | T.ES0001.N0977890.D140116.T1033445 | Successful Acknowledgement that the HIH has received the PA Review Response. |
| Inbound | T.ES0001.M0977890.D140116.T1033445 | Validation Error received by the RC for the Administrative Error Response sent to esMD. |
| Inbound | T.ES0001.V0977890.D140116.T1033445 | Validation Error received by the RC for the PA Review Response sent to esMD. |
| Inbound | T.ES0001.X0977890.D140116.T1033445 | Virus Scan Failure Error received by the RC from the esMD on a file sent previously. |
| Inbound | T.ES0001.S0977890.D140116.T1033445 | Successful Acknowledgement that the HIH has received the administrative error response. |

Table 10: Outbound Files

| Type | Example File Name | Delivery Type Description |
|----------|--|--|
| Outbound | T#EFT.ON.ESMD2.E0977890.D140116.T1033445 | E indicates PA Review Response. |
| Outbound | T#EFT.ON.ESMD2.D0977890.D140116.T1033445 | D indicates an Administrative Error. |
| Outbound | T#EFT.ON.ESMD2.P0977890.D140116.T1033445 | P indicates an esMD pickup notification i.e. both and success and error. |

11. XML Messages

This section describes the various XML messages transferred during the inbound and outbound processes.

11.1 Inbound

Note: Please refer to Section 13.3 Inbound Processes for details on how RC Client routes the inbound files once they are successfully processed into the data directories.

The RC Client transfers the following files during the inbound process:

- Payload Files;
- Flat File Rendering (FFR);
- Cover Sheet;
- Metadata File;
- Pickup HIH Status Response;
- Pickup Validation Error Response;
- Administrative Error HIH Status Response;
- Administrative Error Response Validation Error;
- Virus Scan Error Response;
- PA Review Result HIH Status Response; and
- PA Review Result Validation Error Response.

11.1.1 Payload Files

The RC Client will receive PDF files as payloads in the inbound documents with delivery type “E”. An example payload file name is E_185457-esmdQSSIVG0407141396893280928-0.pdf.

11.1.2 Flat File Rendering (FFR)

The RC Client will receive FFR file in the inbound documents along with the payload files for the X12N 278 request. An example FFR file is shown in Table 11: E_185457-flatfilerendering.ffr.

For more details on the layout of the FFR and X12N 278 requests, please see the X12N 278 Companion Guide under the esMD Downloads section, using the link below:

http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_Review-Contractors.html

Table 11: E_185457-flatfilerendering.fff

| | | | | | |
|-----------------------------------|------------------|-----------------------------|-------------------------------|----------------------------|---------|
| ST | 2781523 | 005010X217 | | BHT | |
| 0007013920394930203 | | | | 200812081615 | RUHL |
| 1 | 201NM1 | X3 | 2JOHNSON | | |
| 46111222333 | | | | | |
| HL | 2 | 1 | 211NM1 | 1P | 1SMITH |
| MUFFY | | M | | | PH.D |
| XX1111111112 | | | | | |
| N3 | PO BOX 123 | | | | |
| N4 | CINCINNATI | | OH43017 | | |
| PER | ICWILBER | | | | |
| FX8189991234 | | | | | |
| TE8187691304 | | | | | |
| EXPRV | CO PXC208D00000X | | | | |
| HL | 3 | 2 | 221NM1 | IL | 1JONES |
| BARBARA | | T | | MR | M.D. |
| IIAA123456 | | | | | |
| N3 | PO BOX | | | | 123 |
| N4 | CINCINNATI | | OH43017 | | |
| DMG | D8 19511204 | | | FHL | 4 |
| 3 | EV1TRN | 1 | 12345678900987654321768958473 | | |
| 1311234567500 | | | | UM | |
| INI1 13A AA EM AP ONCA U 34Y1 PWK | | | | 77ELACATTACHMENT | CONTROL |
| NUMBER 1 | | | | | |
| NM1 | 72 | 1JOHNSON | | | |
| BARBARA | | | | | |
| 461111111111 | | | | | |
| N3 | PO BOX 123 | | | | |
| N4 | CINCINNATI | | OH43017 | | HL |
| 5 | 4 | SS0TRN | 1 | 0001-201501150001UBERTEST- | |
| 20141224-SVC1 | | 9555555555UBERTESTHAPPYPATH | | | |
| UM | SCN3 | SV1 | HC27447 | | |
| 36345.25 | UN1 | | SE | 27 | 1523 |

11.1.3 Cover Sheet

The RC Client will receive cover sheet in the inbound documents along with the payload files for the X12N 278 request. An example cover sheet is shown in Figure 4: Sample EDI Cover Sheet - E_1234567-coversheet.pdf

Figure 4: Sample EDI Cover Sheet - E_1234567-coversheet.pdf

EDI Cover Sheet

| | |
|--|---|
| Transaction ID : | 1234567890 |
| Procedure code Qualifier : | HCPCS123 |
| HCPCS, CPT, ICD9/10 procedure code : | ICD9 |
| Pricing Modifiers : | 854329.25 |
| Beneficiary identification : | |
| HICN : | HICN1234 |
| Date of birth : | 01/1/ |
| Gender : | HICN1234 |
| Name : | |
| Address : | |
| Ordering provider identification : | |
| NPI : | 1234567890 |
| Name : | |
| Address : | |
| Rendering provider/supplier identification : | |
| NPI : | 1234567890 |
| Name : | |
| Address : | |
| Date prior authorization request submitted : | 01/30/2015 |
| State where service is rendered : | Maryland asfdadsf asfsadfd asdfasdfa asfdadsfda asdfadsfas asdfsafdsaf asdfadsfasd asdfadsfda asdfadsfa asdfadsf asfdadsfda asfdadsfa |
| Facility/Agency : | |
| NPI : | 1234567890 |
| Name : | |
| Address : | |
| CMS Certification Number : | CER123456789 |
| Place of service as applicable : | Maryland |
| ICD 9/10 diagnosis code : | ICD9 |
| Requester/contact : | |
| Name : | |
| Telephone : | (210) 810-5000 |
| Documentation – Attachment Control Numbers : | ACN1234567 |

11.1.4 Metadata File

The metadata file accompanies the payload files, FFR, and X12N 278 request copy in the inbound documents with delivery type “E”. The metadata file contains information about the payloads like the Object Identifier (OID), Transaction ID, Submission metadata (includes Attachment Control Number and other information), and optional metadata. The Content Type Code will change for each line of business. See Table 12: E_123456-Metadata.xml.

Note: The metadata file will remain the same for all lines of business including Additional Documentation Requests (ADRs), PMD PA Requests, Non-Emergent Ambulance Transport and HBO Prior Authorization requests, Appeals, and Recovery Auditor (RA) requests.

Note: The Claim ID is optional for Appeals and ADMCs. For more information on the Content Type Codes, please refer to Appendix F: Content Type Codes and Business Types.

Table 12: E_123456-Metadata.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:RetrieveMedicalDocumentationResponse
xmlns:ns0="http://esmd.ois.cms.hhs.gov/v1/rc" returnCode="1"
serviceSuccessful="true">
  <statusDescription>T</statusDescription>
  <NumberOfDocuments>3</NumberOfDocuments>
  <ESMDPackage>
    <ESMDTransaction TransactionId="28894"
DeliveryType="E"/>
    <SendingOID>urn:oid:123.456.657.132</SendingOID>

<TargetOID>urn:oid:2.16.840.1.113883.13.34.110.1.999.1</TargetOID>

    <CompleteSubmission>true</CompleteSubmission>
    <RequestType>XDR</RequestType>
    <SubmissionMetadata>
      <BusinessType>XDR X12</BusinessType>
      <CreationTime>2015-02-09T19:03:02.619-
05:00</CreationTime>
      <SubmissionTime>2015-02-09T19:03:02.619-
05:00</SubmissionTime>
      <EFTSubmissionTime>2015-02-09T19:03:02.619-
05:00</EFTSubmissionTime>
      <ContentTypeCode>13</ContentTypeCode>
      <NPI>1234567890</NPI>
      <ClaimId/>
      <CaseId/>
    </SubmissionMetadata>
    <Documentation DocumentUniqueIdentifier="E_28894-
_esmdQSSI_SK_ADR_VALID_14235265790061423526581795_0"
```

```

MimeType="application/pdf" FileName="E_28894-
_esmdQSSI_SK_ADR_VALID_14235265790061423526581795_0.pdf">
  <OptionalMetadata>
    <FieldName>FileName</FieldName>
    <FieldValue>E_28894-
_esmdQSSI_SK_ADR_VALID_14235265790061423526581795_0.pdf</FieldVa
lue>

  </OptionalMetadata>
  <OptionalMetadata>
    <FieldName>Description</FieldName>
    <FieldValue>From esMD</FieldValue>
  </OptionalMetadata>
  <OptionalMetadata>
    <FieldName>Checksum</FieldName>

<FieldValue>73d1ba48402985bac6ddab12f47c179dddbbe4c6</FieldValue
>

  </OptionalMetadata>
</Documentation>
<Documentation DocumentUniqueIdentifier="E_28894-
flatfilerendering.ffr" MimeType="text/xml" FileName="E_28894-
flatfilerendering.ffr">
  <OptionalMetadata>
    <FieldName>FileName</FieldName>
    <FieldValue>E_28894-
flatfilerendering.ffr</FieldValue>
  </OptionalMetadata>
  <OptionalMetadata>
    <FieldName>AttachmentControlNumber</FieldName>
    <FieldValue>acn1</FieldValue>
  </OptionalMetadata>
  <OptionalMetadata>
    <FieldName>Checksum</FieldName>

<FieldValue>83d1ba48402985bac6ddab12f47c179dddbbe4c6</FieldValue
>

  </OptionalMetadata>
</Documentation>
<Documentation DocumentUniqueIdentifier="E_28894-
coversheet.pdf" MimeType="application/pdf" FileName="E_28894-
coversheet.pdf">
  <OptionalMetadata>
    <FieldName>FileName</FieldName>
    <FieldValue>E_28894-coversheet.pdf</FieldValue>
  </OptionalMetadata>
  <OptionalMetadata>
    <FieldName>AttachmentControlNumber</FieldName>

```

```

        <FieldValue>acn1</FieldValue>
    </OptionalMetadata>
    <OptionalMetadata>
        <FieldName>Checksum</FieldName>

<FieldValue>93d1ba48402985bac6ddab12f47c179dddbbe4c6</FieldValue
>
        </OptionalMetadata>
    </Documentation>
</ESMDPackage>
</ns0:RetrieveMedicalDocumentationResponse>

```

11.1.5 Pickup HIH Status Response

When the RC Client sends a pickup notification to esMD, the esMD application processes the notification and sends the response to the HIH. Once the esMD application receives the acknowledgement for the pickup notification from HIH, then it generates the Pickup Status Response and sends it to the RC, indicating the response was sent to the HIH, as detailed in the code in Table 13: A_123456_Pickup_HIH_Status_Response.xml.

Note: The HIH Pickup Status Response will remain the same for all lines of business including ADRs, PMD PA Requests, Non-Emergent Ambulance Transport, and HBO PA requests, and ADMCs.

Table 13: A_123456_Pickup_HIH_Status_Response.xml

```

<?xml version="1.0" encoding="UTF-8" standalone="true"?>

<ns2:RCPickupNotificationResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc/config">
    <ESMDTransactionId>123456</ESMDTransactionId>
    <ErrorInfo xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:nil="true"/>
    <status>Success</status>
    <statusDesc>SENT PICKUP STATUS TO HIH</statusDesc>
</ns2:RCPickupNotificationResponse>

```

11.1.6 Pickup Validation Error Response

When the RC Client sends a Pickup Notification to esMD, the esMD application processes and sends the Pickup Notification to the HIH. If there is an error in processing the Pickup Notification submitted by the RC, the esMD application generates the Pickup Validation Error Response, as detailed in Table 14: R_123456_Pickup_Validation_Error.xml, and sends it to the RC. The RC will correct the pickup notification and resubmits the PA Results Result. Refer to the code located in Table 14: R_123456_Pickup_Validation_Error.xml.

Table 14: R_123456_Pickup_Validation_Error.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:RCPickupNotificationResponse
xmlns:ns0="http://esmd.ois.cms.hhs.gov/v1/rc/config">
  <ESMDTransactionId>123456</ESMDTransactionId>
  <ErrorInfo>
    <ErrorCode>614</ErrorCode>
    <ErrorName/>
    <ErrorDescription>Unable to parse RC
response</ErrorDescription>
  </ErrorInfo>
  <Status>FAILED</Status>
  <StatusDesc>ESMD internal system error, please resubmit
proper file</StatusDesc>
</ns0:RCPickupNotificationResponse>
```

11.1.7 Administrative Error HIH Status Response

When the RC Client sends an administrative error for an inbound submission to esMD, the esMD application processes the administrative error and sends the response to the HIH. Once the esMD application receives the acknowledgement for the administrative error from HIH, then it generates the Administrative Error HIH Status Response and sends it to the RC, indicating the error was sent to the HIH, as detailed in the code in Table 15:

S_123456_Administrative_Error_HIH_Status_Response.xml.

Note: The Administrative Error HIH Status Response will remain the same for all lines of business including ADRs, PMD PA Requests, Non-Emergent Ambulance Transport, and HBO PA requests, and ADMCs.

Table 15: S_123456_Administrative_Error_HIH_Status_Response.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:SubmitPADeterminationResponseResult
xmlns:ns0="http://esmd.ois.cms.hhs.gov/v1/rc" returnCode="1"
serviceSuccessful="true">
  <statusDescription>Sent administrative error response
delivery to HIH</statusDescription>
  <ESMDTransaction TransactionId="123456" DeliveryType="S"/>
</ns0:SubmitPADeterminationResponseResult>
```

11.1.8 Administrative Error Response Validation Error

When the RC Client sends an Administrative Error Response to esMD, the esMD application processes and sends the Administrative Error Response to the HIH. If there is an error in processing the Administrative Error Response submitted by the RC, the esMD application

generates the Administrative Error Response Validation Error, as detailed in Table 16: M_123456_Administrative_Response_Validation_Error.xml, and sends it to the RC. The RC will correct the administrative error response and resubmits it. Refer to the code located in Table 16: M_123456_Administrative_Response_Validation_Error.xml.

Table 16: M_123456_Administrative_Response_Validation_Error.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:SubmitPADeterminationResponseResult
xmlns:ns0="http://esmd.ois.cms.hhs.gov/v1/rc" returnCode="1"
serviceSuccessful="true">
  <statusDescription>ESMD internal system error (validation
failure) for administrative error response, please
resubmit</statusDescription>
  <ESMDTransaction TransactionId="123456" DeliveryType="M"/>
</ns0:SubmitPADeterminationResponseResult>
```

11.1.9 Virus Scan Error Response

When the RC Client sends any outbound file to esMD, the esMD application sends it to the Virus Scan Gateway for virus scan. If there are any viruses detected in the file received, the esMD application sends the message detailed in Table 17: X_123456_Virus_Scan_Error.xml to the RC. The RC Client will then pull this Virus Scan Error, stop the inbound and outbound processes, and lock down the RC Client to prevent RC Client from interacting with esMD. In this situation, the RC Client does not enable recovery, and the RC will contact esMD Help Desk. Refer to the code located in Table 17: X_123456_Virus_Scan_Error.xml.

Table 17: X_123456_Virus_Scan_Error.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<tns:RCPickupNotificationResponse
xmlns:tns="http://esmd.ois.cms.hhs.gov/v1/rc/config"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://esmd.ois.cms.hhs.gov/v1/rc/config esmd-
config.xsd">
  <ESMDTransactionId>123456</ESMDTransactionId>
  <ErrorInfo>
    <ErrorCode>560</ErrorCode>
    <ErrorName>VirusFound</ErrorName>
    <ErrorDescription>ESMD validation error: Submission is infected with
virus</ErrorDescription>
  </ErrorInfo>
  <Status>FAILED</Status>
  <StatusDesc>Outbound Response File contains virus and so the response is
rejected.</StatusDesc>
</tns:RCPickupNotificationResponse>
```

11.1.10 PA Review Result HIH Status Response

When the RC Client sends a PA Review Result to esMD, the esMD application processes the file and sends the PA Review Result to the HIH. The esMD application submits the PA Review Result HIH Status Response, detailed in Table 18:

N_123456_PA_Review_Result_HIH_Status_Response.xml, and sends it to the RC, indicating the result was sent to the HIH. Please refer to the code located in Table 13:

A_123456_Pickup_HIH_Status_Response.xml.

Table 18: N_123456_PA_Review_Result_HIH_Status_Response.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<63ool:SubmitPADeterminationResponseResult
xsi:schemaLocation="http://esmd.ois.cms.hhs.gov/v1/rc
../../config/esmd-rc.xsd "
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:esmdl="http://esmd.ois.cms.hhs.gov/v1/rc/transaction"
xmlns:63ool="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:cmsbt="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <statusDescription>PA Review Decision Response results -
  Successfully delivered to HIH</statusDescription>
  <ESMDTransaction DeliveryType="N" TransactionId="123456"/>
</63ool:SubmitPADeterminationResponseResult>
```

11.1.11 PA Review Result Validation Error Response

When the RC Client sends a PA Review Result to esMD, the esMD application processes and sends the PA Review Result to the HIH. If there is an error in processing the PA Review Result submitted by the RC, the esMD application generates the PA Results Response Error, as detailed in Table 19: V_123456_PA_Review_Response_Validation_Error.xml, and sends it to the RC. The RC will correct the response and resubmits the PA Results Result. Refer to the code located in Table 19: V_123456_PA_Review_Response_Validation_Error.xml.

Table 19: V_123456_PA_Review_Response_Validation_Error.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<63ool:SubmitPADeterminationResponseResult
xsi:schemaLocation="http://esmd.ois.cms.hhs.gov/v1/rc/config/esm
d-rc.xsd "
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:esmdl="http://esmd.ois.cms.hhs.gov/v1/rc/transaction"
xmlns:63ool="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:cmsbt="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <statusDescription>statusDescription</statusDescription>
  <ESMDTransaction DeliveryType="V" TransactionId="123456"/>
```

```

    <ValidationFailure>
      <FailureCode>541</FailureCode>
      <FailureReason>ESMD validation error: Transaction ID is
invalid</FailureReason>
    </ValidationFailure>
    <ValidationFailure>
      <FailureCode>556</FailureCode>
      <FailureReason>ESMD validation error: Decision Indicator
must be A, N, or M</FailureReason>
    </ValidationFailure>
  </64ool:SubmitPADeterminationResponse>

```

11.2 Outbound

Note for API users: Please refer to the properties files packaged with the source code for more details on the reference data needed to populate the outbound XMLs described in this section.

The RC Client transfers the following messages during the outbound process:

- Pickup Notification;
- Error Pickup Notification;
- Review Decision Response to PA Request;
- Error Response to PA request; and
- Administrative Error Response to Inbound Submissions.

11.2.1 Pickup Notification

The RC Client generates pickup notifications for all inbound files with delivery type “E” pulled from TIBCO MFT server and processed successfully, as detailed in Table 20:

P_186303_Pickup_Notification.xml. Refer to the code located in Table 20:

P_186303_Pickup_Notification.xml.

Table 20: P_186303_Pickup_Notification.xml

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:RCPickupNotification
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc/config">
  <ESMDTransactionId>186303</ESMDTransactionId>
  <RoutingId>ES9999</RoutingId>
  <PickupTime>2015-03-18T14:42:35.292-04:00</PickupTime>
  <SubmissionTime>2015-03-12T22:51:09.632-
04:00</SubmissionTime>
</ns2:RCPickupNotification>

```

11.2.2 Error Pickup Notification

The RC Client generates pickup error notifications for all inbound files pulled from TIBCO MFT and processed unsuccessfully, as detailed in Table 21:

P_186303_Pickup_Error_Notification.xml. The processing errors are generated in two scenarios:

1. Checksum verification failed (i.e., the payload file received by the RC client does not match the file sent by esMD); and
2. Extraction was unsuccessful (i.e., the RC client could not successfully unzip the file received from the server).

Refer to the code located in Table 21: P_186303_Pickup_Error_Notification.xml.

Refer to the Section 11.2.5 Administrative Error Response to Inbound Submissions for more details on the errors sent from RC to the esMD for an inbound submission processing error.

Table 21: P_186303_Pickup_Error_Notification.xml

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:RCPickupNotification
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc/config">
  <ESMDTransactionId>186303</ESMDTransactionId>
  <RoutingId>ES9999</RoutingId>
  <PickupTime>2015-03-18T14:42:35.292-04:00</PickupTime>
  <SubmissionTime>2015-03-12T22:51:09.632-
04:00</SubmissionTime>
  <ErrorInfo>
    <ErrorCode>535</ErrorCode>
    <ErrorName> ERROR VERIFYING PAYLOAD CHECKSUM </ErrorName>
    <ErrorDescription> ESMD_535 - RC Client processing error (Checksum
issue). Please resubmit.</ErrorDescription>
  </ErrorInfo>
</ns2:RCPickupNotification>
```

11.2.3 Review Decision Response to PA Request

The Review Decision Response Result to PA Request is the XML message from the RC to the HIH to inform the HIH of the review decision.

11.2.3.1 PA Review Response with Decision Indicator ‘Affirmed’

Table 22: E_1523121_PA_Review_Response.xml shows the XML message generated for a review response with decision indicator as “Affirmed”.

The RC process for entering an A-Affirmed decision, which creates the XML indicated below, is

detailed in Section 4.1 How to Enter an A-Affirmed Decision.

Table 22: E_1523121_PA_Review_Response.xml

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:SubmitPADeterminationResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:ns3="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <ESMDTransaction RoutingId="ES9999" DeliveryType="E"
TransactionId="1523121"/>
  <PAReviewResponse>
    <CreationTime>2015-03-17T23:06:27.637-
04:00</CreationTime>
    <SubmissionTime>2015-03-17T23:07:28.048-
04:00</SubmissionTime>
    <ProcedureLevelRecordList>
      <ProcedureLevelRecord>
        <ProcedureCode>K0802</ProcedureCode>
        <DecisionIndicator>A</DecisionIndicator>
      </ProcedureLevelRecord>
    </ProcedureLevelRecordList>
    <UniqueTrackingNumber>A0014280106700</UniqueTrackingNumber>
  </PAReviewResponse>
</ns2:SubmitPADeterminationResponse>
```

11.2.3.2 PA Review Response with Decision Indicator “Affirmed” with Change

Table 23: E_1523124_PA_Review_Response.xml shows the XML message generated for a review response with decision indicator as ‘Affirmed’ with changes.

The RC process for entering an M-Affirmed with Change decision, which creates the XML indicated below, is detailed in the Section 4.2 How to Enter an M-Affirmed with Change Decision.

Please refer to the Appendix D: PA Reason Codes for more information on the reason codes used in the PA Review Response.

Table 23: E_1523124_PA_Review_Response.xml

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:SubmitPADeterminationResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:ns3="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <ESMDTransaction RoutingId="ES9999" DeliveryType="E"
```

```

TransactionId="1523124"/>
  <PAReviewResponse>
    <CreationTime>2015-03-17T23:03:29.861-
04:00</CreationTime>
    <SubmissionTime>2015-03-17T23:05:18.938-
04:00</SubmissionTime>
    <ProcedureLevelRecordList>
      <ProcedureLevelRecord>
        <ProcedureCode>A0426</ProcedureCode>
        <DecisionIndicator>M</DecisionIndicator>
        <UnitsDateRangeRecord>
          <ApprovedUnits>9</ApprovedUnits>
          <ApprovedDateRange>
            <StartDate>2015-03-18</StartDate>
            <EndDate>2015-03-26</EndDate>
          </ApprovedDateRange>
        </UnitsDateRangeRecord>
      </ProcedureLevelRecord>
    </ProcedureLevelRecordList>
    <UniqueTrackingNumber>A0014280106621</UniqueTrackingNumber>
    <ReasonCodeList>
      <ReasonCode>ADB23</ReasonCode>
      <ReasonCode>WVYZ1</ReasonCode>
    </ReasonCodeList>
  </PAReviewResponse>
</ns2:SubmitPADeterminationResponse>

```

11.2.3.3 PA Review Response with Decision Indicator “Non Affirmed”

Table 24: E_1541233_PA_Review_Response.xml shows the XML message generated for a review response with decision indicator as “Non Affirmed”.

The RC process for entering an N-Non Affirmed decision, which creates the XML indicated below, is detailed in the Section 4.3 How to Enter an N-Non Affirmed Decision.

Please refer to the Appendix D: PA Reason Codes for more information on the reason codes used in the PA Review Response.

Please refer to the Appendix C: Industry Codes for more details on the Industry Codes to be used in an N-Non Affirmed response.

Note for API users: For the XDR PA Responses, the IndustryCodeRecordList will be discarded if RC sends the list, when the esMD system processes the PA Review Response.

Table 24: E_1541233_PA_Review_Response.xml

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:SubmitPADeterminationResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:ns3="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <ESMDTransaction RoutingId="ES9999" DeliveryType="E"
TransactionId="1541233"/>
  <PAReviewResponse>
    <CreationTime>2015-03-17T23:07:32.455-
04:00</CreationTime>
    <SubmissionTime>2015-03-17T23:08:40.451-
04:00</SubmissionTime>
    <ProcedureLevelRecordList>
      <ProcedureLevelRecord>
        <ProcedureCode>K0802</ProcedureCode>
        <DecisionIndicator>N</DecisionIndicator>
        <UniqueTrackingNumber>A0014280106680</UniqueTrackingNumber>
        <IndustryCodeRecordList>
          <IndustryCodeRecord>
            <IndustryCode>04</IndustryCode>
            <IndustryCodeDescription>Authorized
Quantity Exceeded</IndustryCodeDescription>
          </IndustryCodeRecord>
          <IndustryCodeRecord>
            <IndustryCode>16</IndustryCode>
            <IndustryCodeDescription>Inappropriate
facility type</IndustryCodeDescription>
          </IndustryCodeRecord>
        </IndustryCodeRecordList>
        <ReasonCodeList>
          <ReasonCode>PMD1A</ReasonCode>
          <ReasonCode>PMD9A</ReasonCode>
          <ReasonCode>PMD2B</ReasonCode>
        </ReasonCodeList>
      </ProcedureLevelRecord>
    </ProcedureLevelRecordList>
  </PAReviewResponse>
</ns2:SubmitPADeterminationResponse>

```

11.2.4 Error Response to PA request

The Error Response to PA Request is the XML message from the RC to the HIH, to inform the HIH of the error response as detailed in Table 25: E_1521342_PA_Review_Response.xml.

Please refer to the Appendix B: Reject Error Codes for more information on the error codes

used in the Error Review Response for a PA Request.

Table 25: E_1521342_PA_Review_Response.xml

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:SubmitPADeterminationResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:ns3="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <ESMDTransaction RoutingId="ES9999" DeliveryType="E"
TransactionId="1521342"/>
  <PAReviewResponse>
    <CreationTime>2015-03-17T23:10:22.327-
04:00</CreationTime>
    <SubmissionTime>2015-03-17T23:11:46.176-
04:00</SubmissionTime>
    <ErrorResponseDetail>
      <DecisionIndicator>R</DecisionIndicator>
      <RejectErrorCodeRecordList>
        <RejectErrorCodeRecord>
          <ErrorCategoryName>Medical-
Info</ErrorCategoryName>
          <ErrorCodeRecordList>
            <ErrorCodeRecord>
              <ErrorCode>15</ErrorCode>
              <ErrorCodeDescription>Number of
Units is missing or invalid</ErrorCodeDescription>
            </ErrorCodeRecord>
            <ErrorCodeRecord>
              <ErrorCode>33</ErrorCode>
              <ErrorCodeDescription>Place of
Service code is missing or invalid</ErrorCodeDescription>
            </ErrorCodeRecord>
          </ErrorCodeRecordList>
        </RejectErrorCodeRecord>
        <RejectErrorCodeRecord>
          <ErrorCategoryName>Beneficiary</ErrorCategoryName>
          <ErrorCodeRecordList>
            <ErrorCodeRecord>
              <ErrorCode>64</ErrorCode>
              <ErrorCodeDescription>HIC Number is
missing or invalid</ErrorCodeDescription>
            </ErrorCodeRecord>
          </ErrorCodeRecordList>
        </RejectErrorCodeRecord>
      </RejectErrorCodeRecordList>
      <ReasonCodeList>

```

```

        <ReasonCode>PMD1A</ReasonCode>
        <ReasonCode>PMD2C</ReasonCode>
        <ReasonCode>PMD3A</ReasonCode>
        <ReasonCode>PMD3B</ReasonCode>
    </ReasonCodeList>

    <UniqueTrackingNumber>A0014280106600</UniqueTrackingNumber>
  </ErrorResponseDetail>
</PAReviewResponse>
</ns2:SubmitPADeterminationResponse>

```

11.2.5 Administrative Error Response to Inbound Submissions

The Administrative Error Response is the XML message from the RC to the HIH to inform the HIH of the administrative error response to inbound submissions.

Note: Section 6 How to Submit an Inbound Submission Error on the Administrative Error Response to Inbound Submissions Tab describes the process of creating an XML message, using the RC Client.

Table 26: D_1532432_Administrative_Error_Response.xml provides the PA Review Decision Response XML.

Table 26: D_1532432_Administrative_Error_Response.xml

```

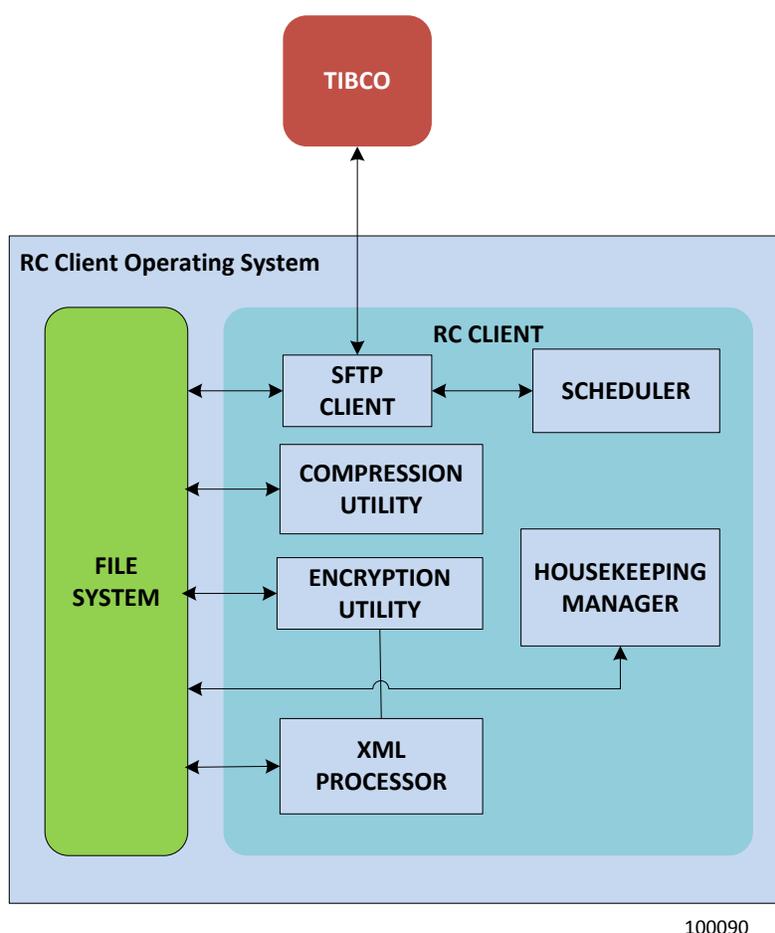
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:SubmitAdministrativeErrorResponse
xmlns:ns2="http://esmd.ois.cms.hhs.gov/v1/rc"
xmlns:ns3="http://esmd.ois.cms.hhs.gov/v1/rc/cmsbt">
  <ESMDTransaction RoutingId="ES9999" DeliveryType="D"
TransactionId="1532432"/>
  <AdministrativeErrorResponse>
    <CreationTime>2015-03-17T23:11:57.521-
04:00</CreationTime>
    <SubmissionTime>2015-03-17T23:12:10.931-
04:00</SubmissionTime>
    <ErrorResponseList>
      <ErrorResponseRecord>
        <ErrorCode>ESMD_410</ErrorCode>
        <ErrorName>Cannot Read Files / Corrupt
Files</ErrorName>
      </ErrorResponseRecord>
    </ErrorResponseList>
  </AdministrativeErrorResponse>
</ns2:SubmitAdministrativeErrorResponse>

```

12. RC Client Components

Figure 5: RC Client Components shows the internal components of RC Client application. The following sections describe each component in detail.

Figure 5: RC Client Components



12.1 SFTP Client

The SFTP Client is an internal component of the RC Client. It provides the following functionality:

- Connects to the TIBCO MFT server using EIDM ID;
- Lists the available documents on the TIBCO MFT server;
- Pulls the documents to the RC Client; and
- Pushes the outbound documents from RC Client to the TIBCO MFT server.

12.2 Compression Utility

The Compression utility allows the RC Client to extract the payload, metadata file, and messages from the compressed file downloaded from the TIBCO MFT server. The RC Client uses the zip file format.

The same utility is used to create compressed file logs for extraction.

12.3 Encryption Utility

The Encryption utility encrypts the login credentials that will be stored in memory for the duration of the RC Client program execution. The Encryption utility is described in detail in Section 15.1 Security.

12.4 XML Processor

The XML Processor supports creating XML messages to send to esMD as well as loading the configuration files for the RC Client.

12.5 Scheduler

After the RC Client starts, the polling cycle begins. The poll is a redundant cycle; you can configure the interval (for example, 1 hour or 4 hours) through the RC Client property file. The Schedule component controls the RC Client threads and ensures the RC Client runs in regular intervals determined by the “checkFrequency” parameter in the XML Configuration File.

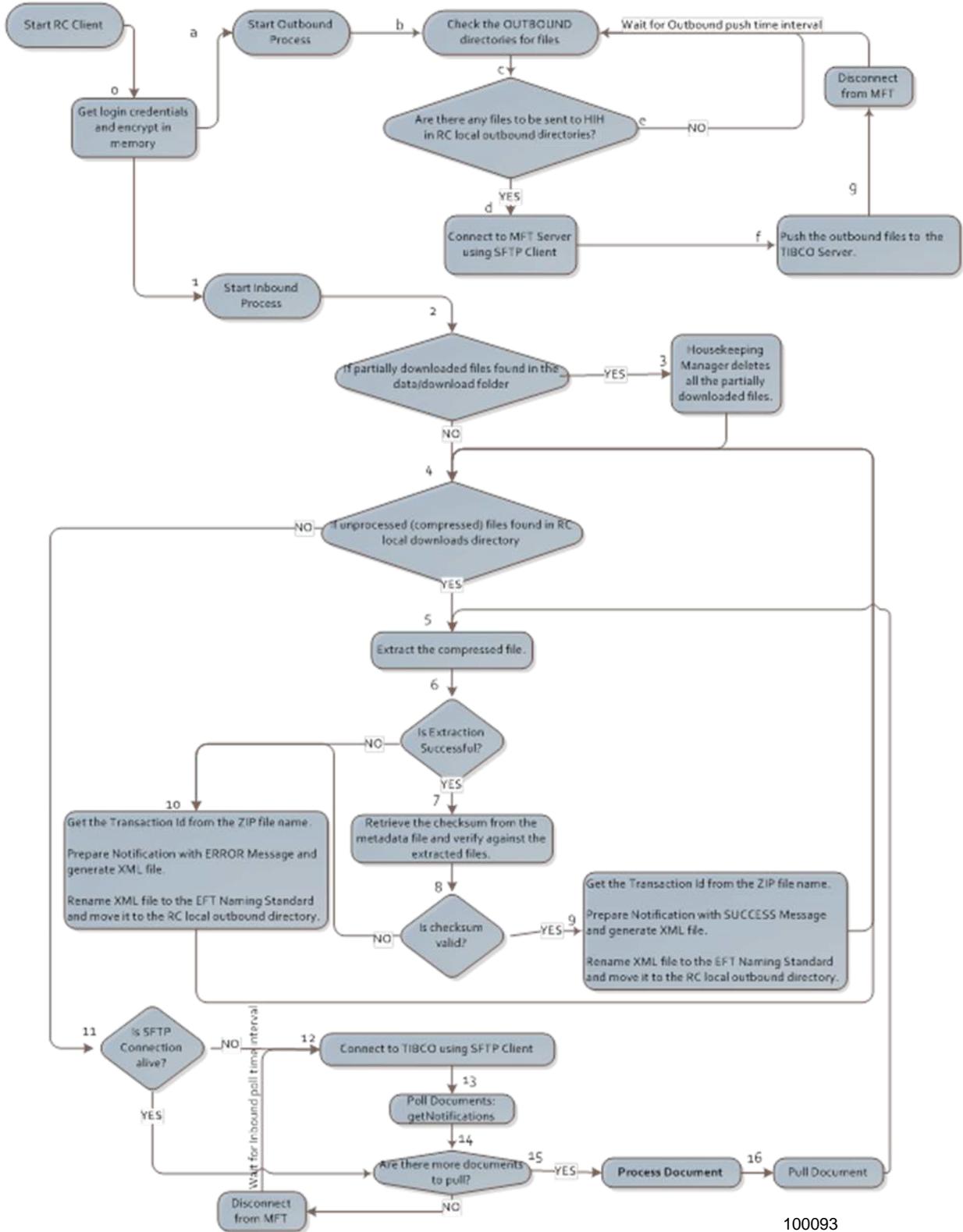
12.6 Housekeeping Manager

The Housekeeping Manager allows the RC Client to recover from any abnormal terminations with the exception of a Virus lockdown. In this situation, the RC Client does not enable recovery, and the RC must contact the esMD Help Desk.

13. RC Client Workflow

The workflow associated with Figure 5: RC Client Components is broken down in Figure 6: RC Client Workflow, followed by a detailed description of the workflow.

Figure 6: RC Client Workflow



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13.1 Start RC Client

The RC Client starts on the RC machine or server. It loads the XML Configuration File.

13.1.1 Login and Encryption

The RC Client prompts the user for the following details:

1. EIDM User ID; and
2. EIDM Password.

After successful login, TIBCO login credentials are encrypted in memory and used when needed to log in to the TIBCO MFT server. The RC Client initiates two threads, one for the inbound process and one for the outbound process in sections 13.2 Outbound Process and 13.3 Inbound Processes, respectively. These processes are described in the next section.

13.2 Outbound Process

13.2.1 Outbound Start

The RC Client loads configuration parameters for the outbound process from the XML configuration file. The configuration parameters are as follows:

- Directories used by the RC Client to create the outbound files (`outputDirectory`);
- The remote outbound directory to push the files to (`remoteOutboundDir`);
- Push frequency (`pushFrequency`);
- The outbound file name prefix for the TIBCO MFT server (`outboundFilePrefix`); and
- SFTP server details for the chosen environment (`ESMDSFTPServer`).

13.2.2 Get Outbound Documents

The RC Client checks the output directory for any files to be sent to the HIH. If any such files exist, the process continues to Step D (Connect); otherwise, the outbound process thread sleeps for the time interval determined by the `pushFrequency` parameter in the XML Configuration file.

13.2.3 Connect

The RC Client connects to the TIBCO MFT server using EIDM login credentials. The Encryption utility decrypts the credentials in memory and logs in to the TIBCO MFT server. If the user password is expired, the connection fails, prompting the user to provide the login information again.

13.2.4 Push

The RC Client pushes outbound files to the TIBCO MFT server. After that, the outbound process thread sleeps. The sleep time interval is determined by the outbound push frequency configuration parameter in the XML Configuration file.

13.3 Inbound Processes

13.3.1 Inbound Start

The RC Client loads Configuration parameters from the XML Configuration file. The configuration parameters are for the following inbound processes:

- Pull frequency; and
- SFTP server details for the chosen environment.

13.3.2 Housekeeping

The Housekeeping Manager is responsible for the cleanup and recovery from any abnormal terminations. If the extraction process was interrupted during extraction in the previous run, then there will be compressed files in the local “temp” directory.

13.3.3 Extraction

The Housekeeping Manager extracts compressed files found in the local “temp” directory for the RC Client before it pulls any new documents from the TIBCO MFT server. It will extract the oldest files first. If the extraction is successful, RC Client proceeds to “checksum verification”; otherwise, RC Client creates an error pickup notification.

13.3.4 Checksum Verification

After the extraction is complete, the RC Client uses the XML Processor to parse the metadata file from the zip package. This metadata file contains the checksums for all payloads in the package. The RC Client verifies the checksum for each file in the package against the checksum in the metadata file. If the checksum is valid for all files, the RC Client will create a pickup notification; otherwise, the RC Client will create an error pickup notification.

13.4 Acknowledgements

13.4.1 Pickup Notification

If the RC Client successfully extracts and verifies compressed files, the RC Client sends a SUCCESS notification through esMD to inform the HIH that the document has been received and successfully processed.

To generate this SUCCESS notification, the RC Client should:

1. Get the Transaction ID from the compressed file name;
2. Prepare the notification with a SUCCESS message and generate an XML notification file; and
3. Rename the XML notification file to the Enterprise File Transfer (EFT) naming standard and move it to the outbound directory. Refer to Section 13.2 Outbound Process for more information.

13.4.2 Error Pickup Notification

If the RC Client encounters an error indicating a failure, while either extracting the compressed file or verifying the checksum for the contents of the package, the RC Client sends an error notification through the esMD system, asking the HIH to resubmit the package. In order to generate this error notification, the RC Client must:

- Obtain the Transaction Identifier (TID) from the compressed file name;
- Prepare the notification with an Error message;
- Generate an XML notification file; and
- Rename the XML notification file to the EFT naming standard and move it to the outbound directory. This file will be handled by the outbound process.

13.5 Connect

After the Housekeeping Manager completes preprocessing, the RC Client checks for an active connection to the TIBCO MFT server. If a connection is active, the RC Client uses this connection. If the connection is inactive, the RC Client uses the Encryption utility to decrypt the login credentials from memory and connects to the TIBCO MFT server.

13.6 Get Notifications

The RC Client uses the SFTP Client to get a list of the available inbound documents for the RC on the TIBCO MFT server.

13.7 Process Document

If any documents are available for the RC Client to pull from the TIBCO MFT server, the RC Client will go through the list to pull each document.

13.8 Pull Document

The RC Client uses the SFTP Client to pull each inbound document from the TIBCO MFT server. The RC Client then extracts the contents of the zip file and continues processing.

14. Release 4.0 Changes in the API

Note: The API details in this section will be updated, after the development of the RC Client has been completed.

Table 27: Client Method Comparison compares similar Inbound methods in the Release 3.1 RC Client and the Release 4.0 RC Client.

Table 27: Client Method Comparison (Inbound)

| RC Client Release 3.1 (Inbound) | RC Client Release 4.0 (Inbound) |
|--|--|
| <p>Run()</p> <ul style="list-style-type: none"> • Starts the Housekeeping Manager to process any unprocessed files in the “temp” directory. The Housekeeping Manager calls the processMedicalDocumentation() for each unprocessed file found. • After the Housekeeping Manager has completed processing the unprocessed files, it collects the EIDM login credentials provided in the login prompt or by decrypting the encrypted login details in memory. The encrypted login details are stored in memory by the “RCClient” parent process. • Calls getNotifications() with the login credentials to get a list of available downloads from TIBCO MFT server. • Pulls each zip file from the TIBCO MFT server using the pullDocument() method based on the name passed to it. • Calls processMedicalDocumentation() for each available document from TIBCO MFT server. • Calls acknowledge() each document processed with a success/error XML response message. • Sleeps for the checkFrequency time interval before the next pull. | <p>No changes in Release 4.0. TIBCO MFT server TIBCO MFT server.</p> |

| RC Client Release 3.1 (Inbound) | RC Client Release 4.0 (Inbound) |
|---|--|
| <p>InboundProcessImpl.getNotifications()</p> <ul style="list-style-type: none"> Connects to the TIBCO MFT server with the EIDM Login and Password. Retrieves the list of files available for download for that environment. | <p>No changes in Release 4.0.</p> |
| <p>InboundProcessImpl.processMedicalDocumentation()</p> <ul style="list-style-type: none"> Extracts the zip file into the “download” directory using the extractDocument() method. If extraction fails, calls the acknowledge method with an error event and exits. After successful extraction, verifies the extracted payloads against the checksum in the metadata file using the checkPayloads() method. If checksum fails, calls the acknowledge method with an error event. If checksum passes, calls the acknowledge method with a success event. <p>Routes the inbound files to the local directories.</p> | <ul style="list-style-type: none"> Verifies the extracted payloads, flat file rendering (FFR) and Cover sheet against the checksum in the metadata file using the checkPayloads() method. |
| <p>InboundProcessImpl.acknowledge()</p> <ul style="list-style-type: none"> Creates the error/success message and puts it in the output directory. <ul style="list-style-type: none"> Logs the event. | <p>No change in Release 4.0.</p> |

Table 28: Client Method Comparison (Outbound – PA Review Decision) compares similar Outbound methods in the Release 3.1 RC Client and the Release 4.0 RC Client.

Table 28: Client Method Comparison (Outbound – PA Review Decision)

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|--|--|
| Not in scope for Release 3.1. | <p>ESMDManualSubmitPARReviewResponseImpl.validationOfPARReviewDecisionResponse(PARReviewDecisionResponseBean paReviewDecisionResponseBean_)</p> <ul style="list-style-type: none"> • Gets the following information as input from PARReviewDecisionResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Procedure Code; ○ Procedure Level Decision (Decision Indicator); ○ Number of Approved Units; ○ Approved Service Date; ○ Approved Service Date Range(Start Date and End Date); ○ Procedure Level UTN (Unique Tracking Number); ○ Reason Code(s); ○ Industry Code(s); ○ Creation Time; and ○ Submission Time. • Perform missing, format and length validations for all input data provided. <ul style="list-style-type: none"> • Creates the list of ValidationFailureBean Object for data which failed validation. • Builds the Message Object with status of validation result and also sets list of Validation Failure Bean object if there is any validation failure. |
| <p>ESMDManualSubmitPARResultImpl.promptForInfo()</p> <ul style="list-style-type: none"> • Gathers the following information: <ul style="list-style-type: none"> ○ Delivery Type; ○ Transaction ID; ○ Content Type Code; ○ NPI; ○ PA Decision Indicator; ○ UTN (enter for none); ○ Add a reason code Y/N; ○ Reason Code; and ○ Description (enter for none). • Builds the PA Result object. | <p>ESMDManualSubmitPARReviewResponseImpl.createPARReviewResponseObject(PARReviewDecisionResponseBean paReviewDecisionResponseBean_)</p> <ul style="list-style-type: none"> • Gets the following information as input from PARReviewDecisionResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Procedure Code; ○ Procedure Level Decision (Decision Indicator); ○ Number of Approved Units; ○ Approved Service Date; ○ Approved Service Date Range(Start Date and End Date); ○ Procedure Level UTN (Unique Tracking |

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|--|---|
| | <ul style="list-style-type: none"> Number); o Reason Code(s); o Industry Code(s); o Creation Time; and o Submission Time. Sets Delivery Type as "E". Builds the PA Review Response Type Object and sets it to SubmitPADeterminationResponse object. |
| ESMDManualSubmitPAResultImpl.submitPAResult() <ul style="list-style-type: none"> • Takes the PAResult object and creates the XML response file in the input directory. Compresses and pushes the XML file to TIBCO MFT server. | ESMDManualSubmitPAResponseImpl.submitPAResponseDecisionResponse(PAResponseDecisionResponseBean paResponseDecisionResponseBean_) <ul style="list-style-type: none"> • Takes the SubmitPADeterminationResponse object, creates the XML response file, compresses, and place it in the output directory. Pushes the response XML file to TIBCO MFT server by the outbound process. |

Table 29: Client Method Comparison (Outbound – PA Error (Rejected Decision) Response) compares similar Outbound – PA Error (Rejected Decision) Response methods in the Release 3.1 RC Client and the Release 4.0 RC Client.

Table 29: Client Method Comparison (Outbound – PA Error (Rejected Decision) Response)

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|----------------------------------|--|
| Not in scope for Release 3.1. | <p>ESMDManualSubmitPAErrorResponseImpl. validationOfPAErrorResponse (PAErrorResponseBean paErrorResponseBean</p> <ul style="list-style-type: none"> • Gets the following information as input from PAErrorResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Decision Indicator; ○ Request Level UTN (Unique Tracking Number); ○ Reason Code(s); ○ Reject Error Category(ies); ○ Reject Error Code(s); ○ Reject Error Description; ○ Creation Time; and ○ Submission Time. • Perform missing, length and format validations for all input data provided. <ul style="list-style-type: none"> • Creates the list of ValidationFailureBean Object for data which failed validation. • Builds the Message Object with status of validation result and also sets list of Validation Failure Bean object if there is any validation failure. • Returns the Message Object. |

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|---|---|
| <p>ESMDManualSubmitPAResultImpl.promptForInfo()</p> <ul style="list-style-type: none"> • Gathers the following information: <ul style="list-style-type: none"> ○ Delivery Type; ○ Transaction ID; ○ Content Type Code; ○ NPI; ○ PA Decision Indicator; ○ UTN (enter for none); ○ Add a reason code Y/N; ○ Reason Code; and ○ Description (enter for none). • Builds the PA Result object. | <p>ESMDManualSubmitPAErrorResponseImpl.createPAErrorResponseObject(PAErrorResponseBean paErrorResponseBean_)</p> <ul style="list-style-type: none"> • Gets the following information as input from PAErrorResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Decision Indicator; ○ Request Level UTN (Unique Tracking Number); ○ Reason Code(s); ○ Reject Error Category(ies); ○ Reject Error Code(s); ○ Reject Error Description; ○ Creation Time; and ○ Submission Time. • Sets Delivery Type as “E”. <ul style="list-style-type: none"> • Builds the PA Review Response Type Object and sets it to SubmitPADeterminationResponse object. |
| <p>ESMDManualSubmitPAResultImpl.submitPAResult()</p> <ul style="list-style-type: none"> • Takes the PA Result object and creates the XML response file in the input directory. • Compresses and pushes the XML file to TIBCO MFT server. | <p>ESMDManualSubmitPAErrorResponseImpl.submitPAErrorResponse(PAErrorResponseBean paErrorResponseBean_)</p> <ul style="list-style-type: none"> • Takes the SubmitPADeterminationResponse object, creates the XML response file, compresses, and place it in the output directory. • Pushes the compressed response XML file to TIBCO MFT server by the outbound process. |

Table 30: Client Method Comparison (Outbound – Administrative Error Response) compares similar Outbound – Administrative Error Response methods in the Release 3.1 RC Client and the Release 4.0 RC Client.

Table 30: Client Method Comparison (Outbound – Administrative Error Response)

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|----------------------------------|--|
| Not in scope for Release 3.1. | <p>ESMDManualSubmitAdminErrorResponseImpl. validationOfAdministrativeErrorResponse (AdministrativeErrorResponseBean administrativeErrorResponseBean_)</p> <ul style="list-style-type: none"> • Gets the following information as input from AdministrativeErrorResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Administrative Error Code; ○ Administrative Error Name; ○ Creation Time; and ○ Submission Time. • Perform missing, format and length validations for all input data provided. <ul style="list-style-type: none"> • Creates the list of ValidationFailureBean Object for data which failed validation. • Builds the Message Object with status of validation result and also sets list of Validation Failure Bean object if there is any validation failure. |

| RC Client Release 3.1 (Outbound) | RC Client Release 4.0 (Outbound) |
|----------------------------------|---|
| Not in scope for Release 3.1. | <p>ESMDManualSubmitAdminErrorResponseImpl. createAdministrativeErrorResponseObject(AdministrativeErrorResponseBean administrativeErrorResponseBean_)</p> <ul style="list-style-type: none"> • Gets the following information as input from AdministrativeErrorResponseBean: <ul style="list-style-type: none"> ○ Transaction ID; ○ Administrative Error Code; ○ Administrative Error Name; ○ Creation Time; and ○ Submission Time. • Sets Delivery Type as “D” <ul style="list-style-type: none"> • Builds the Administrative Error Response Type Object and sets it to SubmitAdministrativeErrorResponse object. |
| Not in scope for Release 3.1. | <p>ESMDManualSubmitAdminErrorResponseImpl. submitAdministrativeErrorResponse(Administrative ErrorResponseBean administrativeErrorResponseBean_)</p> <ul style="list-style-type: none"> • Takes the SubmitAdministrativeErrorResponse object, creates the XML response file, compresses, and places it in the output directory. • Pushes the compressed response XML file to TIBCO MFT server by the outbound process. |

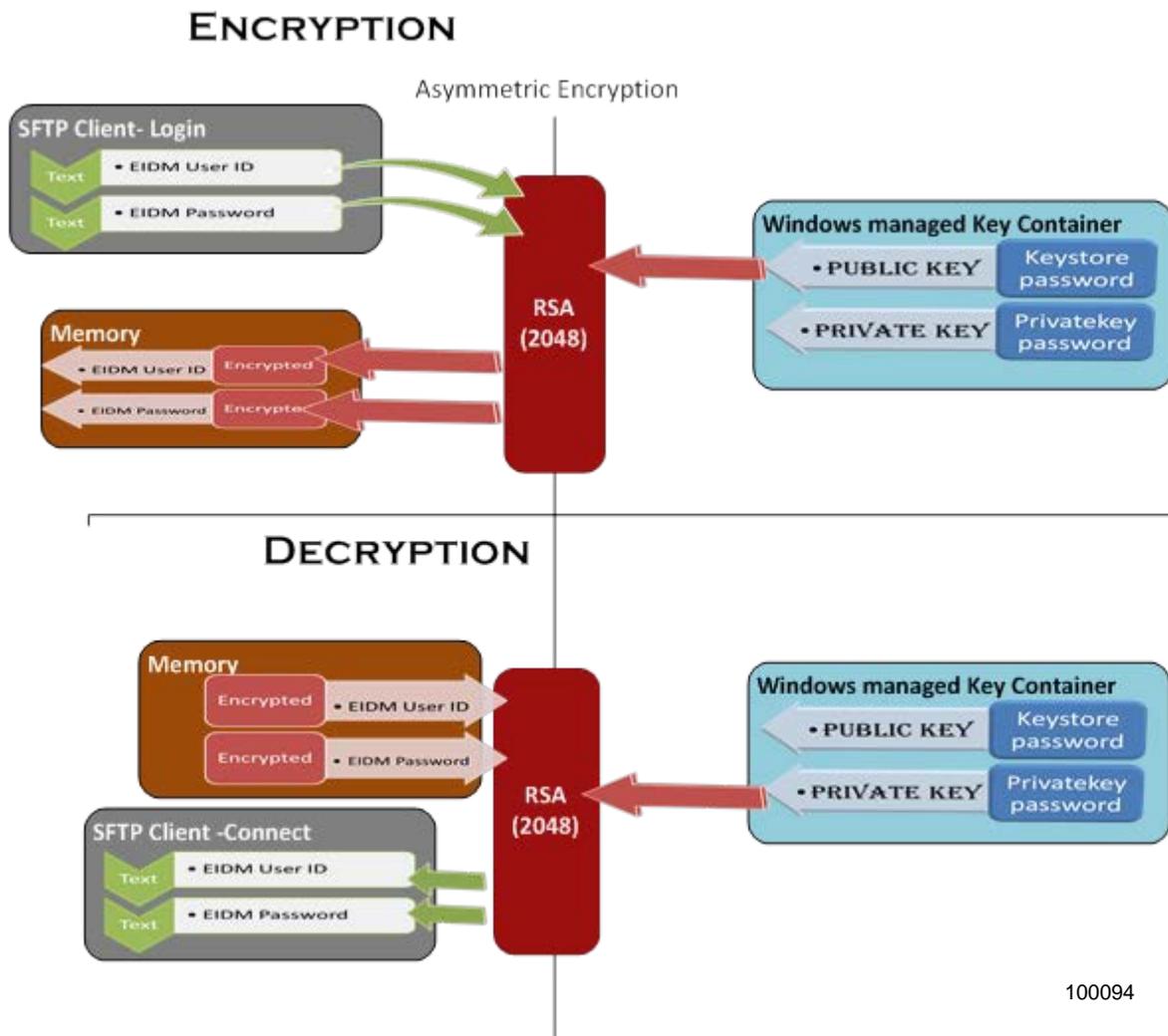
15. Java Client API

15.1 Security

When the RC Client starts, the user credentials are provided because they are stored in encrypted form in memory. Figure 7: Encryption and Decryption Process shows the processes used to safeguard the EIDM user credentials from exposure.

The RC Java Client uses RSA asymmetric encryption algorithms to secure the login credentials.

Figure 7: Encryption and Decryption Process



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15.2 Java API Documentation

This section discusses API methods that can be called for a custom solution to interface with the TIBCO MFT server. If you, as the RC, choose to use the RC Java client out-of-the-box, skip this section.

15.2.1 Login

Table 31: Login Details lists the methods and their descriptions used in the login process.

Table 31: Login Details

| No. | Method | Description |
|-----|--|--|
| 1. | <pre>public LoginDetails loginAndEncrypt(SftpDetails sftpDetails_, ESMDCConfig.KeyStoreInfo keyStoreInfo_, LoginBean loginBean_) throws Exception;</pre> | <p>Logs into the server and stores the encrypted login information.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. sftpDetails_ – The SFTP server Details; 2. keyStoreInfo_ – The Keystore Details; and 3. loginBean_ – The Login Details (User ID and Password). <p>Returns: The LoginDetails Object with the following properties populated:</p> <ol style="list-style-type: none"> 1. encryptedUID – Encrypted User ID; 2. encryptedPWD – Encrypted Password; and 3. message – status(TRUE/FALSE) and description if any exceptions occurred. |
| 2. | <pre>public LoginDetails decryptAndLogin(LoginDetails loginDetails_, SftpDetails sftpDetails_, ESMDCConfig.KeyStoreInfo keyStoreInfo_) throws Exception;</pre> | <p>Decrypts the login credentials passed in the LoginDetails object and logs into the TIBCO MFT server.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. loginDetails_ – the LoginDetails object with the following properties populated: <ul style="list-style-type: none"> • encryptedUID – Encrypted User ID; and • encryptedPWD – Encrypted Password; 2. sftpDetails_ – The SFTP server Details; and 3. keyStoreInfo_ – The Keystore Details. <p>Returns: The LoginDetails Object with the following properties populated:</p> <ol style="list-style-type: none"> 1. encryptedUID – Encrypted User ID; 2. encryptedPWD – Encrypted Password; and 3. channelSftp – SFTP Channel connected. |

15.2.2 Inbound

Table 32: Inbound Method Details lists the methods and their descriptions used in the inbound process.

Table 32: Inbound Method Details

| No. | Method | Description |
|-----|---|--|
| 1. | <pre>public List<String> getNotifications(LoginDetails loginDetails_,String remoteDownloadDirectoryPath_, String filePattern_) throws SftpException ;</pre> | <p>Uses the LoginDetails object to list the remote directory.</p> <p>Parameters:</p> <ol style="list-style-type: none"> loginDetails_ – the LoginDetails object with the following properties populated: <ul style="list-style-type: none"> encryptedUID – Encrypted User ID; encryptedPWD – Encrypted Password; and channelSftp – SFTP Channel connected; remoteDownloadDirectoryPath_ – The remote directory path to download from as a String; and filePattern_ – The File Name Pattern to look for as a String. <p>Returns: The List<String> with the filenames to pull.</p> |
| 2. | <pre>public void pullDocument(String remoteDocumentName_, String localDocumentName_, LoginDetails loginDetails_) throws Exception;</pre> | <ol style="list-style-type: none"> Pulls the document (namely, the zip file) from the TIBCO MFT server with the name remoteDocumentName; and Saves it as localDocumentName_ using the loginDetails_ to pull the file from TIBCO MFT server. <p>Parameters:</p> <ol style="list-style-type: none"> remoteDocumentName_ – The remote file to pull as a String; localDocumentName_ – The local file name to save as a String; and loginDetails_ - the LoginDetails object with the following properties populated: <ul style="list-style-type: none"> encryptedUID – Encrypted User ID; encryptedPWD – Encrypted Password; and channelSftp – SFTP Channel connected. |

| No. | Method | Description |
|-----|--|---|
| 3. | public String extractDocument(File localDocumentName_, File localTargetDirectory_) throws Exception; | <p>Extracts the zip file downloaded from the TIBCO MFT server.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. localDocumentName_ - The local zip file to extract; and 2. localTargetDirectory_ - The target directory to place the extracted contents. <p>Returns: The extracted Directory name as a String.</p> |
| 4. | public boolean processMedicalDocumentation(String remoteDocumentName_); | <p>This method does the following:</p> <ol style="list-style-type: none"> 1. Extracts the zip file into the “download” directory using the extractDocument() method; 2. If extraction fails, calls the acknowledge method with an error event; 3. After successful extraction, verifies the extracted payloads, flat file rendering file and cover sheet against the checksum in the metadata file using the checkPayloads() method; 4. If checksum fails, calls the acknowledge method with an error event; and 5. If checksum passes, calls the acknowledge() method with a success event. <p>Parameter:</p> <ol style="list-style-type: none"> 1. localDocumentPath_ - The local document name to process. <p>Returns: The Boolean status of the processing for that document.</p> |
| 5. | public String acknowledge(RCPickupNotification rcPickupNotification_) throws Exception; | <p>Generates the pickup notification for a downloaded document. If the ErrorInfo object is populated, it generates an error pickup notification. If the ErrorInfo object is null, it generates a pickup notification.</p> <p>Parameter:</p> <ol style="list-style-type: none"> 1. rcPickupNotification_ - The RCPickupNotification object. <p>Returns: The TIBCO MFT server ready compressed file name created in the output directory as a String.</p> |

| No. | Method | Description |
|-----|---|--|
| 6. | <pre>public boolean checkPayloads(File localExtractedDirectory_, RetrieveMedicalDocumentationRe sponse retrieveMedicalDocumentationRes ponse_);</pre> | <p>Checks the payload, FFR, and coversheet files against the metadata from the package.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. localExtractedDirectory_ – The directory in which the payloads, ffr and coversheet were extracted to as a File; and 2. retrieveMedicalDocumentationResponse_ – The metadata xml as object. <p>Returns: The status of the checksum verification.</p> |

15.2.3 Outbound

Table 33: Retrieval of Outbound Documents Details provides the retrieval of Outbound documents.

Table 33: Retrieval of Outbound Documents Details

| No. | Methods | Description |
|-----|---|---|
| 1. | <pre>public List<String> getOutboundDocuments(String localOutputDirectoryPath_, String localOutboundDocumentNamePattern_) throws Exception;</pre> | <p>This method is used to retrieve the list of outbound documents in the “output” directory to push.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. localOutputDirectoryPath_ – The local “output” directory to push files from as a String; and 2. localOutboundDocumentNamePattern_ – The file name pattern to push as a String. <p>Returns: The List<String> with the names of the Outbound files in the “output” directory.</p> |

| No. | Methods | Description |
|-----|---|--|
| 2. | <pre>public void pushDocument(String localOutboundDocumentPath_, String remoteOutboundDirectoryName_, LoginDetails loginDetails_) throws Exception;</pre> | <p>This method is used to push a local compressed document from the “output” directory to the TIBCO MFT server.</p> <p>Parameters:</p> <ol style="list-style-type: none"> 1. localOutboundDocumentPath_ – The name of the file to push as a String; 2. remoteOutboundDirectoryName_ – The remote directory name to push to as a String; and 3. loginDetails_ - The LoginDetails object with the following properties populated: <ul style="list-style-type: none"> • encryptedUID – Encrypted User ID; • encryptedPWD – Encrypted Password; and • channelSftp – SFTP Channel connected. |

15.2.4 PA Review Decision Response

Table 34: Manual Submission of PA Review Decision Response details the methods to submit the PA Review Decision (Affirmed, Affirmed with Change and Non Affirmed) Response.

Table 34: Manual Submission of PA Review Decision Response

| No. | Methods | Description |
|-----|---|--|
| 1. | <pre>public Message validationOfPAReviewDecisionResp onse(PAReviewDecisionResponseB ean paReviewDecisionResponseBean_);</pre> | <p>This method takes PAReviewDecisionResponseBean object as input, which has the review decision response information provided by user and validates all information before generating the XML response.</p> <p>Parameter:</p> <ol style="list-style-type: none"> 1. paReviewDecisionResponseBean_ – The PAReviewDecisionResponseBean object to use. <p>Returns: The Message Object which has status of validations result and also the list of Validation Failure Bean object if there is any validation failure with the data provided by the user.</p> |

| No. | Methods | Description |
|-----|---|--|
| 2. | <pre>public SubmitPADeterminationResponse createPAReviewResponseObject(P AReviewDecisionResponseBean paReviewDecisionResponseBean_) throws Exception;</pre> | <p>This method takes PAReviewDecisionResponseBean object as input which has the review decision response information and creates the SubmitPADeterminationResponse object.</p> <p>Parameter:</p> <ol style="list-style-type: none"> paReviewDecisionResponseBean_ – The PAReviewDecisionResponseBean object to use. <p>Returns: The SubmitPADeterminationResponse object populated with the data provided by the user.TIBCO MFT server.</p> |
| 3. | <pre>public String createCompressedTIBCOFileForPA ReviewDecisionResponse(SubmitPA DeterminationResponse submitPADeterminationResponse_) throws Exception;</pre> | <p>This method is used create the XML file and compress it into a TIBCO MFT server file.</p> <p>Parameter:</p> <ol style="list-style-type: none"> submitPADeterminationResponse_ – The SubmitPADeterminationResponse object to use. <p>Returns: The compressed outbound file name ready to be pushed by the outbound process.</p> |

15.2.5 PA Error (Rejected Decision) Response

Table 35: Manual Submission of PA Error (Rejected Decision) Response details the methods to submit the PA Error (Rejected Decision) Response.

Table 35: Manual Submission of PA Error (Rejected Decision) Response

| No. | Methods | Description |
|-----|---|--|
| 1. | <pre>public Message validationOfPAErrorResponse (PAErrorResponseBean paErrorResponseBean_);</pre> | <p>This method takes PAErrorResponseBean object as input which has the review error (rejected decision) response information provided by user and validates all those information before generating the response XML.</p> <p>Parameter:</p> <ol style="list-style-type: none"> paErrorResponseBean_ – The PAErrorResponseBean object to use. <p>Returns: The Message Object which has status of validations result and also the list of Validation Failure Bean object if there is any validation failure with the data provided by the user.</p> |

| No. | Methods | Description |
|-----|--|---|
| 2. | <pre>public SubmitPADeterminationResponse createPAErrorResponseObject(PA ErrorResponseBean paErrorResponseBean_) throws Exception;</pre> | <p>This method takes PAErrorResponseBean object as input which has the review error (rejected decision) response information provided by user and creates the SubmitPADeterminationResponse object.</p> <p>Parameter:</p> <ol style="list-style-type: none"> 1. paErrorResponseBean_ – The PAErrorResponseBean object to use. <p>Returns: The SubmitPADeterminationResponse object populated with the data provided by the user.</p> |
| 3. | <pre>public String createCompressedTIBCOFileForP AErrorResponse(SubmitPADetermi nationResponse submitPADeterminationResponse_) throws Exception;</pre> | <p>This method is used create the XML file and compress it into a TIBCO MFT server file.</p> <p>Parameter:</p> <ol style="list-style-type: none"> 1. submitPADeterminationResponse_ – The SubmitPADeterminationResponse object to use. <p>Returns: The compressed outbound file name ready to be pushed by the outbound process.</p> |

15.2.6 Administrative Error Response to Inbound Submissions

Table 36: Manual Submission of Administrative Error Response details the methods to submit the Administrative Error Response to an Inbound submission.

Table 36: Manual Submission of Administrative Error Response

| No. | Methods | Description |
|-----|--|--|
| 1. | <pre>public Message validationOfAdministrativeErrorRes ponse (AdministrativeErrorResponseBean administrativeErrorResponseBean_);</pre> | <p>This method takes AdministrativeErrorResponseBean object as input which has the administrative error response information provided by user and validates all those information before generating the response XML.</p> <p>Parameter:</p> <ol style="list-style-type: none"> administrativeErrorResponseBean_ – The AdministrativeErrorResponseBean object to use. <p>Returns: The Message Object which has status of validations result and also the list of Validation Failure Bean object if there is any validation failure with the data provided by the user.</p> |
| 2. | <pre>private SubmitAdministrativeErrorRespons e createAdministrativeErrorResponse Object(AdministrativeErrorRespons eBean administrativeErrorResponseBean_) throws Exception;</pre> | <p>This method takes AdministrativeErrorResponseBean object as input which has the administrative error response information provided by user and creates the SubmitAdministrativeErrorResponse object.</p> <p>Parameter:</p> <ol style="list-style-type: none"> administrativeErrorResponseBean_ – The AdministrativeErrorResponseBean object to use. <p>Returns: The SubmitAdministrativeErrorResponse object populated with the data provided by the user.</p> |
| 3. | <pre>public String createCompressedTIBCOFileForAd ministrativeErrorResponse(SubmitA dministrativeErrorResponse submitAdministrativeErrorRespons e_) throws Exception;</pre> | <p>This method is used create the XML file and compress it into a TIBCO MFT server file.</p> <p>Parameter:</p> <ol style="list-style-type: none"> submitAdministrativeErrorResponse_ – The SubmitAdministrativeErrorResponse object to use. <p>Returns: The compressed outbound file name ready to be pushed by the outbound process.</p> |

15.2.7 Utilities - Encryption

Note: The Java Client release from April 28, 2014 does not include the encryption of login credentials. This section depicts the planned design and is subject to change. This guide will be updated as required when the security implementation is completed.

Table 37: Encryption provides the details on the EMSD.RcClient.Encryption.EncryptionUtil methods.

Table 37: Encryption

| # | Methods | Description |
|----|--|--|
| 1. | public String encryptKSPassword(String keyStorePassword_) throws Exception; | This method encrypts the Keystore password so it can be stored in the configuration file. Parameter: 1. keyStorePassword_ – The password to encrypt as a String. Returns: The Encrypted Keystore Password using “PBEWithMD5AndTripleDES”. |
| 2. | public String encryptPKPassword(String privateKeyPassword_) throws Exception; | This method encrypts the Private Key password so it can be stored in the configuration file. Parameter: 1. privateKeyPassword_ – The password to encrypt as a String. Returns: The Encrypted Private Key Password using “PBEWithMD5AndTripleDES”. |

| # | Methods | Description |
|----|---|---|
| 3. | <pre>public Map<String, String> encryptCredentials(Map<String, String> loginInfo_, ESMDCConfig.KeyStoreInfo keyStoreInfo_) throws Exception;</pre> | <p>This method encrypts the EIDM login credentials using a RSA Public Key from the JKS Store.</p> <p>Parameters:</p> <ol style="list-style-type: none"> loginInfo_ - The Map<String, String> containing the UID and PWD as keys; and keyStoreInfo_ - The ESMDCConfig.KeyStoreInfo object with the following details populated: <ul style="list-style-type: none"> keyStoreLocation – The JKS Store to use as a String; encKeyInfo – The Encrypted Keystore password to load the JKS as a String; and certAlias – The alias of the certificate to retrieve the public key as a String. <p>Returns: The Map<String, String> of encrypted login credentials ENC_UID and ENC_PWD as keys.</p> |
| 4. | <pre>public Map<String, String> decryptCredentials(Map<String, String> encryptedLoginInfo_, ESMDCConfig.KeyStoreInfo keyStoreInfo_) throws Exception;</pre> | <p>This method decrypts the EIDM login credentials using a RSA Private Key from the JKS Store.</p> <p>Parameters:</p> <ol style="list-style-type: none"> encryptedLoginInfo_ - The Map<String, String> of encrypted login credentials ENC_UID and ENC_PWD as keys; and keyStoreInfo_ - The ESMDCConfig.KeyStoreInfo object with the following details populated: <ul style="list-style-type: none"> keyStoreLocation – The JKS Store to use as a String; encKeyInfo - The Encrypted Keystore password to load the JKS as a String; certAlias - The alias of the certificate to retrieve the public key as a String; and encKeyInfoExt - The Encrypted private key password to load the private key from the JKS Store as a String. <p>Returns: The Map<String, String> containing the UID and PWD as keys.</p> |

15.2.8 Test Connection

Refer to Table 38: Remote Troubleshooting for details on the ExecuteHandshake method.

Table 38: Remote Troubleshooting

| # | Methods | Description |
|----|--------------------------------|---|
| 1. | public bool executeHandshake() | This sample method invokes a call to the TIBCO MFT server to pass login information to assist in remote troubleshooting. Returns: TRUE if handshake succeeded. |

15.3 Logs

Table 39: RC Client Logs lists the logs the RC Client provides. The RC is advised to monitor the logs for errors and exceptions.

Table 39: RC Client Logs

| Log | Description |
|----------------------|--|
| config.log | Logging for the encryptConfig.bat utility. |
| handshake.log | Logging for the test connection process. |
| rc.log | Logging for the sample application. |
| Inbound.log | Logging for the Inbound Process. |
| outbound.log | Logging for the Outbound Process. |
| response.log | Logging for the Response File (PA Review and Administrative Error) Creation Process. |

15.4 Utilities

Table 40: RC Client Utilities lists the utilities the RC Client provides.

Table 40: RC Client Utilities

| Log | Description |
|--------------------------|---|
| encryptConfig.bat | Encrypts the provided passwords and updates the configuration XML file. |
| rcclient.bat | The RC Client User Interface Application. This application will have: 1) Login; 2) Review Decision Response to PA Request; 3) Error Response to PA Request; 4) Administrative Error Response to Inbound Submissions; and 5) Advanced/Debugging functionalities. |

16. Error Codes

16.1 Errors: esMD to RC

Table 41: Error Codes Sent From esMD to RC lists all the error codes sent from the esMD to the RC.

Table 41: Error Codes Sent From esMD to RC

| Error Code | Error Description |
|------------|--|
| 305 | esMD validation error: Review Contractor PickUp Timestamp is not a valid Timestamp. Correct and resubmit. |
| 306 | esMD validation error: esMD Delivery Timestamp is not a valid Timestamp. Correct and resubmit. |
| 539 | esMD internal system error (Unzip failure). Resubmit. |
| 544 | esMD validation error: Reason Code is required when Decision Indicator is N or R. Correct and resubmit. |
| 545 | esMD validation error: Total number of Reason Codes cannot exceed 25. Reduce the number of Reason Codes and resubmit. |
| 556 | esMD validation error: Decision Indicator must be A, N, M or R. Correct and resubmit. |
| 557 | esMD validation error: Review Contractor Unique Tracking Number must be 1 - 50 alphanumeric characters with no special characters. Correct and resubmit. |
| 558 | esMD validation error: Reason Code does not exist in the esMD database. Correct and resubmit. |
| 560 | esMD validation error: Submission is infected with virus. Correct and resubmit. |
| 562 | esMD validation error: Unique Tracking Number is required when Decision Indicator is A, N, or M. Correct and resubmit. |
| 565 | esMD Internal System error: Unable to process your response. Correct and resubmit. |
| 566 | esMD validation error: A required element is either missing, has an invalid element format, or has an invalid length. Correct and resubmit. |

| Error Code | Error Description |
|------------|--|
| 567 | esMD validation error: A Decision Indicator of 'M' is invalid for PMD PA response. Provide a valid Decision Indicator and resubmit. |
| 569 | esMD validation error: Number of Approved Units; and/or Approved Service Date or Approved Service Date Range are not required elements for this PA response and Procedure Level Decision. Correct and resubmit. |
| 572 | esMD validation error: Approved Service End Date is less than or equal to Approved Service Start Date. Correct and resubmit. |
| 576 | esMD validation error: Number of Approved Units, Approved Service Date, Approved Service Date Range, Industry Code(s) and Reason Code(s) are not allowed for this response. Correct and resubmit. |
| 577 | esMD validation error: Unable to parse response XML file. Correct XML and resubmit. |
| 600 | esMD validation error: Duplicate Reason Codes found. Correct and resubmit. |
| 601 | esMD validation error: Procedure Code in response not equal Procedure Code in request. Correct and resubmit. |
| 602 | esMD validation error: Approved Service Date must be greater than or equal to current system date. |
| 603 | esMD validation error: Decision Indicator = R; response is missing at least one combination of Error Category Code: Error Code. Add the combination(s) of Error Category Code: Error Code and resubmit. |
| 604 | esMD validation error: More than 9 Error Codes were reported for a single Error Category Code. Reduce the number of errors for each Error Category Code to 9 and resubmit. |
| 605 | esMD validation error: Decision Indicator = R; Category Code is invalid for the combination of Error Category Code: Error Code. Correct the Error Category Code and resubmit with correct combination(s) of Error Category Code: Error Code. |
| 606 | esMD validation error: Decision Indicator = R; invalid Error Code for the combination of Error Category Code: Error Code. Correct the Error Code and resubmit with correct combination(s) of Error Category Code: Error Code. |
| 607 | esMD validation error: Invalid Industry Code. Correct and resubmit. |
| 608 | esMD validation error: Invalid Reason Code. Correct and resubmit. |

| Error Code | Error Description |
|------------|--|
| 609 | McAfee Gateway is unavailable. Retry later. |
| 610 | esMD validation error: Empty File Received in the Response. Correct and Resubmit. |
| 611 | esMD validation error: Multiple Files Received in the Response. |
| 612 | esMD validation error: Approved Service Date and Approved Service Date Range and Approved Unit should not be provided for this response. Correct and Resubmit. |
| 613 | esMD validation error : Administrative Error Code is invalid. Correct and Resubmit. |
| 614 | esMD validation error : Approved Service End Date is less than the Current Date. Correct and resubmit. |
| 615 | esMD validation error : Invalid error in the pickup notification. |
| 616 | esMD validation error: Intended Recipient OID is deactivated and cannot accept response. Correct and resubmit. |
| 617 | esMD validation error: Mailbox ID in the response does not match with the Mailbox ID that the request was sent. Correct and resubmit. |
| 618 | ESMD validation error: Error occurred while storing the Review Contractor Status Pickup. |
| 619 | ESMD validation error: Error occurred while validating the Review Contractor Pickup Status Data. |
| 620 | esMD validation error: Invalid Review Response Creation Time format. |
| 621 | esMD validation error: Invalid review Response Submission Time Format. |
| 622 | esMD validation error: This Decision Indicator is not valid for this response. |
| 623 | esMD validation error: Both Approved Service Date and Approved Service Date range cannot exists in same response. Correct and Resubmit. |
| 624 | esMD validation error: Approved Service Start Date cannot be greater than the Approved Service End Date. Correct and Resubmit. |

| Error Code | Error Description |
|-------------------|--|
| 625 | esMD validation error: Reason code is not required for decision Indicator A. Correct and Resubmit. |
| 626 | esMD validation error: Unable to parse RC response. |
| 627 | esMD validation error: Error encountered while saving ReviewContractorPickUpStatus data. |
| 628 | esMD validation error: Failure in sending the Administrative error response to HIH. |
| 629 | esMD validation error: Failure in sending the Administrative PA response to HIH. |
| 630 | esMD validation error: Failure in sending the Pickup notification to HIH. |

16.2 Errors: RC to esMD

There are two types of Error Codes sent by the RC to the esMD. They are:

1. Administrative Errors; and
2. Pickup Errors.

16.2.1 Administrative Errors

Table 42: Administrative Error Codes lists the error codes used to report unexpected errors related to the payload received in a downloaded file from esMD. For more details, please refer to section 11.2.5 Administrative Error Response to Inbound Submissions.

Table 42: Administrative Error Codes

| Administrative Error | Error Code | Description |
|---------------------------------|-------------------|---|
| corrupt files/cannot read files | ESMD_410 | ESMD_410- Administrative Error (corrupt files/cannot read files). |
| Submission Sent to Incorrect RC | ESMD_411 | ESMD_411- Administrative Error (Submission Sent to Incorrect RC). |
| Virus Found | ESMD_412 | ESMD_412- Administrative Error (Virus Found). |
| Other | ESMD_413 | ESMD_413- Administrative Error (Other). |

16.2.2 Pickup Errors

Table 43: Pickup Error Codes lists the types of error codes and their descriptions. These codes are used to populate the ErrorInfo object inside the error pickup notification XML (e.g., R_TID_Pickup_Error_Request.xml). Please refer to section 11.2.2 Error Pickup Notification for more details.

Table 43: Pickup Error Codes

| Error Type | Error Code | Description |
|----------------|------------|--|
| UNZIP ERROR | 534 | ESMD_534 – RC Client processing error (Unzip failure). Please resubmit. |
| CHECKSUM ERROR | 535 | ESMD_535 – RC Client processing error (Checksum issue). Please resubmit. |
| METADATA ERROR | 536 | ESMD_536 – RC Client processing error (Metadata issue). Please resubmit. |

17. Contacts

Table 44: Support Points of Contact list for esMD.

Table 44: Support Points of Contact

| Contact | Phone | Email | Hours of Operation |
|--------------------|----------------|--|--|
| CMS esMD Help Desk | (443) 832-1856 | esMD_Support@cms.hhs.gov | Regular Business Hours: 8 a.m. to 8 p.m. Eastern Time (ET). |

Appendix A: Description of Fields on RC Client Tabs

Table 45: Descriptions of Fields on Review Decision Response to PA Request Tab lists the descriptions of the fields on the Review Decision Response to PA Request tab.

Table 45: Descriptions of Fields on Review Decision Response to PA Request Tab

| Review Decision Response to PA Request Tab | |
|--|--|
| Name of Field | Description |
| Transaction ID | Transaction Identifier of the request this response is being sent for. Required Element. Minimum Length should be 7 and Maximum Length should be 7. Format of this element is Numeric. |
| Procedure Code | Procedure Code for the Review Response. It should be the same as the one that was sent in the request. Required Element. Length should be 1 – 48 Alpha – Numeric. |
| Procedure Level Decision | Decision provided for the Review Response; can be one of the following: <ul style="list-style-type: none"> • “A” for A - Affirmed; • “M” for M - Affirmed with Change; or • “N” for N - Non Affirmed. |
| Number of Approved Units | Number of Approved Units for the request service; entered only when Procedure Level Decision is M - Affirmed with Change decision. Maximum Length should be 10. It should be Numeric. |
| Approved Service Date | Approved Service Date is the new date the RC is approving for the requested service if the response is for M - Affirmed with Change Decision; the format is mm-dd-yyyy and the date must be same or later than the current date; can be selected from the calendar; entered only when Procedure Level Decision is M - Affirmed with Change decision. |

| Review Decision Response to PA Request Tab | |
|--|--|
| Name of Field | Description |
| <p>Approved Service Date Range</p> <ul style="list-style-type: none"> • Start Date • End Date | <p>Start Date is the approved service start date for approving the requested service if the response is for M - Affirmed with Change Decision; the format is mm-dd-yyyy; can be selected from the calendar; Can be Past, current or Future date; entered only when Procedure Level Decision is M - Affirmed with Change decision.</p> <p>End Date is the approved service end date for approving the requested service if the response is for M - Affirmed with Change Decision; the format is mm-dd-yyyy; can be selected from the calendar; Should be greater than the Start Date provided and should be same or later than current date; entered only when Procedure Level Decision is M - Affirmed with Change decision..</p> <p>Unique Tracking Number for review response; Required Element for all decisions; format of the unique tracking number is 1 – 50 Alpha Numeric.</p> |
| Procedure Level UTN | Industry Code(s) if the decision is Non Affirmed for the response; minimum one and maximum of five industry code(s). |
| Industry Code | Reason code; required only when Procedure Level Decision is N - Non Affirmed; optional when Procedure Level Decision is M - Affirmed With Change; format is five character alpha number; a minimum of 1 and up to maximum of 25 reason codes can be provided. |
| Reason Code | Start Date is the approved service start date for approving the requested service if the response is for M - Affirmed with Change Decision; the format is mm-dd-yyyy; can be selected from the calendar; Can be Past, current or Future date; entered only when Procedure Level Decision is M - Affirmed with Change decision. |

Table 46: Descriptions of Fields on Error Response to PA Request Tab lists the descriptions of the fields on the Review Decision Response to PA Request tab.

Table 46: Descriptions of Fields on Error Response to PA Request Tab

| Error Response to PA Request Tab | |
|---|---|
| Name of Field | Description |
| Transaction ID | Transaction Identifier of the request that is associated with the response that is being sent to the request. Required Element. Minimum Length should be 7 and Maximum Length should be 7. Format of this element is Numeric. |
| Reject Error Category | One or multiple Reject Error Category is selected for each Response; each Reject Error Category has number of Reject Error Codes associated with it. Required Element. |
| Reject Error Code | Under Each Reject Error Category, either one or multiple Reject Error Codes are selected. Required Element. Minimum 1 and maximum 9 reject error codes can be selected for each category. |
| Reason Code | 5-character reason code is provided. Minimum of 1 and up to maximum of 25 reason codes can be provided. Required Element. |
| Request Level UTN | UTN is provided for each response. Optional Element. Format of the unique tracking number is 1 – 50 Alpha Numeric Characters. |

Table 47: Descriptions of Fields on Administrative Error Response to Inbound Submissions Tab lists the descriptions of the fields on the Administrative Error Response to Inbound Submissions tab.

Table 47: Descriptions of Fields on Administrative Error Response to Inbound Submissions Tab

| Administrative Error Response to Inbound Submissions Tab | |
|---|---|
| Name of Field | Description |
| Transaction ID | Transaction Identifier of the request this response is being sent for. Required Element. Minimum Length should be 7 and Maximum Length should be 7. Format of this element is Numeric |
| Error Situation | Error code/situation; can be one of the following: <ul style="list-style-type: none"> • Corrupt Files/Cannot read file, • virus found, • Submission sent to incorrect RC, or • Other. Required Element. |

Table 48: Descriptions of Fields on Advanced/Debugging Tab lists the descriptions of the fields on the Advanced/Debugging tab.

Table 48: Descriptions of Fields on Advanced/Debugging Tab

| Advanced/Debugging Tab | |
|-------------------------------|---|
| Name of Field | Description |
| User ID | EIDM User ID Required Element for testing the connectivity to TIBCO. |
| Password | EIDM password Required Element for testing the connectivity to TIBCO. |

Appendix B: Reject Error Codes

For an up-to-date list of Reject Error Codes, please refer to the esMD Downloads section, using the link below:

http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_Review-Contractors.html

(Note: An up-to-date list of Reject Error Codes will be added to this web site by CMS.)

Appendix C: Industry Codes

For an up-to-date list of Industry Codes, please refer to the esMD Downloads section, using the link below:

http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_Review-Contractors.html

(Note: An up-to-date list of Industry Codes will be added to this web site by CMS.)

Appendix D: PA Reason Codes

For an up-to-date list of PA Reason Codes, please refer to the esMD Downloads section, using the link below:

http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_Review-Contractors.html

(Note: An up-to-date list of PA Reason Codes will be added to this web site by CMS.)

Appendix E: Data Directories

Table 49: Inbound File Names and Data Directories lists out all the files received by the RC and the corresponding data directories these files will reside in along with a brief description.

Note: "TID" indicates a "Transaction ID" in the table below.

Table 49: Inbound File Names and Data Directories

| Data Directory | Folder | File Name | Description |
|-----------------|--------|--|---|
| acknowledgement | A_TID | A_TID_Pickup_HIH_Status_Response.xml | Successful Acknowledgement that the HIH has received the pickup notification. |
| error | M_TID | M_TID_Administrative_Response_Validation_Error.xml | Validation Error received by the RC for the Administrative Error Response sent to esMD. |
| error | R_TID | R_TID_Pickup_Validation_Error.xml | Validation Error received by the RC for the Pickup Notification sent to esMD. |
| error | V_TID | V_TID_PA_Review_Response_Validation_Error.xml | Validation Error received by the RC for the PA Review Response sent to esMD. |
| error | X_TID | X_TID_Virus_Scan_Error.xml | Virus Scan Failure Error received by the RC from the esMD on a file sent previously. |
| input | E_TID | E_TID-UniqueIdDateTimestamp_sequence.pdf | Documentation received as part of the inbound submission i.e. PDF. |
| input | E_TID | E_TID-flatfilerendering.ffr | Flat File Rendering of the X12N 278 PA Request received by the RC from esMD. |
| input | E_TID | E_TID-coversheet.pdf | Coversheet PDF of the X12N 278 PA Request received by the RC from esMD. |
| Input | E_TID | E_TID-metadata.xml | Metadata XML for the payloads received by the RC in the inbound submission from esMD. |

| Data Directory | Folder | File Name | Description |
|----------------|--------|--|---|
| notifications | N_TID | N_TID_PA_Review_Result_HIH_Status_Response.xml | Successful Acknowledgement that the HIH has received the PA Review Response. |
| notifications | S_TID | S_TID_Administrative_Error_HIH_Status_Response.xml | Successful Acknowledgement that the HIH has received the administrative error response. |

Table 50: Outbound File Names and Data Directories lists all the outbound files sent from the RC to the esMD along with a brief description and the data directory where they are created.

Note: "TID" indicates a "Transaction ID" in the table below.

Table 50: Outbound File Names and Data Directories

| Data Directory | Folder | File Name | Description |
|----------------|--------|---|---|
| output | P_TID | P_TID_Pickup_Notification.xml | Successful pickup notification being sent to esMD inside the zip file. |
| output | P_TID | P_TID_Pickup_Error_Notification.xml | Error pickup notification (i.e. unzip, checksum etc.) being sent to esMD inside the zip file. |
| output | D_TID | D_TID_Administrative_Error_Response.xml | Administrative Error Response being sent to esMD inside the zip file. |
| output | E_TID | E_TID_PA_Review_Response.xml | PA Review Response being sent to esMD inside the zip file. |

Appendix F: Content Type Codes

Table 51: Content Type Code Descriptions provides the description of the Content Type Code used in the esMD Release 4.0.

Table 51: Content Type Code Descriptions

| Content Type Code | Description | Comment |
|-------------------|---|---|
| 1 | Response to Additional Documentation Request(ADR) | N/A |
| 8 | PMD PA | N/A |
| 9 | Appeal Request | N/A |
| 10 | ADMC | N/A |
| 11 | RA Requests | N/A |
| 12 | Supporting Documentation for the unsolicited X12N 278 Request | N/A |
| 13 | Supporting Documentation for the X12N 278 Request | N/A |
| 8.1 | Non-Emergent Ambulance Transport | Will accept 81 till a period determined by CMS. |
| 8.2 | Hyperbaric Oxygen (HBO) Therapy | Will accept 81 till a period determined by CMS. |

Table 52: Content Type Codes and Business Types shows the list of Business Types associated with them.

Table 52: Content Type Codes and Business Types

| Content Type Code | Business Type |
|-------------------|--|
| 1 | Response message for additional documentation request |
| 8 | Requesting PMD PA |
| 9 | Requesting an Appeal |
| 10 | ADMC |
| 11 | RA Requests |
| 8.1 or 81 | Requesting Non-Emergent Ambulance Transport |
| 8.2 or 82 | Requesting Hyperbaric Oxygen (HBO) Therapy |
| 12 | Unsolicited supporting documentation using XDR Profile |
| 13 | XDR X12 |

Appendix G: Record of Changes

Table 53: Record of Changes

| Version Number | Date | Author/Owner | Description of Change |
|----------------|------------|---|--|
| 1.0 | 02/10/2015 | John Dondapati, James Littlejohn | Initial Draft. |
| 1.1 | 03/06/2015 | Murugaraj Kandaswamy, John Dondapati, James Littlejohn | Updated Draft. |
| 1.2 | 03/24/2015 | Murugaraj Kandaswamy, John Dondapati, James Littlejohn | Updated Draft. |
| 1.3 | 03/27/2015 | Murugaraj Kandaswamy John Dondapati | Updated per CMS comments to v1.2. |
| 1.4 | 06/16/2015 | John Dondapati Pallavi Sakhare | URLs have been updated, where applicable, and minor revisions and updates have been added. |

Appendix H: Acronyms

Table 54: Acronyms

| Acronym | Literal Translation |
|---------|---|
| ADMC | Advance Determination of Medicare Coverage |
| ADR | Additional Documentation Request |
| API | Application Programming Interface |
| CMS | Centers for Medicare & Medicaid Services |
| EFT | Enterprise File Transfer |
| EIDM | Enterprise Identity Management |
| esMD | Electronic Submittal of Medical Documentation |
| FFR | Flat File Rendering |
| FFS | Fee-For-Service |
| HBO | Hyperbaric Oxygen |
| HIH | Health Information Handler |
| JAR | Java Archive |
| JCE | Java Cryptography Encryption |
| JDK | Java Development Kit |
| JKS | Java KeyStore |
| JRE | Java Runtime Environment |
| MB | Megabytes |
| MFT | Managed File Transfer |
| PA | Prior Authorization |
| PDF | Portable Document Format |
| PMD | Power Mobility Device |
| RC | Review Contractor |
| RSA | Rivest, Shamir & Adleman |
| SFTP | SSH File Transfer Protocol |
| SSH | Secure Shell |
| URL | Universal Resource Locator |

| Acronym | Literal Translation |
|---------|--|
| UTN | Universal Tracking Number |
| XDR | Cross-Enterprise Document Reliable Interchange |
| XML | Extensible Markup Language |

Appendix I: Glossary

Table 55: Glossary

| Glossary | Description |
|---|--|
| Additional Documentation Request (ADR) | Official letters sent to Providers from CMS RCs requesting additional documentation that is needed to process claims. |
| Advanced Determination of Medical Coverage (ADMC) | A voluntary program that allows Suppliers and Beneficiaries to request prior approval of eligible items (e.g., wheelchairs) before delivery of the items to the beneficiary. |
| CONNECT | CONNECT implements a flexible, open-source gateway solution that enables healthcare entities - Federal agencies or private-sector health organizations or networks - to connect their existing health information systems to the eHealth Exchange. CONNECT is fully functional out-of-the-box, while at the same time configurable and flexible to allow organizations to customize it to meet their needs and those of their existing health information systems. |
| Electronic Submission of Medical Documentation (esMD) | A new mechanism for submitting medical documentation via a secure internet gateway connecting Providers to the Centers for Medicare & Medicaid Services (CMS). In its second phase, esMD will allow Medicare RCs to electronically submit claim related Additional Document Request (ADR) letters, and other use case requests, to Providers when their claims are selected for review. |
| Health Information Handler (HIH) | A Health Information Handler (HIH) is defined as an organization that oversees and governs the exchange of health-related claim reviewer information from Provider to CMS esMD Gateway according to nationally recognized standards. |
| Interface | A well-defined boundary where direct contact between two different environments, systems, etc., occurs, and where information is exchanged. |
| Power Mobility Device (PMD) Prior Authorization (PA) | The CMS implemented a Prior Authorization process for scooters and power wheelchairs for people with Fee-For-Service Medicare who reside in seven states with high populations of fraud- and error-prone Providers (CA, FL, IL, MI, NY, NC, and TX). This demonstration will help ensure that a beneficiary's medical condition warrants their medical equipment under existing coverage guidelines. Moreover, the program will assist in preserving a Medicare beneficiary's ability to receive quality products from accredited suppliers. |
| Security | The physical, technological, and administrative safeguards used to protect individually identifiable health information. |

| Glossary | Description |
|-------------|--|
| SOAP | Simple Object Access Protocol is a message exchange format for web services. |
| Transaction | Event or process (such as an input message) initiated or invoked by a user or system, regarded as a single unit of work and requiring a record to be generated for processing in a database. |

Appendix J: Referenced Documents

Table 56: Referenced Documents

| Document Name | Document Location and/or URL | Issuance Date |
|---------------|------------------------------|---------------|
| None. | | |

Appendix K: Approvals

The undersigned acknowledge that they have reviewed the Review Contractor (RC) Client Java User Guide and Installation Handbook, Version 1.4, and agree with the information presented within this document. Changes to this Review Contractor (RC) Client Java User Guide and Installation Handbook, Version 1.4, will be coordinated with, and approved by, the undersigned, or their designated representatives.

Signature:

Date:

Print Name: Braeyon Terry-ConnorTitle: Contracting Officer's RepresentativeRole: CMS Approving Authority
