RESOURCE AND PATIENT MANAGEMENT SYSTEM

RPMS/Ensemble Cache Classes
Database File

(BMW)

BMW CACHE.DAT Installation Guide

Version 2016.2
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Office of Information Technology
Division of Information Technology
Albuquerque, New Mexico
# Table of Contents

## 1.0 Release Notes

## 2.0 Installation Notes
- 2.1 Contents of Distribution
- 2.2 Required Database Server Resources
- 2.3 Ensemble Prerequisites

## 3.0 Installation Overview

## 4.0 Installation and Configuration
- 4.1 Assumptions
- 4.2 Installation
  - 4.2.1 Create the /BMW Folder
  - 4.2.2 Unzip the BMW ZIP File
  - 4.2.3 Move the BMW CACHE.DAT file to the Database Server
  - 4.2.4 Set File and Folder Permissions
  - 4.2.5 Set Up the BMW Database
  - 4.2.6 Mount the BMW Database
  - 4.2.7 Create the New Namespace
- 4.3 Package Mapping
  - 4.3.1 Set up Package Mapping
  - 4.3.2 Verify Package Mapping
- 4.4 Global Mappings
- 4.5 Verify BMW Version Installed

## 5.0 Installing File Updates
- 5.1 Updating the BMW CACHE.DAT File
  - 5.1.1 Acquire the latest BMW CACHE.DAT File
  - 5.1.2 Unzip the BMW CACHE.DAT ZIP File
  - 5.1.3 Stop the BMW Web Site on the Application Server
  - 5.1.4 Stop CCDA Messaging
  - 5.1.5 Stop CCDA Production
  - 5.1.6 Dismount the BMW Database on the Database Server
  - 5.1.7 Move the new CACHE.DAT File
  - 5.1.8 Mount the BMW Database
- 5.2 Purge the Previous SQL Queries
- 5.3 Start the BMW Web Site on the Application Server
- 5.4 Start CCDA Messaging
- 5.5 Starting CCDA Production
- 5.6 Verify BMW Version Installed

## Acronym List

## Contact Information
Preface

This manual describes the installation of the BMW CACHE.DAT file used by the BPRM Practice Management Application Suite, as well as other Meaningful Use 2-compliant Indian Health Service (IHS) applications. The versioning information indicates the calendar year and release number in which the BMW CACHE.DAT file was generated.
1.0 Release Notes

This release of the stand-alone BMW CACHE.DAT file is to support changes related to a BPRM patch release. Previously, this file was integrated into the BMW Practice Management Application Suite, but since this CACHE.DAT file is now used by other applications, it is provided to sites as a stand-alone package from this point forward.
2.0 Installation Notes

Prefix: BMW
Current Version: 2016.2

2.1 Contents of Distribution

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMW-CACHE-04-26-2016.zip</td>
<td>CACHE.DAT Cache database file for Windows systems</td>
</tr>
<tr>
<td>BMW-CACHE-04-26-2016-Aix.gz</td>
<td>CACHE.DAT Cache database file for AIX systems</td>
</tr>
</tbody>
</table>

2.2 Required Database Server Resources

The BMW CACHE.DAT file requires a minimum 5 GB of free disk space on the database server.

2.3 Ensemble Prerequisites

The BMW CACHE.DAT file currently supports only Ensemble version 2012.2.x.

The examples in this Installation Manual reflect Ensemble 2012.2.5. If you are running a different version, some of the screens you see may vary slightly from those shown here.
3.0 Installation Overview

The BMW CACHE.DAT file is a required component of several IHS RPMS applications. It must be present in order for these applications to run.

As a strategy to minimize changes to the Resource and Patient Management (RPMS) database, the BMW CACHE.DAT file is mounted as a separate database and attached to an Ensemble/Cache server. This database contains already generated Cache classes against FileMan files.

The classes in the BMW database are generated in a specific package called BMW. The BMW package can be mapped onto the RPMS database, thus enabling the RPMS database to consume the mapped classes. The Cache-generated Classes will reside in the BMW database, yet remain available to the RPMS database, thus achieving the goal of minimizing steps for the BMW database setup when it is scaled onto several sites.

Follow the instructions shown in Section 4.0 if you are installing the BMW CACHE.DAT file for the first time at your site. Refer to Section 5.0 if an earlier version of the BMW CACHE.DAT file is installed at your site.
4.0 Installation and Configuration

4.1 Assumptions

This section assumes the following:

- Ensemble/Cache server (running one of the supported versions) has already been set up.
- An RPMS database is already set up on the Ensemble/Cache server.
- The user performing the installation and configuration has the appropriate rights to mount databases.

In this manual, “EBCI” is the name of the RPMS database used. The name may be different on your system. The steps shown in the following sections will guide you through setting up the BMW database for the IHS RPMS environment.

4.2 Installation

4.2.1 Create the /BMW Folder

Create a /BMW folder under the default database folder on the database server. This is the folder where the BMW CACHE.DAT file will reside.

For Windows systems, follow these steps (substituting the appropriate drive letter and folder names):

1. Using Windows Explorer, navigate to D:\EnsembleData\ on your database server.
2. Click Organize, and then select New Folder.
3. Type BMW, and press Enter to create the D:\EnsembleData\BMW folder.

For AIX systems, issue the following command at the command prompt. (Note that this example is using usr3 as the default database directory. Your default directory will likely be different.):

$mkdir /usr3/cachedata/bmw/

4.2.2 Unzip the BMW ZIP File

Using the appropriate utility for the file format provided, unzip the CACHE.DAT file, which will be mounted onto the Ensemble/Cache server in the steps shown in Section 4.2.6.
Unzip this file on a workstation or other local machine, not on your database server itself. After it is unzipped, it will be moved to the database server as described in Section 4.2.3

4.2.3 Move the BMW CACHE.DAT file to the Database Server

After unzipping the compressed file, move the CACHE.DAT file contained within it to the /BMW folder created in Section 4.2.1:

- If installing on a Windows database server, this file move can be done directly through the network or via Remote Desktop Connection, depending on site requirements.
- On an AIX database server, it will probably be necessary to use File Transfer Protocol (FTP) or another similar file transfer program to move the file.

4.2.4 Set File and Folder Permissions

The BMW CACHE.DAT file needs specific access permissions (also known as access rights on AIX systems) to access the CACHE.DAT file and the folder in which it is stored. On Windows servers, the necessary permissions are typically set up by default. On AIX servers, the necessary rights are not established by default. To set the access rights on an AIX server:

1. Type this command at the AIX command prompt to navigate to the folder where CACHE.DAT is stored. (Note that this example is using `usr3` as the default database directory. Your default directory will likely be different):

   ```
   $cd /usr3/cachedata/
   ```

2. Type this command to set the permissions for the /bmw directory:

   ```
   $chmod 770 /usr3/cachedata/bmw
   ```

3. Type this command to set the permissions for the CACHE.DAT file:

   ```
   $chmod 775 /usr3/cachedata/bmw/CACHE.DAT
   ```

4.2.5 Set Up the BMW Database

Mount the unzipped BMW database using the Ensemble System Management Portal, a component of Ensemble/Cache:

1. Right-click the Ensemble icon (📷) in the Windows Notification Area. The menu in Figure 4-1 displays.
2. Select **System Management Portal**.

3. Type your Ensemble/Cache user name and password in the window displayed (Figure 4-2). Click **Login**.

4. From the Ensemble/Cache **System Management Portal Home** window click **System Administration > Configuration > System Configuration > Local Databases** as shown in Figure 4-3:
5. The **Local Databases** window displays as shown in Figure 4-4:

6. Select **Create New Database** in the upper left of the **Local Databases** window. The **Database Wizard** (Figure 4-5) window is displayed.

7. In the **Enter the name of your database** field, type **BMW**.

8. Click **Browse** and browse to the folder where the **BMW** database is located as described in Section 4.2.2. (The correct folder is labeled `\BMW` and contains the CACHE.DAT file).
9. Click **Next** to display the next window of the Database Wizard (Figure 4-6). A message displays stating the CACHE.DAT database file already exists. Click **Finish** to close the **Database Wizard**.

![Database Wizard Create New Database](image)

**Figure 4-5: Database Wizard Create New Database**

4.2.6 **Mount the BMW Database**

To mount the BMW database:

1. From the Ensemble/Cache **System Management Portal Home** window, click **System Operation > Databases** to display the **Databases** window shown in Figure 4-7.
2. If the **Status** column for the BMW database shows it to be unmounted, click **Mount**. The confirmation dialog shown in Figure 4-8 displays.

![Mount Database dialog](image)

Figure 4-8: **Mount Database** dialog

### 4.2.7 Create the New Namespace

To create a new namespace for the BMW database:

1. Browse to the **New Namespace** window of the **Ensemble Management Portal** following this path:
   - **Home** > **System Administration** > **Configuration** > **System Configuration** > **Namespaces**
2. Click **Create New Namespace** at the top of the screen displayed. This causes the **New Namespace** window shown in Figure 4-9 to be displayed.

![New Namespace Window](image)

Figure 4-9: Add a New Namespace

3. Create a new namespace, specifying **BMW** as the name of the namespace, and selecting **BMW** from the list of existing databases.

4. Click **Save**.

### 4.3 Package Mapping

#### 4.3.1 Set up Package Mapping

To set up the package mapping:

1. Browse to the **Namespaces** window of the **Ensemble Management Portal** following this path:
   - **Home > System Administration > Configuration > System Configuration > Namespaces**
   - A **Namespaces** window similar to Figure 4-10 displays.
2. Click **Package Mappings** in the row corresponding to your *RPMS production database*. This example shows the ECBI database. Your database will have a different name. The **Package Mappings** window (Figure 4-11) displays.

3. Click **New Package Mapping** to display the **Package Mapping** (Figure 4-12) dialog.
4. Type BMW in the **Package database location** field.

5. Type BMW in the **Package name** field.

6. Click **OK**; the Package Mappings dialog (Figure 4-13) redisplay.

![Figure 4-13: Package Mappings confirmation window](image)

7. Click **Save Changes**.

### 4.3.2 Verify Package Mapping

To verify that the package mapping was successful and Cache classes (tables) can accurately fetch data from FileMan files:

1. Browse to the **Execute SQL Query** window of the Ensemble System Management Portal following this path: **Home > System Explorer > SQL > Execute SQL Statements**

   The **Execute SQL Query** page (Figure 4-14) displays:

![Figure 4-14: Execute SQL Query page](image)

2. Select the site-specific namespace (**EBCI** in this example) from the column on the left.

3. Type **SELECT * FROM BMW.STATE** in the edit box.

4. Click **Execute Query**. If the package mapping is successful, a listing similar to Figure 4-15 displays:
4.4 Global Mappings

Global mapping must be established between the BMW database and RPMS database.

To perform global mapping:

1. Browse to the Namespaces window of the Ensemble Management Portal following this path:
   Home > System Administration > Configuration > System Configuration > Namespaces
   A Namespaces window similar to Figure 4-19 displays.
2. Click **Global Mappings** in the row corresponding to the RPMS production database. This example shows the ECBI database, an RPMS production database. Your database will have a different name, and potentially a different name for each site. The **Global Mappings** window (Figure 4-20) displays.
3. Click **New Global Mapping** to display the **Global Mappings** dialog (Figure 4-21).

![Figure 4-18: Global Mapping dialog](image)

4. Select **BMW** from the **Global database location** list.

5. Type **BMW** in the **Global name** field.

6. Click **OK**. The **Global Mappings** page (Figure 4-22) redisplays.
7. Click **Save Changes** to complete the global mapping operation.

4.5 Verify BMW Version Installed

Once installation is complete, you confirm the version number of BMW that is currently installed.

1. Log into an RPMS session and go to the programmer prompt

2. Type in the following command: **ZW ^BMW**

3. This will display the BMW generation date and version number (Figure 4-20) that is currently installed

```
PRECERT>ZW ^BMW
^BMW("fm2class","GenDate")="04/26/2016 12:04:13"
^BMW("fm2class","Version")=2016.2
```

Figure 4-20: Example of BMW Version from RPMS Programmer Prompt
5.0 Installing File Updates

BMW CACHE.DAT file updates are released on a periodic basis to address reported issues and to add enhancements. Follow the steps in Sections 5.1 through 5.5 to install a BMW CACHE.DAT update.

5.1 Updating the BMW CACHE.DAT File

Follow the steps in Sections 5.1.1 through 5.1.8 to import a new BMW CACHE.DAT file.

5.1.1 Acquire the latest BMW CACHE.DAT File

Acquire the latest BMW CACHE.DAT file from the IHS RPMS website or FTP site.

5.1.2 Unzip the BMW CACHE.DAT ZIP File

Using the appropriate software, unzip the compressed file containing the BMW CACHE.DAT file. Unzip this file on a workstation or other local machine, not on the database server. After it is unzipped, it is moved to the database server as described in Step 2 in Section 5.1.6. After it has been moved, the BMW CACHE.DAT file is mounted onto the Ensemble/Cache server following the steps shown in Section 5.1.8.
5.1.3 Stop the BMW Web Site on the Application Server

If running the BPRM Practice Management Application Suite, it is necessary to stop the BPRM (Moonwalk) web site on the application server before installing a BMW CACHE.DAT file patch or update. Follow these steps:

1. Select Internet Information Services (IIS) Manager from the Windows Server Administrative Tools menu. The Internet Information Services (IIS) Manager window (Figure 5-2) displays.

![Figure 5-1: Opening Internet Information Services (IIS) Manager](image)

![Figure 5-2: Internet Information Services (IIS) Manager Window](image)
2. Select the application server in the left pane (\textbf{Win2k8srv32} in the example).

3. Expand the \textbf{Sites} folder, and select the \textbf{Moonwalk} site.

4. Click \textbf{Stop} in the \textbf{Manage Web Site} section in the \textbf{Actions} pane.

5.1.4 Stop CCDA Messaging

If CCDA is running, it must be stopped before updating the BMW CACHE.DAT file. CCDA Messaging can be stopped using the \textbf{Manage CCDA transmissions} option, available in the CCDA Menu (Figure 5-3). The CCDA Menu can be accessed from the regular “OPTION NAME” prompt in RPMS.

\begin{verbatim}
Select CCDA Menu Option: MANG  Manage CCDA transmissions
C Messaging status:
No configuration problems found
CCDA processing task is running
Stop CCDA? No// Y (Yes)
Attempting to stop CCDA....CCDA stopped
\end{verbatim}

Figure 5-3: Stopping CCDA Messaging

1. At the “Select CCDA Menu Option” prompt, type \textbf{MANG} (Manage CCDA transmissions) and press Enter.

2. If CCDA Messaging is running, type \textbf{YES} at the “Stop CCDA?” prompt.
5.1.5 Stop CCDA Production

To stop CCDA production, if it is currently running:

1. Sign on to Ensemble’s Management Portal as an administrator. At the top center, the main page displays the server name, the current user, the current namespace, license and instance information, and a Switch link.

![Ensemble Management Portal](image)

Figure 5-4: Ensemble Management Portal

2. Click the Switch link. The Namespace Chooser dialog (Figure 5-5) displays.

![Namespace Chooser](image)

Figure 5-5: Namespace Chooser dialog
3. Select the appropriate CCDA namespace. The namespace consists of **CCDA** followed by the name of the RPMS namespace. In the example, the RPMS namespace is named **TEST4**, so the associated CCDA namespace is named **CCDATEST4**.

4. Click **OK** to select the namespace. The namespace displayed on the **Management Portal** page (Figure 5-6) is updated to reflect the selection.

![Figure 5-6: Production option in the Ensemble Management Portal](image)

5. Select **Ensemble** in the left column.

6. Select **Configure**.

7. Select **Production**.

8. When the **View, Edit, Start, or Stop a Production** option appears, click **Go** to display the **Production Configuration** page (Figure 5-7).
9. Above the Services column on the left of the display, the words Ensemble Running will be displayed. If the words Ensemble Stopped are displayed, then the production is already stopped. Otherwise, click Stop. The Stop Production dialog (Figure 5-8) displays.

![Stop Production dialog](image)

Figure 5-8: Stop Production dialog

It might take the production a few seconds to stop. When it stops, the message Production ‘BCCD.Prod.Production’ stopped displays, followed by the message Done. There might be additional messages on this screen if it takes Ensemble more than a few seconds to stop all associated processes.
10. Click **OK** to return to the **Production Configuration** screen.

5.1.6 Dismount the BMW Database on the Database Server

1. From the Ensemble/Cache **System Management Portal Home** window, click **System Operation > Databases** to display the Databases window (Figure 5-9).

   ![](image)

   **Figure 5-9: Dismounting the BMW database**

2. Click **Dismount** in the BMW row to dismount the database.

5.1.7 Move the new CACHE.DAT File

After unzipping the compressed file as described in Section 5.1.2, move the CACHE.DAT file contained within it to the /BMW folder where earlier versions of the file have been stored. If installing on a Windows database server, this file move can be done directly through the network or via Remote Desktop Connection, depending on site requirements. On an AIX database server, it may be necessary to use FTP or a similar file transfer program to move the file.

5.1.8 Mount the BMW Database

To mount the BMW database:

1. From the Ensemble/Cache **System Management Portal Home** window, click **System Operation > Databases**. A Databases window similar to Figure 5-10 displays.
2. If the Status column for the BMW database reads unmounted, click Mount. The confirmation dialog (Figure 5-11) displays.

![Mount Database dialog](image)

**Figure 5-11: Mount Database dialog**

### 5.2 Purge the Previous SQL Queries

To clear any previous SQL queries for your RPMS database:

1. From the Ensemble/Cache System Management Portal Home window, click System Explorer > SQL > Browse SQL Schemas. The Schemas page (Figure 5-12) displays.
2. On the left side of the window select the RPMS database. In the example shown in, \textbf{EBCI} is selected. Your database will likely have a different name.

3. Click \textbf{Purge Queries}.

### 5.3 Start the BMW Web Site on the Application Server

If running the BMW Practice Management Application Suite, restart the BMW web site. Follow the steps outlined in Section 5.1.3, but select the \textbf{Start} option in Step 2.

### 5.4 Start CCDA Messaging

If CCDA was previously running, restart it by following the steps outlined in Step 2 of Section 5.1.3 and typing \textbf{YES} at the “Start CCDA?” prompt as shown in Figure 5-13:

```
Select CCDA Menu Option: \textbf{MANG} Manage CCDA transmissions
CCDA status:
No configuration problems found
CCDA processing task is not running
Start CCDA? No// \textbf{YES} (Yes)
Attempting to start CCDA (JUL 16, 2013@16:09:54)..CCDA started
```

Figure 5-13: Starting CCDA Messaging
5.5 Starting CCDA Production

When CCDA Messaging is started via the Manage CCDA Transmissions option, the CCDA production will start automatically within two minutes. If it is necessary to start the production without starting CCDA Messaging:

1. Sign on to the Ensemble Management Portal as an administrator.

![Ensemble Management Portal](image)

Figure 5-14: Ensemble Management Portal

5.6 Verify BMW Version Installed

Once installation is complete, you confirm the version number of BMW that is currently installed.

1. Log into an RPMS session and go to the programmer prompt

2. Type in the following command: ZW ^BMW

3. This will display the BMW generation date and version number (Figure 5-15) that is currently installed

```
PRECERT>ZW ^BMW
^BMW("fm2class","GenDate")="04/26/2016 12:04:13"
^BMW("fm2class","Version")=2016.2
```

Figure 5-15: Example of BMW Version from RPMS Programmer Prompt
4. Click the **Switch** link. The **Namespace Chooser** dialog (Figure 5-5) displays.

![Namespace Chooser dialog](image)

Figure 5-16: Namespace Chooser dialog

5. Select the appropriate CCDA namespace. The namespace consists of **CCDA** followed by the name of the RPMS namespace. For example, if the RPMS namespace is named **TEST5**, then the associated CCDA namespace will be named **CCDATEST5**.

6. Click **OK** to select the namespace. The namespace displayed on the **Management Portal** page is updated to reflect the selection.
7. Select **Ensemble** in the left column.

8. Select **Configure**.

9. Select **Production**.

10. When the **View, Edit, Start, or Stop a Production** option appears, click **Go** to display the **Production Configuration** page (Figure 5-17).
11. Above the Services column on the left, the words Ensemble Stopped should be visible. If the words Ensemble Running are displayed, the production is already running; skip the rest of this section. Otherwise, click Start. The Start Production dialog displays.

![Start Production dialog](image)

Figure 5-19: Start Production dialog

At the Do you wish to start this Production? dialog, click OK. It might take the production a few seconds to start. When it starts, the message Production ‘BCCD.Prod.Production’ started displays, followed by the message Done. There might be additional messages on this screen.

12. Click OK to return to the Production Configuration screen.
## Acronym List

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>IHS</td>
<td>Indian Health Service</td>
</tr>
<tr>
<td>OIT</td>
<td>Office of Information Technology (IHS)</td>
</tr>
<tr>
<td>RPMS</td>
<td>Resource and Patient Management System</td>
</tr>
<tr>
<td>SQA</td>
<td>Software Quality Assurance (OIT)</td>
</tr>
</tbody>
</table>
Contact Information

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

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

**Web:** [http://www.ihs.gov/helpdesk/](http://www.ihs.gov/helpdesk/)

**Email:** support@ihs.gov