



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Practice Management Application Suite**

(BPRM)

## **Installation Guide and Release Notes**

Version 4.0 Patch 1  
June 2023

Office of Information Technology  
Division of Information Technology

# Table of Contents

|            |   |           |
|------------|---|-----------|
| <b>1.0</b> | <b>Release Notes .....</b>  | <b>1</b>  |
| <b>2.0</b> | <b>Installation Notes.....</b>  | <b>3</b>  |
| 2.1        | Contents of Distribution .....  | 3         |
| 2.2        | Required Resources .....  | 3         |
| 2.2.1      | Standalone Application Server Resources .....   | 3         |
| 2.2.2      | BPRM Server Disk Resources.....   | 3         |
| 2.2.3      | Workstation Resources .....   | 4         |
| 2.3        | Before You Begin: Installation Issues .....   | 4         |
| 2.4        | Prerequisites.....  | 4         |
| 2.4.1      | HealthShare Prerequisites.....  | 4         |
| 2.4.2      | BPRM Prerequisites .....  | 4         |
| <b>3.0</b> | <b>Installation Overview.....</b>   | <b>6</b>  |
| 3.1        | Upgrading from BPRM 3.x Or a First-time install .....                                     | 6         |
| 3.2        | Upgrading from BPRM 4.x.....  | 6         |
| <b>4.0</b> | <b>Installation Instructions: First-Time Install .....</b>                                | <b>7</b>  |
| 4.1        | Acquire the SSL Certificate.....  | 7         |
| 4.1.1      | SSL Certificate Acquisition – IHS Domain .....  | 7         |
| 4.1.2      | SSL Certificate Acquisition – Non-IHS Domain .....  | 13        |
| <b>5.0</b> | <b>BPRM Application Server Installation and Configuration.....</b>                        | <b>14</b> |
| 5.1        | Microsoft .NET Framework 4.6 Installation .....   | 14        |
| 5.2        | Internet Information Services 10 Installation (Windows Server 2016 Operating System)..... | 14        |
| 5.3        | Install the SSL Certificate .....   | 19        |
| 5.4        | BPRM Website Setup .....  | 21        |
| 5.4.1      | Add the Application Pool .....  | 21        |
| 5.4.2      | Create a BPRM Folder .....  | 23        |
| 5.4.3      | Add the New Site.....   | 23        |
| <b>6.0</b> | <b>BPRM Database Server Installation and Configuration .....</b>                          | <b>26</b> |
| 6.1        | Assumptions .....   | 26        |
| 6.2        | Importing a New BPRM XML File .....   | 26        |
| 6.2.1      | Disable Read Only.....  | 26        |
| 6.2.2      | Import the BPRM XML File .....  | 27        |
| 6.3        | Cache User Creation .....   | 30        |
| 6.3.1      | Create the BPRM User.....   | 30        |
| 6.3.2      | Assign User Roles .....   | 31        |
| 6.3.3      | Verify XML Import and Installation.....   | 33        |
| <b>7.0</b> | <b>Application Deployment to the Web Server .....</b>                                     | <b>37</b> |
| 7.1        | Deploy the BPRM Application.....  | 37        |

|                                  |  |           |
|----------------------------------|--|-----------|
| 7.2                              | Adding a Database After the Installation.....                      | 44        |
| 7.3                              | Menu and Security Keys.....  | 49        |
| 7.4                              | Open the BPRM Application .....                                    | 50        |
| 7.5                              | Verify Client/Server Machine Date Time.....                        | 52        |
| <b>Appendix A</b>                | <b>Run the Application Installer from the Command Prompt.....</b>  | <b>54</b> |
| <b>Appendix B</b>                | <b>Disable Logging in IIS Manager.....</b>                         | <b>55</b> |
| <b>Appendix C</b>                | <b>Run Multiple BPRM Web Applications on a Single Server .....</b> | <b>58</b> |
| <b>Acronym List .....</b>        |  | <b>59</b> |
| <b>Contact Information .....</b> |  | <b>60</b> |

## Preface

This manual describes the installation of **the Practice Management Application Suite (namespace BPRM)** and any additional support software needed.

BPRM is a browser-enabled graphical user interface (GUI) for the **Indian Health Service (IHS) Resource and Patient Management System (RPMS)** applications. It provides improved access to existing RPMS data and streamlines the input of new patient data. In some aspects of its operation and configuration, this suite is also referred to by its development name, BPRM. It should also be noted that prior to V3.0, the previous namespace for the **Practice Management Application Suite** was **BMW**. The **BMW** namespace now refers only to the **CACHE.DAT** file used by BPRM and other IHS applications.

The BPRM application suite consumes Cache classes, provided by BMW, which maps onto **FileMan** files. **Create, Read, Update, and Delete (CRUD)** operations can then be performed over the generated Cache classes (SQL tables) via the **ADO.NET** provider for **InterSystems Ensemble/Cache**.

## 1.0 Release Notes

The following describes the changes made in BPRM V4.1:

- 90191: BPRM – REG – Legal Name "Required" label adjustment
- 90192: BPRM – REG – Print Index Cards
- 90193: BPRM – Enhance SETTINGS Filters/Searches to be dynamic
- 90304: BPRM – REG – Medicaid Address display on sequencing
- 90663: BPRM – SCH – Waiting List display in Reschedule Appointment workflow
- 90778: BPRM – ADT – Edit Discharge via View Admission Detail crossing over to V Hospitalization file
- 90982: BPRM – Date format addition to all REPORTS
- 91009: BPRM – REG – Group Name/Group Number lookup
- 91291: BPRM – SCH – Allow Patient Reschedule for same time when previous appt is 'cancelled by patient'
- 92116: BPRM – SCH – Workspace – add Work Week/Day(s) View to scheduling calendar
- 92118: BPRM – SCH – Enter/edit Remarks for No Show/Cancelled Appts
- 92126: BPRM – REG – Legal Name "Suffix"
- 92128: BPRM – SCH – Display Recall Date with clinic name on WaitingList section of Appt Schedule screen
- 92130: BPRM – SCH – CheckIn time on Routing Slip
- 92361: BPRM – SCH – Search for Patient in schedule Appointment with ?? only bring up facility active patient (no empty HRN)
- 92366: BPRM – ADT – Block Admit Patient with Temp HRN
- 92481: BPRM – SCH – Appt Tile display for really long names + preferred names
- 92482: BPRM – SCH – Letters to Parents Greeting only minors
- 92623: BPRM – ADT – ADT enforce the lock out date
- 92635: BPRM – select the same division as current shall not display division switch screen
- 92636: BPRM – Add authorization for ADT module for re-login when a different user logs using the same machine and same browser after a user has logged out

- 92637: BPRM – REG – Update Internet Access workflow for better user experience
- 92724: BPRM – SCH – display Overbook Appts indicator on appt info/detail screen
- 92842: BPRM – ADT – Record Lock on Incomplete chart add/update
- 92843: BPRM 4.1 – REG – register patient with apostrophe in last name
- 92858: BPRM – REG – Notes – invalid characters in word processing field when notes deleted/removed
- 93333: BPRM – SCH – Add Clinic -update Institution search
- 93335: BPRM – SCH – Waiting List filter for Recall Date -> add 'Today' in filter
- 93615: BPRM – SCH – 12-hour TIME Format on Letters
- 62492: Mini-reg (patient) information to cross-over to Dentrux application
- 95452: BPRM – ADT – Unable to discharge or admit [Help Desk Ticket: INC0327751, INC0328742, INC0332014]
- 95731: BPRM – REG – Group Numbers are NOT displaying [INC0328853]
- 95722: BPRM – REG – View Closed Benefit Case [INC0327749]
- 95924: BPRM – SCH – Copy/Paste an appt [INC0332350]
- 95927: BPRM – SCH – 'Created On' Date on View Appointment Detail [INC0328882]
- 95962: BPRM – SCH – Patient info is not updating when a patient is checked in via Registration tab [INC032874]
- 60959: BPRM-Appointment letters should not print for a deceased patients

## 2.0 Installation Notes

**Prefix:** BPRM  
**Current Version:** 4.0 Patch 1

### 2.1 Contents of Distribution

Table 2-1: Distributed Files with Descriptions

| File                          | Description                                      |
|-------------------------------|--|
| bprm0400.01.msi               | BPRM Application Installer                       |
| bprm0400.01.xml               | BPRM Data Description File                       |
| bprm0400.01i.pdf              | Version 4.1 Installation Guide and Release Notes |
| bprm0400.01s.pdf              | Version 4.1 Security manual                      |
| bprm0400.01t.pdf              | Version 4.1 Technical manual                     |
| bprm0400.01u_Registration.pdf | Registration User Manual V4.1                    |
| bprm0400.01u_Scheduling.pdf   | Scheduling User Manual V4.1                      |
| bprm0400.01u_ADT.pdf          | ADT User Manual V4.1                             |
| bprm0400.01u_Overview.pdf     | Overview User Manual V4.1                        |

### 2.2 Required Resources

This section lists the computer resources required for each deployment strategy.

#### 2.2.1 Standalone Application Server Resources

The following resources are required for a standalone application server:

- Microsoft® Windows® Server 2016 x64 bit (or later)
- Microsoft IIS® 10 (WebSocket protocol required)
- Microsoft .NET Framework 4.6 (or later)
- 8+ processor cores running at 2.0 GHz or faster (for site)
- 12+ processor cores running at 2.4 GHz or faster (for area office)
- 8+ GB RAM running at 1333 MHz (for site)
- 16+ GB RAM running at 1333 MHz (for area office)
- 20 GB minimum free disk space

#### 2.2.2 BPRM Server Disk Resources

Servers running the BPRM application require a minimum of **5 GB** of free disk space.

### 2.2.3 Workstation Resources

The following resources are recommended for any workstations (user machines) accessing the BPRM application:

- Dual-core processor running at 1.8 GHz or faster
- 4+ GB of RAM
- 20 GB free disk space
- Screen resolution of 1024 x 768 or higher
- Windows 10 or above
- Microsoft Edge / Google Chrome / Mozilla Firefox

## 2.3 Before You Begin: Installation Issues

Internet connectivity on the application server is necessary to download the required installation items.

## 2.4 Prerequisites

### 2.4.1 HealthShare Prerequisites

BPRM v4.1 currently supports only **HealthShare 2017.2.x**. Be aware the examples in this installation manual reflect **HealthShare 2017.2**. If running a different version, some of the screens may differ slightly from those shown here.

A BMW-specific **CACHE.DAT** file (Version 2020.3 or later) must be loaded into the **HealthShare** server **BMW** namespace. Acquire this file from the **IHS FTP** or **RPMS** website; it is not delivered as part of the installation package. Refer to the latest *BMW CACHE.DAT Installation Guide* for more information.

### 2.4.2 BPRM Prerequisites

The following **CACHE.DAT** file must be installed:

- BMW Version 2020.3 or above

The following **KIDS** must be installed:

- PIMS v5.3 p1019
- AG v7.1 p15
- AUM v20 p4
- AUT v98.1 p28
- AUT v98.1 p29



- XU v8.0 p1018 or later
- DI v22 p1018 or later
- BJPC v2.0 p10
- AVA v93.2 p25
- AVA v93.2 p26
- AUPN v99.1 p28
- BSDX v3.0

## 3.0 Installation Overview

The BPRM v4.1 installation requires three files. The **bprm0400.01.xml** data description file and the **bprm0400.01.msi** application installation file are specific to the BPRM suite. These two files are included in the BPRM distribution package.

Additionally, a **BMW CACHE.DAT** file (contained in a zipped file) specific to the HealthShare version is also necessary. This **BMW CACHE.DAT** file is used by BPRM, as well as other **Certified Health IT 2015 IHS** applications and is not included as part of the distribution package. It must be acquired separately from the IHS FTP or RPMS website.

Save the **bprm0400.01.xml** data description file and the zipped file containing the **CACHE.DAT** file to a folder that is accessible to your database server. Similarly, save the **bprm0400.01.msi** file to a folder that is accessible to your application server(s).

### 3.1 Upgrading from BPRM 3.x Or a First-time install

**BPRM v4.1** can be installed on the same server as **BPRM 3.x**, but it is recommended to create a new website and application pool for v4.1.

**BPRM 3.x** can be uninstalled once v4.1 is installed successfully. Site should only use a single version of BPRM at a time. Having users use both **3.x** and **4.1 version** at the same time creates data inconsistency issues.

Follow the instructions in Section 4.0 through Section 5.0 to install **BPRM v4.1** for the first time at your site. Go through all the steps even if the site already has/had a **BPRM v3.x server setup**. There are updates to the installation steps and additional components need to be installed for IIS.

### 3.2 Upgrading from BPRM 4.x

**Warning:** Any BPRM v4.x installation must be uninstalled before proceeding to install this version.

Sites may choose to make a copy of ‘**appsettings.json**’ file (typically resides at **C:\inetpub\BPRM\**) and place it someplace else on the application server; if the site plans on importing database connection settings from it – during the install process of this build/patch.

Follow the instructions in Section 6.0 and onward.

## 4.0 Installation Instructions: First-Time Install

BPRM contains components that run on both the RPMS server and the client personal computer. As a result, the installation instructions are separated into these actions:

- Application Server Installation (Section 5.0)
- Database Server Installation (Section 6.0)
- Application Installation (Section 7.0)

The application operates in a web-based environment; there is no separate installation necessary on workstations other than the items listed in Section 2.2.3.

### 4.1 Acquire the SSL Certificate

BPRM utilizes the **Secure Sockets Layer (SSL)** protocol to ensure secure communications between its components. If your site is not on a **secure domain**, you must acquire an **SSL certificate**.

**Note:** If your site is on a secure domain, an **SSL certificate** is not necessary, and you can skip all of this Section 4.1). Since the **SSL certificate acquisition** may take up to 24-hours, it is recommended that you acquire the **SSL certificate** before beginning the BPRM installation.

The process for acquiring this certificate for sites on the **IHS domain** is different than that used by sites that are not on the **IHS domain**.

#### 4.1.1 SSL Certificate Acquisition – IHS Domain

If your site is on the **IHS domain**, use the following steps to acquire your **SSL certificate**:

1. Click **Start > Administrative Tools > Internet Information Services (IIS) Manager** (Figure 4-1).

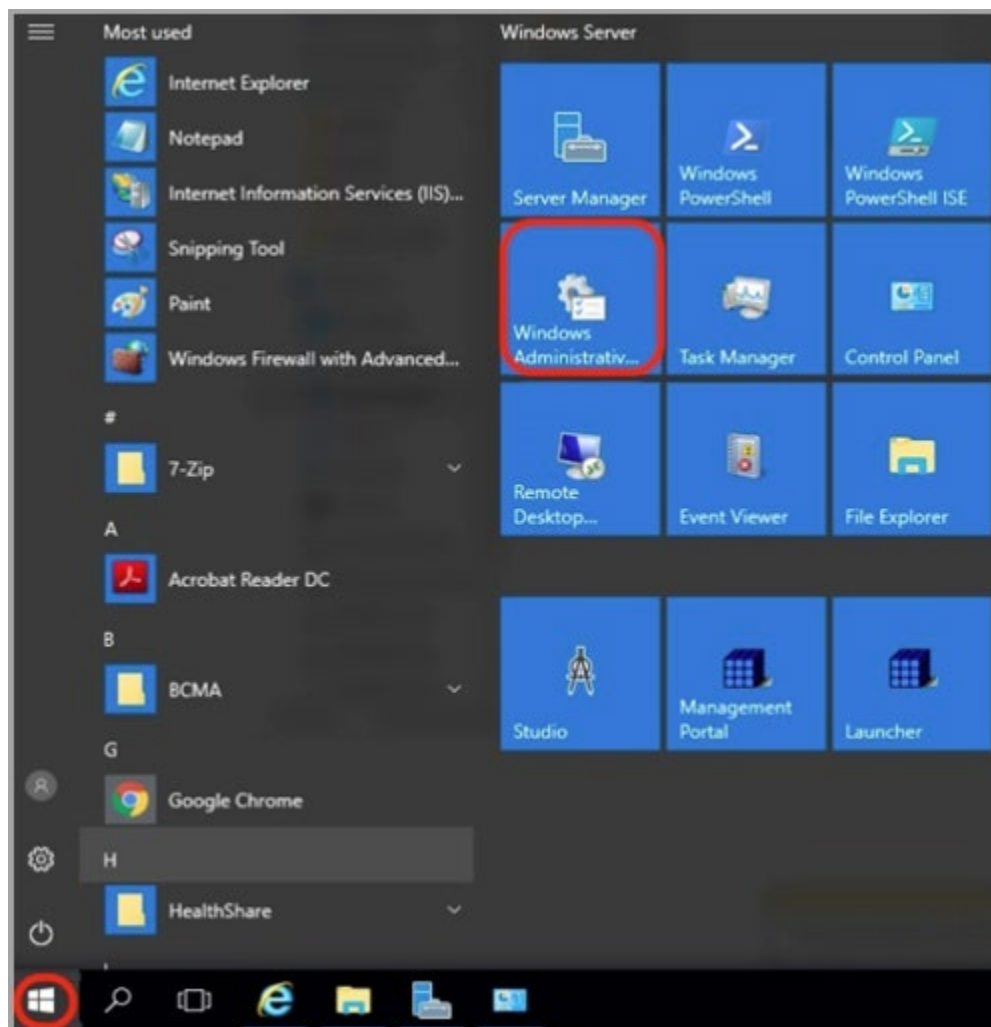


Figure 4-1: Windows Start menu, Administrative Tools option

2. Click the **server name**. The **IIS Manager** dialog (Figure 4-2) displays.

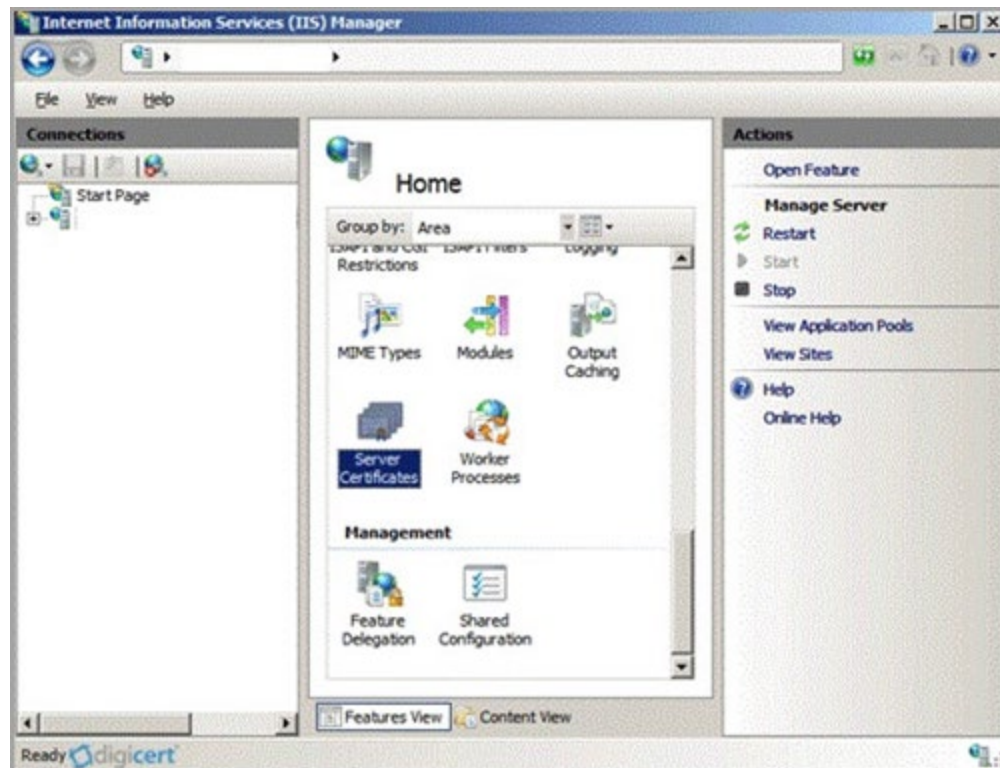


Figure 4-2: Internet Information Services (IIS) Manager

3. In the **center panel** (Figure 4-3), double-click **Server Certificates** in the **Security section** (near the bottom of the panel).

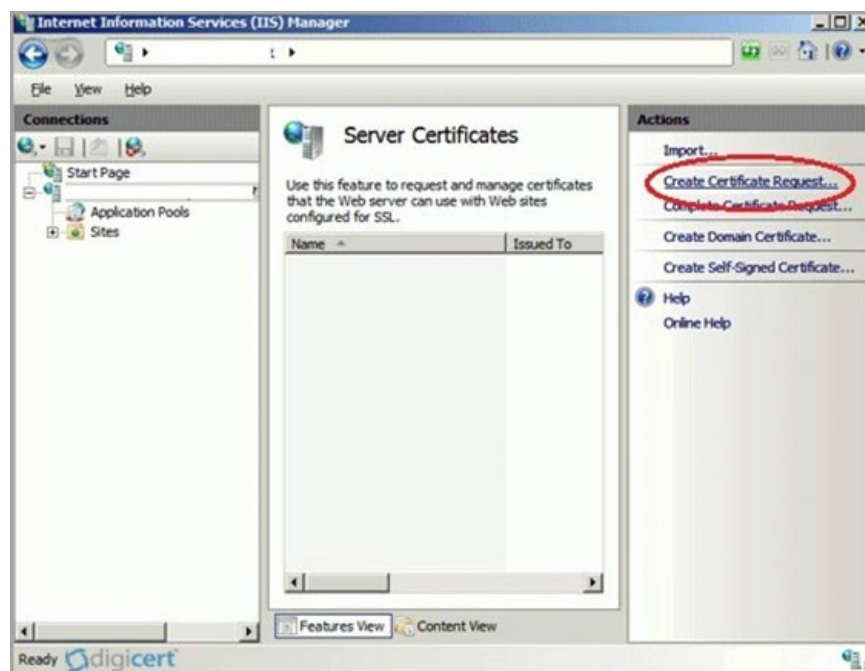
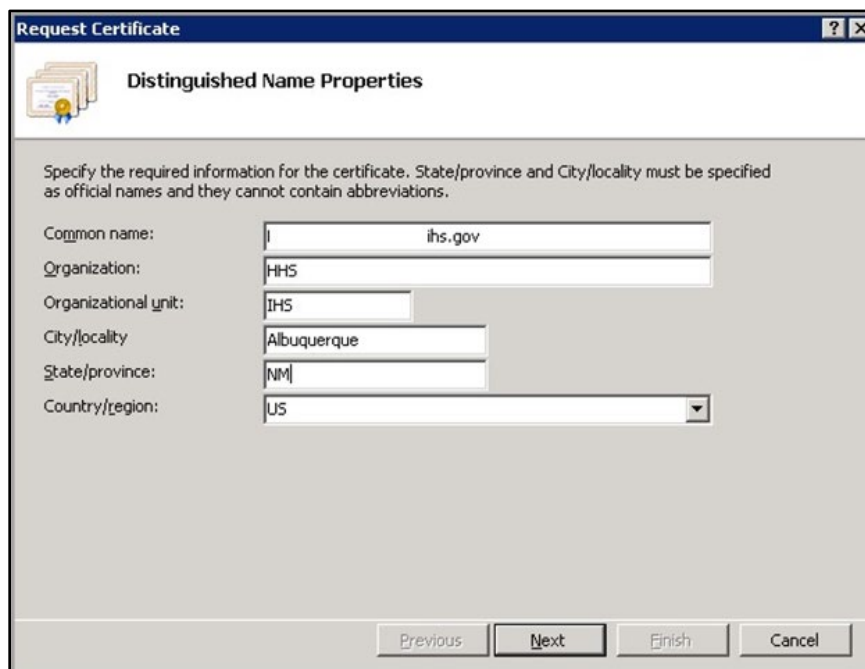


Figure 4-3: Internet Information Services (IIS) manager – Server Certificates

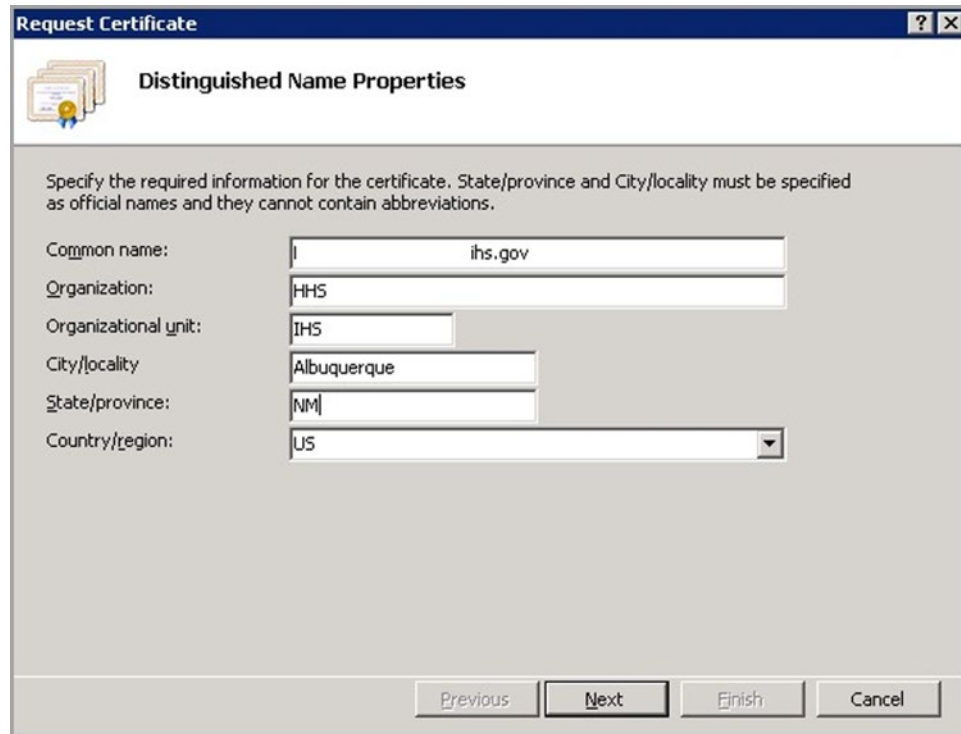
4. In the **Actions** panel (on the right), click **Create Certificate Request**. The **Request Certificate Wizard** (Figure 4-4) displays.



The screenshot shows a Windows-style dialog box titled "Request Certificate" with a subtitle "Distinguished Name Properties". It contains a text area with instructions: "Specify the required information for the certificate. State/province and City/locality must be specified as official names and they cannot contain abbreviations." Below this are several input fields: "Common name:" with "ihs.gov", "Organization:" with "HHS", "Organizational unit:" with "IHS", "City/locality:" with "Albuquerque", "State/province:" with "NM", and "Country/region:" with a dropdown menu showing "US". At the bottom are four buttons: "Previous", "Next", "Finish", and "Cancel".

Figure 4-4: Request Certificate Wizard – Distinguished Name Properties

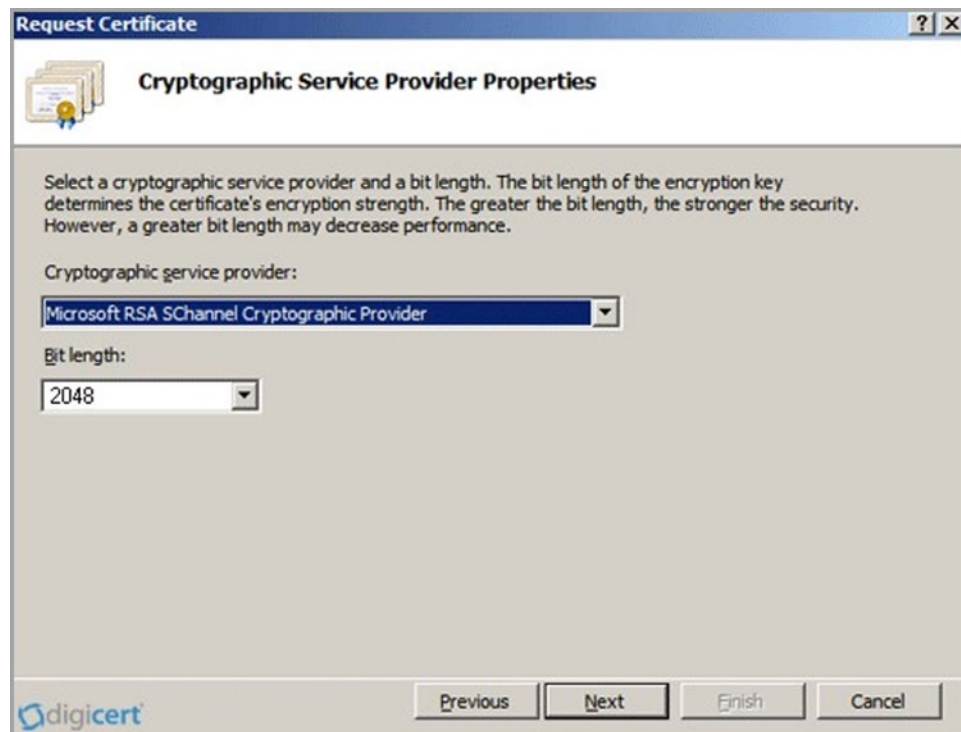
5. In the **Distinguished Name Properties** dialog (Figure 4-5), enter the information as follows:
  - **Common Name:** The name through which the certificate will be accessed (usually the fully qualified domain name of the machine).
  - **Organization:** The legally registered name of your organization or company.
  - **Organizational unit:** The name of your department within the organization (e.g., IHS).
  - **City/locality:** The city in which your organization is located.
  - **State/province:** The state in which your organization is located.
  - **Country/region:** The two-character country code.



The dialog box is titled "Request Certificate" and "Distinguished Name Properties". It contains a text box for "Common name:" with the value "ihs.gov", a text box for "Organization:" with the value "HHS", a text box for "Organizational unit:" with the value "IHS", a text box for "City/locality" with the value "Albuquerque", a text box for "State/province:" with the value "NM", and a dropdown menu for "Country/region:" with the value "US". The instructions state: "Specify the required information for the certificate. State/province and City/locality must be specified as official names and they cannot contain abbreviations." The buttons at the bottom are "Previous", "Next", "Finish", and "Cancel".

Figure 4-5: Request Certificate Wizard – Distinguished Name Properties

6. Click **Next**. The **Cryptographic Service Provider Properties** dialog (Figure 4-6) displays.



The dialog box is titled "Request Certificate" and "Cryptographic Service Provider Properties". It contains a dropdown menu for "Cryptographic service provider:" with the value "Microsoft RSA SChannel Cryptographic Provider" and a dropdown menu for "Bit length:" with the value "2048". The instructions state: "Select a cryptographic service provider and a bit length. The bit length of the encryption key determines the certificate's encryption strength. The greater the bit length, the stronger the security. However, a greater bit length may decrease performance." The buttons at the bottom are "Previous", "Next", "Finish", and "Cancel". The Digicert logo is visible in the bottom left corner.

Figure 4-6: Request Certificate Wizard – Cryptographic Service Provider Properties

7. Leave both **settings** at their defaults:
  - Cryptographic service provider: Microsoft RSA SChannel Cryptographic Provider.
  - Bit length: 2048.
8. Click **Next**. The **File Name** dialog (Figure 4-7) displays.

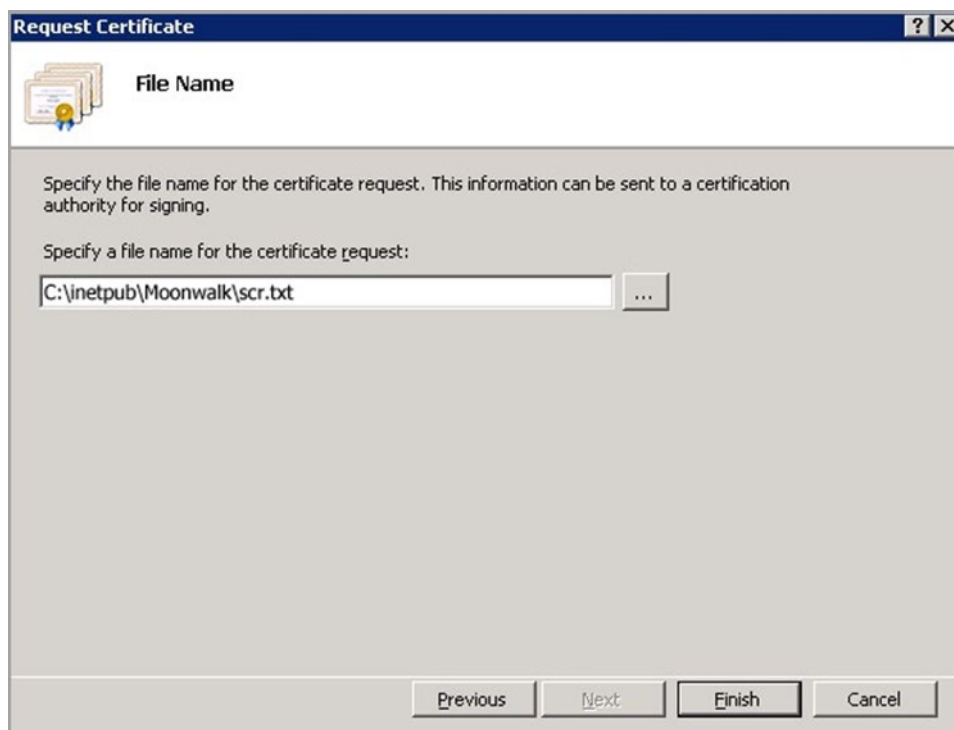


Figure 4-7: Request Certificate – File Name dialog

9. Type a **path** and **file name** for the certificate request file.
10. Make note of the chosen **filename** and the **save location**. You must open this file as a text file and copy the entire body of it (including the **Begin Certificate Request** and **End Certificate Request** tags) into the online order process when prompted.
11. Click **Finish** to save the **SSL certificate request** file.
12. E-mail the **file** to **itsupport@ihs.gov**.
13. Request the **SSL Certificate** in CER format for the BPRM application. A certificate is issued within 24 hours and emailed to the originator of the request.
14. Once the **certificate** is received, proceed with the BPRM installation as described in Section 5.0 through Section 7.0.



#### 4.1.2 SSL Certificate Acquisition – Non-IHS Domain

If the site is not on the **IHS domain**, the steps for acquiring an **SSL certificate** will vary, depending on the certificate provider. Several vendors (e.g., **GoDaddy**, **Thawte**, and **Verisign**) provide **SSL certificates**, and the process for acquiring the certificate is different for each.

Follow the steps provided by the **SSL certificate** vendor to acquire the certificate and proceed to the BPRM installation instructions in Section 5.0 through Section 7.0.

## 5.0 BPRM Application Server Installation and Configuration

### 5.1 Microsoft .NET Framework 4.6 Installation

**Warning:** .NET Framework 4.6 is shipped with Windows server 2016 and above. Since BPRM application requires Server 2016 or above; this requirement is completed automatically.

### 5.2 Internet Information Services 10 Installation (Windows Server 2016 Operating System)

To install the **Microsoft IIS**:

1. From the **Windows Start** menu (Figure 5-5), select **Server Manager**.

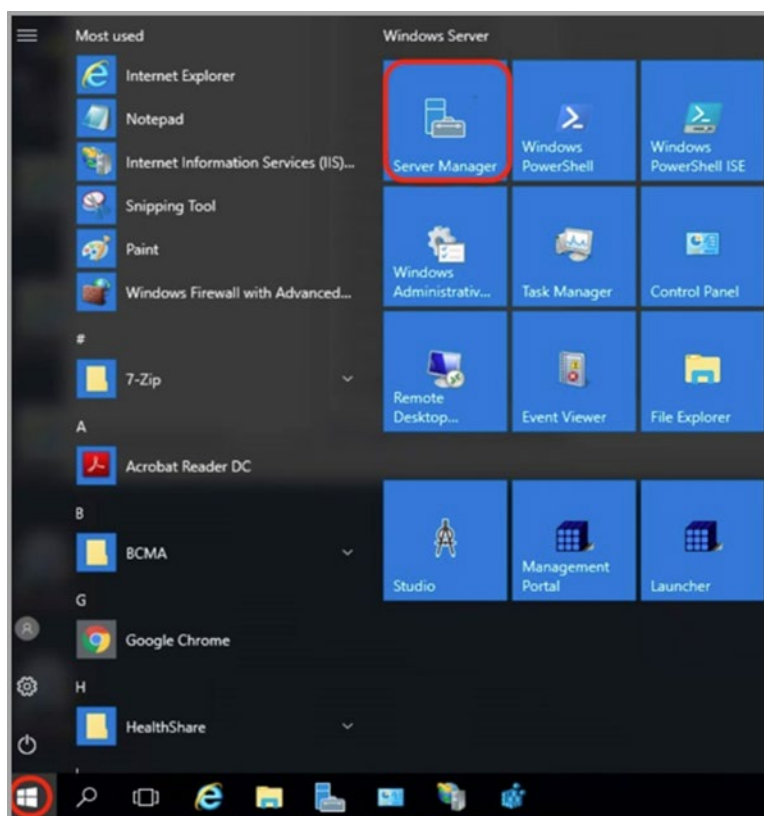


Figure 5-1: Start menu for Windows Server 2016 OS

The **Server Manager** window (Figure 5-6) displays.

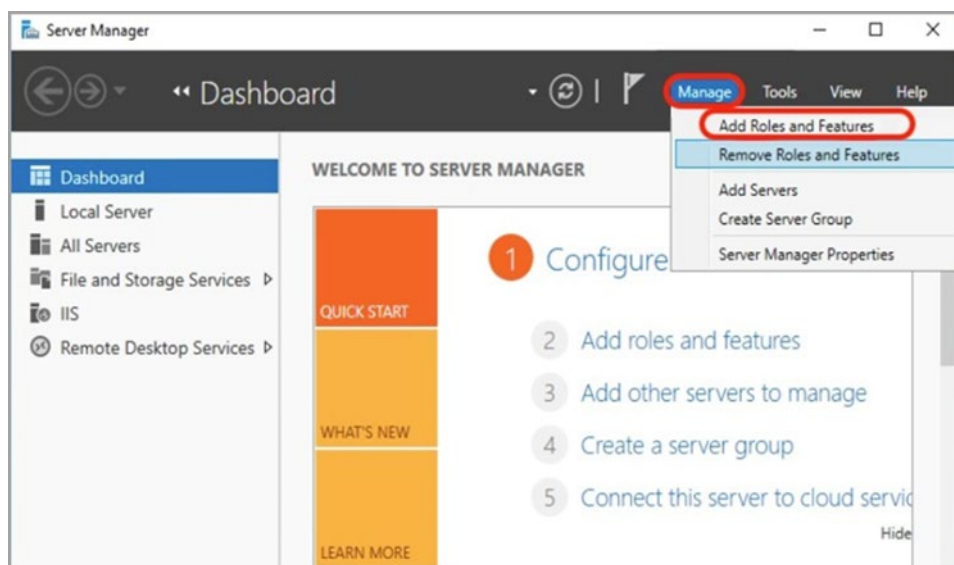


Figure 5-2: Server Manager window

2. Click **Manage > Add Roles and Features**.
3. Review the **Before You Begin** dialog, then click **Next**. The **Add Roles and Features Wizard** dialog displays.
4. Select the **Role-based or feature-based installation option** button (Figure 5-7), then click **Next**.

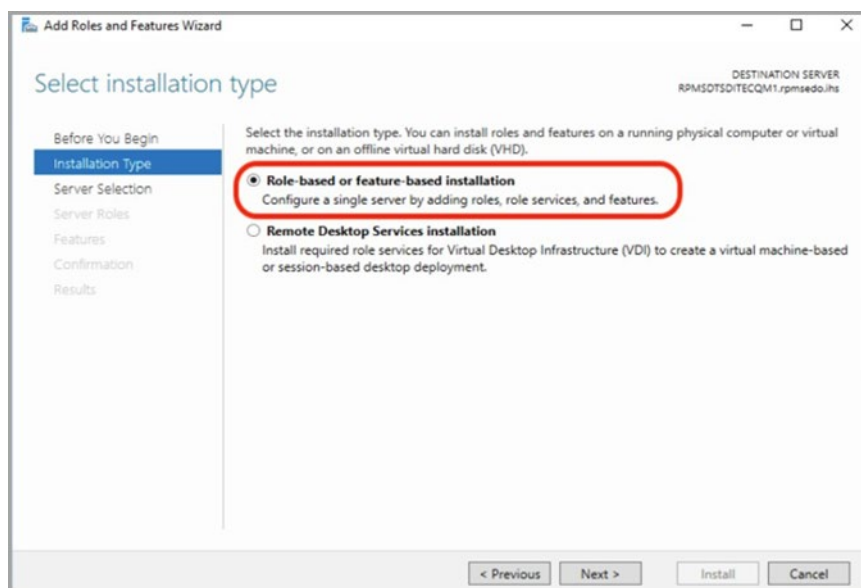


Figure 5-3: Add Roles and Features Wizard dialog

5. Select **Web Server (IIS)** on the **Server Selection** window. The **Select Server Roles** window (Figure 5-8) displays.

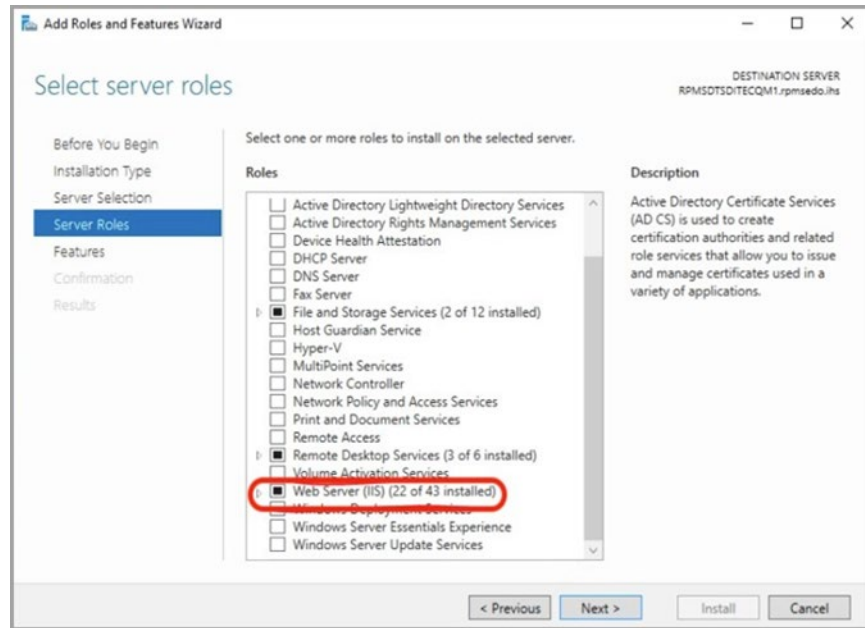


Figure 5-4: Select Server Roles window

6. Expand the **Web Server (IIS)** role and make the following selections. Figure 5-9 displays a portion of the selection.

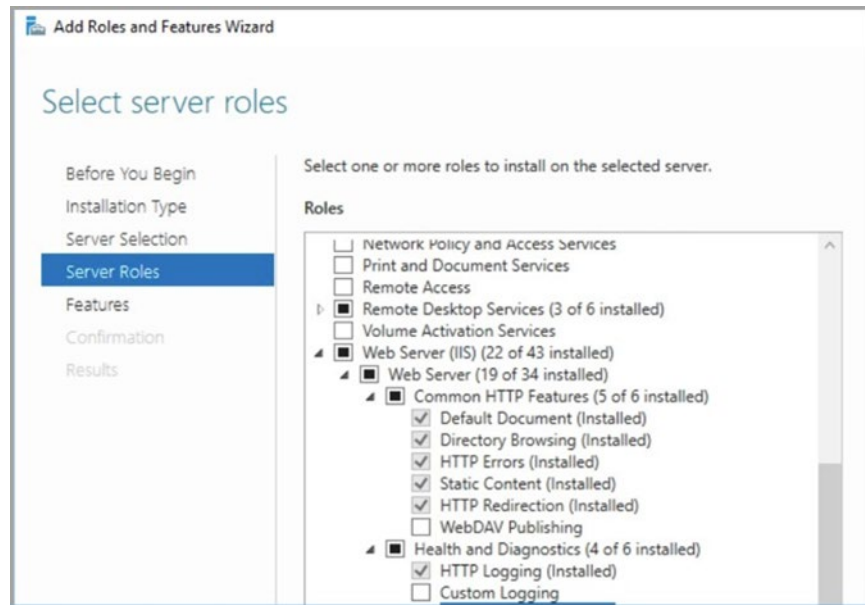


Figure 5-5: Select Web Server components

7. Enable the following **Web Server** role services:
  - Common HTTP Features:
    - Static Content

- Default Document
- Directory Browsing
- HTTP Errors
- HTTP Redirection
- Application Development: (Figure 5-10)
  - ASP.NET (latest version)
  - .NET Extensibility (latest version)
  - ISAPI Extensions
  - ISAPI Filters
  - WebSocket Protocol

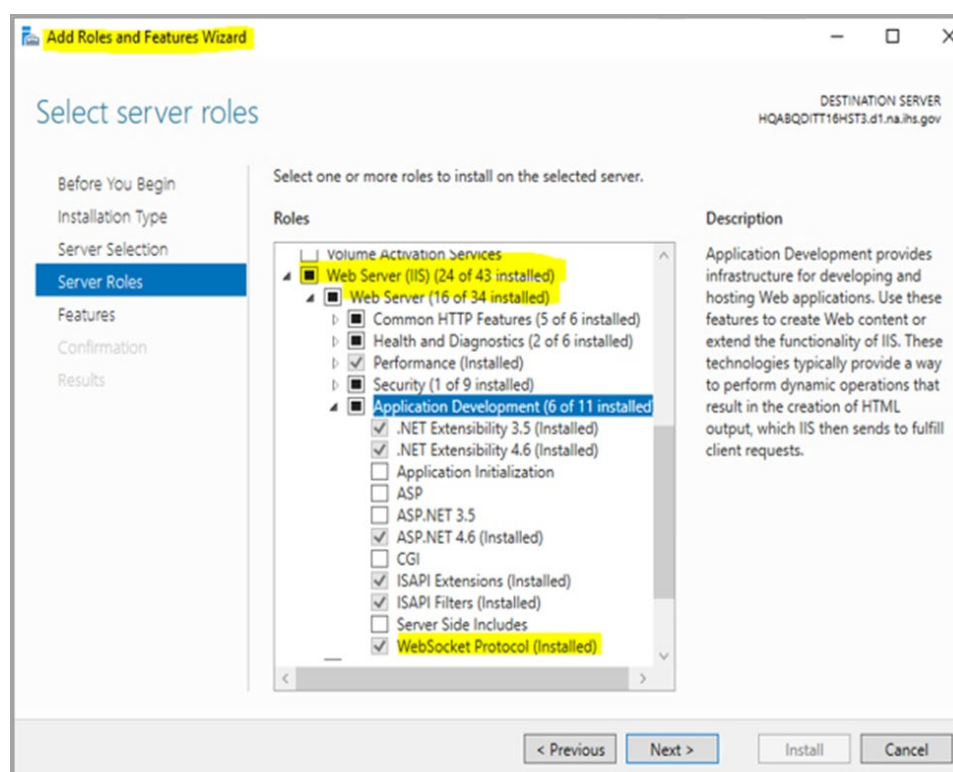


Figure 5-6: Select Web Server -- Application Development components

- Health and Diagnostics (optional):
  - HTTP Logging
  - Request Monitor
- Security:
  - Request Filtering
- Performance:
  - Static Content Compression

- Dynamic Content Compression
  - Management Tools:
    - IIS Management Console
    - IIS 6 Management Compatibility – IIS 6 Metabase Compatibility
8. Click **Next** to go to the **Features** tab.
9. In the **Features** area, make following selections: (Figure 5-11)
- .NET Framework 3.5 Features
    - .Net Framework 3.5
    - HTTP Activation
    - Non-HTTP Activation
  - .NET Framework 4.6 Features
    - .Net Framework 4.6
    - ASP.NET 4.6
    - WCF Services
      - HTTP Activation
      - Named Pipe Activation
      - TCP Activation
      - TCP Port Sharing

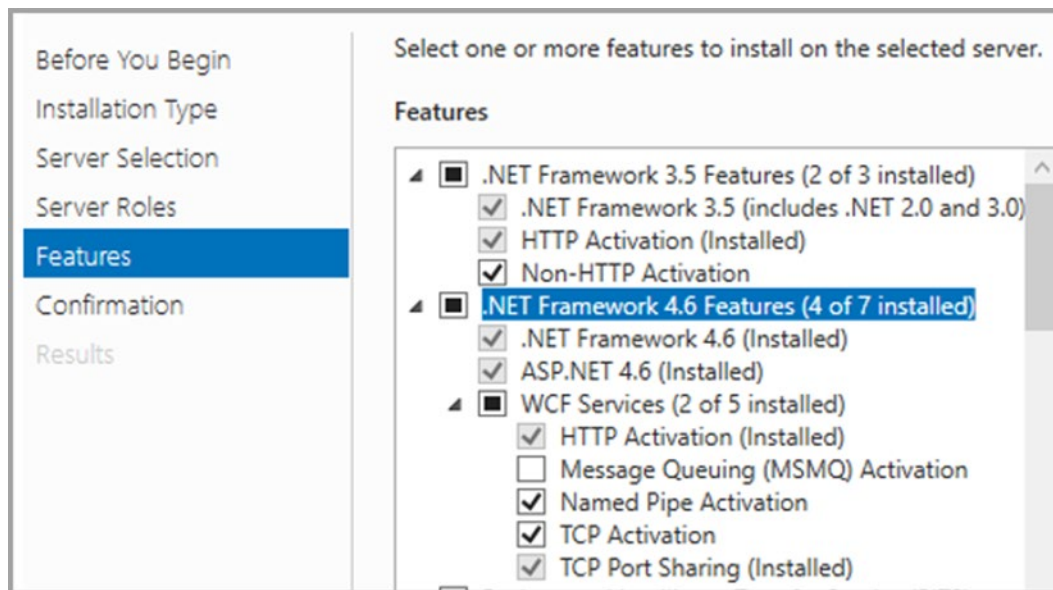


Figure 5-7: Select .Net Framework Features

10. Click **Next** to display the **Confirmation** dialog.
11. Click **Install** (Figure 5-12).

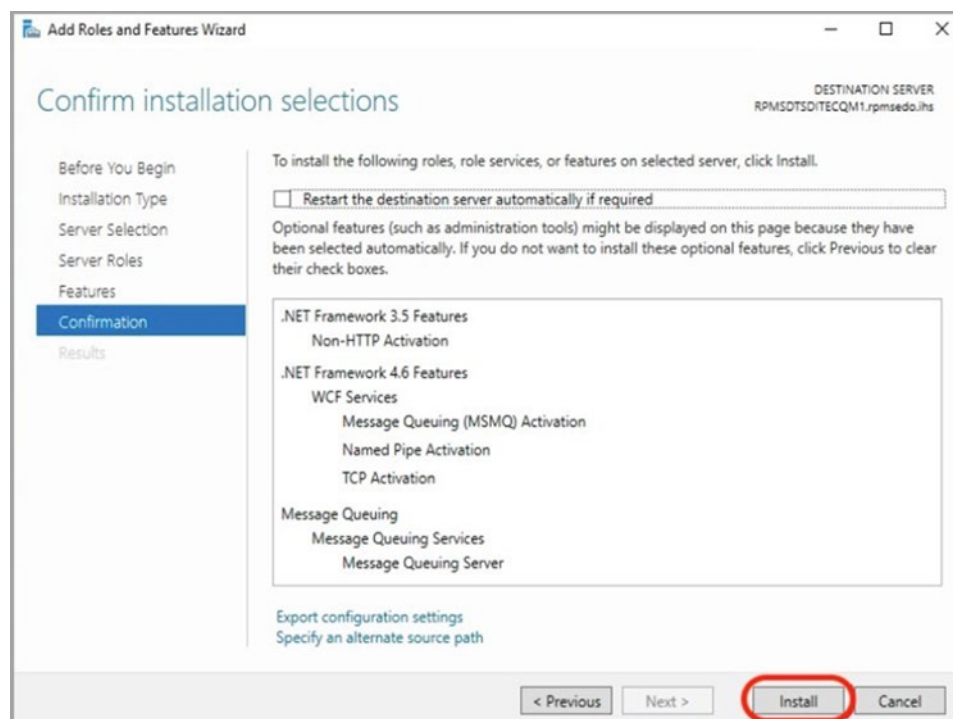


Figure 5-8: Confirm installation selections

12. Click **Close** after the installation is complete.

**Note:** Review the additional steps for disabling the IIS Manager Logging feature in Appendix B.

## 5.3 Install the SSL Certificate

To install the **SSL server certificate**:

1. From the **Windows Start menu**, select **Administrative Tools**.
2. Select **Internet Information Services (IIS) Manager** (Figure 5-13).



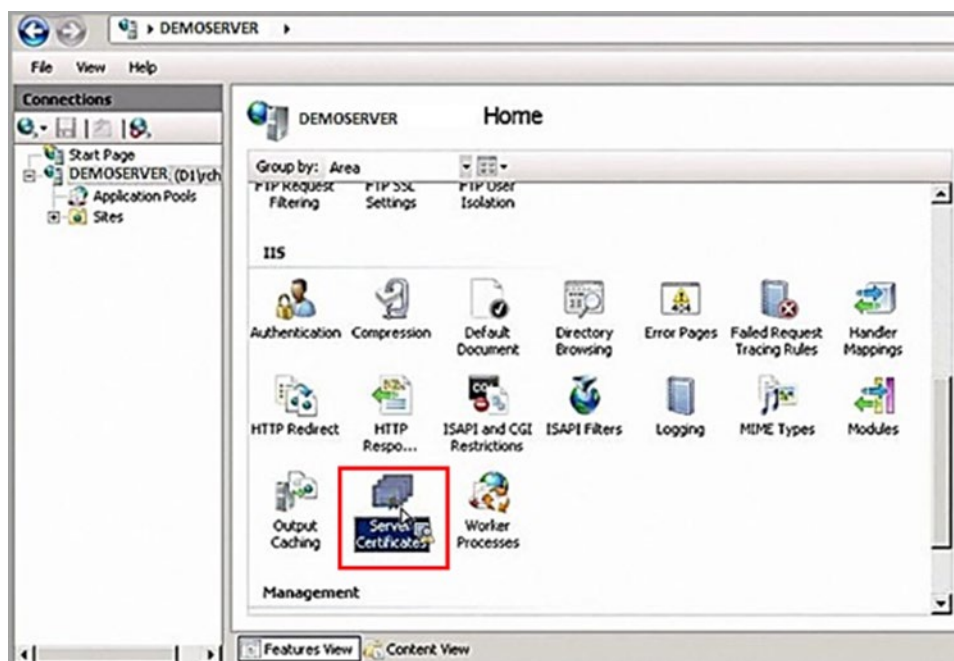


Figure 5-9: Internet Information Services (IIS) Manager

3. Click the **server name** in the left panel (Figure 5-14).

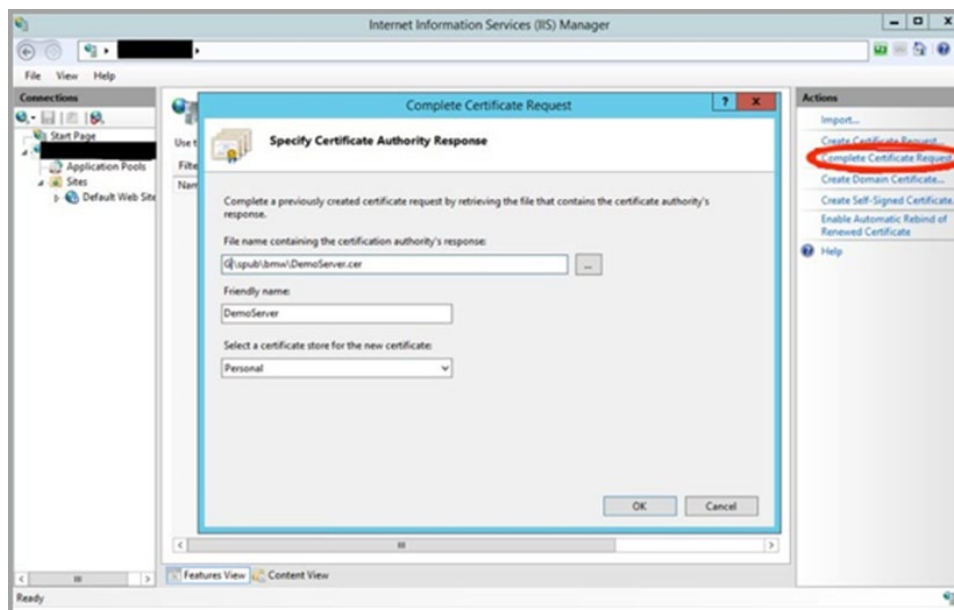



Figure 5-10: Complete Certificate Request dialog

4. Double-click **Server Certificates** in the **Security section** (near the bottom of the panel).
5. In the **Actions** panel (on the right), click **Complete Certificate Request**. The **Complete Certificate Request** dialog displays.



**Note:** The **Complete Certificate Request** must be completed on the same system where the Certificate Signing Request was generated (Section 4.1.1) to ensure the private key is correctly associated with the new certificate.

6. Click the **Ellipses** button (  ) to browse to the location where the server certificate file acquired in Section 4.1 is saved.
7. In the **Friendly** name field, type the friendly name for the certificate. This name is intended for use for management of certificate stores on the server.
8. In the **Select a Certificate** store for the **Certificate** field, verify **Personal Store** is selected.
9. Click **OK** to complete the procedure.

## 5.4 BPRM Website Setup

**Note:** This section can be skipped if this is an upgrade from **BPRM 4.x setup**, and the **BPRM website** and **application pool** already exists on the **application server**.

### 5.4.1 Add the Application Pool

To add the **Application Pool**:

1. Return to the **IIS Manager** opened in Section 4.1.1 and browse to **Application Pools** in the tree structure below your IIS node as shown in Figure 5-15.

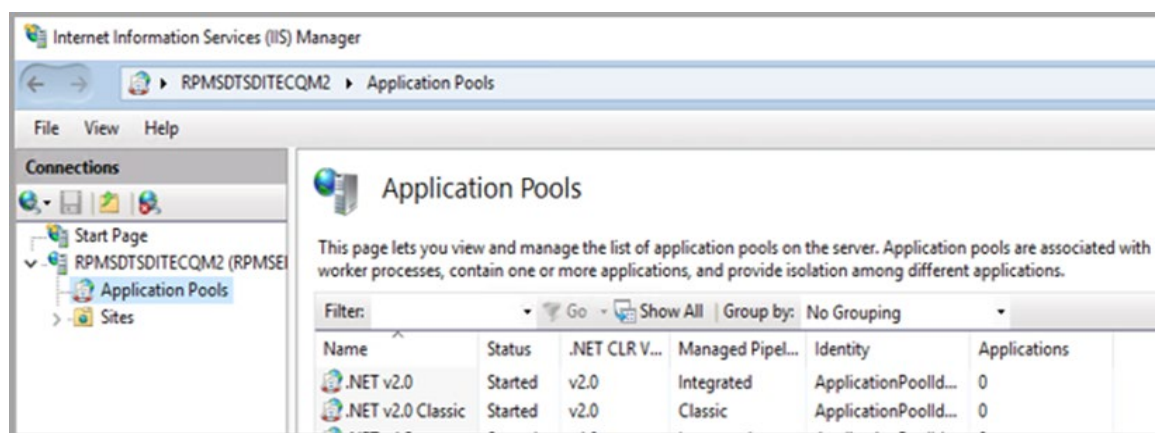


Figure 5-11: IIS Manager browsed to Application Pools

2. Right-click **Application Pools** and select **Add Application Pool**. The **Add Application Pool** dialog (Figure 5-16) displays.

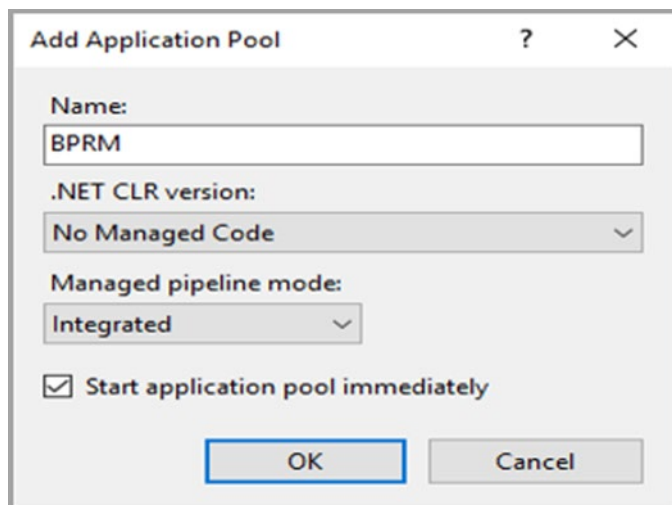


Figure 5-12: Add Application Pool dialog

3. In the **Name** field, type the name of the **application pool (BPRM)**.
4. In the **.NET Framework version:** field, select **No Managed Code**.
5. Click **OK**.
6. Right-click the newly created **application pool** in **IIS Manager** and click **Advanced Settings**. A dialog similar to Figure 5-17 displays:

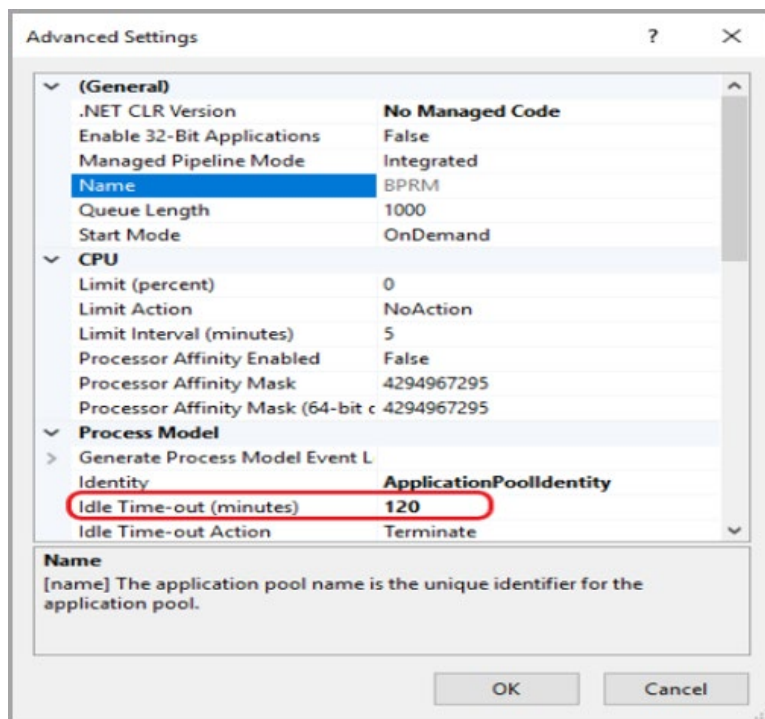


Figure 5-13: Application Pool Advanced Settings

7. Change the **Idle Time-out value** to **120 minutes**.
8. Click **OK** to save the changes and close the dialog.

### 5.4.2 Create a BPRM Folder

1. To aid in setting up the **BPRM website**, create a **C:\inetpub\BPRM**.
2. Using **Windows Explorer**, navigate to **C:\inetpub** on your **Windows application server**.
3. Click **Organize**, then select **New Folder**. (Alternatively, click **New Folder** in the **Windows Explorer** toolbar if it is present.)
4. Type **BPRM** and press **Enter** to create the **C:\inetpub\BPRM** folder.

### 5.4.3 Add the New Site

To add the new website:

1. Right-click **Sites** in the **Connections pane** of the **IIS Manager** and select **Add Web Site**. The **Add Web Site** dialog (Figure 5-18) displays.

The screenshot shows the 'Add Website' dialog box. The 'Site name' field is 'BPRM'. The 'Application pool' is 'BPRM'. The 'Physical path' is 'C:\inetpub\BPRM'. The 'Binding' section shows 'Type' as 'https', 'IP address' as 'All Unassigned', and 'Port' as '443'. The 'Host name' is '<FullyQualifiedDomainName>'. The 'Require Server Name Indication' checkbox is unchecked. The 'SSL certificate' is 'Not selected'. The 'Start Website immediately' checkbox is checked.

Figure 5-14: Add Web Site dialog

2. In the **Site name** field, type **BPRM**.
3. Click **Select** and select the **BPRM application pool** created in the previous steps.
4. In the **Physical Path** field, browse to the **C:\inetpub\BPRM folder** created in Section 5.4.2.

**Note:** Be aware that the location will be different if the folder was created on a different drive.

5. Under **Binding**, select **Type** as **https**.

**Note:** It is highly recommended that BPRM application be hosted over HTTPS protocol.

6. For **IP address**, select **All Unassigned**.
7. For **Port**, specify a **port number** ranging from **440 through 443**.
8. Select the **SSL certificate** installed in Section 5.4.
9. For **Hostname**, can be left blank OR put in the fully qualified name of the **machine** or **SSL certificate Issued** to value.
10. Select **View** to display the **SSL certificate details** (Figure 5-19 and Figure 5-20).

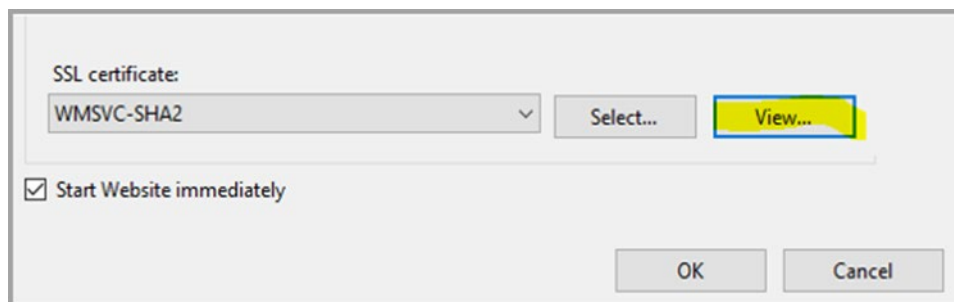


Figure 5-15: View SSL certificate



Figure 5-16: SSL certificate details

11. Click **OK** to save the changes and close the **Add Web Site** dialog.

## 6.0 BPRM Database Server Installation and Configuration

This section outlines the steps essential for setting up and configuring an **IHS RPMS** database server for the BPRM application to be executed against **the RPMS database**. It also provides steps to set up such an environment.

### 6.1 Assumptions

This section assumes the following:

- **HealthShare** server (running one of the supported versions as described in Section 2.4.1) 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, create a namespace, and edit namespace settings for the **RPMS database**.
- The **BMW CACHE.DAT** file acquired from the **IHS FTP** or **RPMS website**, as described in the *BMW CACHE.DAT Installation Guide*, is installed.

### 6.2 Importing a New BPRM XML File

A separate **XML** file is included with the release. Follow the steps in Section 6.2.1 through Section 6.2.2 to import a new **BPRM XML** file.

#### 6.2.1 Disable Read Only

In order to import the **bprm0400.01.xml** file, user must set the **BMW database** to allow write access. If the database is set to **Read Only**, do the following:

1. Browse to the Local Databases window of the Ensemble Management Portal following this path:  
**Home > System Administration > Configuration > System Configuration > Local Databases.**
2. Click **BMW** to open the **edit database settings/configuration page**.
3. In the window displayed, clear the **Mount Read-Only** check box.

**Note:** Once the patch is installed, you can re-enable **Read Only** mode by repeating these steps and selecting the **Mount Read-Only** check box.

## 6.2.2 Import the BPRM XML File

To import the bprm0400.01.xml file:

1. From the **HealthShare System Management Portal Home** window, click **System Explorer**, then **Classes**. The **Classes** dialog (Figure 6-1) displays.

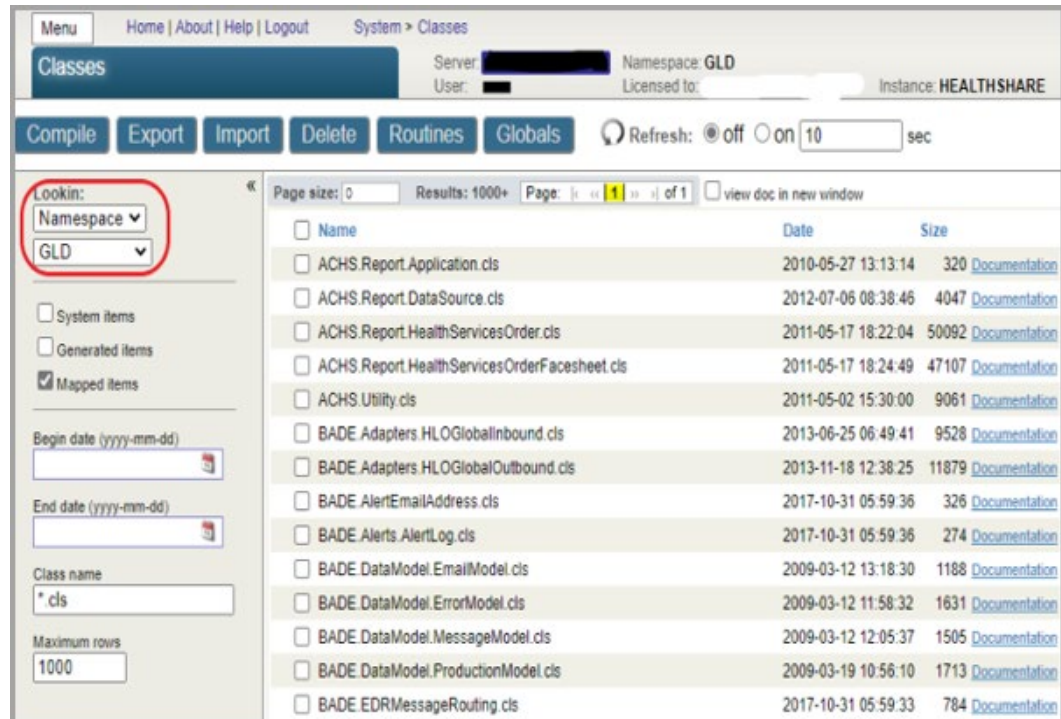


Figure 6-1: Classes dialog

2. Select the **RPMS** or **BMW** namespace in the **LookIn:** pane on the left side of the dialog.
3. Click **Import**. The **Import Classes** dialog (Figure 6-2) displays.

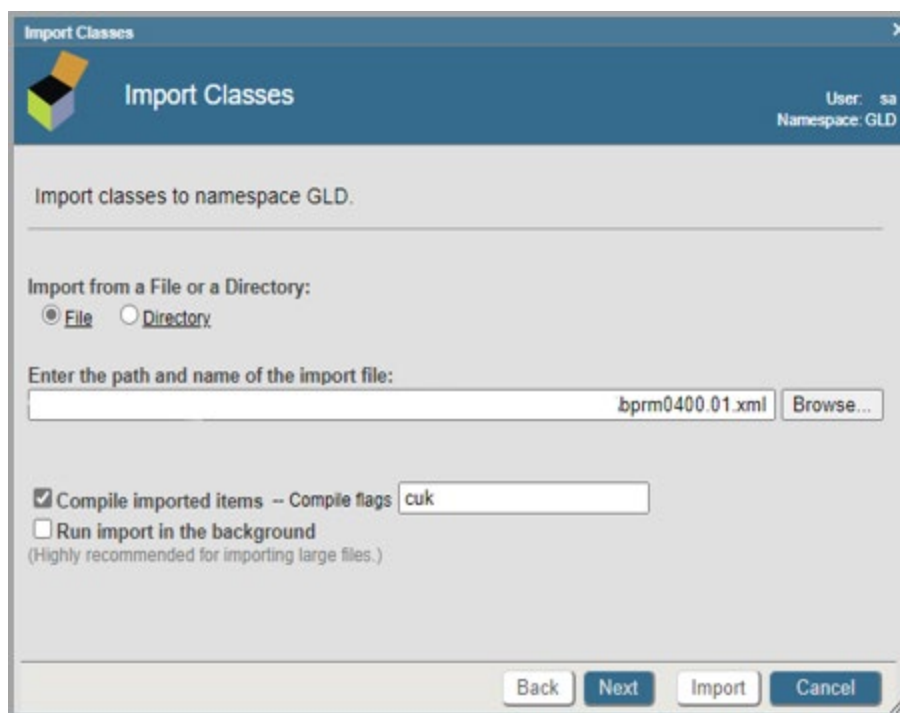


Figure 6-2: Import Classes dialog

4. Click **Browse** and navigate to the **bprm0400.01.xml** file in the folder where it is saved as described in the Section 3.0.
5. Select the **bprm0400.01.xml** file and click **Next**.

A listing (Figure 6-3) displays, showing the contents of the **XML** file.



Import Classes

User:   
 Namespace: C

Select items you wish to import.

| <input checked="" type="checkbox"/> | Item  | Exists | Last Modified              |
|-------------------------------------|---|--------|----------------------------|
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgBenefitCasesReport.cls                   | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgCheckAndSetSilentSPTAccess.cls           | Yes    | 2015-02-19 17:15:35.147335 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgCheckSPTAccess.cls                       | Yes    | 2015-02-19 11:52:14.991028 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetIncompleteChartStatistics.cls         | Yes    | 2014-12-04 11:13:56.514655 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetIncompleteChartStatisticsCount.cls    | Yes    | 2014-12-04 11:13:45.385378 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetIncompleteChartStatisticsSum.cls      | Yes    | 2014-12-04 11:13:36.561179 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientErrorsAndWarnings.cls          | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientFaceSheet.cls                  | Yes    | 2020-03-25 15:51:48.987883 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientInsuranceErrorsAndWarnings.cls | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientInsuranceInUse.cls             | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientMbi.cls                        | Yes    | 2018-03-14 14:31:44.416207 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientSearchResult.cls               | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgGetPatientWellnessHandout.cls            | Yes    | 2019-06-25 12:58:58.253268 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgInsuranceCoverageReport.cls              | No     |                            |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgPatientRegisterEvent.cls                 | Yes    | 2014-12-04 11:12:42.566883 |
| <input checked="" type="checkbox"/> | BMW.BSF.SP.AgPatientUpdateEvent.cls                   | Yes    | 2014-12-04 11:12:15.063889 |

Back Next Import Cancel

Figure 6-3: Import Classes window – content listing

6. Click **Import**. After a few moments of processing, a listing of the imported classes (Figure 6-4) displays.
7. Scroll to the bottom of the listing to confirm the **Load finished successfully** message displays (Figure 6-4).

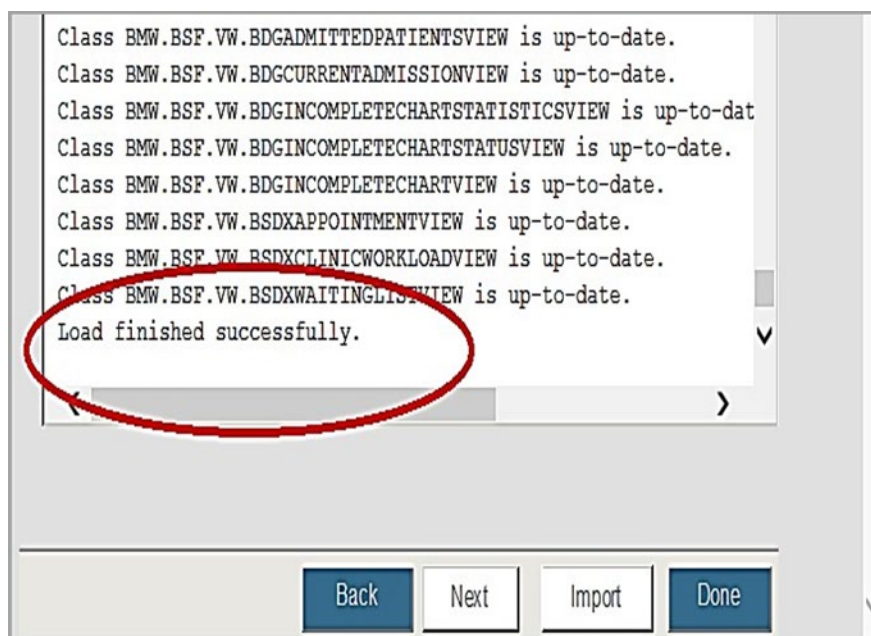


Figure 6-4: Import Classes window – Load finished successfully

At this point, the **BPRM XML installation** is complete.

## 6.3 Cache User Creation

BPRM performs CRUD operations over the RPMS DB using the BMW tables that were mapped over the RPMS database.

BPRM requires a Cache user privileged to execute CRUD on the RPMS database. Table 6-1 shows the privileges needed:

Table 6-1: User permissions needed

| Item           | Permissions Needed   |
|----------------|--|
| SQL Tables     | Update/Read/Delete privilege on all tables of the BMW package in the RPMS database |
| SQL Views      | Read permission all views of the BMW package in the RPMS database                  |
| SQL Procedures | Execute permission on all procedures of the BMW package in the RPMS database       |

### 6.3.1 Create the BPRM User

This step may be skipped if the site has **Moonwalk\_user** already created for BPRM application. **Moonwalk\_user** can be used for BPRM v4 as well.

To create a new **BPRM user**:

1. Navigate to the user's window of the **Ensemble System Management Portal** following this path:

**Home > System Administration > Security > Users.**

2. Click **Create New User** to display the **Edit User** window (Figure 6-5).

Figure 6-5: Edit User window

3. Type **BPRM\_USER** in the **Name** field.
4. Type a **password** that complies with your site-specific password rules in the **Password** and **Password Confirmation** fields.
5. Click **Save** to save the new user.
6. Click **Close** to exit the **Edit User** window.

### 6.3.2 Assign User Roles

To assign user roles for the required tables:

1. Navigate to the **Users window** (Figure 6-6) in the **Ensemble System Management Portal** following this path:

**Home > System Administration > Security > Users.**

2. Click **BPRM\_USER**, as shown in Figure 6-6.

The following is a list of user definitions:

Filter:  Page size: 0 Max rows: 1000 Results: 22 Page: [ < << 1 >> > ] of 1

| Name                      | Full Name            | Enabled | Namespace | Routine | Type                |                        |                         |
|---------------------------|----------------------|---------|-----------|---------|---------------------|------------------------|-------------------------|
| <a href="#">Admin</a>     | System Administrator | Yes     |           |         | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">BPRMA</a>     |                      | Yes     | BPRMA     | ^XUS    | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">bprmaa</a>    |                      | Yes     | BPRMAA    | ^XUS    | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">BPRMB</a>     |                      | Yes     | BPRMB     |         | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">BPRMC</a>     |                      | Yes     | BPRMC     |         | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">BPRM_USER</a> | Bprm User            | Yes     |           |         | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |
| <a href="#">com</a>       |                      | Yes     |           |         | Cache password user | <a href="#">Delete</a> | <a href="#">Profile</a> |

Figure 6-6: Create New User window

3. Click the **Roles** tab.
4. Select **%ALL** from the **Available** column and move it to the **Selected** column by clicking the right arrow.
5. Click **Assign** to assign the **%ALL** role to the **BPRM\_USER** account.

When complete, the **Edit User** window will look similar to that shown in Figure 6-7.

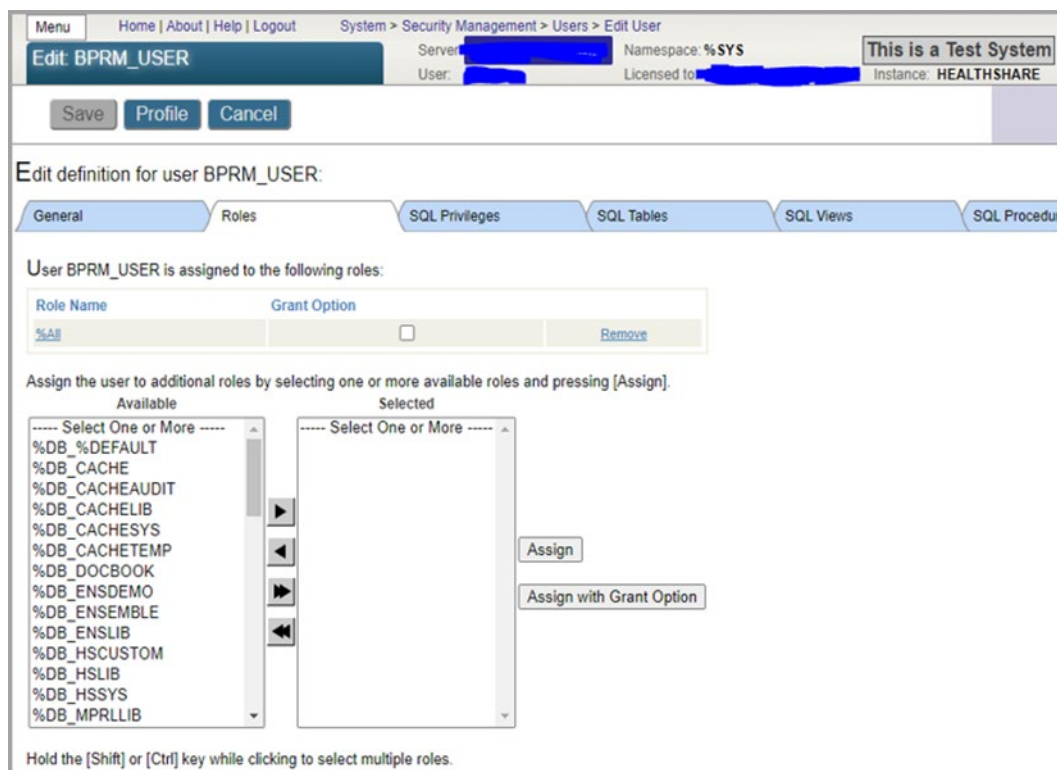


Figure 6-7: Roles tab in Edit User window – after changes

### 6.3.3 Verify XML Import and Installation

To verify the **XML** file has been imported and is readily available:

1. From the **HealthShare System Management Portal Home** window, click **System Explorer > SQL** (you may need to click SQL twice).
2. Switch to the **RPMS namespace**. In the example shown in Figure 6-8, **PRECERT** is selected. Your site's **RPMS database/namespace** will likely have a different name.

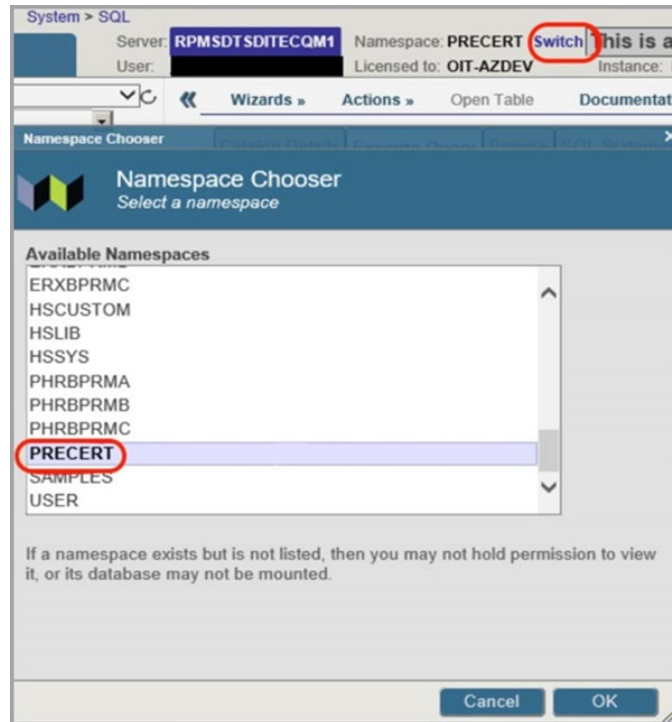


Figure 6-8: Namespace Chooser window

3. Open the **Schema** drop-down menu and select **BMW\_BSF\_SP**, as shown in Figure 6-9.

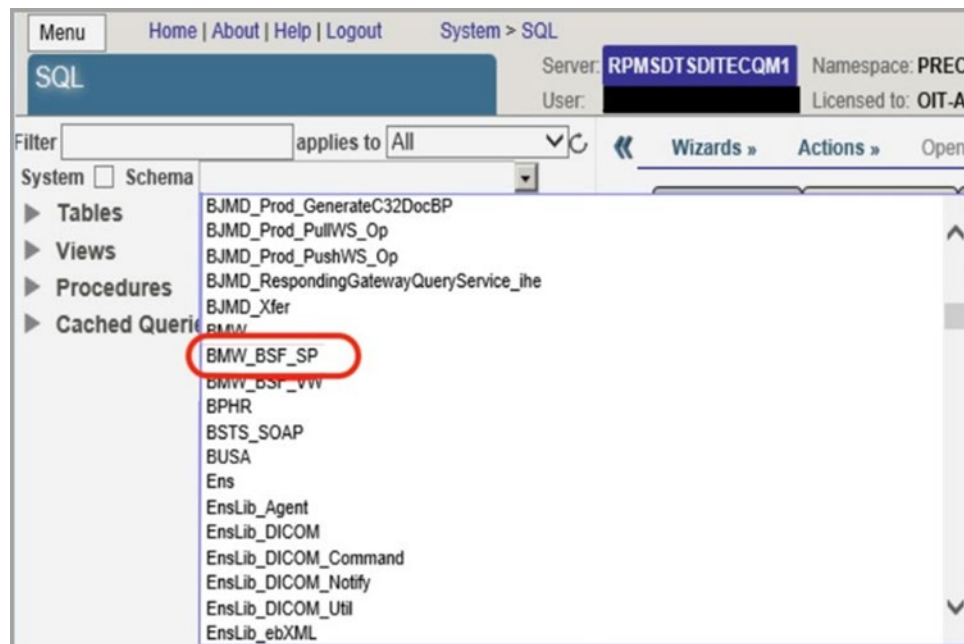


Figure 6-9: Expand the Schema menu

4. Expand **Procedures** as shown in Figure 6-10.



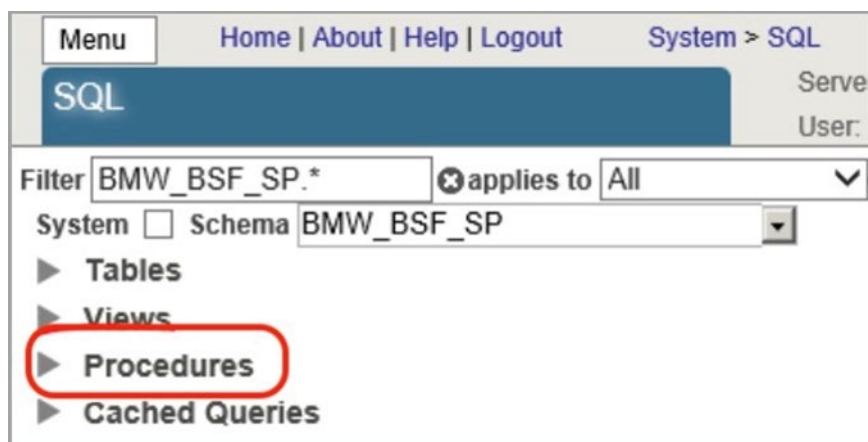


Figure 6-10: Expand Procedures

5. Scroll down to locate and select **BMW\_BSF\_SP.Core\_AuthenticateUserV2Q**.
6. Click **Run Procedure** as shown in Figure 6-11.

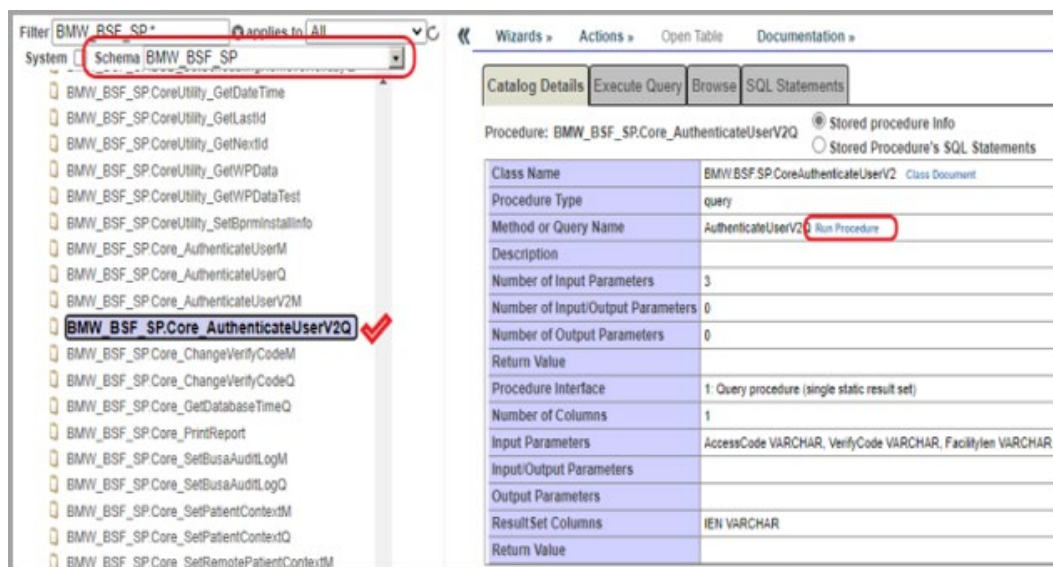


Figure 6-11: Run Procedure option

If the **HealthShare** version is compatible with the newly installed **BMW Cache classes**, the **Run Query** window (Figure 6-12) displays. The user does not need to put in any information (access/verify) here.

SQL query from stored procedure Core\_AuthenticateUserV2Q in namespace BPRMA

[BMW.BSF.SP.CoreAuthenticateUserV2 : AuthenticateUserV2Q](#)

Enter values for the query parameters:

|                                  | <u>xDBC Type</u> |
|----------------------------------|------------------|
| AccessCode <input type="text"/>  | VARCHAR          |
| VerifyCode <input type="text"/>  | VARCHAR          |
| FacilityIen <input type="text"/> | VARCHAR          |

Figure 6-12: Run Query

If an error message displays, the **HealthShare version** running is not compatible with the newly installed **BMW Cache classes**.



## 7.0 Application Deployment to the Web Server

This section describes the steps for installing the BPRM application itself.

### 7.1 Deploy the BPRM Application

**Note:** Before proceeding with BPRM msi install, make sure **BPRM XML** has been installed (see Section 6.2).

To deploy the BPRM application:

1. Log on to the **application server** and browse to the location where the **BPRM Application Installer** file (**bprm0400.01.msi**) is stored.
2. Double-click the **bprm0400.01.msi** file to run the **BPRM application installer**.

**Note:** If an error message displays indicating that you do not have sufficient privileges to run the installer, refer to Appendix A for instructions on running the installer from the Administrator command prompt.

Once the installer is started, the **BPRM setup wizard** (Figure 7-1) displays.

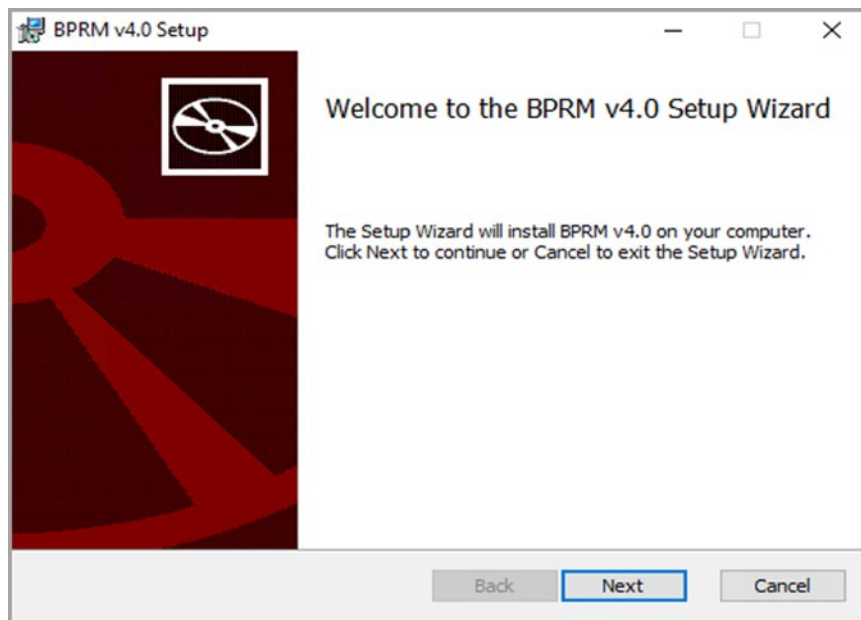


Figure 7-1: BPRM setup wizard dialog

3. Click **Next**. The **Destination Folder** dialog (Figure 7-2) displays.

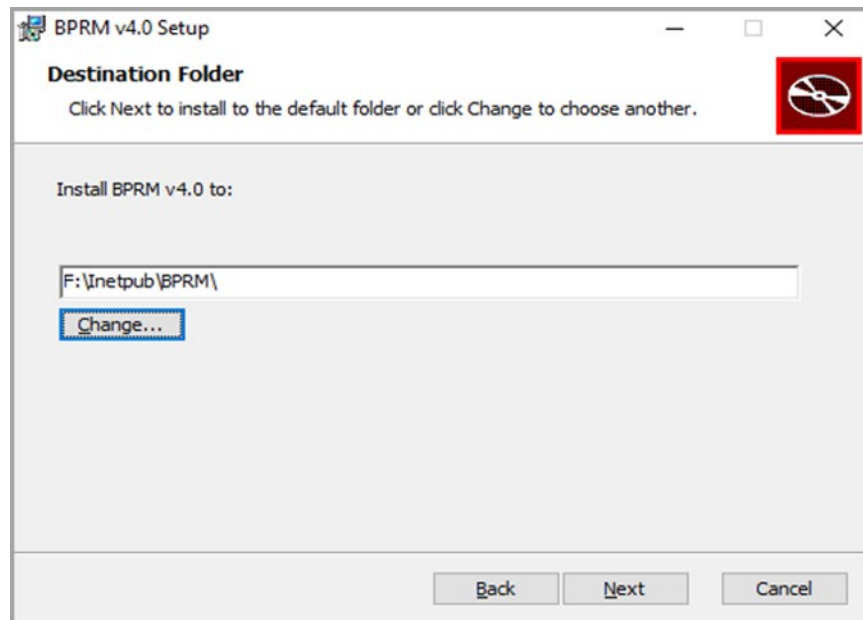


Figure 7-2: Destination Folder dialog

4. Click **Change** to choose the **BPRM website folder**, as created in Section 5.4.2, (Figure 7-3) and Select **OK**.

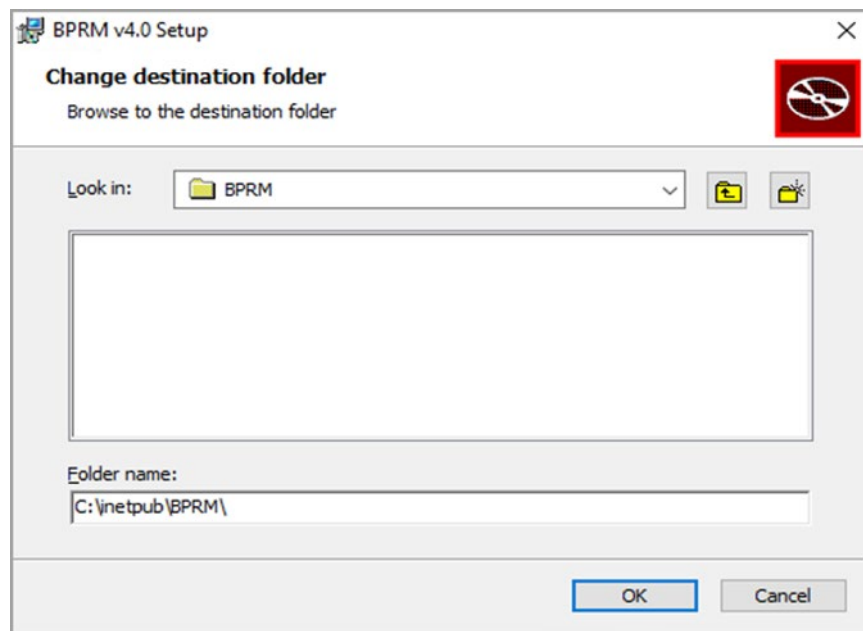


Figure 7-3: BPRM website folder

5. Click **Next** once the appropriate **Destination folder** (Figure 7-4) is selected.

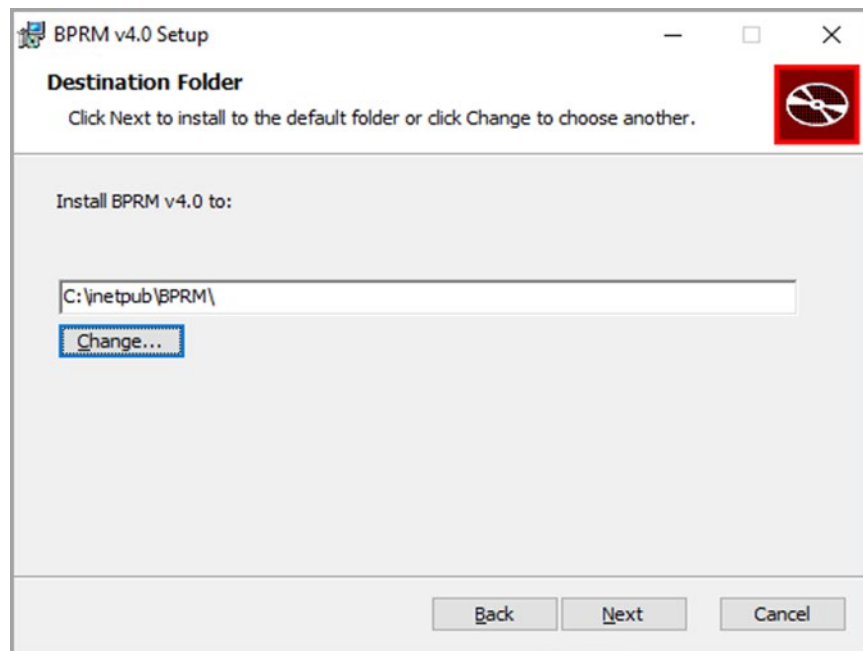


Figure 7-4: Destination Folder dialog

6. Click **Install**. The **Ready to install BPRM v4.1** dialog (Figure 7-5) displays.

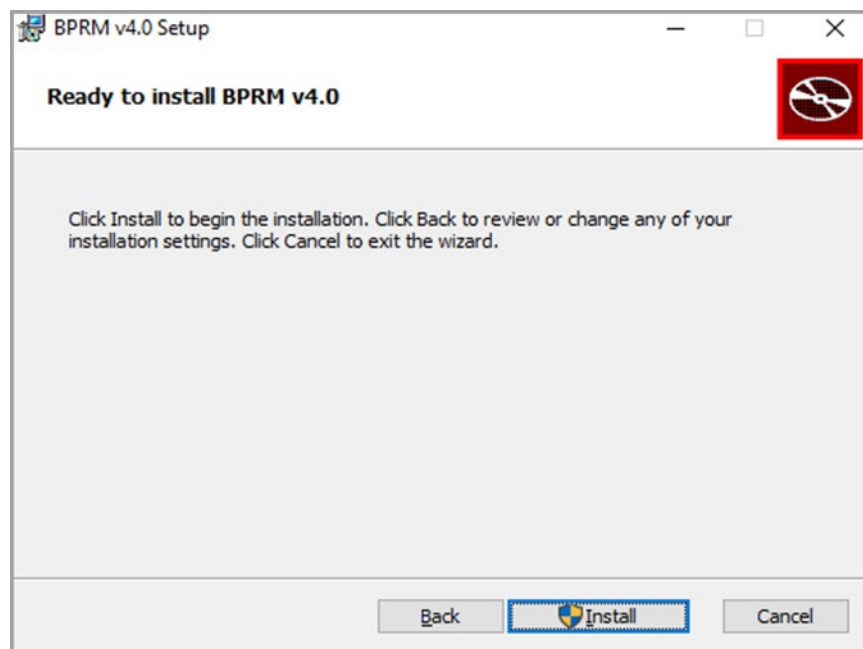


Figure 7-5: Ready to Install BPRM v4.1 dialog

7. Click **Yes**. The **User Account Control** dialog (Figure 7-6) displays.

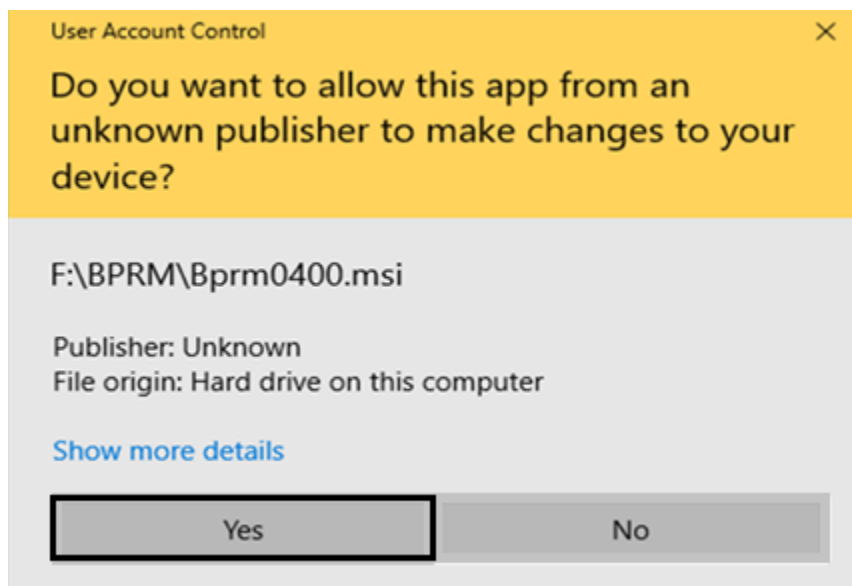


Figure 7-6: Installing BPRM dialog

After a short time of processing, the **Database Configuration** dialog (Figure 7-7) displays.

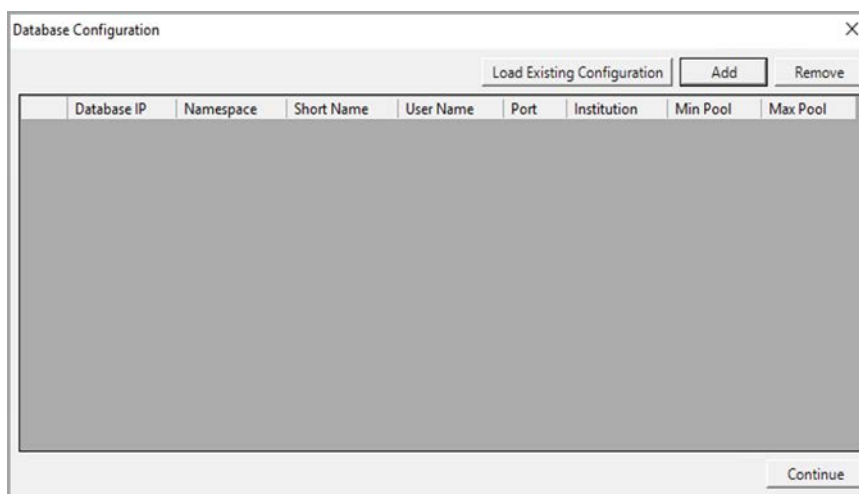


Figure 7-7: Database Configuration dialog

The **BPRM suite** relies on specific information about each **RPMS database** to which it is connected.

8. Click **Add** on the **Database Configuration** dialog to display the **Configuration** dialog (Figure 7-8) and add this information for each database associated with this installation.

**Note:** **Load Existing Configuration** will not work when loading from a **BRPM V3.x configuration** file. Use **Add** instead.

The Configuration dialog box contains the following fields and controls:

- Database IP: Text input field.
- Namespace: Text input field.
- DB User Name: Text input field with the value "bprm\_user".
- Password: Text input field.
- Port: Text input field.
- Short Name: Text input field.
- Verify Connection: Button.
- ☒ Default Institution: Check box.
- Institutions: Dropdown menu.
- Connection Pool Settings:
  - Minimum: Text input field with the value "20".
  - Maximum: Text input field with the value "100".
- Save: Button.
- Cancel: Button.

Figure 7-8: Configuration dialog

The **Configuration** dialog contains the following fields:

- Database IP: Use this field to enter the **IP address** of your **RPMS database**.

**Note:** This is the **internal IP address**, not an **external address**.

- Namespace: Use this field to enter the **namespace** of your **RPMS database**.
- DB User Name: This field is automatically populated with the **BPRM\_USER user name**.
- Password: Use this field to enter the **password** you set for the **BPRM\_USER account** in Section 6.3.1.
- Port: Use this field to enter the **Cache Superserver port** used by your **RPMS database**. By default, this is **port 1972**, although it will be different on your system if you have changed this **HealthShare setting**.

The **Superserver port number** can be checked from within the **HealthShare Management Portal** using this path:

**Home > System Administration > Configuration > System Configuration > Memory and Startup**

The **Superserver port number** displays at the bottom of the page.

- Short Name: This field is automatically populated with your institution's **short name** if it exists in your **INSTITUTION** file. If it does not exist, type a **short name** of your choice to identify this institution in the future.

- **Institutions:** Use this list box to choose the institutions associated with your **RPMS database**. When the **Default** check box is enabled, this list is limited to only the institutions set as your default per your **INSTITUTION** file. When the check box is cleared, the list will show all available institutions.
  - **Connection Pool Settings:** This section relates to connection settings for **BPRM application** when requesting connections from the **HealthShare Database**. This setting has been introduced since, with **HealthShare**, the number of **licensed connections** has decreased from **1,500** (in **Ensemble**) to **250–500** (in **HealthShare**) and that has resulted in exhaustion of licenses. Sites can customize the number of minimum connections and maximum connections the **BPRM application** can request from the **HealthShare application**. It is defaulted to **20–100**, but sites can modify according to the site's **HealthShare license** and **BPRM usage**.
  - **Minimum:** This number indicates the **minimum connections** the **BPRM application** shall create/request from **HealthShare DB**, when the application is accessed for the first time. Minimum connections persist as long as the application is live.
  - **Maximum:** This number indicates the **maximum connections** BPRM shall create/request from **HealthShareDB** at any given time (usually at the busiest time). Connections shall be destroyed when not in use until it reaches the minimum threshold.
9. When the **Configuration** dialog displays, enter the following:
- Database IP
  - Namespace
  - DB User Name
  - Password
  - Port
10. Click **Verify Connection**.
11. Once the **Institutions list** is loaded, select your **institution** from the list and provide a **Short Name** (if not already present).
12. Once the fields are populated, click **Save** to add the information to the **BPRM database configuration** file.
- For **Multi-tenant setup** (connecting this **BPRM application** to multiple **RPMS environments/databases**) repeat Steps 8 to 12 of this section.
13. When complete, click **Continue** to continue the **application installation**.

If an **Access Denied** error displays (Figure 7-9), close the **installer** and run the **installer** again in **Administrator mode (Run as Administrator)**, as shown in Appendix A.

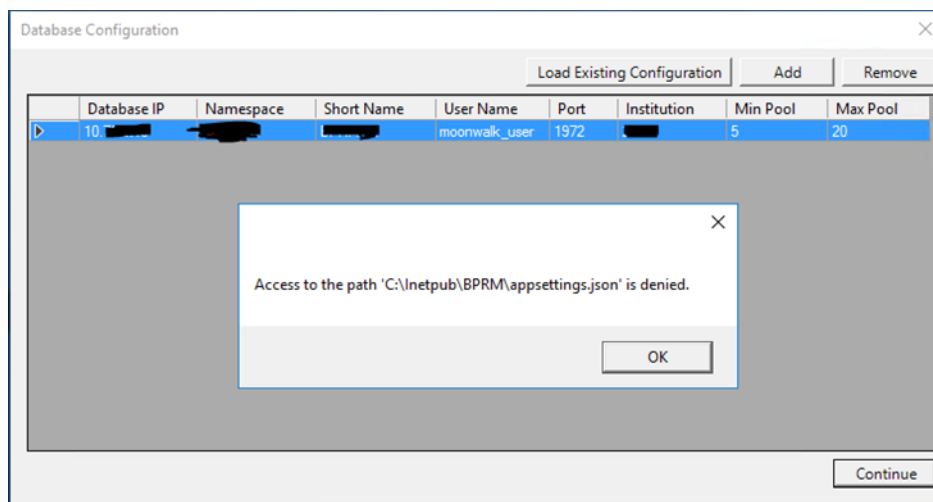


Figure 7-9: Access to Path Denied error

14. When the installation is complete, click **Next**. The **Installation Complete** dialog (Figure 7-10) displays.

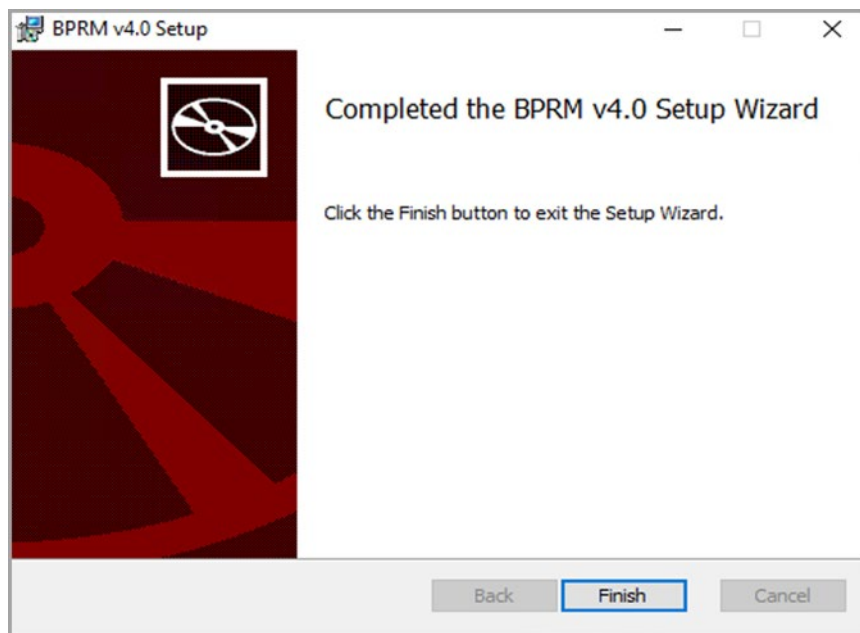


Figure 7-10: Installation Complete dialog

15. Click **Finish** to exit the dialog.

## 7.2 Adding a Database After the Installation

In some cases, and at some sites, it may be necessary or desirable to associate one or more additional databases to the **BPRM application suite**. To add a database after BPRM has been installed:

1. Log on to the **application server** where **BPRM** resides.
2. Browse to the location where the **BPRM Application Installer** file (**bprm0400.01.msi**) is stored.
3. Double-click the **bprm0400.01.msi** file to run the **BPRM application installer**. The **BPRM setup wizard** (Figure 7-11) displays.

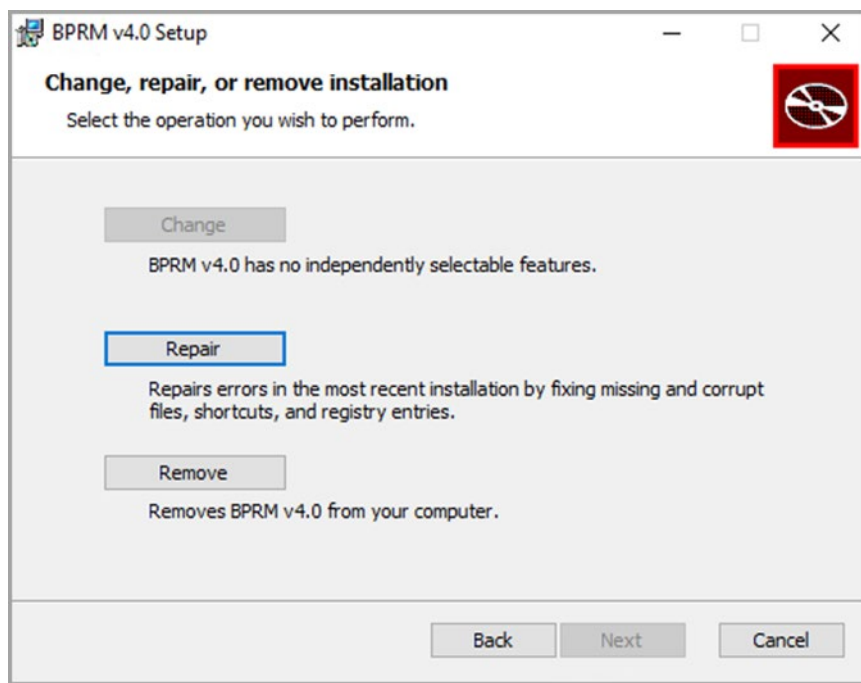


Figure 7-11: BPRM Setup Wizard dialog – Repair mode

4. Click **Repair**, and then click **Finish**. The **Installing BPRM** dialog (Figure 7-12) displays.



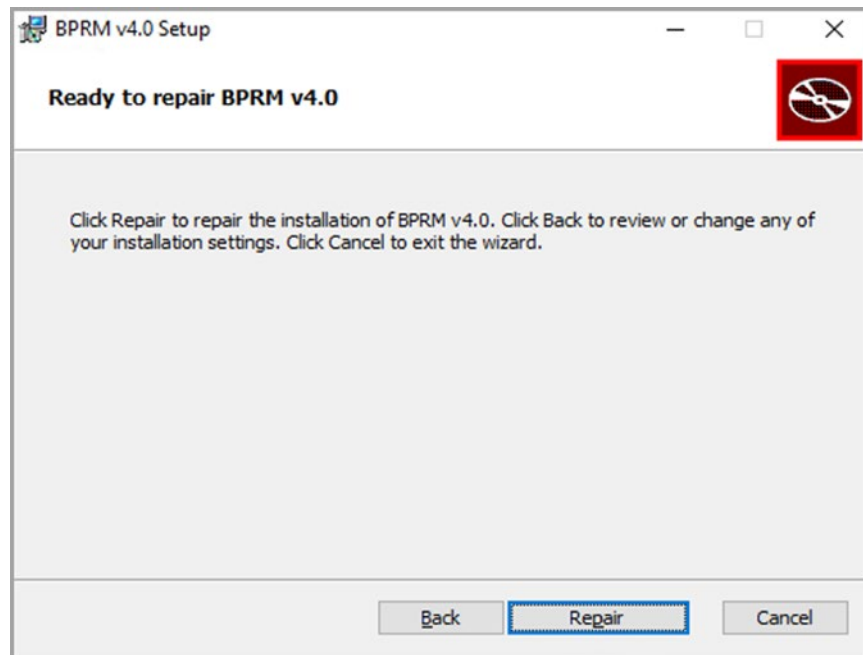


Figure 7-12: Installing BPRM dialog

5. Click **Next** once the processing is complete. The **Database Configuration** dialog (Figure 7-13) displays.

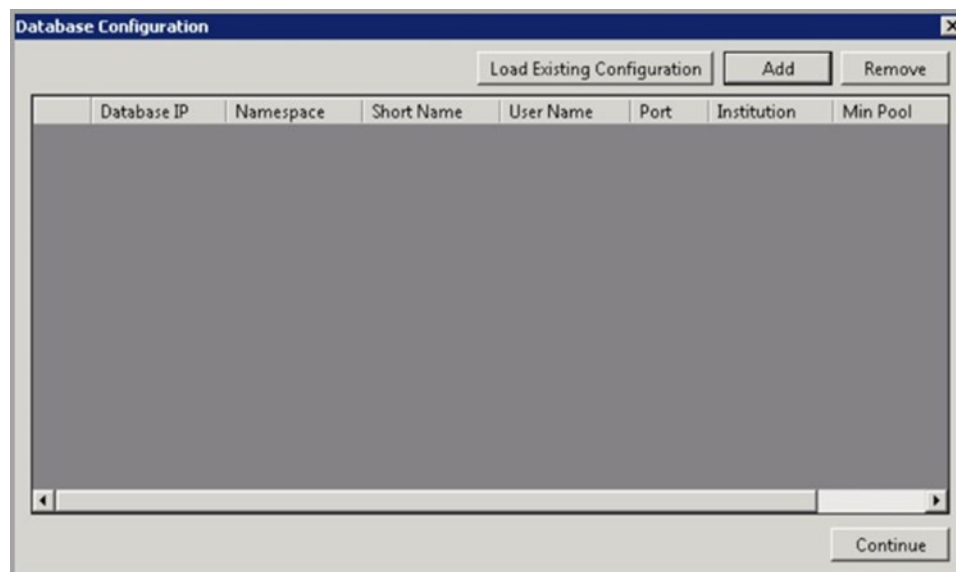


Figure 7-13: Database Configuration dialog

6. Click **Add** on the **Database Configuration** dialog to display the **Configuration** dialog (Figure 7-14) and add this information for each database associated with this installation.

**Note:** **Load Existing Configuration** will not work when loading from a **BRPM V3.x configuration** file. Use **Add** instead.

The Configuration dialog box contains the following fields and controls:

- Database IP: Text input field
- Namespace: Text input field
- DB User Name: Text input field (pre-filled with 'bprm\_user')
- Password: Text input field
- Port: Text input field
- Short Name: Text input field
- Verify Connection: Button
- ☒ Default Institution: Check box
- Institutions: Dropdown menu
- Connection Pool Settings:
  - Minimum: Text input field (pre-filled with '20')
  - Maximum: Text input field (pre-filled with '100')
- Save: Button
- Cancel: Button

Figure 7-14: Configuration dialog

The **Configuration** dialog contains the following fields:

- Database IP: Use this field to enter the IP address of your RPMS database.

**Note:** This is the **internal IP address**, not an **external address**.

- Namespace: Use this field to enter the **namespace** of your **RPMS database**.
- DB User Name: This field is automatically populated with the **BPRM\_USER** user name.
- Password: Use this field to enter the **password** you set for the **BPRM\_USER** account in Section 6.3.1.
- Port: Use this field to enter the **Cache Superserver port** used by your **RPMS database**. By default, this is **port 1972**, although it will be different on your system if you have changed this **HealthShare setting**.

The **Superserver port number** can be checked from within the **HealthShare Management Portal** using this path:

**Home > System Administration > Configuration > System Configuration > Memory and Startup**

The **Superserver port number** displays at the bottom of the page.

- **Short Name:** This field is automatically populated with your institution's **short name** if it exists in your **INSTITUTION file**. If it does not exist, type a **short name** of your choice by which you can identify this institution in the future.
  - **Institutions:** Use this list box to choose the **institutions** associated with your **RPMS database**. When the **Default** check box is enabled, this list is limited to only the **institutions** set as your default per your **INSTITUTION file**. When the check box is cleared, the list will show all available institutions.
  - **Connection Pool Settings:** This section relates to connection settings for **BPRM application** when requesting connections from the **HealthShare Database**. This setting has been introduced since, with **HealthShare**, the number of licensed connections has decreased from **1,500** (in **Ensemble**) to **250–500** (in **HealthShare**) and that has resulted in exhaustion of licenses. Sites can customize the number of **minimum connections** and **maximum connections** the **BPRM application** can request from the **HealthShare application**. It is defaulted to **20–100**, but sites can modify according to the site's **HealthShare license** and **BPRM** usage.
  - **Minimum:** This number indicates the **minimum connections** the **BPRM application** shall create/request from **HealthShare DB**, when the application is accessed for the first time. **Minimum connections** persist as long as the application is live.
  - **Maximum:** This number indicates the **maximum connections** BPRM shall create/request from **HealthShareDB** at any given time (usually at the busiest time). Connections shall be destroyed when not in use until it reaches the **minimum threshold**.
7. When the Configuration dialog displays, enter the following:
    - Database IP
    - Namespace
    - DB User Name
    - Password
    - Port
  8. Click **Verify Connection**.
  9. Once the **Institutions** list is loaded, select your **institution** from the list and provide a **Short Name** (if not already present).
  10. Once the fields are populated, click **Save** to add the information to the **BPRM database configuration file**.

For **Multi-tenant** setup (connecting this **BPRM application** to multiple **RPMS environments/databases**) repeat Steps 6 to 10 of this section.

11. When complete, click **Continue** to continue the **application installation**.
12. If an **Access denied** error (Figure 7-15) displays, close the **installer** and run the **installer** again in **Administrator mode (Run as Administrator)**, as shown in Section Appendix A.

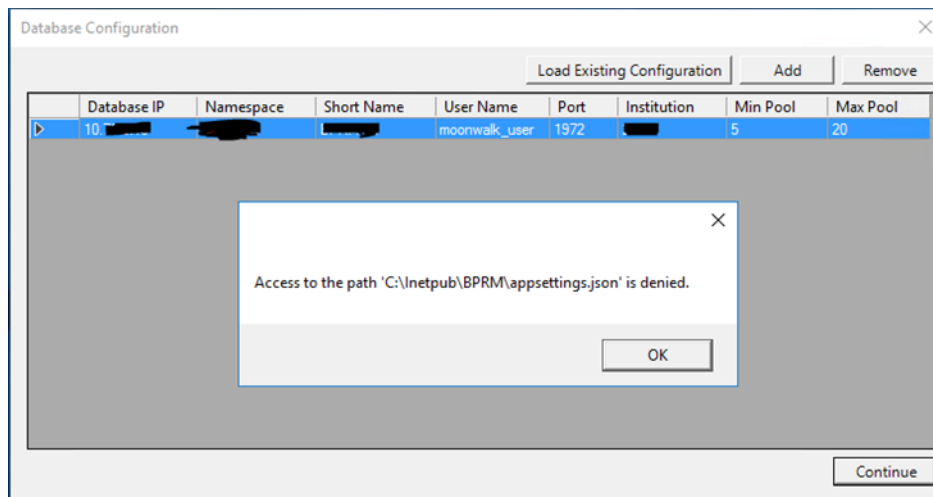


Figure 7-15: Access Denied error message

When the installation is complete, the **Installation Complete** dialog (Figure 7-16) displays.

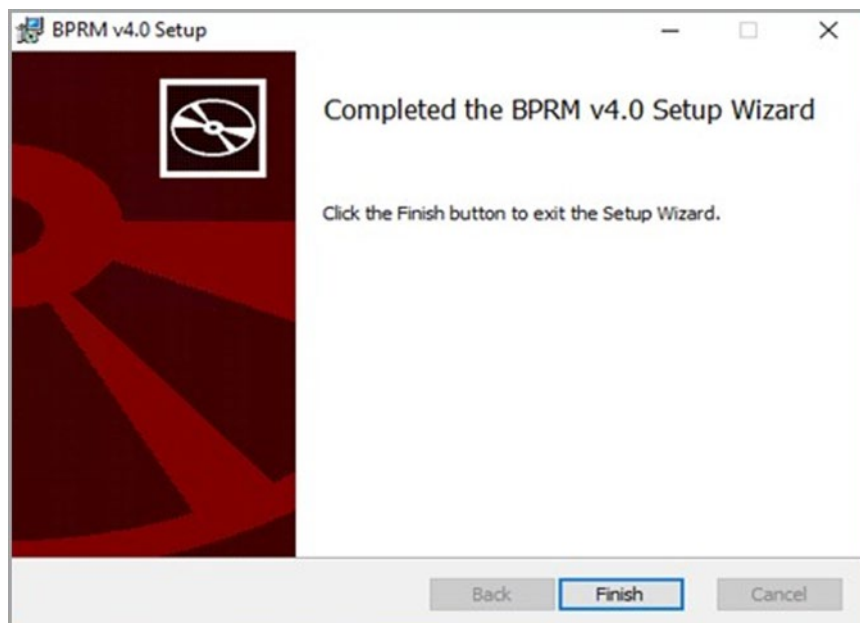


Figure 7-16: Installation Complete dialog

13. Click **Close** to exit the dialog.

## 7.3 Menu and Security Keys

There are no package-specific **security keys** associated with BPRM. The BPRM package operates on existing **RPMS security keys**.

**BPRM security** is built upon the **RPMS Menus and Security keys**. Table 7-1 defines the relationship between **BPRM Roles** and the **RPMS Menu and Security keys**.

**Note:** If a user has **AKMOCORE** or **AKMOEVE** as their primary menu option, either of these menu options will override any of the **Secondary Menu** options shown in Table 7 1. They will, however, need the appropriate **Security Keys** as shown in the table.

Table 7-1: Security Keys

| Role                    | Secondary Menu Option | Security Keys<br>(Must include all)                       |
|-------------------------|-----------------------|---|
| ADT Clerk               | BDGMENU               | DGZADT<br>DGZNUR<br>DGZMENU                               |
| ADT Coder               | BDGMENU               | DGZPCC<br>DGZMENU   |
| ADT Supervisor          | BDGMENU               | DGZADT<br>DGZICE<br>DGZNUR<br>DGZSUP<br>DGZSYS<br>DGZMENU |
| Admin                   |                       | XUPROG<br>XUPROGMODE                                      |
| Flag Manager            |                       | DGPF MANAGER  |
| Flag Assignment         |                       | DGPF ASSIGNMENT   |
|                         |                       |   |
| ReOpen Benefit Case     |                       | AGZCREOPN   |
| Registration Clerk      | AGPAT – or – AGMENU   | AGZMENU   |
| Registration Supervisor | AGMENU                | AGZMENU<br>AGZMGR<br>AGZHOME                              |

| <b>Role</b>            | <b>Secondary Menu Option</b>          | <b>Security Keys<br/>(Must include all)</b> |
|------------------------|---------------------------------------|---|
| Registration View Only | AGPAT – or – AGVIEWONLY               | AGZVIEWONLY                                 |
| Scheduling Clerk       | BSDMENU                               | SDZMENU                                     |
| Scheduling Supervisor  | BSDMENU – or – BSD<br>MENU SUPERVISOR | SDZMENU<br>SDZSUP                           |
| SSN Viewer             |                                       | AGZVIEWSSN                                  |

In cases where there is more than one **Secondary Menu Option** listed in Table 7-1, only one is necessary per user. Conversely, where there is more than one security key listed for a specific role, all of the keys shown must be included.

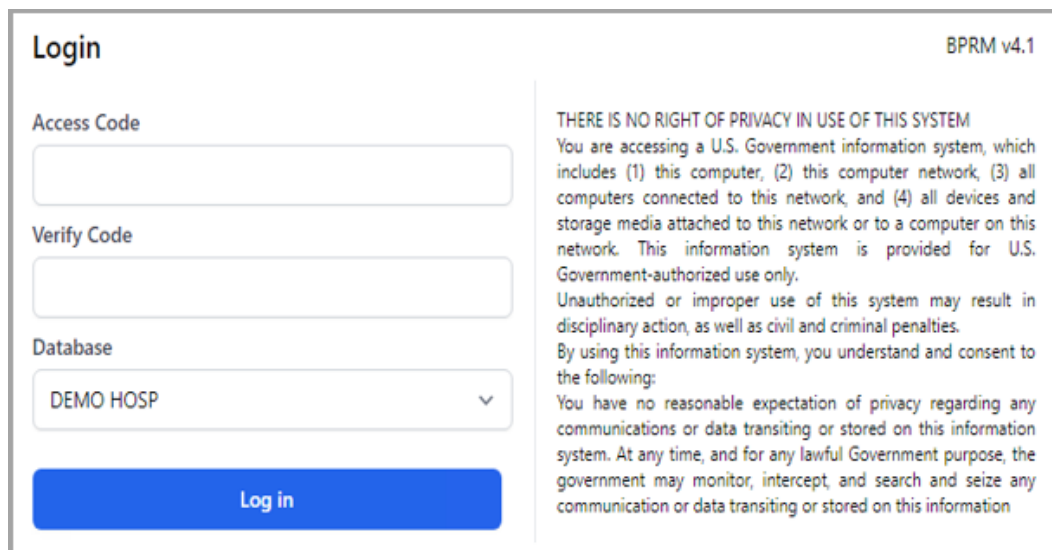
For example, a **Scheduling Supervisor** needs either the **BSDMENU** or **BSD MENU SUPERVISOR** added as a **Secondary Menu Option**, but needs both the **SDZMENU** and **SDZSUP** security keys.

## 7.4 Open the BPRM Application

After the **installation** and **configuration** steps have been completed to open **BPRM**:

1. Open **Microsoft Edge**, **Google Chrome**, or **Mozilla Firefox**.
2. In the **Address bar**, enter the **IP address** of your **Windows application server** and the **port number** using this form, where **domain\_name** represents the **IP address** of the application server and **k** represents the **port number** you previously assigned:
  - For sites using SSL: https://domain\_name:kkk
  - For sites not using SSL: http:// ip\_address:kk

The **BPRM Log In** dialog (Figure 7-17) displays.



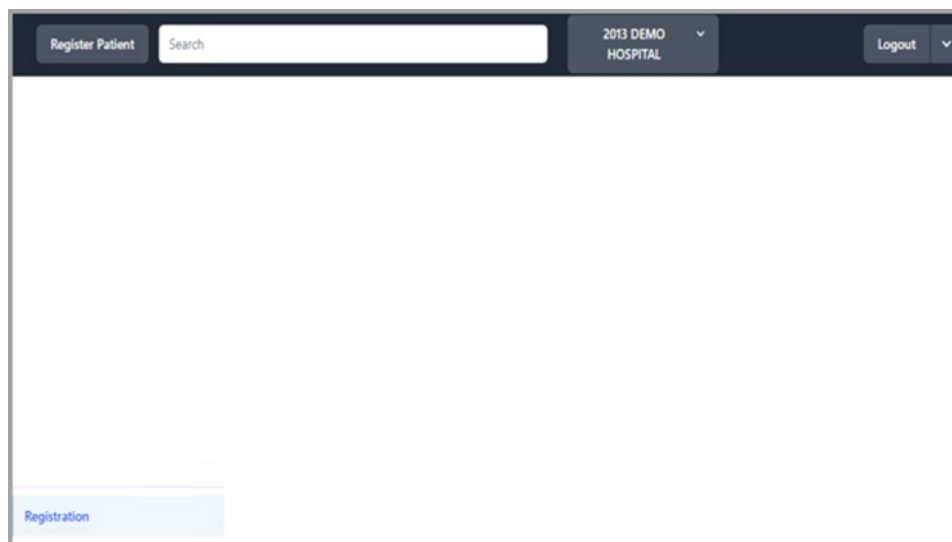
The login dialog box is titled "Login" in the top left and "BPRM v4.1" in the top right. It contains three input fields: "Access Code", "Verify Code", and "Database". The "Database" dropdown menu is currently set to "DEMO HOSP". A blue "Log in" button is at the bottom left. On the right side, there is a privacy notice: "THERE IS NO RIGHT OF PRIVACY IN USE OF THIS SYSTEM. You are accessing a U.S. Government information system, which includes (1) this computer, (2) this computer network, (3) all computers connected to this network, and (4) all devices and storage media attached to this network or to a computer on this network. This information system is provided for U.S. Government-authorized use only. Unauthorized or improper use of this system may result in disciplinary action, as well as civil and criminal penalties. By using this information system, you understand and consent to the following: You have no reasonable expectation of privacy regarding any communications or data transiting or stored on this information system. At any time, and for any lawful Government purpose, the government may monitor, intercept, and search and seize any communication or data transiting or stored on this information system."

Figure 7-17: BPRM Log In dialog

3. Type your **RPMS Access Code (user name)** in the **Access Code** field.
4. Type your **RPMS Verify Code (password)** in the **Verify Code** field.
5. Select your **RPMS database** from the **Database list box**.

**Note:** Users must have an **RPMS division** assigned to them before they can log into the **RPMS database** selected in this step.

6. Click **Login**. A screen similar to that shown in Figure 7-18 displays, although different modules may display at the bottom of the screen.



The opening screen has a dark blue header bar. On the left, there is a "Register Patient" button and a search bar. In the center, it says "2013 DEMO HOSPITAL" with a dropdown arrow. On the right, there is a "Logout" button with a dropdown arrow. The main content area is white and mostly empty. At the bottom left, there is a blue box labeled "Registration".

Figure 7-18: BPRM opening screen

**Note:** If you specified a port other than the default and the opening screen is not displayed, verify that the port you specified is open on the **BPRM web server**.

Refer to the separate **BPRM User Manuals** for additional information about using the modules that make up the application suite.

## 7.5 Verify Client/Server Machine Date Time

For BPRM to work correctly, following environments must be on the same **date/time (up to minutes)**:

- Database server (hosting RPMS)
- Application/IIS server (hosting BPRM application)
- User/Client machine (BPRM user's environment)

Once logged into the **BPRM application**, open the **About** page as follows:

1. Click the **Down** button next to **Logout** at top-right corner of BPRM.
2. Select **About** from the drop-down list, to open **About page**, as shown in Figure 7-19.

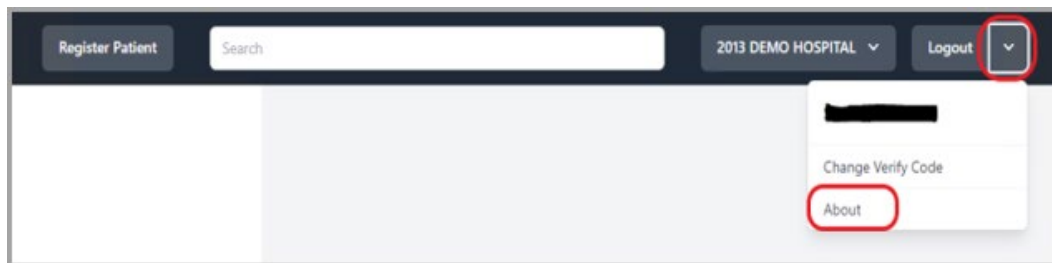


Figure 7-19: BPRM Logout drop-down list

3. Verify all three **date/times (up to minutes)** – **App server Date/Time**, **Database Server Date/Time**, and **User/Client Machine Date/Time** are the same (Figure 7-20).



| About            |  |  |  |
|------------------|--|--|--|
| BPRM v4.1        |  |  |  |
| User             | Name _____                                   | Current Division   | Divisions  |
|                  | Menus<br>AKMOCORE, AGMENU                    | Keys<br>XUPROG, XUPROGMODE, AGZREPORTS,<br>AGZMENU, AGZHOME, AGZMGR, APCLZMENU,<br>SDZSUP, DGZSUP, DGZADT, DGZPCC,<br>DGZMENU, AGZDELHRN, DGZSYS, SDZMENU,<br>DGZNOCLN, DGZNUH, DGZICE, DGPF PRF<br>ACCESS, AGZVIEWSSN, AGZCREPH, DGPF<br>ASSIGNMENT, DGPF MANAGER | Authorized Modules<br>Registration, ADT, Scheduling, Settings, Reports |
|                  | Lock Time<br>18000 sec                       |  |  |
| Server           | App Server Date/Time<br>4/19/2023 5:31:34 PM | Database Server Date/Time<br>4/19/2023 5:31:34 PM  |  |
| Browser          | Version<br>Chrome (112.0.0.0)                | OS<br>Windows 10 (amd64)   | Screen Resolution<br>1920x1080   |
|                  | Time Zone<br>America/New_York                |  |  |
| <div>Close</div> |  |  |  |

Figure 7-20: BPRM About page logout

The **Client/User machine date time** is not displayed in the **About** page. Users may verify the machine's **system date time**.

## Appendix A Run the Application Installer from the Command Prompt

In cases where you do not have sufficient privileges to install the BPRM application, an error message similar to the one shown in Figure A-1 displays.



Figure A-1: Insufficient privileges error message

If this happens, it will be necessary to install the application as an **Administrator**:

1. Navigate to **C:\Windows\system32** on your **application server**.
2. Locate the **cmd.exe** file, right-click, and select **Run as Administrator**.
3. In the **Command Prompt** window displayed, type this command to change to the disk and directory where the **BPRM application installer file** is located.

In this example, the file is located on **Drive D:** in the **EnsembleDatabases\bprm** folder (Figure A-2).

On your system, this location will likely be different.

```
C:\Windows\system32>D:
D:\>
D:\>cd EnsembleDatabases\bprm
D:\EnsembleDatabases\bprm>
```

Figure A-2: Drive D: in the EnsembleDatabases\bprm folder

4. At the resulting prompt, type the name of the installation file (bprm0400.01.msi in this example) and press Enter:

**D:\EnsembleDatabases\bprm>bprm0400.01.msi**

This will launch the **BPRM Setup Wizard** and at that point you can follow the steps described in Section 7.1.

## Appendix B Disable Logging in IIS Manager

The **Internet Information Services (IIS) manager** is set up by default with a logging feature, which allows it to capture certain types of requests to log files in the **IIS installation** folder. We recommend disabling this logging feature for the BPRM websites as it may result in storage issues if the log file is not maintained or monitored.

The following steps show how to disable the **Logging feature** for each **BPRM website setup** at your site. This information can also be found on the **Microsoft website** at:

<https://technet.microsoft.com/en-us/library/cc754631%28v=ws.10%29.aspx>

1. From the **Windows Start menu**, select **Administrative Tools** (Figure B-1).

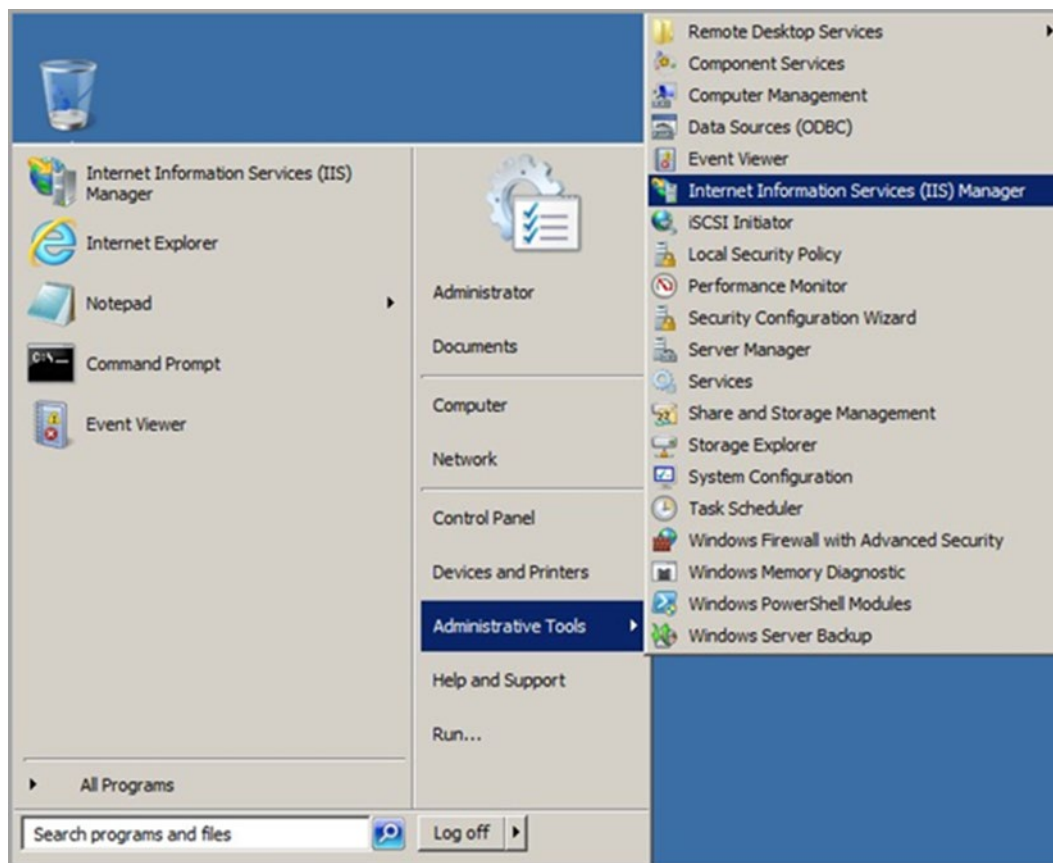


Figure B-1: Opening Internet Information Services (IIS) Manager

2. Select **Internet Information Services (IIS) Manager** to display the **IIS Management Console**.

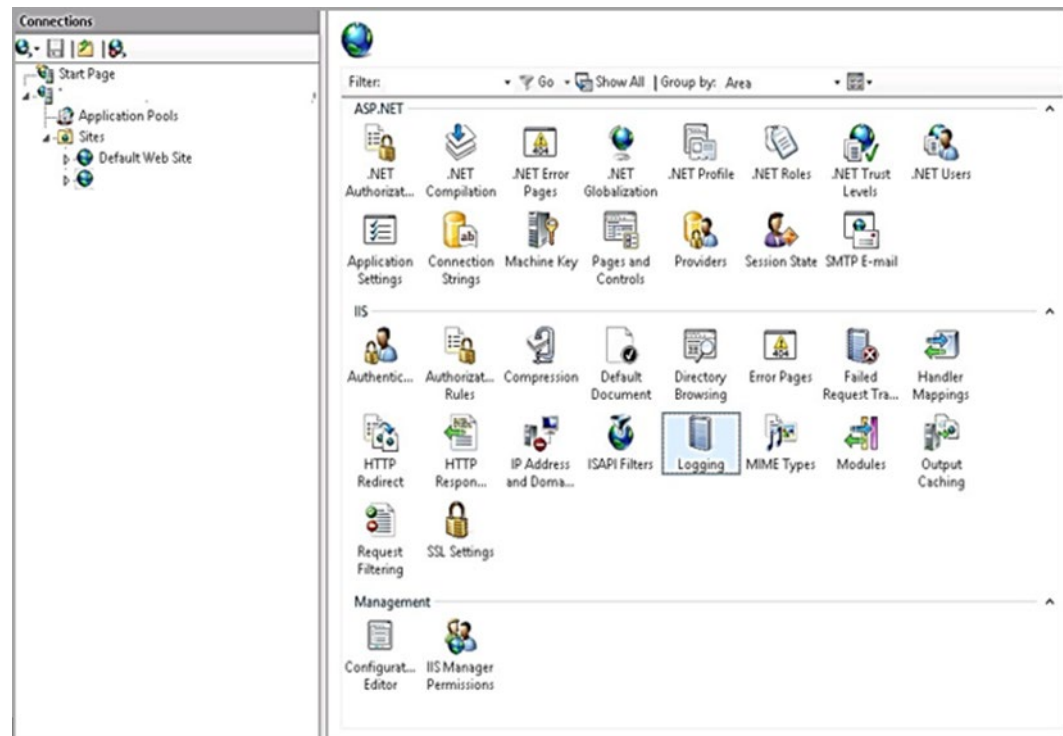


Figure B-2: IIS Management console

3. Select the **BPRM website** in the left pane.
4. Double-click **Logging** to display the **Logging** dialog.

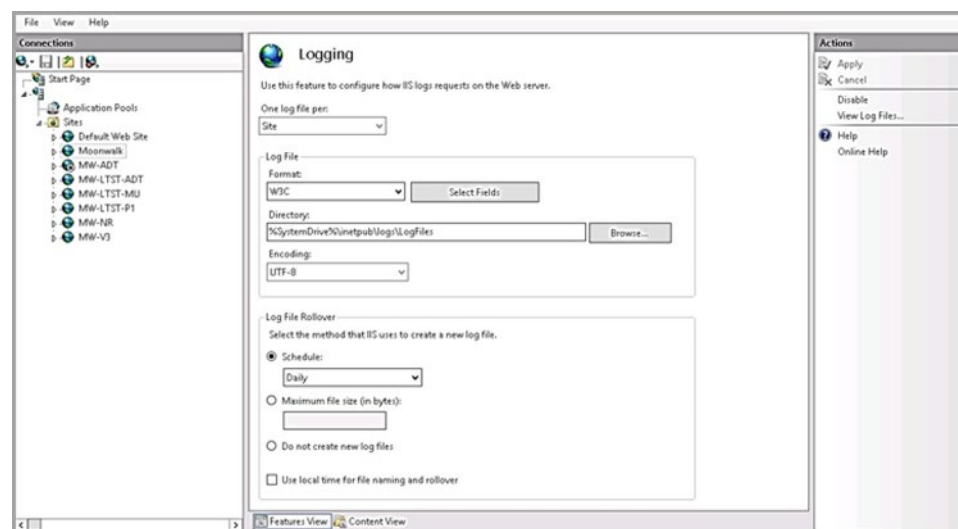


Figure B-3: Logging window

5. Click **Disable** in the **Actions** pane.

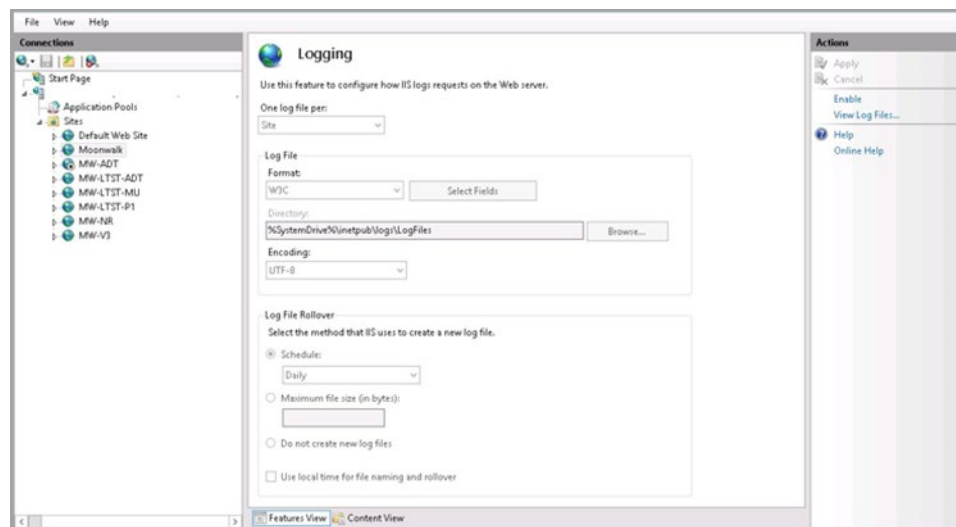


Figure B4: Disabled Logging window

## **Appendix C   Run Multiple BPRM Web Applications on a Single Server**

BPRM is a multi-tenant application meaning a single BPRM application website can connect to multiple RPMS systems.

Setting up multiple BPRM applications on a single server/environment is not supported.

In cases where a single BPRM server needs to serve multiple RPMS environments; a single BPRM installation can be used to connect to multiple RPMS environments as described in Section 7.2.

## Acronym List

| Acronym | Meaning                                     |
|---------|---|
| CRUD    | Create, Read, Update, and Delete            |
| HTTP    | Hypertext Transfer Protocol                 |
| HTTPS   | Hypertext Transfer Protocol Secure          |
| IHS     | Indian Health Service                       |
| IIS     | Internet Information Service                |
| KIDS    | Kernel Installation and Distribution System |
| PHR     | Personal Health Record                      |
| RPMS    | Resource and Patient Management System      |
| SQL     | Structured Query Language                   |
| SSL     | Secure Sockets Layer                        |
| WCF     | Windows Communication Foundation            |

## Contact Information

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

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

**Web:** <https://www.ihs.gov/itsupport/>

**Email:** [itsupport@ihs.gov](mailto:itsupport@ihs.gov)