

iBed Server

REF 5212

Connected Hospital®

stryker®

Installation/Configuration Manual



Symbols

	General warning
	Manufacturer
	Direct current
	Alternating current

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Warning/Caution/Note Definition

The words **WARNING**, **CAUTION**, and **NOTE** carry special meanings and should be carefully reviewed.

WARNING

Alerts the reader about a situation which, if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards.

CAUTION

Alerts the reader of a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the product or other property. This includes special care necessary for the safe and effective use of the device and the care necessary to avoid damage to a device that may occur as a result of use or misuse.

Note: Provides special information to make maintenance easier or important instructions clearer.

Introduction

This manual assists you with the operation or maintenance of your Stryker product. Read this manual before operating or maintaining this product. Set methods and procedures to educate and train your staff on the safe operation or maintenance of this product.

CAUTION

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this manual.
 - Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.
-

Notes

- This manual is a permanent part of the product and should remain with the product even if the product is sold.
- Stryker continually seeks advancements in product design and quality. This manual contains the most current product information available at the time of printing. There may be minor discrepancies between your product and this manual. If you have any questions, contact Stryker Customer Service or Technical Support at 1-800-327-0770.

Intended use: *i*Bed Wireless® with *i*Bed Awareness

The intended use for the *i*Bed Wireless (with *i*Bed Awareness) is to assist clinical staff to monitor bed parameters on specific Stryker beds. The desired bed parameters are set by operators at the bedside. The *i*Bed Wireless software is only intended for use with specifically enabled Stryker beds that have been verified and validated with the *i*Bed Wireless software, and is not intended to provide bed status information for non-Stryker beds. The *i*Bed Wireless software is not intended to communicate any patient status information, nor to permanently store any type of data. The *i*Bed Wireless with *i*Bed Awareness System is not intended to provide automated treatment decisions or as a substitute for professional healthcare judgment. The *i*Bed Wireless with *i*Bed Awareness System is not a replacement or substitute for vital signs monitoring or alert equipment. All patient medical diagnosis and treatment are to be performed under direct supervision and oversight of an appropriate healthcare professional.

*i*Bed Server software

The included *i*Bed Server installation CD (5212-500-001) contains the software required for the *i*Bed server installation.

Note: Before uninstalling the application, copy the following files to the **Public Documents** folder. The files will import to the new application. Using the *i*Bed Server Tool and *i*Bed Locator Association Tool, configure the Master Device List and the *i*Bed Locator Association Tool.

Program Files(x86)\Stryker\iBedServerApplication\Data

BBIDList.xml

DeviceURLs.xml

DeviceBBIDLocationAssociation.xml

HospitalLocationList.xml

Stryker disclaims all responsibility for information transmitted off of its devices.

Introduction

System requirements

Note: You can use a Virtual Machine (VM) to install the iBed Server software, but the Virtual Machine may require more resources than the lowest hardware requirement. Performance may not be optimal.

HARDWARE:

Note: The Stryker Server Application will run on a dedicated server or VM.

Minimum requirements for the iBed Server hardware is dependent on the amount of beds connected to the system.

1 - 300 connected beds:

- 2.x GHz processor or higher with a total of 4 cores
- Memory: 8 GB RAM
- Hard Drive: 150 GB

301 - 600 connected beds:

- 2.x GHz processor or higher with a total of 8 cores
- Memory: 16 GB RAM
- Hard Drive: 150 GB

601 - 800 connected beds:

- 2.x GHz processor or higher with a total of 16 cores
- Memory: 32 GB RAM
- Hard Drive: 150 GB

801 - 1,000 connected beds:

- 2.x GHz processor or higher with a total of 24 cores
- Memory: 32 GB RAM
- Hard Drive: 150 GB

1,001 - 1,300 connected beds:

- 2.x GHz processor or higher with a total of 32 cores
- Memory: 64 GB RAM
- Hard Drive: 150 GB

Note: For systems that have over 1,300 connected beds, add a core for every 50 additional beds.

SOFTWARE:

Windows Server 2008 R2

- Add Roles
 - Web Server (IIS) (Installed)
 - Roles Services
 - ◆ Application development
 - ◇ ASP .NET (Installed)
 - ◇ ASP (Installed)
 - ◆ Management tools
 - ◇ IIS Management Console (Installed)
 - ◇ IIS6 Management Compatibility (Installed)

Introduction

System requirements (Continued)

- Features
 - .NET Framework 3.5.1 features (Installed)
- All current Microsoft High Priority Updates (Installed) and .NET Framework 4

Additional configuration or setup may be required depending on equipment and other variables. If you have difficulties during installation, setup, configuration, or while attempting to establish a connection between the iBed Server and iBed Wireless, contact Stryker Technical Support at 1-800-327-0 770.

Device connection requirements

Note: You are required to use the DNS naming convention for each Stryker device if the devices can travel to multiple sub-nets.

- DHCP connections using a reserved IP address for each device via its MAC address
- Static connections using static IP address for each device via its MAC address
- DNS naming convention using each device host name that is hard-coded to the device (Host name example = SYK-001970b23 45 [SYK device MAC address])

Introduction

Contact information

Contact Stryker Customer Service or Technical Support at: 1-800-327-0770.

Stryker Medical
3800 E. Centre Avenue
Portage, MI 49002
USA

E-mail: medicaliBedWirelessSupport@stryker.com

Summary of safety precautions

Carefully read and strictly follow the warnings and cautions listed on this page. Service only by qualified personnel.

CAUTION

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this manual.
 - Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.
 - Before proceeding with this installation, make sure that a previous version of the iBed Server application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.
 - Before proceeding with this installation, make sure that a previous version of the iBed Locator association tool application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.
 - Before proceeding with this installation, make sure that a previous version of the iBed Wireless configuration tool application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.
-

Installation

iBed Server application

CAUTION

Before proceeding with this installation, make sure that a previous version of the iBed Server application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.

1. Begin the iBed Server application installation by double-clicking the **5212-500-005 Server Application Setup.exe** file.
2. In the **InstallShield Wizard** screen, click **Next** (Figure 1 on page 9).

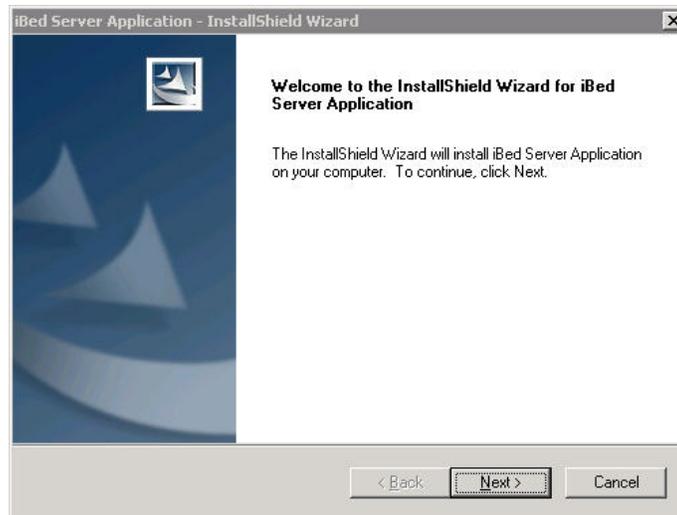


Figure 1: InstallShield Wizard

3. The **Choose Destination Location** screen will appear (Figure 2 on page 9).
 - a. If using the default location, click **Next**.
 - b. If using a different location, click **Change**.

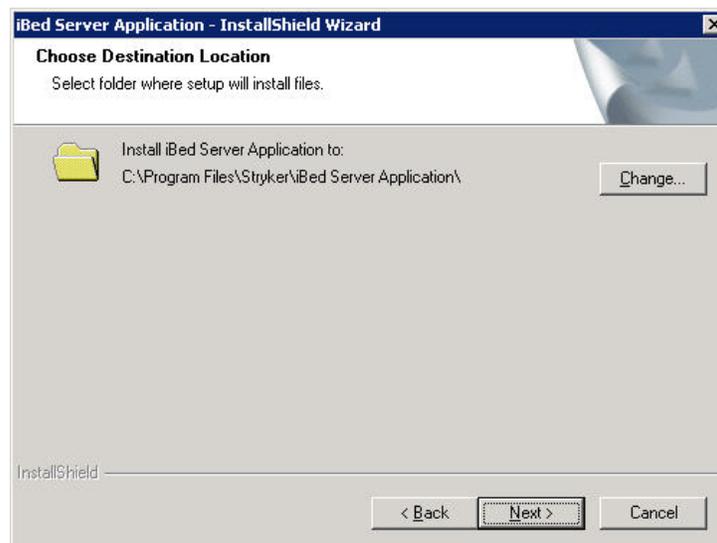


Figure 2: Choose Destination Location

Installation

iBed Server application (Continued)

4. The **Select Program Folder** screen will appear (Figure 3 on page 10).
 - a. If using the default folder, click **Next**.
 - b. If using a different folder, create a different folder name.

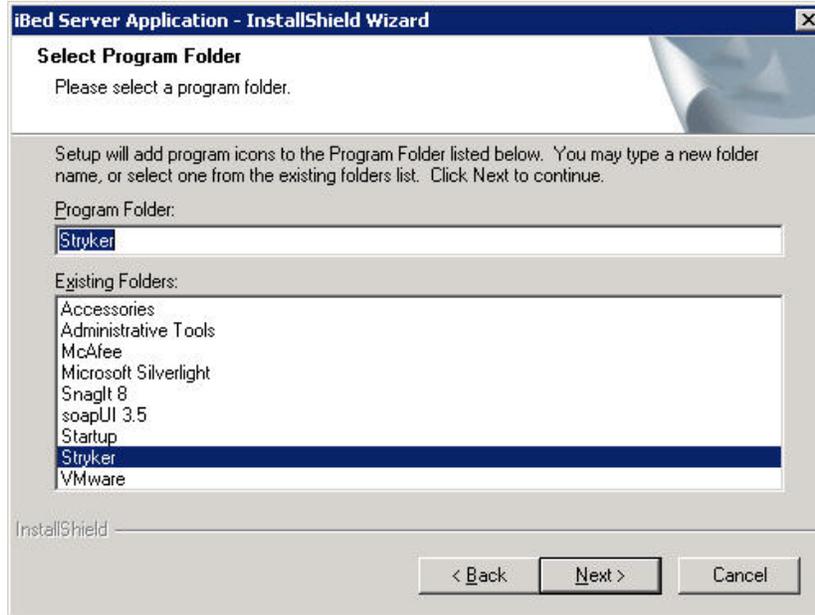


Figure 3: Select Program Folder

5. Click **Install** to begin the installation (Figure 4 on page 10).
Note: To return to the **Select Program Folder**, click **Back**.

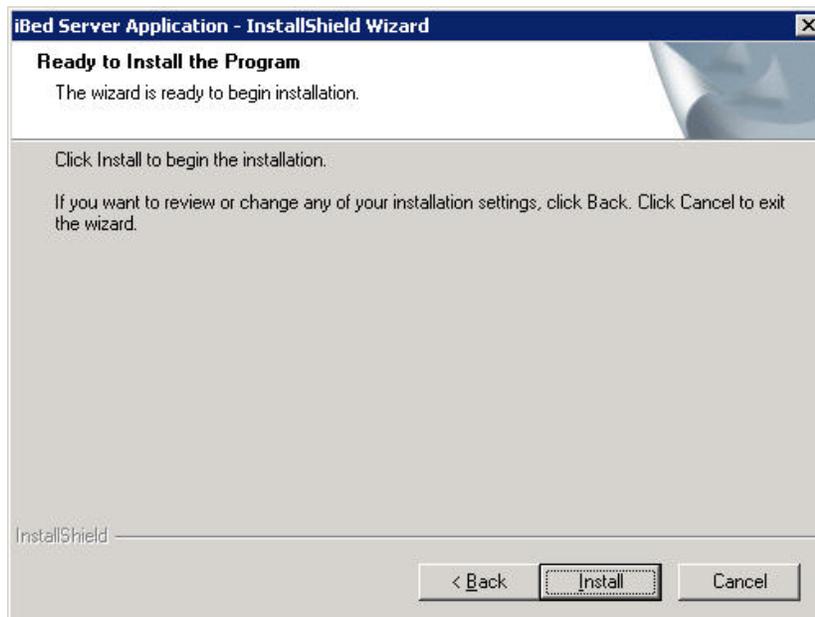


Figure 4: Install iBed Server

Installation

*i*Bed Server application (Continued)

6. Click **Finish** to exit the **InstallShield Wizard** ([Figure 5 on page 11](#)).

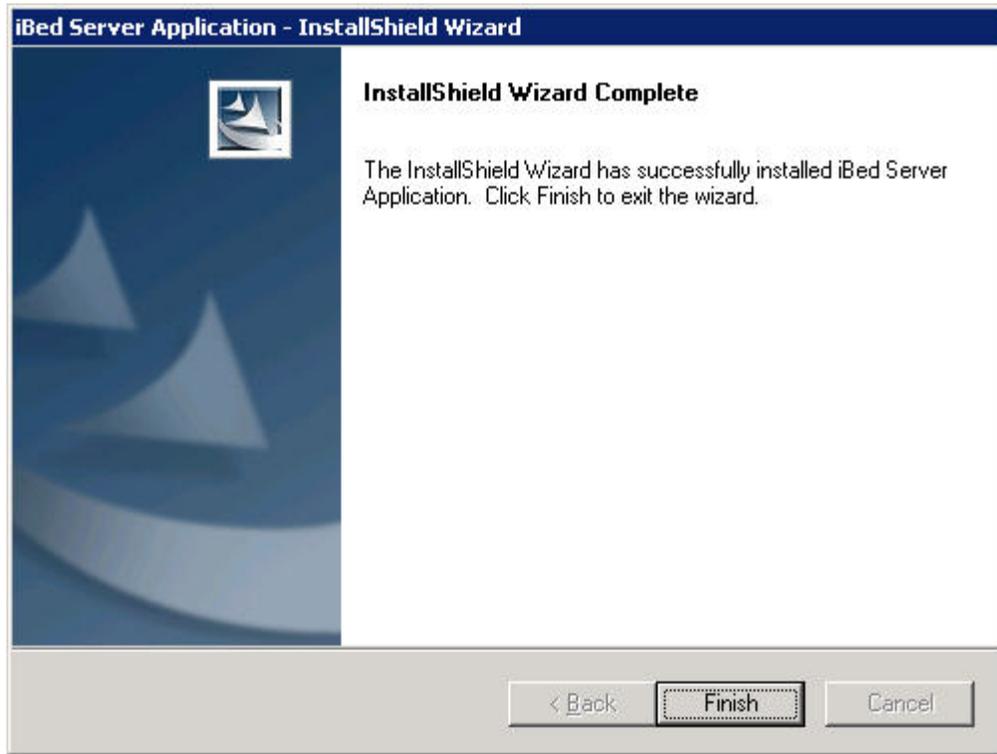


Figure 5: Finish

7. Install the [iBed Locator Association Tool on page 23](#).

Configuring the Internet Information Services (IIS) Manager for *i*Bed Server

1. Go to the **Internet Information Services (IIS) Manager**.
 - a. Expand the **Connections** tree and **Sites** folder.
 - b. In the **Connections** pane, click **Application Pools** ([Figure 6 on page 12](#)).
 - c. In the **Application Pools** pane, select **DefaultAppPool** ([Figure 6 on page 12](#)).
 - d. In the **Actions** pane, click **Recycling** ([Figure 6 on page 12](#)).

Installation

Configuring the Internet Information Services (IIS) Manager for iBed Server (Continued)

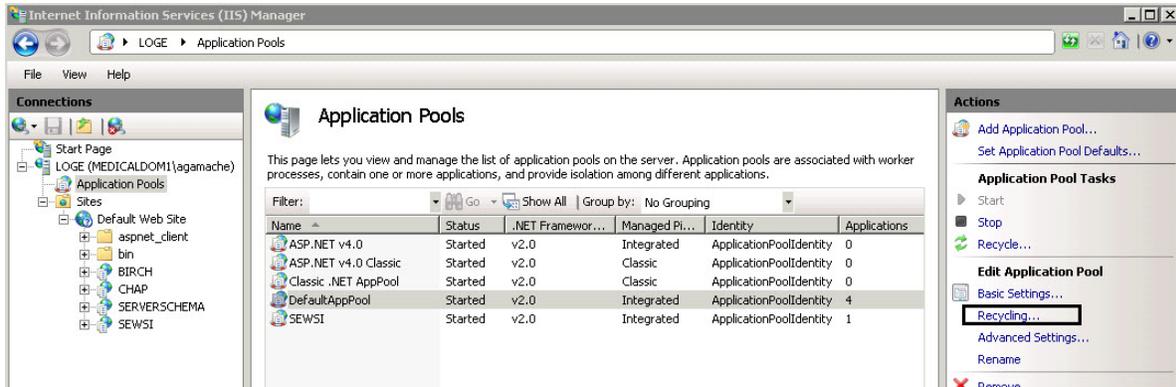


Figure 6: Disabling recycling conditions

- e. Disable Recycling by clearing any selected boxes (Figure 7 on page 12).
- f. Click **Next**, and then click **Finish**.

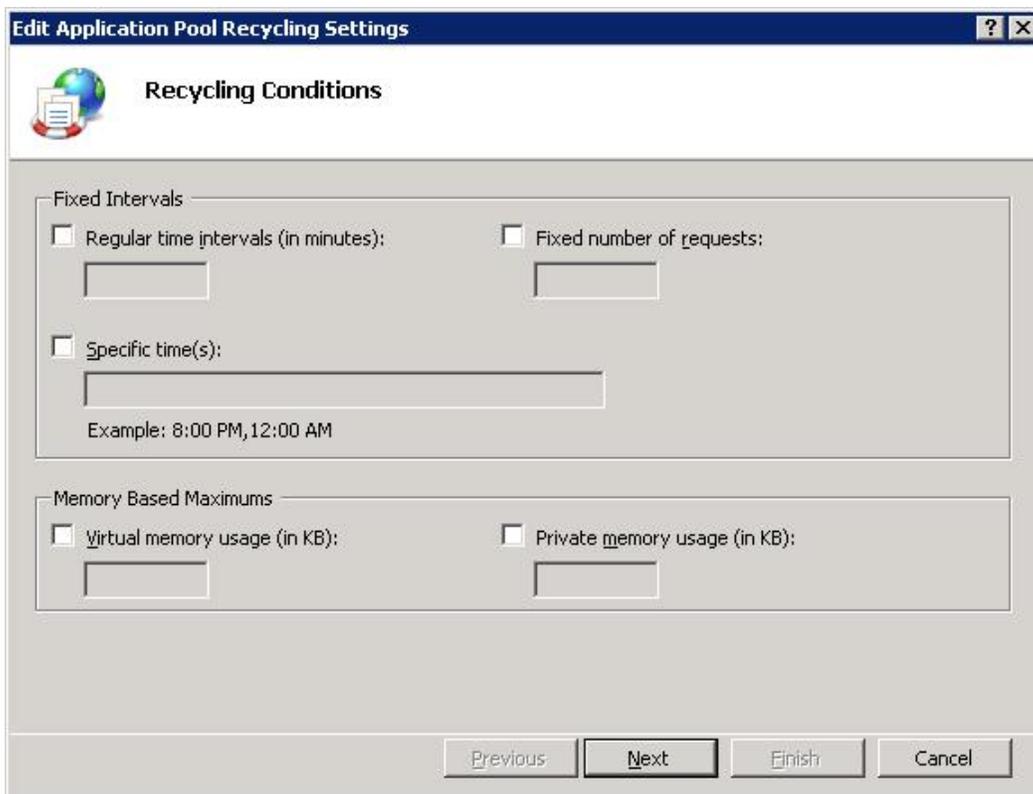


Figure 7: Recycling Conditions

- 2. Make sure that all Application Pools (Default and SEWSI) are using v2.0 .NET Framework **and integrated** (Figure 8 on page 13).

Installation

Configuring the Internet Information Services (IIS) Manager for *i*Bed Server (Continued)

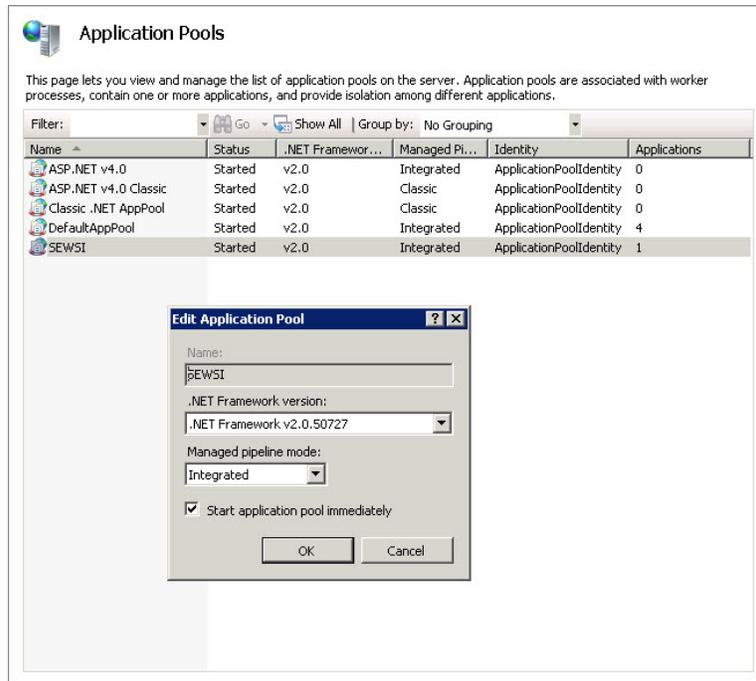


Figure 8: v2.0 .NET Framework

3. In the **Connections** pane, click **Default Web Site**. (Figure 9 on page 14).
4. In the **Default Web Site Home** pane, double-click the **HTTP Response Headers** icon (Figure 9 on page 14).

Installation

Configuring the Internet Information Services (IIS) Manager for iBed Server (Continued)

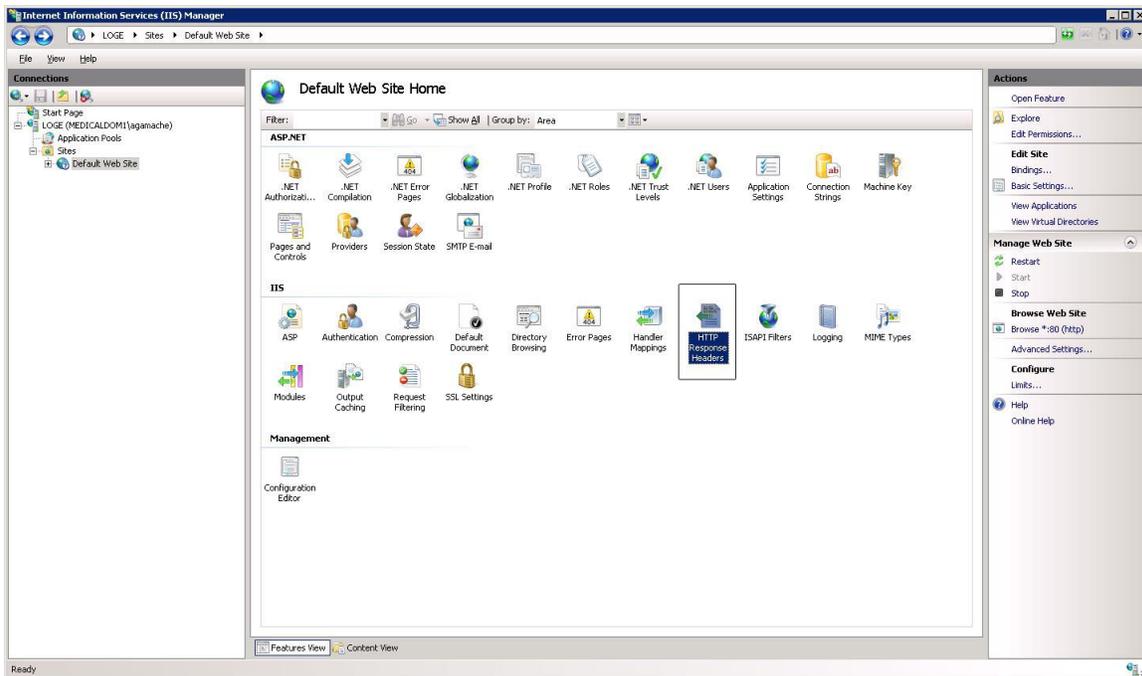


Figure 9: HTTP Response Headers

5. In the **Actions** pane, click **Set Common Headers** (Figure 10 on page 15).

Installation

Configuring the Internet Information Services (IIS) Manager for iBed Server (Continued)

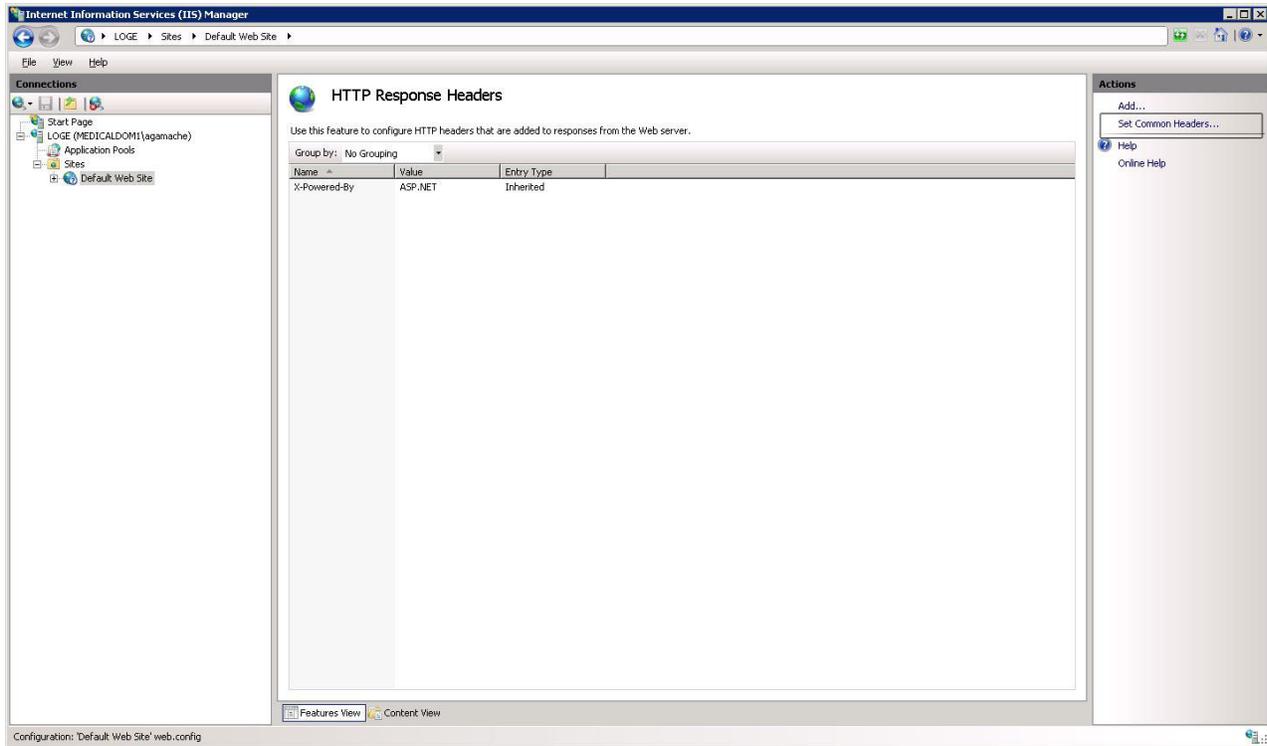


Figure 10: Set common headers

6. Clear the **Enable HTTP keep-alive** check box, and then click **OK** (Figure 11 on page 15).

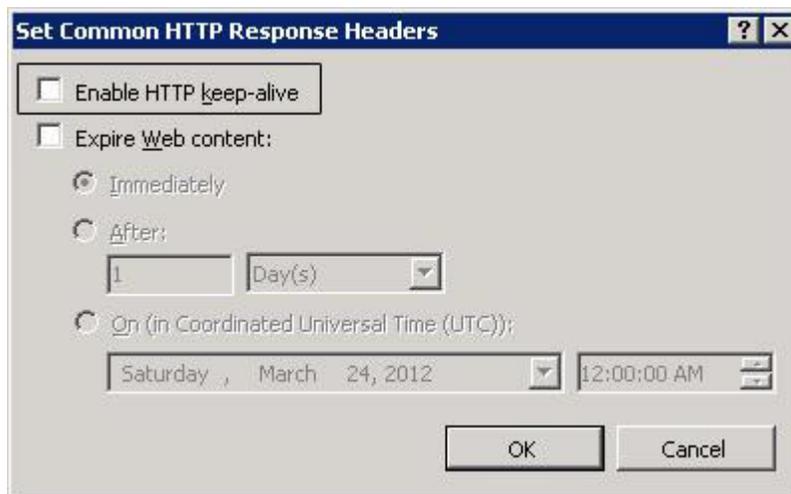


Figure 11: Enable HTTP keep-alive

7. In the **Connections** pane, click **Default Web Site**. (Figure 9 on page 14).
8. In the **Actions** pane under **Manage Website / Configure**, click **Limits** (Figure 12 on page 16).

Installation

Configuring the Internet Information Services (IIS) Manager for iBed Server (Continued)

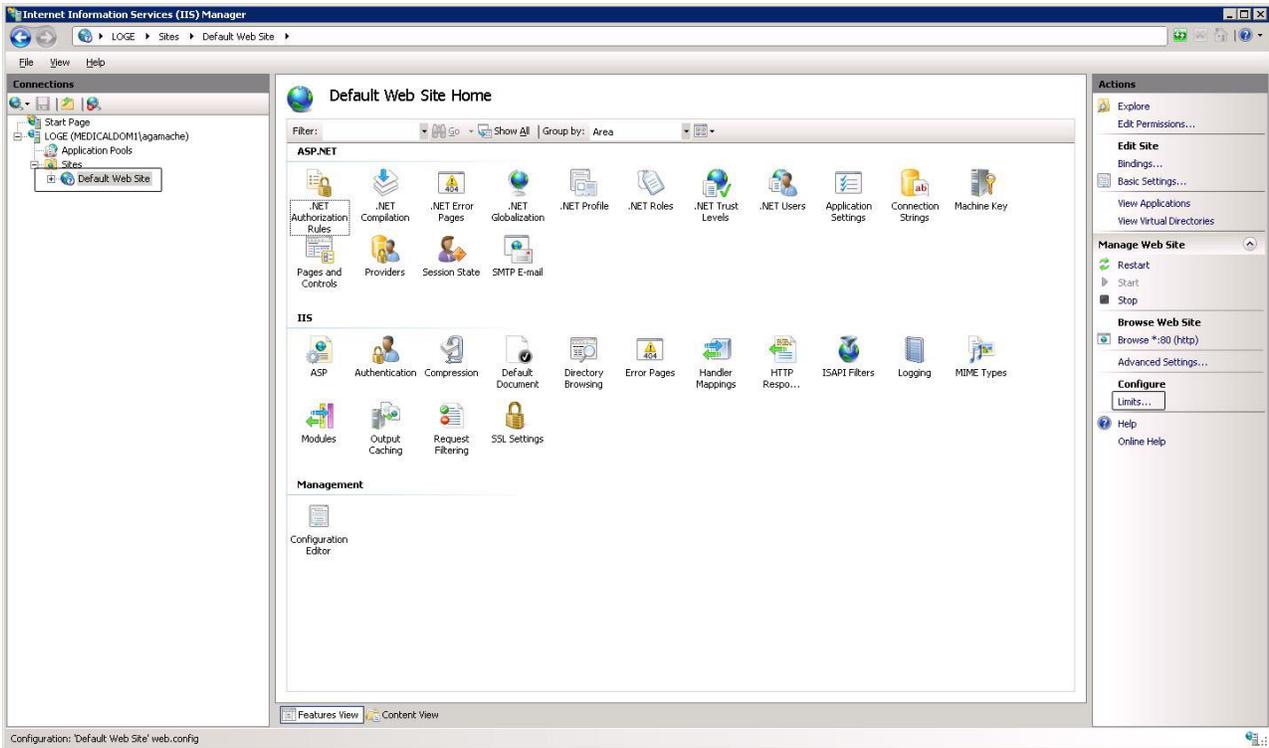


Figure 12: Limits

9. In the **Connection Limits** area, change the **Connection time-out (in seconds)**: to 8, and then click **OK** (Figure 13 on page 16).

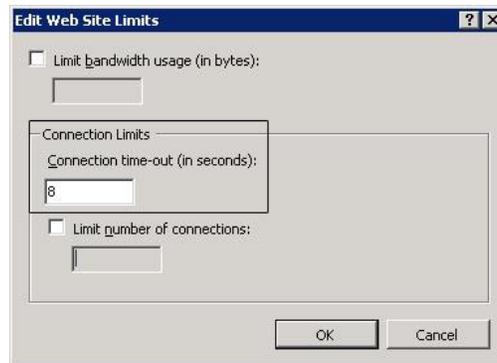


Figure 13: Connection time-out

10. **Exit** the Internet Information Services (IIS) Manager.

Installation

Configuring the Windows Registry

To configure the Windows Registry:

1. In Windows, click **Start**.
2. Type **Run** into the search program and files search box.
3. Using the **Run** dialog box, type **regedit**.
4. Click **OK**.

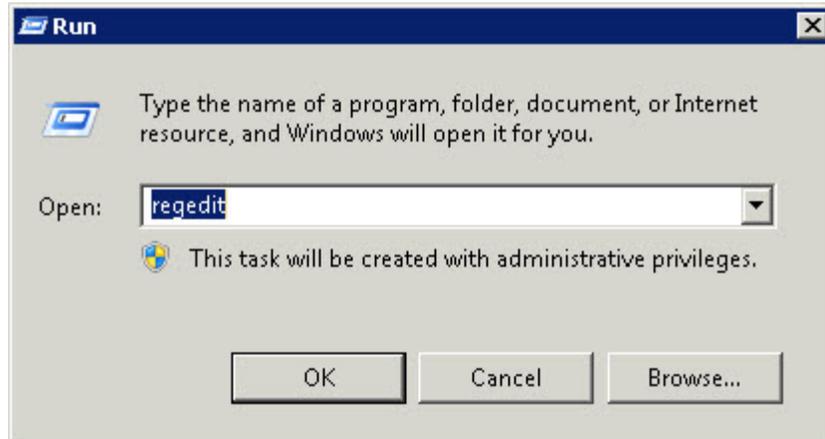


Figure 14: Run regedit

5. In the **Registry Editor** navigation pane, browse to: HKEY_LOCAL-MACHINE/SOFTWARE/Microsoft/ASP.NET/2.0.50727.0 (Figure 15 on page 17).

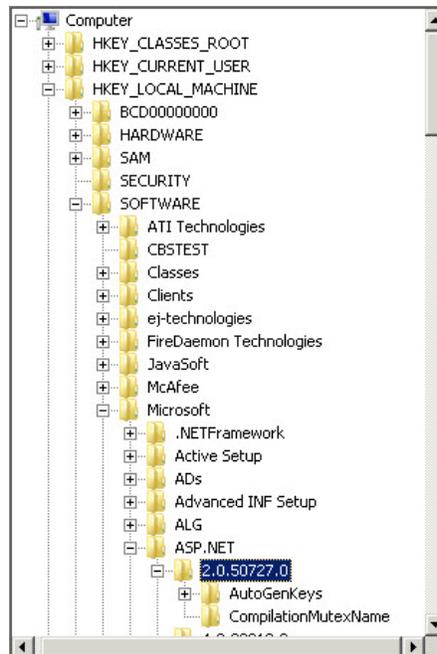


Figure 15: Browse Registry Editor

6. In the right window, right-click to get to the add option menu.
7. Select **New**.

Installation

Configuring the Windows Registry (Continued)

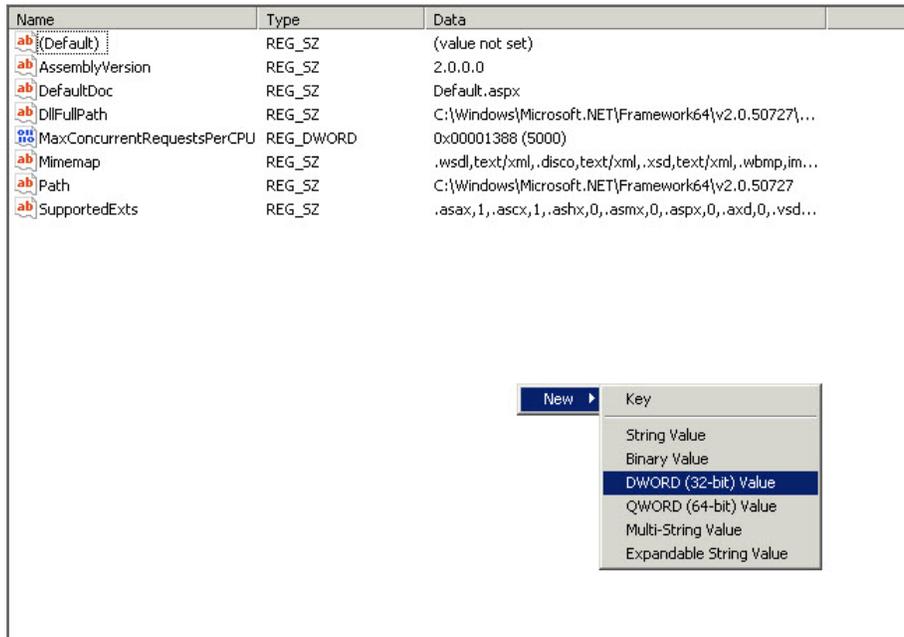


Figure 16: DWORD (32-bit) Value

8. Select **DWORD (32-bit) Value** (Figure 16 on page 18).
9. Rename the **New Value #1** file to **MaxConcurrentRequestsPerCPU** (Figure 17 on page 18).

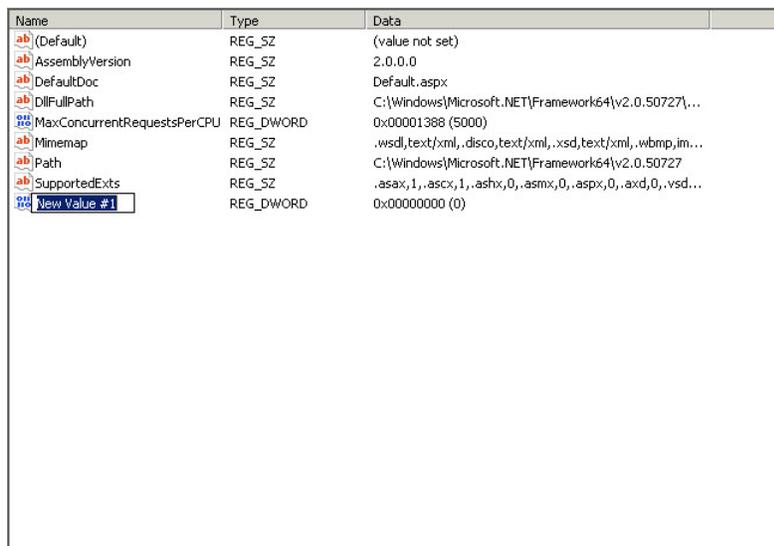


Figure 17: Rename New Value #1

10. Right-click **MaxConcurrentRequestsPerCPU** to edit the DWORD value properties.
11. In the **Base** box, select **Decimal** (Figure 18 on page 19).
12. In the **Value data:** text box, type **5000** (Figure 18 on page 19).
13. Click **OK**.

Installation

Configuring the Windows Registry (Continued)

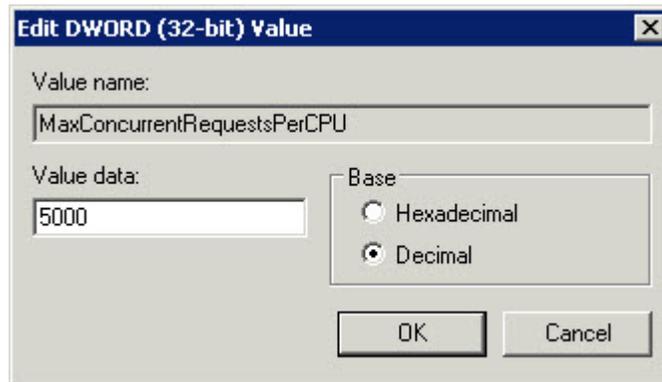


Figure 18: Edit the DWORD (32-bit) Value

Installation

Editing Windows configuration

1. Browse to the machine.config file.
 - C:\Windows\Microsoft.NET\Framework\v2.0.50727\CONFIG\ machine.config (32 bit)
 - C:\Windows\Microsoft.NET\Framework64\v2.0.50727\CONFIG\ machine.config (64 bit)
2. To edit the previous file to increase the thread count for the .NET Framework, replace <processModel autoConfig="false" with <processModel autoConfig="false" maxWorkerThreads="1000" maxIoThreads="1000" minWorkerThreads="50" minIoThreads="50"/>.
3. Browse to: **C:\Program Files (x86)\Stryker\iBed Server Application\HB\SEWSI.HeartBeatWindowsService.exe.config**.
4. To edit the Heartbeat file setting:
 - Change <add key="HeartbeatDeviceTimeout" value="8000"></add> to <add key="HeartbeatDeviceTimeout" value="16000"></add>
 - Change <add key="HeartbeatRetry" value="8000"></add> to <add key="HeartbeatRetry" value="16000"></add>
 - Change <add key="HeartbeatCycle" value="PT20S"></add> to <add key="HeartbeatCycle" value="PT40S"></add>
5. Browse to: **C:\Program Files (x86)\Stryker\iBed Server Application\SEWSI\web.config**.
6. To increase the available ports (TCP connections):
 1. Execute using a command prompt: netsh int ipv4 set dynamicport tcp start=1025 num=64510

Changing the Server URL

The Server URL receives subscription information from devices and the Properties for Location Subscription value.

To change the Server URL:

1. Browse to: **C:\Program Files(x86) > Stryker > iBed Server Application > SEWSI >**.
2. Open the web file.
3. Using the **Find** function, search for serverurl:

```
<add key="serverurl" value="http://localhost/SEWSI/SEWSIWebServiceContract.asmx"></add>
```

4. In the string, change **localhost** to the server IP address.
5. Using the **Find** function, search for **DeviceCallTimeOut**.
6. In the SEWSI settings, change <add key="DeviceCallTimeOut" value="500"></add> to <add key="DeviceCallTimeOut" value="2000"></add>.
7. Save and close the file.

Setting up e-mail notifications (Admin only for server issues)

This sets up e-mail notifications for the administrator.

To set up an e-mail notification:

1. Browse to: **C:\Program Files(x86) > Stryker > iBed Server Application > Conf.**
2. Open each file with the **.log4net** extension (below). Perform steps 3 and 4 on each file:

```
iServerHarmonization(SEWSI)_CHAP_Log4NetConfigFile  
iServerharmonization(SEWSI)_Heartbeat_Log4NetConfigFile  
iServerHarmonization(SEWSI)_Log4NetConfigFile  
ServerTools_Log4NetConfigFile.log4net
```

Installation

Setting up e-mail notifications (Admin only for server issues) (Continued)

3. Edit the notification e-mail information near the bottom of each .log4net file ([Figure 19 on page 21](#)).
Note: Shown addresses are examples only. Make sure to enter the existing hospital e-mail addresses and smtp server information.

```
<to value="Strykerwirelessupport@hospital.org"></to>  
<from value="StrykeriBedPRODSERVER@hospital.org"></from>  
<smtpHost value="mail.hospital.org"></smtpHost>
```

Figure 19: Editing the e-mail notification

4. Save and close the file.
5. Browse to: **C:\Program Files(x86) > Stryker > iBed Location Association Tool > Conf.**
6. Open **LocationAssociationTool_Log4NetConfigFile.log4net**.
7. Perform step 3 and 4 on each file.

Installation

Configuring the TCP_Disconnector IP range

1. Browse to: Browse to C:\Program Files(x86) > Stryker > iBed Server Application > TCP_Disconnector.
2. Open TCP_Disconnector.exe.
3. Change the <add key="RemoteIPFilter" value="xx.xx.xx"/> to match the IP number range for the beds:

```
<!-- Invoke Interval (Min) -->
<add key="InvokeInterval" value="1"/>
<!-- Remote IP Filter -->
<add key="RemoteIPFilter" value="10.32.56"/>
<!-- Remote Port Filter -->
<add key="RemotePortFilter" value="1639"/>
<!-- Monitor Interval (mSec) -->
<add key="MonitorInterval" value="5000"/>
```

Notes

- You can place a comma (,) after an IP group value if you need to more than one IP group. Do not add any spaces.
 - If you have multiple digits in the first two quadrants, you can set the value as xx.xx.
4. Save and close the file.
 5. Restart the server to make the modifications take effect.
 6. Proceed to [Verifying iBed Server on page 29](#).

Starting the Heartbeat service

The Heartbeat service keeps track of all the devices connected to the server application on the LAN. To start the Heartbeat service (**StrykerSEWSIHeartbeatService**):

1. In Windows, click **Start**.
2. Go to **Administrative Tools**.
3. Go to **Services**.
4. Scroll through the list and click the entry labeled **StrykerSEWSIHeartbeatService** ([Figure 20 on page 22](#)).
5. Right-click **StrykerSEWSIHeartbeatService**.
6. Click **Start** from the drop-down menu.
7. Close the **Services** window.

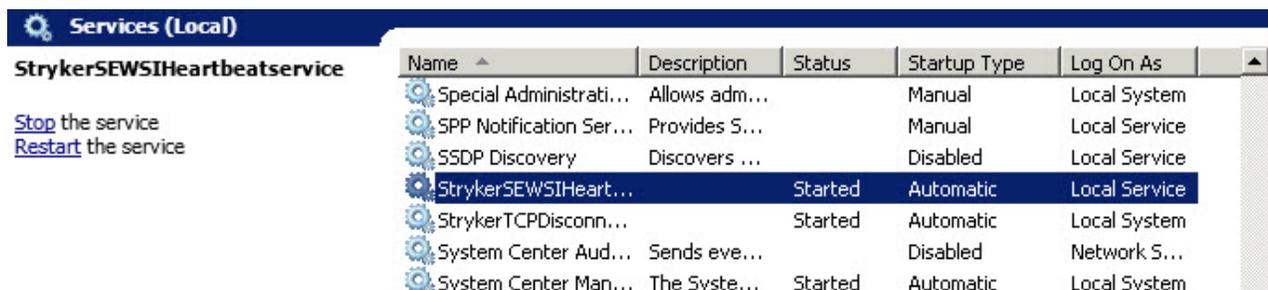


Figure 20: Starting the Heartbeat service

Installation

iBed Locator Association Tool

CAUTION

Before proceeding with this installation, make sure that a previous version of the iBed Locator association tool application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.

1. Run the iBed Locator association tool by double-clicking the **5212-500-025 iBed Locator association tool Setup.exe** file on the source location.
2. In the **InstallShield Wizard** screen, click **Next** (Figure 21 on page 23).

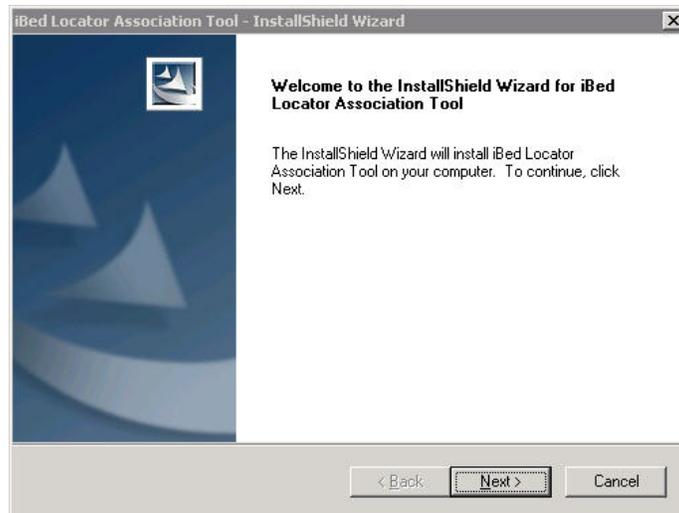


Figure 21: InstallShield Wizard

3. The **Choose Destination Location** screen will appear (Figure 22 on page 23).
 - a. If using the default location, click **Next**.
 - b. If using a different location, click **Change**.

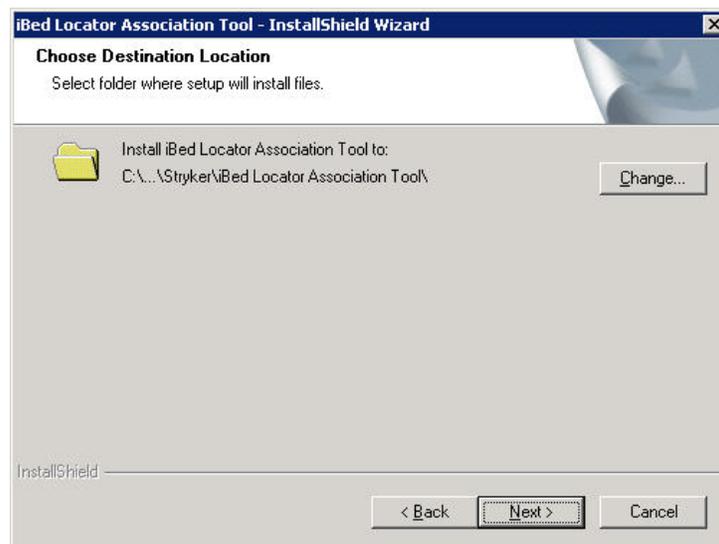


Figure 22: Choose Destination Location

Installation

iBed Locator Association Tool (Continued)

4. The **Select Program Folder** screen will appear (Figure 23 on page 24).
 - a. If using the default folder, click **Next**.
 - b. If using a different folder, create a different folder name.

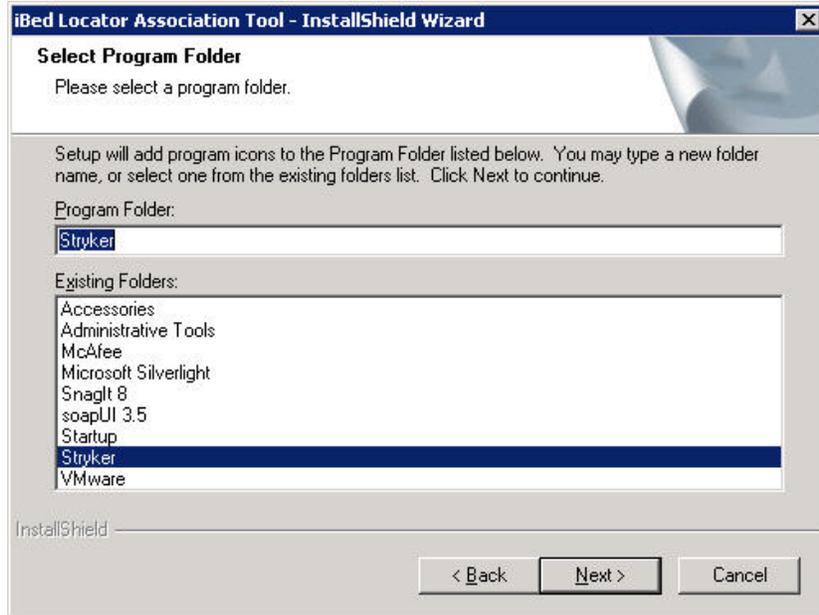


Figure 23: Select Program Folder

5. Click **Install** to begin the installation (Figure 24 on page 24).
Note: To return to the **Select Program Folder**, click **Back**.

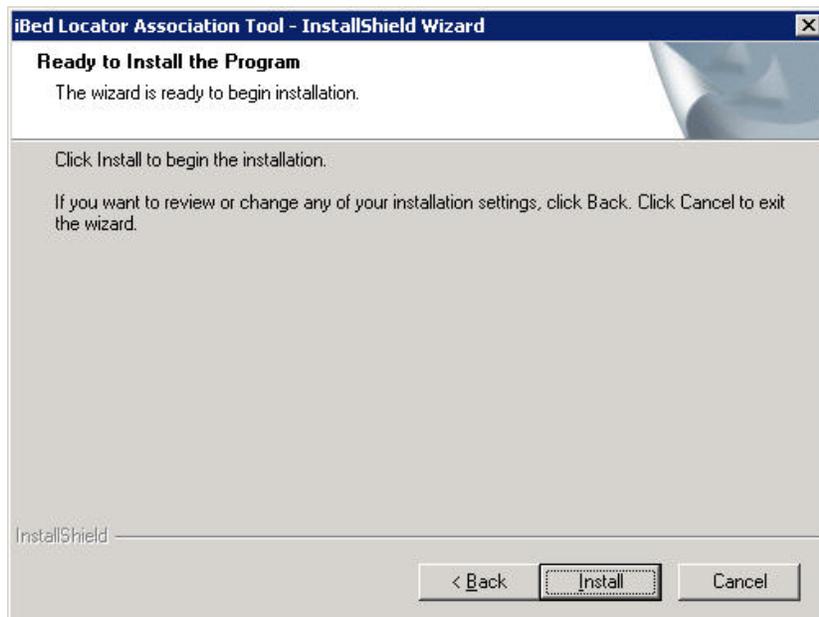


Figure 24: Install iBed Locator association tool

Installation

iBed Locator Association Tool (Continued)

6. Click **Finish** to exit the **InstallShield Wizard** ([Figure 25 on page 25](#)).

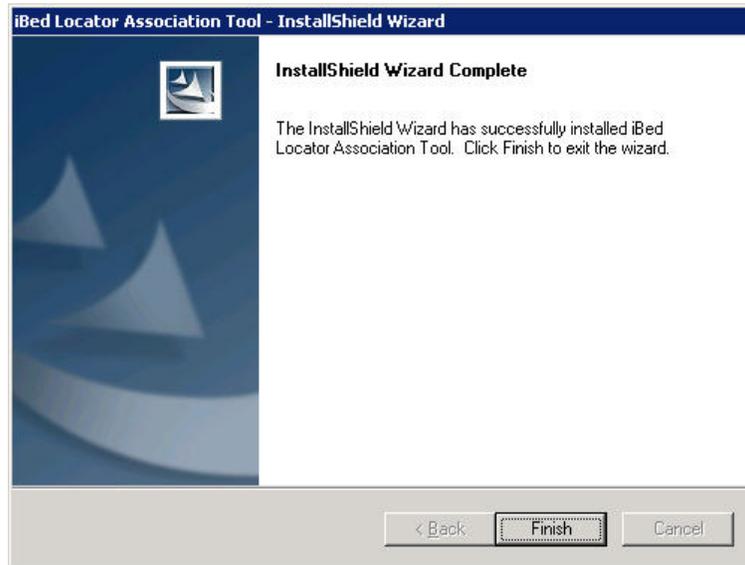


Figure 25: Finish

7. Install the [iBed Wireless Configuration Tool on page 26](#).

Installation

iBed Wireless Configuration Tool

CAUTION

Before proceeding with this installation, make sure that a previous version of the iBed Wireless configuration tool application is not currently installed on the target system. If a previous version was installed, uninstall the software. If you attempt to install the application on a system where a previous version was installed, the installer behavior may be unpredictable.

1. Run the iBed Wireless configuration tool by double-clicking the **5212-500-015 iBed Wireless configuration tool Setup.exe** file on the source location.
2. In the **InstallShield Wizard** screen, click **Next** (Figure 26 on page 26).

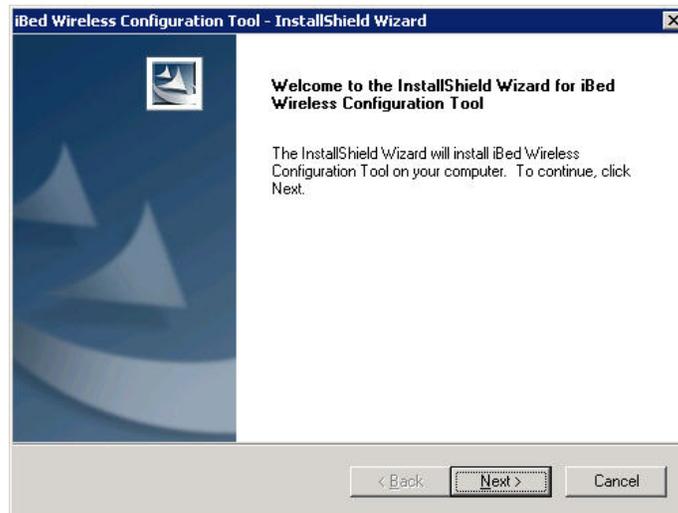


Figure 26: InstallShield Wizard

3. The **Choose Destination Location** screen will appear (Figure 27 on page 26).
 - a. If using the default location, click **Next**.
 - b. If using a different location, click **Change**.

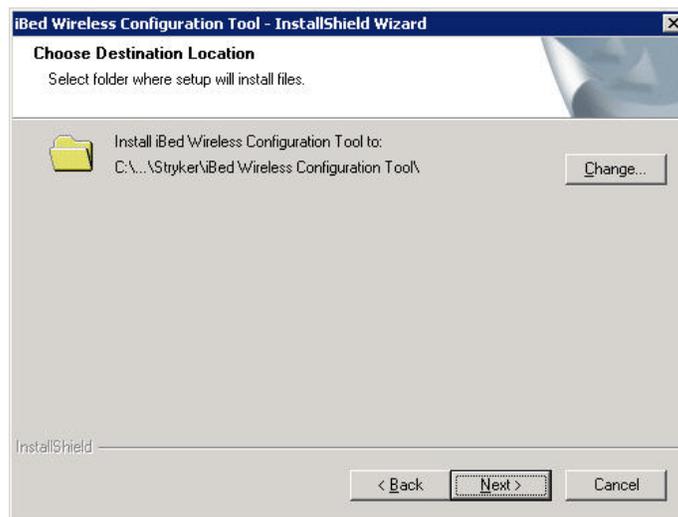


Figure 27: Choose Destination Location

Installation

iBed Wireless Configuration Tool (Continued)

4. The **Select Program Folder** screen will appear (Figure 28 on page 27).
 - a. If using the default folder, click **Next**.
 - b. If using a different folder, create a different folder name.

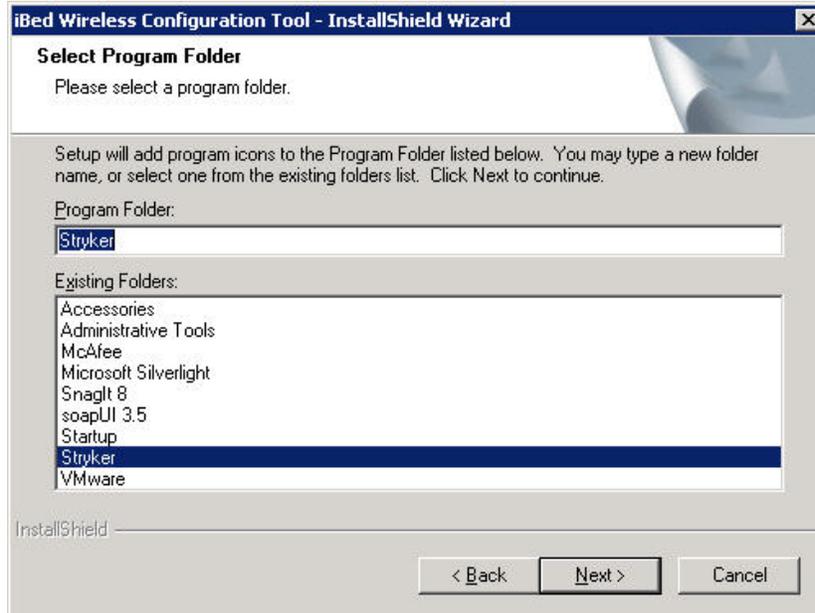


Figure 28: Select Program Folder

5. Click **Install** to begin the installation (Figure 29 on page 27).
Note: To return to the **Select Program Folder**, click **Back**.

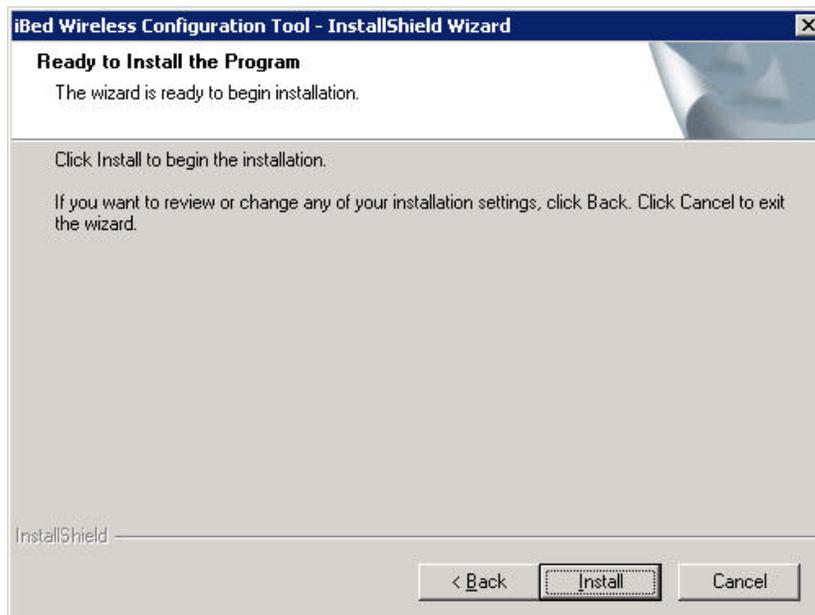


Figure 29: Install iBed Wireless configuration tool

Installation

iBed Wireless Configuration Tool (Continued)

6. Click **Finish** to exit the **InstallShield Wizard** ([Figure 30 on page 28](#)).

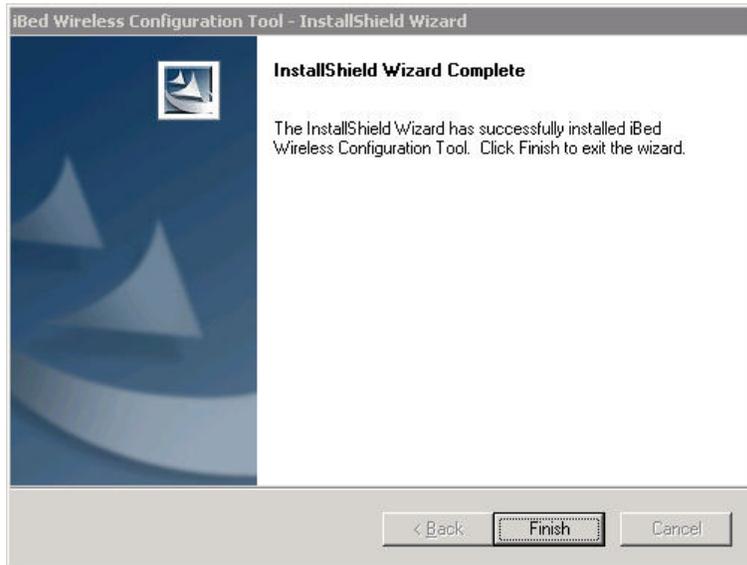


Figure 30: Finish

7. Proceed to [Starting the Heartbeat service on page 22](#).

Verifying iBed Server

To verify iBed Server:

1. Open the iBed Server Tool by either double-clicking the iBed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. Click **iBed Server Verification** ([Figure 31 on page 29](#)).

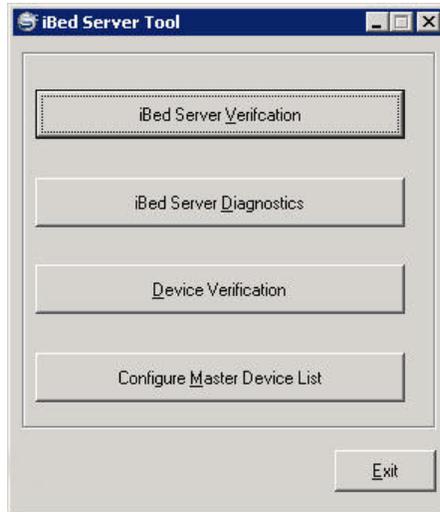


Figure 31: iBed Server Tool

3. Click **Verify Server** ([Figure 32 on page 29](#)).

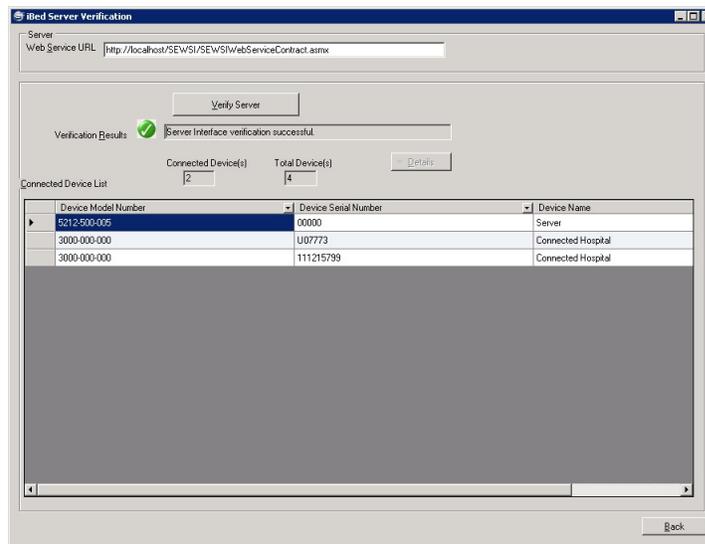


Figure 32: Verifying iBed Server

- a. If the server interface verification is successful, the system returns a green check ([Figure 32 on page 29](#)).
 - b. If the server interface verification is unsuccessful, the system returns a red X.
Note: Before you continue installing iBed Server, you must resolve this error. To resolve the error, return to the beginning of the installation process and make sure that all steps were executed properly. For further troubleshooting details, see TROUBLESHOOTING.
4. Proceed to [Adding new Locator ID numbers on page 30](#).

Setup

Adding new Locator ID numbers

1. Open the iBed Server Tool by either double-clicking the iBed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the iBed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 33 on page 30).



Figure 33: iBed Locator Association Tool

3. To add Locator ID(s), perform the following in the **Locator ID** dialog window (Figure 34 on page 30)
 - a. Make sure that there is a URL in the **Server Web Service URL** box (Figure 34 on page 30).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the **http://** protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
4. Click the **Get existing Locator ID(s) from Server** button (Figure 34 on page 30). Any Locator ID(s) on the server populate in the **Locator ID List**.

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) that are currently listed on the server (if any).

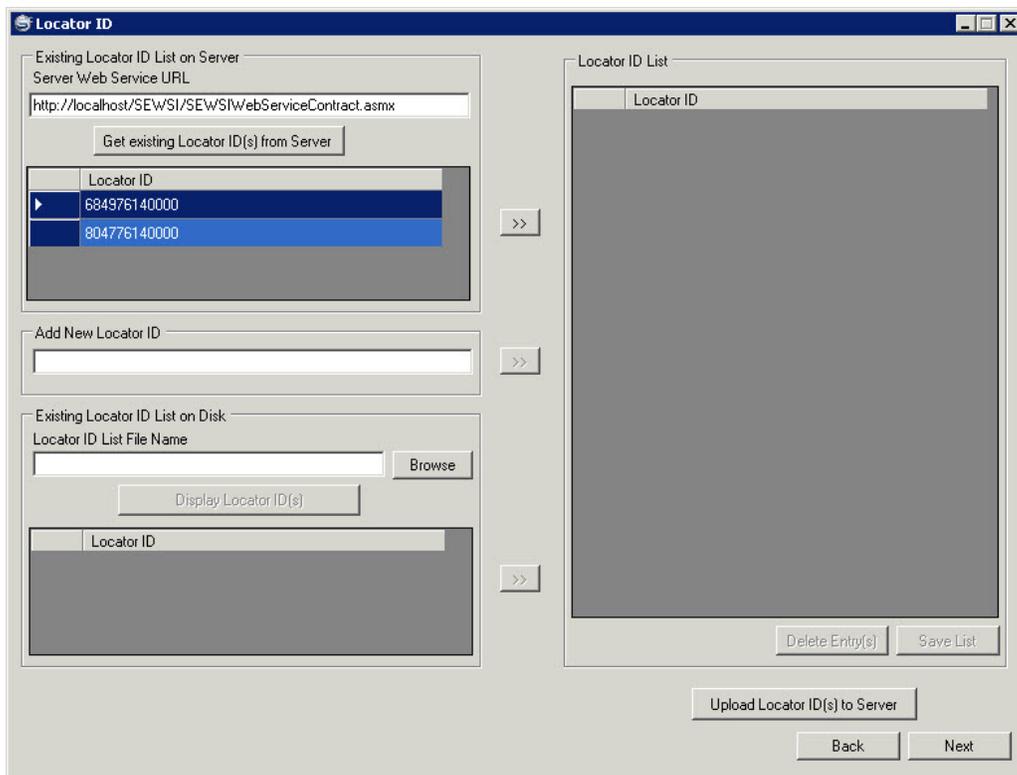


Figure 34: Get existing Locator ID(s) from server

Adding new Locator ID numbers (Continued)

5. In the upper left corner of the **Existing Locator ID List on Server** box, click **Select** to select all the existing **Locator ID(s)** populated in step 4.
6. Click **Add (>>)** to add all the Locator ID(s) that were retrieved from the server to add Locator ID(s) to the **Locator ID List**.
7. In the **Add New Locator ID** box, add any new Locator ID(s) that are located on the back of the iBed Locator ([Figure 36 on page 32](#)).
Note: The Locator ID is alphanumeric and case sensitive. You must use lower case to enter the Locator ID letters, or the server will not recognize the locator.
8. Click **Add** ([Figure 35 on page 31](#)) to add the new Locator ID just entered onto the **Locator ID List**.

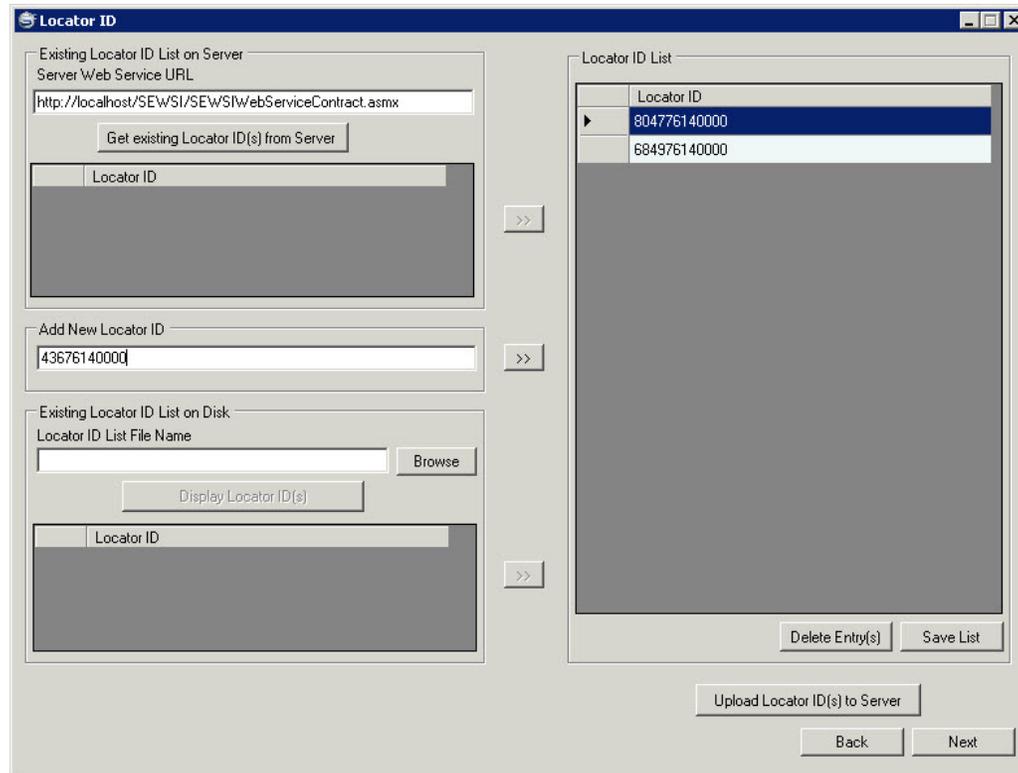


Figure 35: Add Locator ID(s)

9. In the upper left corner of the **Locator ID List**, click **Select** to select all Locator ID(s) in the list ([Figure 36 on page 32](#)).
10. Click **Upload Locator ID(s) to Server** ([Figure 36 on page 32](#)) to upload all the selected Locator ID(s) to the server.

Setup

Adding new Locator ID numbers (Continued)

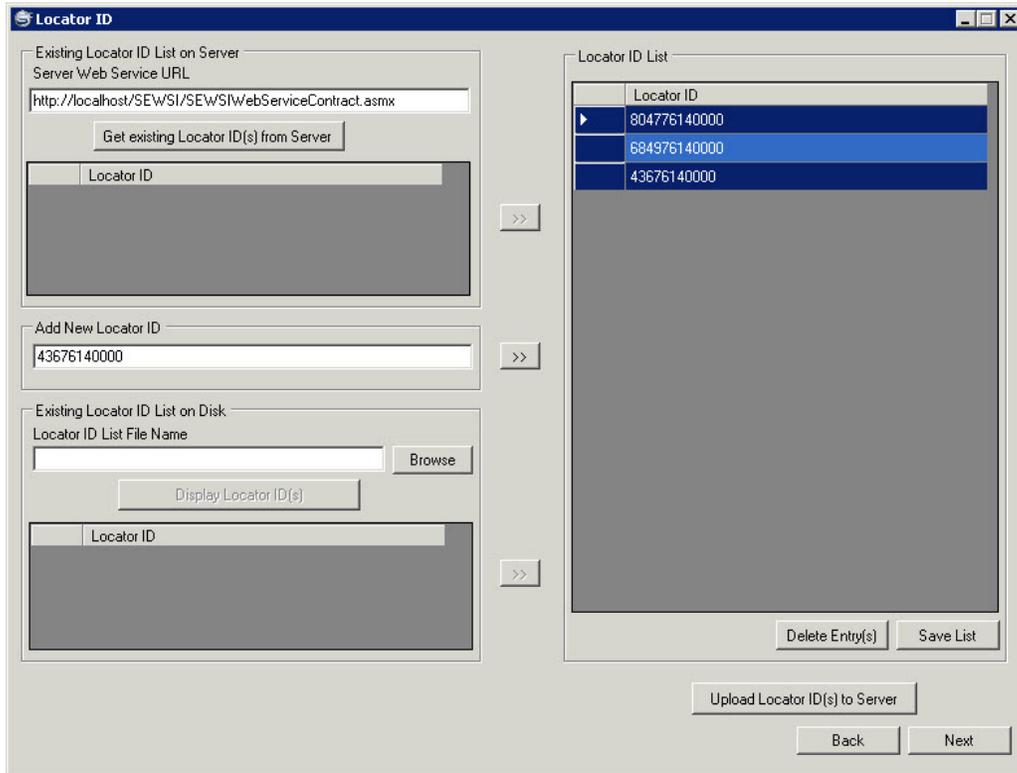


Figure 36: Upload Locator ID(s) to server

11. Click **Next** to proceed to the **Hospital Location** dialog box.

Importing Locator ID numbers

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 37 on page 33).

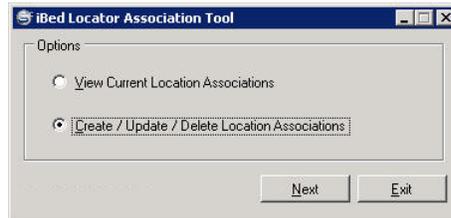


Figure 37: *i*Bed Locator Association Tool

3. In the **Existing Locator ID List on Server** box, click **Browse** (Figure 38 on page 34).
4. Browse to the .txt or .xml file.
5. Select the file.
6. Click the **Display Locator ID(s)** button.
7. In the upper left corner of the **Existing Locator ID List on Disk** box, click **Select** (Figure 38 on page 34). This selects all the existing **Locator ID(s)** that populated in step 4.
8. Click **Add (>>)** to add all the Locator ID(s) that were retrieved from the server. This adds Locator ID(s) to the **Locator ID List**.
9. In the upper left corner of the **Locator ID List** box, click **Select**. This selects all Locator ID(s) in the list.
10. Click **Upload Locator ID(s) to Server** (Figure 39 on page 35). This uploads all Locator ID(s) selected in the Locator ID List to the server.
11. Click **Next** to proceed to the **Hospital Location** dialog box.

Setup

Importing Locator ID numbers (Continued)

The screenshot shows a software window titled "Locator ID" with a blue title bar. The interface is divided into several sections:

- Existing Locator ID List on Server:** Contains a text field for "Server Web Service URL" with the value "http://localhost/SEWSI/SEWSI/WebServiceContract.asmx" and a button "Get existing Locator ID(s) from Server". Below it is an empty table with a header "Locator ID".
- Add New Locator ID:** A simple text input field.
- Existing Locator ID List on Disk:** Contains a text field for "Locator ID List File Name" with the value "C:\Users\Public\Documents\Data Files\BBIDList.xml" and a "Browse" button. Below it is a button "Display Locator ID(s)".
- Locator ID List:** A large table on the right side of the window. It has a header "Locator ID" and is currently empty.

Navigation and action buttons are located between and below the sections:

- Three right-pointing arrow buttons (">>") are positioned between the "Existing Locator ID List on Server", "Add New Locator ID", and "Existing Locator ID List on Disk" sections.
- At the bottom right, there are buttons for "Delete Entry(s)", "Save List", "Upload Locator ID(s) to Server", "Back", and "Next".

Locator ID
684976140000
804776140000

Figure 38: Importing Locator ID(s)

Setup

Importing Locator ID numbers (Continued)

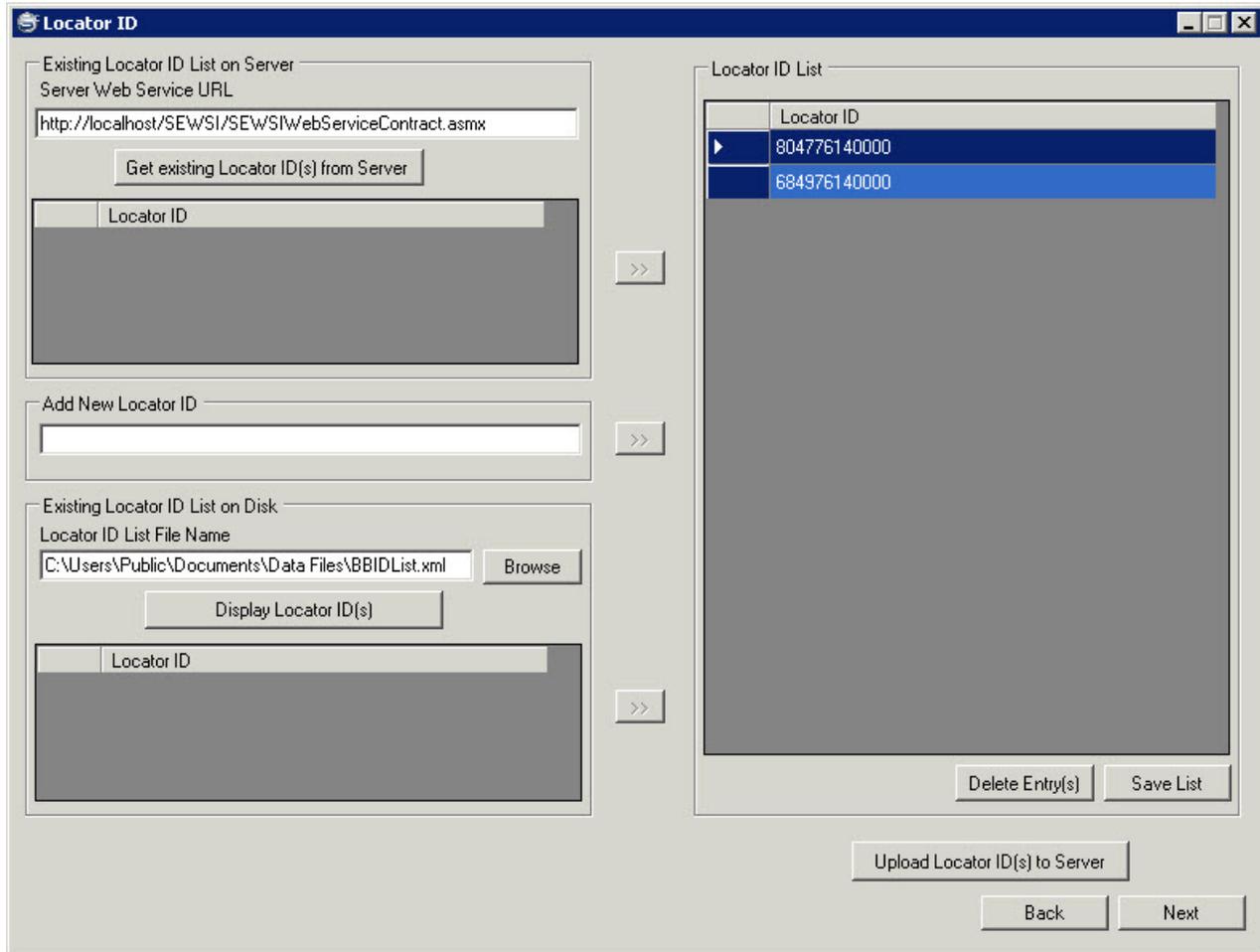


Figure 39: Uploading Locator ID(s)

Setup

Deleting Locator ID numbers

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** ([Figure 40 on page 36](#)).

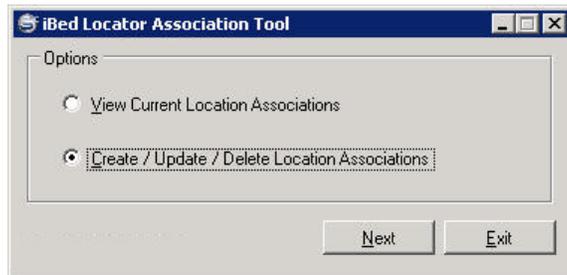


Figure 40: *i*Bed Locator Association Tool

3. To delete Locator ID(s), perform the following in the **Locator ID** dialog window ([Figure 42 on page 38](#))
 - a. Make sure that there is a URL in the **Server Web Service URL** box ([Figure 42 on page 38](#)).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the **http://** protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
4. Click the **Get existing Locator ID(s) from Server** button. Any Locator ID(s) on the server populate in the **Locator ID List**.

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) that are currently listed on the server (if any).
5. In the upper left corner of the **Locator ID** box, click **Select** ([Figure 41 on page 37](#)). This selects all the existing **Locator ID(s)** that populated in step 4.
6. Click **Add (>>)** to add all the Locator ID(s) that were retrieved from the server ([Figure 42 on page 38](#)). This adds Locator ID(s) to the **Locator ID List**.
7. Select the Locator ID(s) you want to delete.
8. Click **Delete Entry(s)**.
9. In the upper left corner of the **Locator ID List**, click **Select**. This selects all Locator ID(s) in the list.
10. Click **Upload Locator ID(s) to Server**. This uploads all Locator ID(s) selected in the Locator ID List to the server.
11. Click **Next** to proceed to the **Hospital Location** dialog box.

Setup

Deleting Locator ID numbers (Continued)

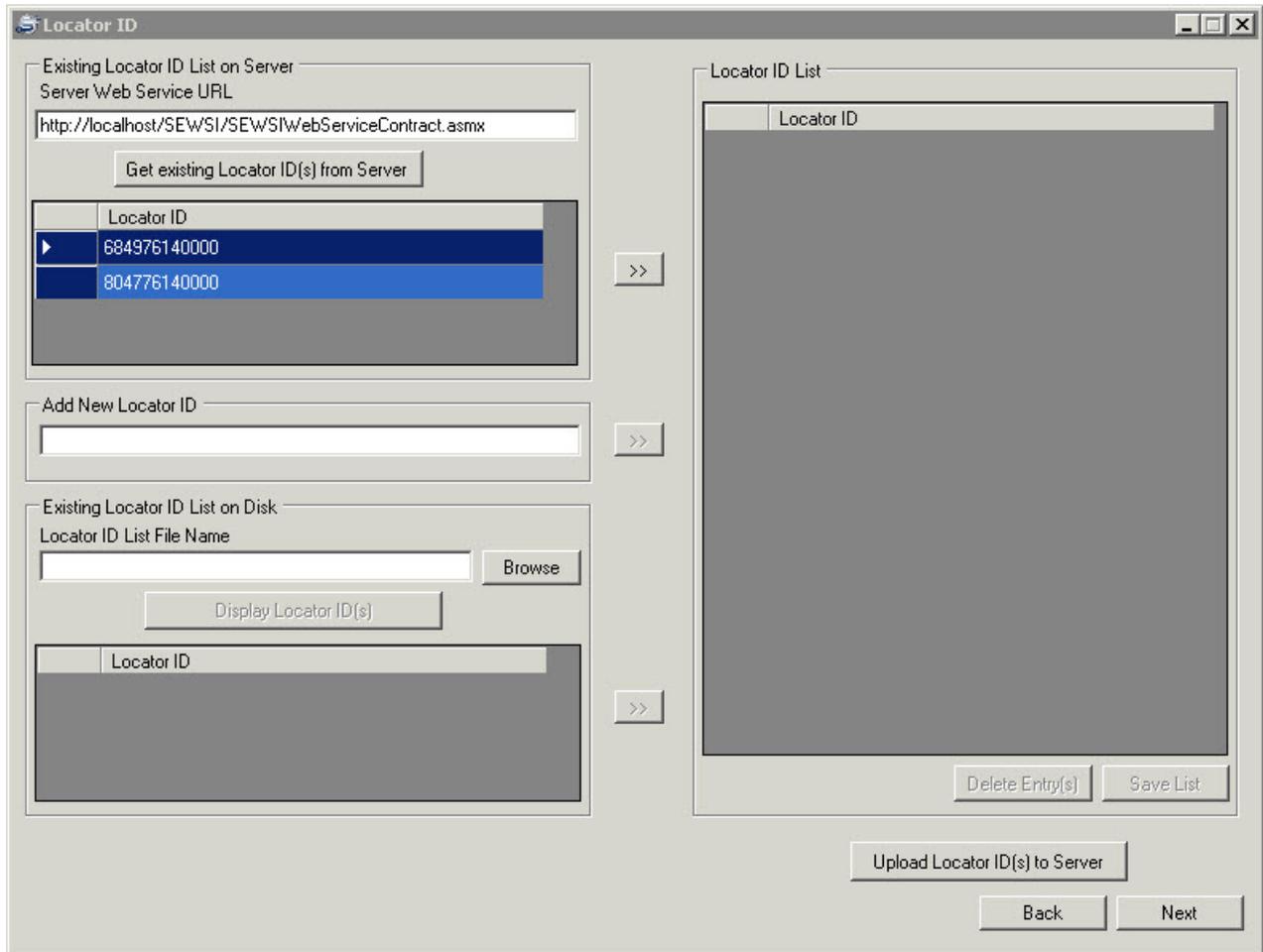


Figure 41: Selecting Locator ID(s)

Setup

Deleting Locator ID numbers (Continued)

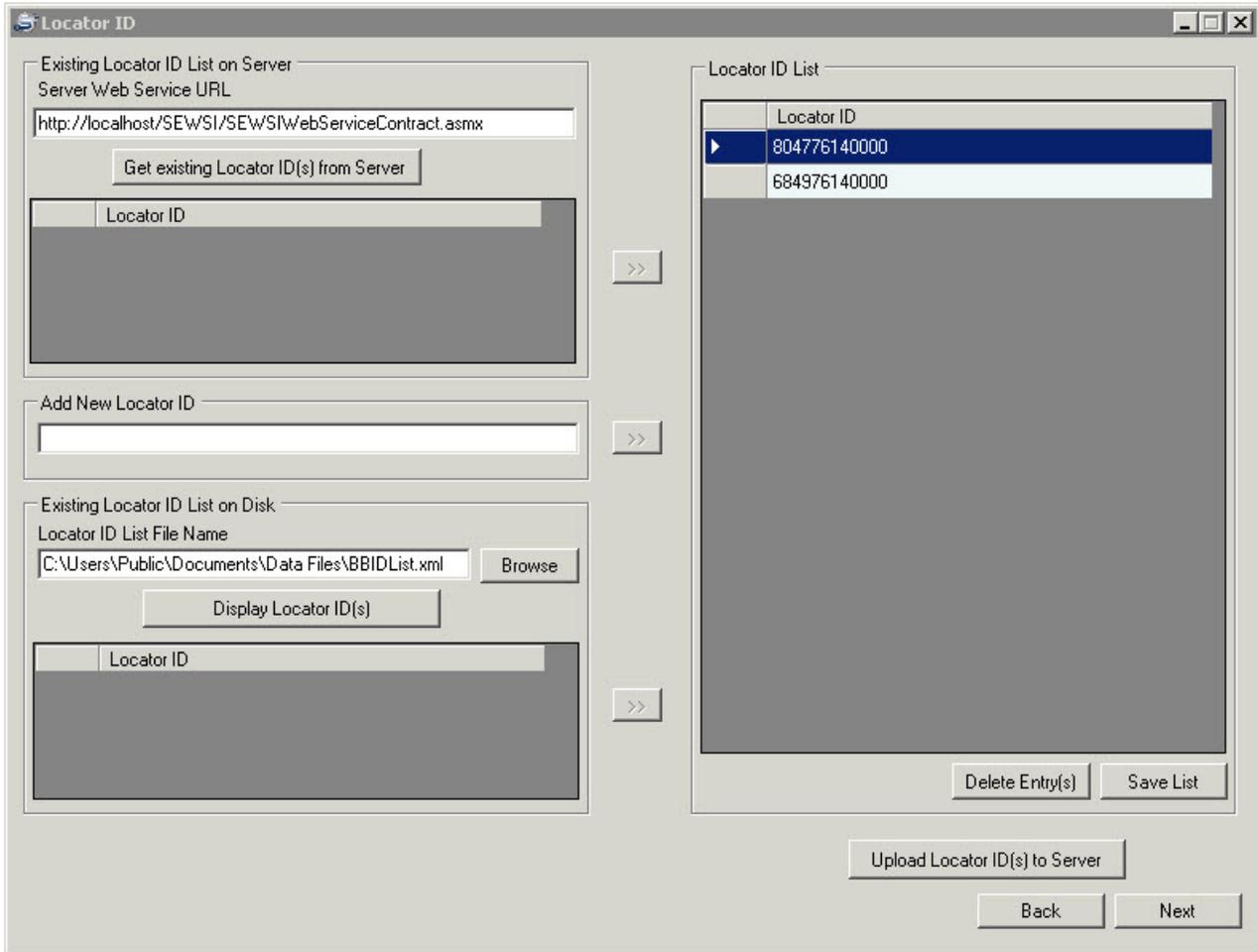


Figure 42: Deleting Locator ID(s)

Adding new hospital locations

To add hospital location(s), perform the following in the **Hospital Location** dialog window ():

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 43 on page 39).

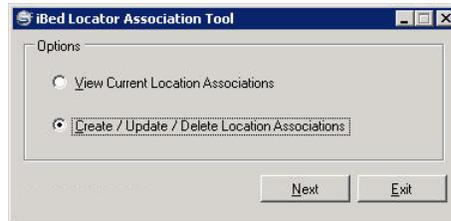


Figure 43: *i*Bed Locator Association Tool

3. Make sure that there is a URL in the **Server Web Service URL** box.
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
4. Click the **Get existing Hospital Location(s) from Server** button (Figure 44 on page 40). Any Hospital Location(s) on the server populate in the **Hospital Location** box.

Note: Do not skip this step. Skipping this step will overwrite the existing hospital locations that are currently listed on the server (if any).
5. In the upper left corner of the **Hospital Location** box, click **Select** to select all of the existing Hospital Location(s) that were populated in step 2.
6. Click **Add (>>)** to add all the existing Hospital Location(s) that were retrieved from the server onto the **Hospital Location List** (Figure 44 on page 40).
7. In the **Add New Hospital Location** box, add any new Hospital Location(s) provided by the hospital.
8. Click **Add** (Figure 45 on page 41) to add the new Hospital Location(s) you just entered onto the **Hospital Location List**.
9. In the upper left corner of the **Hospital Location List**, click **Select** to select all Hospital Location(s) in the list.
10. Click **Upload Hospital Location(s) to Server** (Figure 46 on page 42) to upload all the selected Hospital Location(s) to the server.
11. Click **Next** to proceed to the **Location Association** dialog box.

Setup

Adding new hospital locations (Continued)

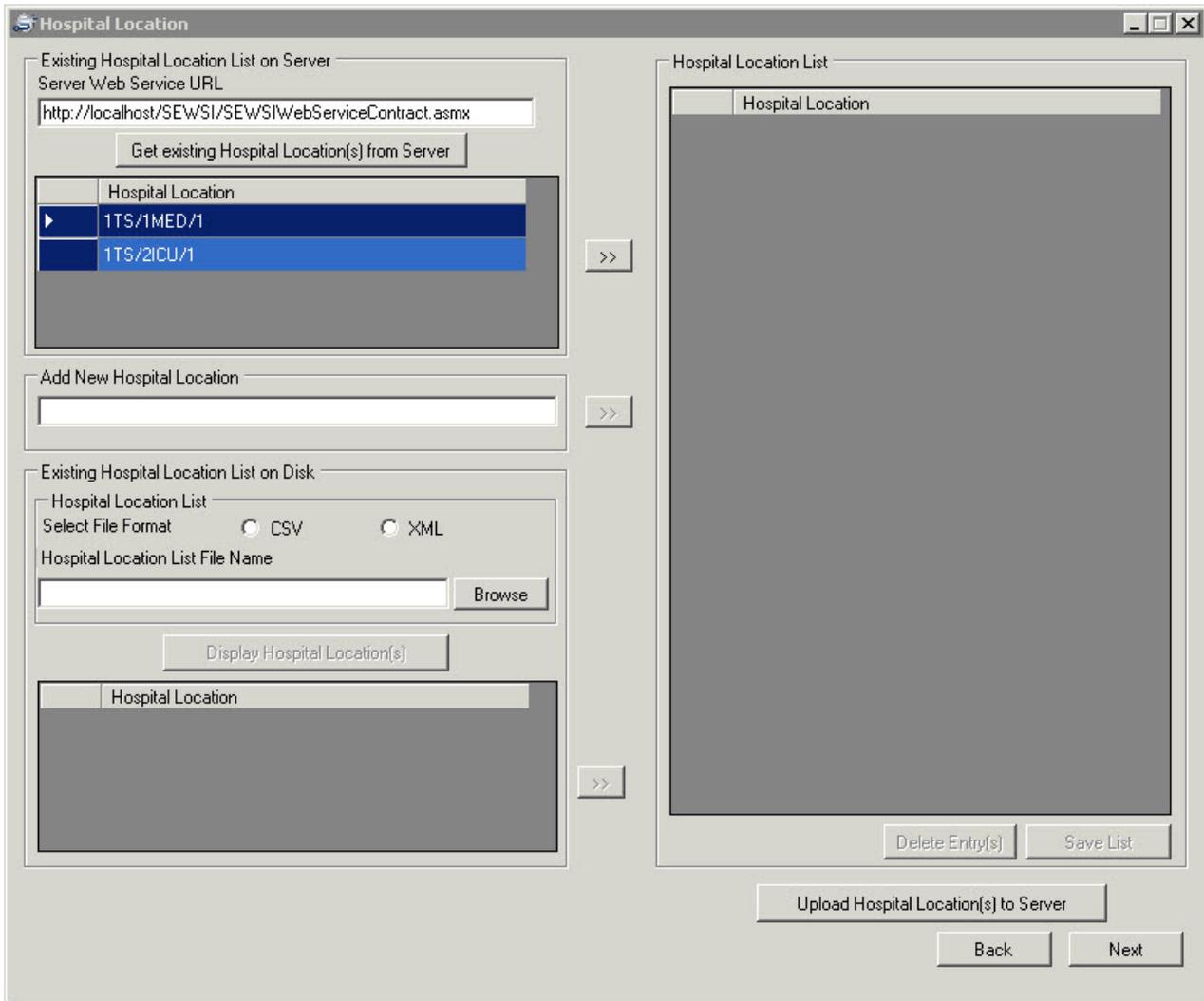


Figure 44: Get existing Hospital Location(s) from server

Setup

Adding new hospital locations (Continued)

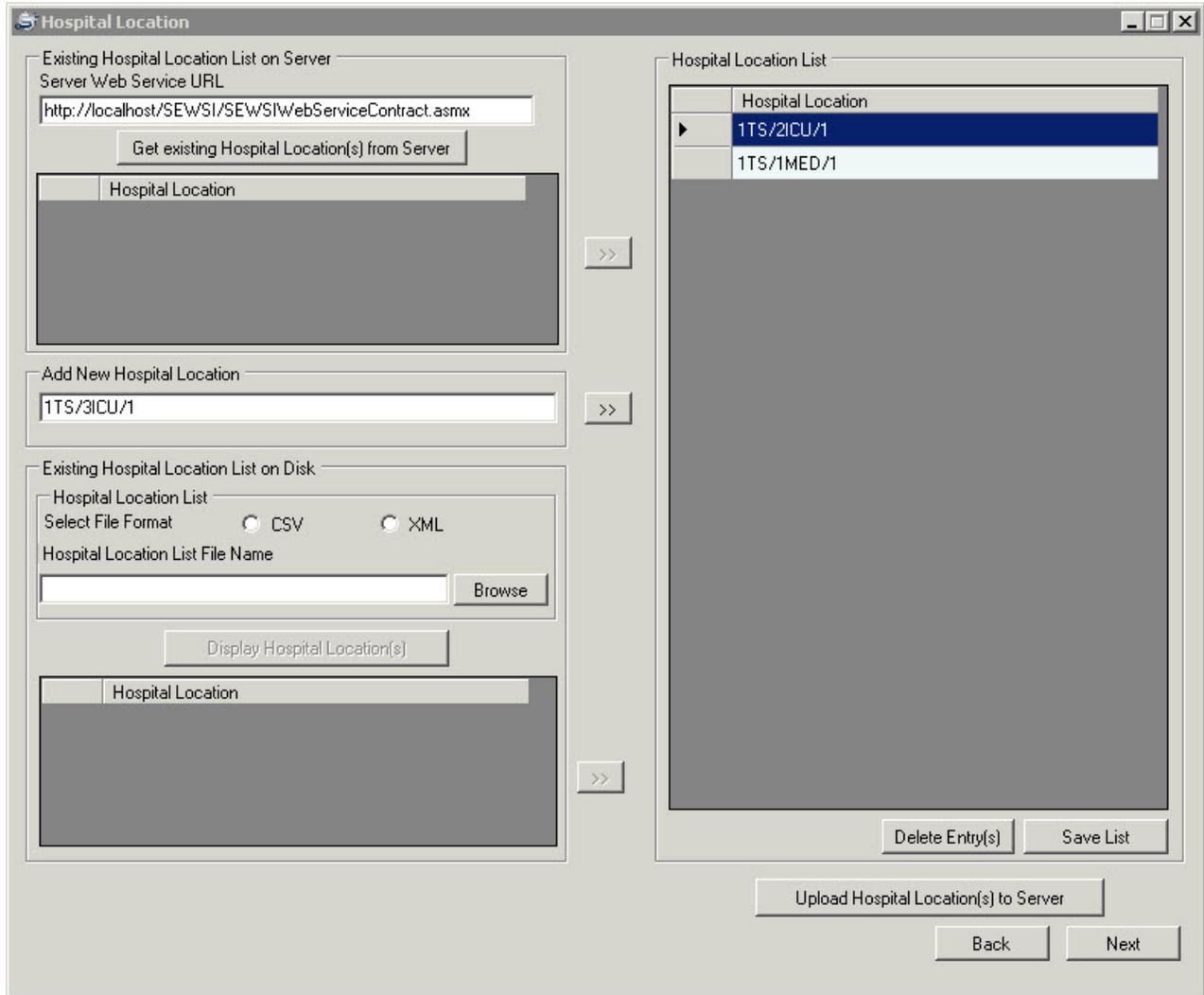


Figure 45: Add Hospital Location(s)

Setup

Adding new hospital locations (Continued)

The screenshot shows a software window titled "Hospital Location" with several sections for managing hospital location data:

- Existing Hospital Location List on Server:** Includes a text field for "Server Web Service URL" containing "http://localhost/SEW/SI/SEW/SI/WebServiceContract.asmx" and a button "Get existing Hospital Location(s) from Server". Below is a table with a header "Hospital Location" and an empty body.
- Add New Hospital Location:** A text field containing "1TS/3ICU/1" and a ">>" button.
- Existing Hospital Location List on Disk:** Includes a "Hospital Location List" section with radio buttons for "CSV" and "XML", a text field for "Hospital Location List File Name", and a "Browse" button. Below is a "Display Hospital Location(s)" button and another empty table with header "Hospital Location".
- Hospital Location List:** A large table on the right with a header "Hospital Location" and three rows: "1TS/2ICU/1", "1TS/1MED/1", and "1TS/3ICU/1". The second row is selected. Below the table are "Delete Entry(s)" and "Save List" buttons.

At the bottom of the window, there are three buttons: "Upload Hospital Location(s) to Server", "Back", and "Next".

Figure 46: Upload Hospital Location(s) to server

Importing hospital locations

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** ([Figure 47 on page 43](#)).

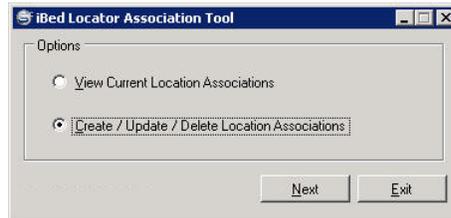


Figure 47: *i*Bed Locator Association Tool

3. In the **Existing Hospital Location List on Disk** box, click **Browse** ([Figure 48 on page 44](#)).
4. Click the **Display Hospital Locations** button ([Figure 48 on page 44](#)).
5. In the upper left corner of the **Hospital Location** list, click **Select**. This selects all **Hospital Locations** in the list.
6. Click **Add (>>)** to add the imported Hospital Locations to the **Hospital Location List** ([Figure 48 on page 44](#)).
7. In the upper left corner of the **Hospital Location List**, click **Select**. This selects all Hospital Location(s) in the list.
8. Click **Upload Hospital Location(s) to Server** ([Figure 49 on page 45](#)). This uploads all Hospital Location(s) selected in the Hospital Location List to the server.
9. Click **Next** to proceed to the **Location Association** dialog box.

Setup

Importing hospital locations (Continued)

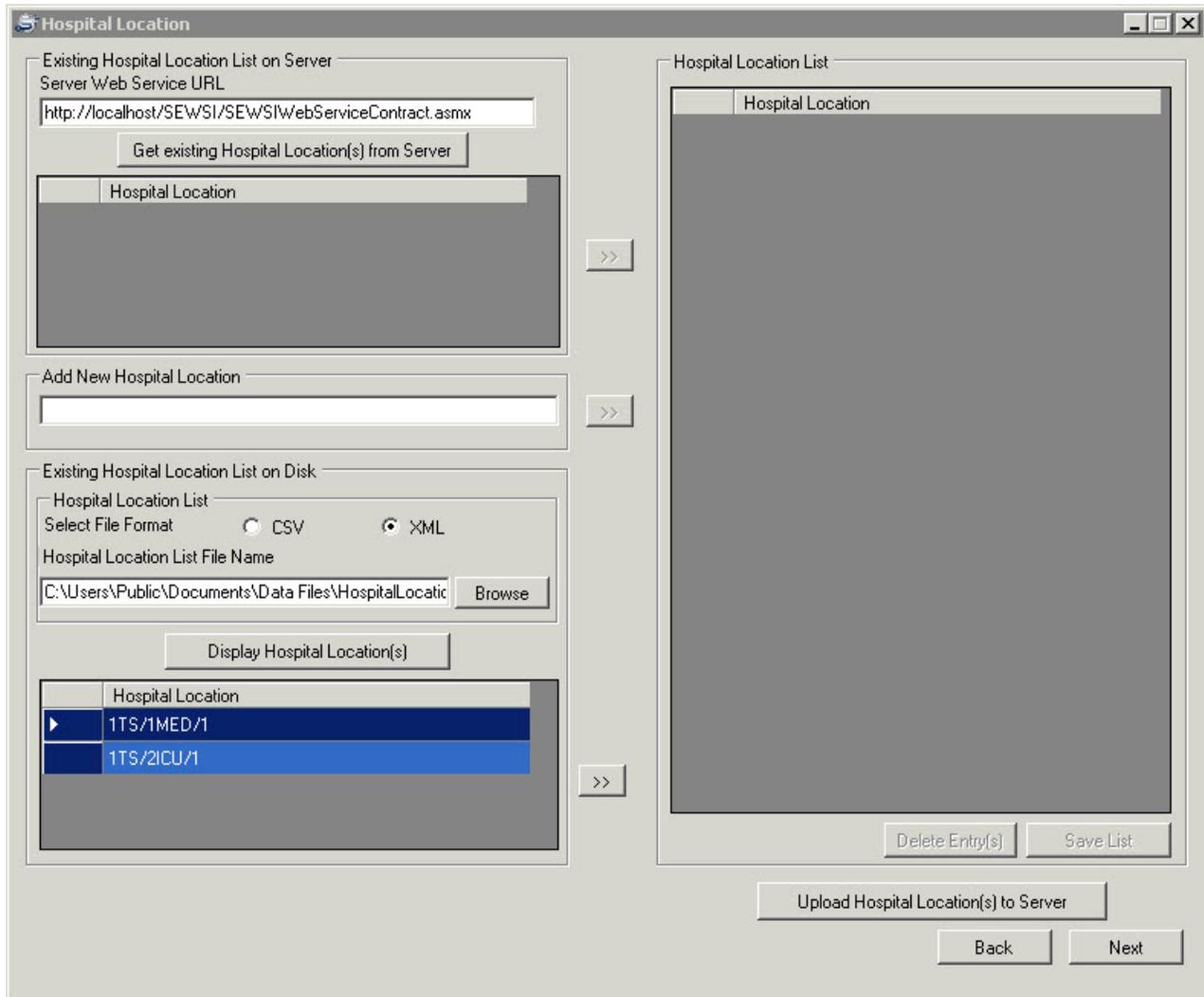


Figure 48: Importing Hospital Location(s)

Setup

Importing hospital locations (Continued)

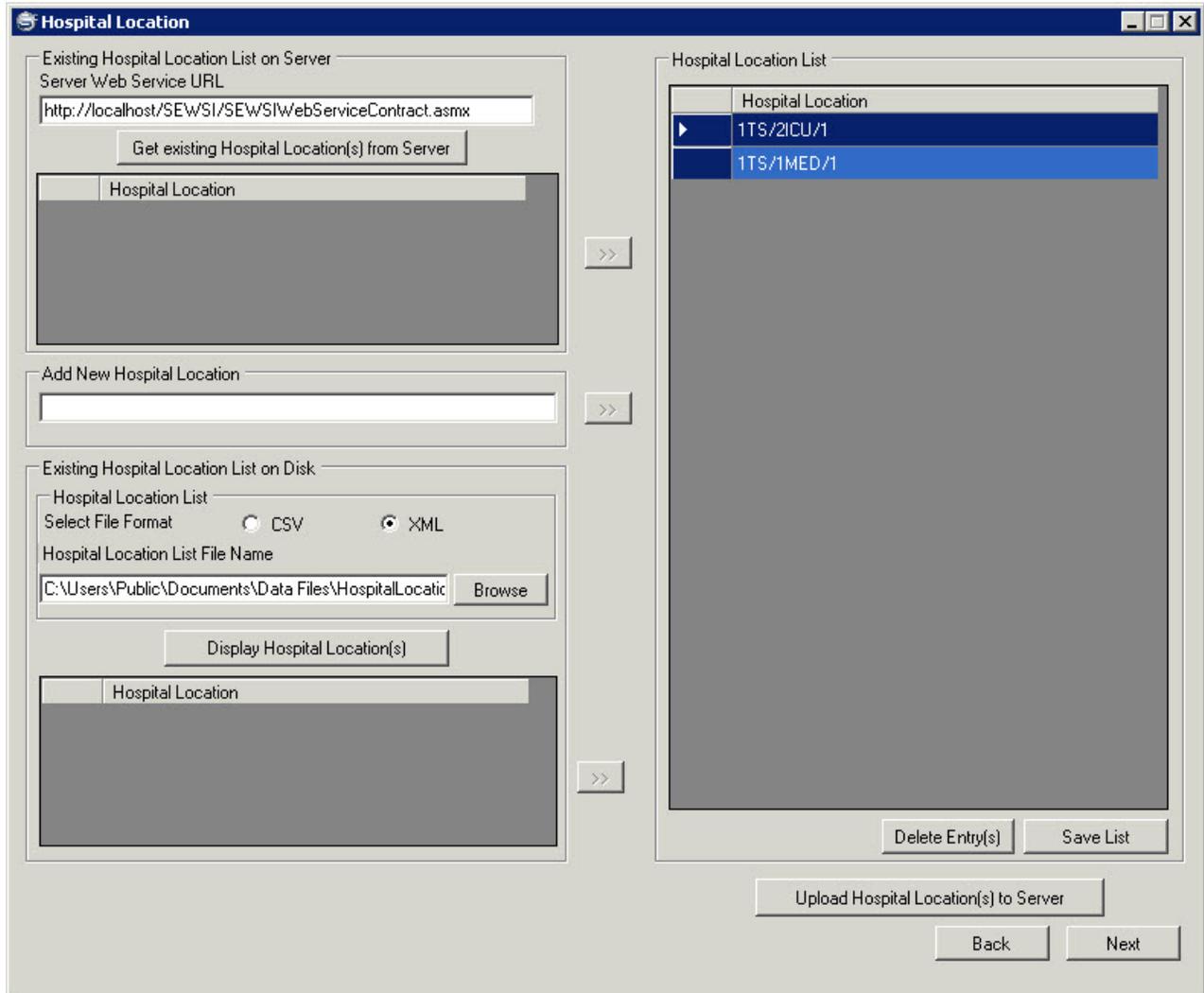


Figure 49: Uploading Hospital Location(s)

Setup

Deleting hospital locations

To add hospital location(s), perform the following in the **Hospital Location** dialog box:

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 50 on page 46).



Figure 50: *i*Bed Locator Association Tool

3. Make sure that the **Server Web Service URL** lists a server IP address.
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
4. Click **Get existing Hospital Location(s) from Server**. Any Hospital Location(s) on the server will be populated in the **Hospital Location** box.

Note: Do not skip this step. Skipping this step will overwrite the existing hospital locations that are currently listed on the server (if any).
5. In the upper left corner of the **Hospital Location** box, click **Select**. This selects all of the existing Hospital Location (s) that were populated in step 4.
6. Click **Add (>>)** to add all the existing Hospital Location(s) that were retrieved from the server. They will be added to the **Hospital Location List**.
7. In the **Hospital Location List**, select the hospital location(s) you want to delete (Figure 52 on page 48).
8. Click **Delete Entry(s)**.
9. In the upper left corner of the **Hospital Location List**, click **Select**. This selects all Hospital Location(s) in the list.
10. Click **Upload Hospital Location(s) to Server**. This uploads all Hospital Location(s) selected in the Hospital Location List to the server.
11. Click **Next** to proceed to the **Location Association** dialog box.

Setup

Deleting hospital locations (Continued)

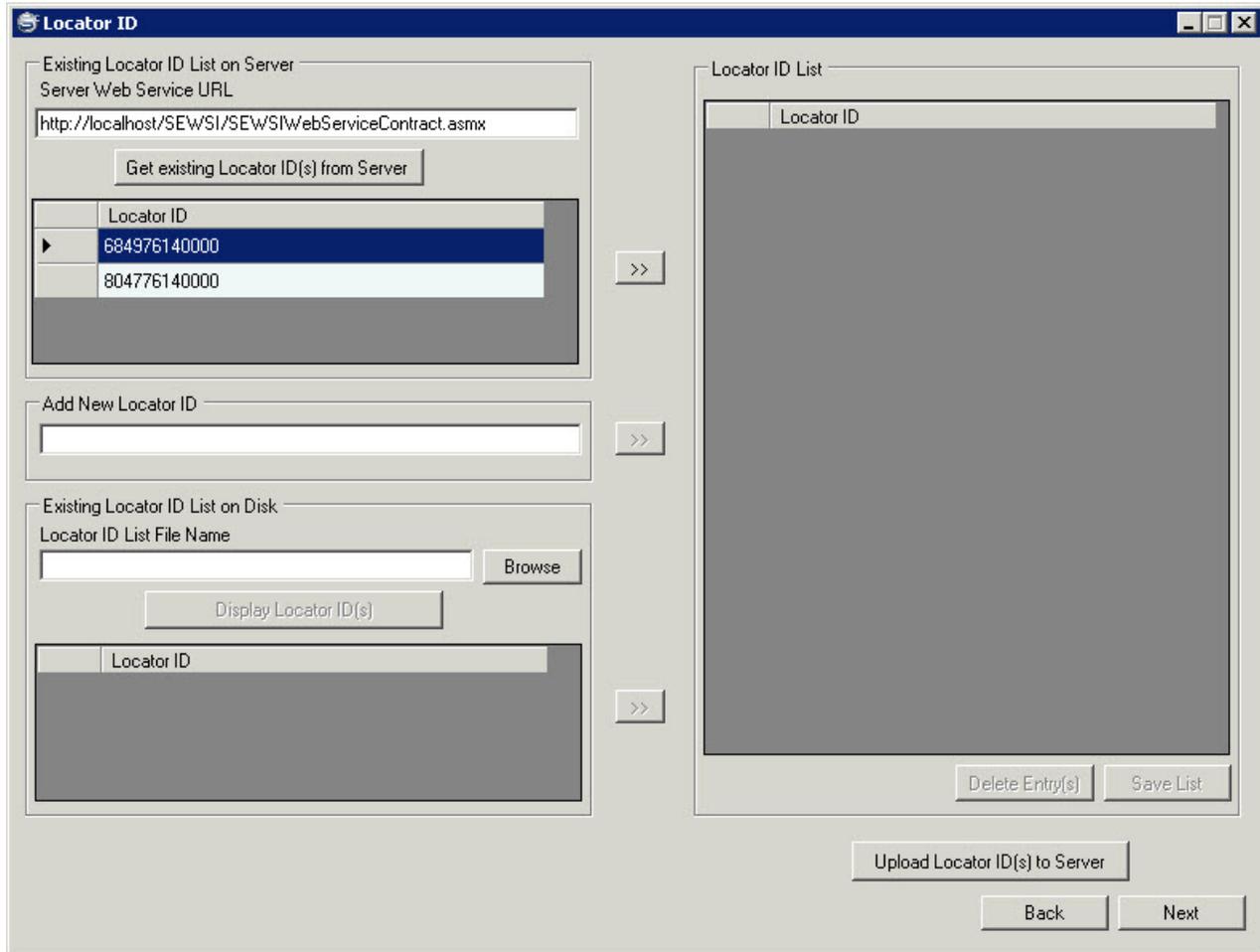


Figure 51: Selecting Hospital Location(s)

Setup

Deleting hospital locations (Continued)

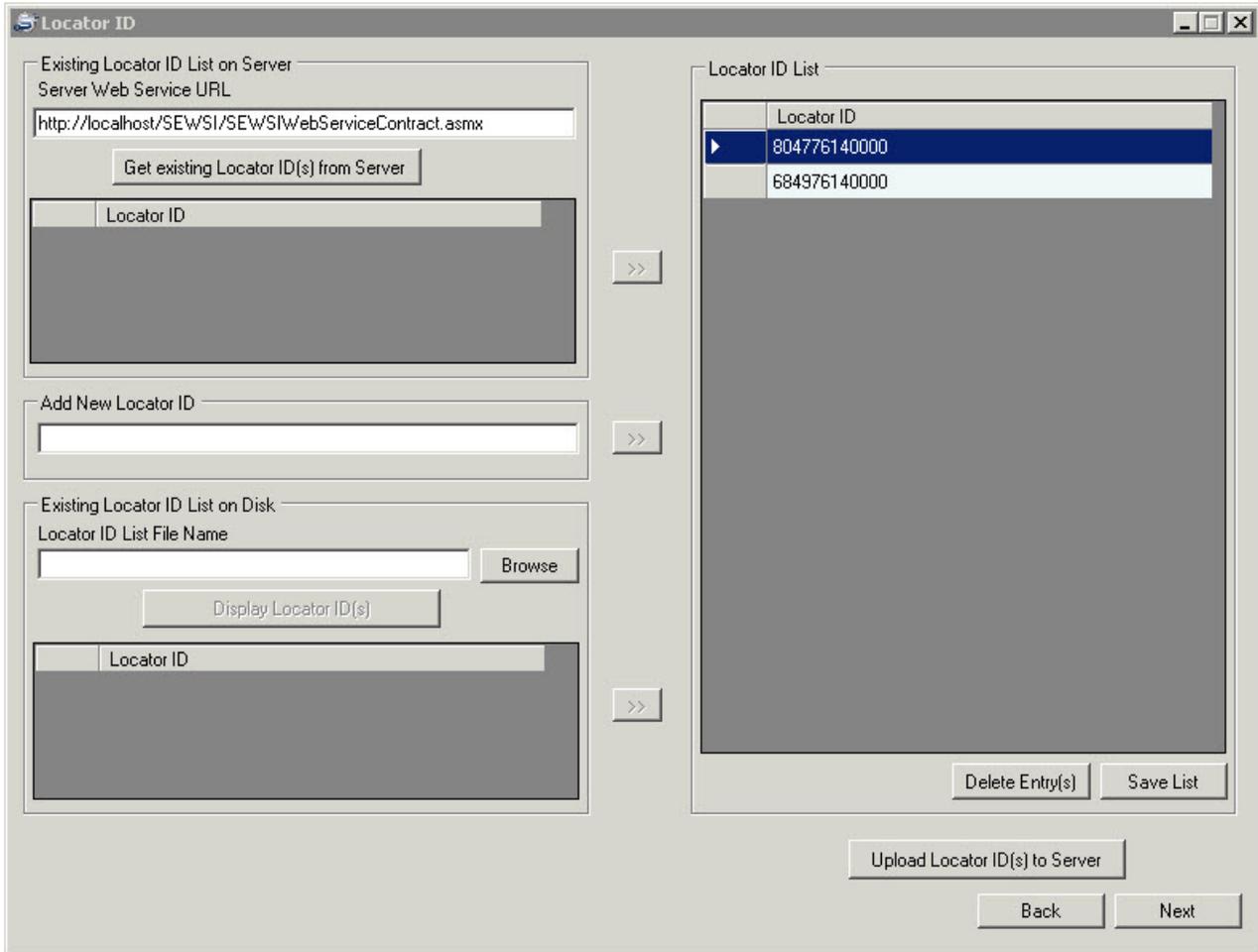


Figure 52: Deleting Hospital Location(s)

Setup

Associating Locator ID(s) and hospital locations

To associate the Locator IDs and Hospital Locations, perform the following in the **Location Association** dialog box ():

1. Open the *iBed* Server Tool by either double-clicking the *iBed* Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *iBed* Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 53 on page 49).

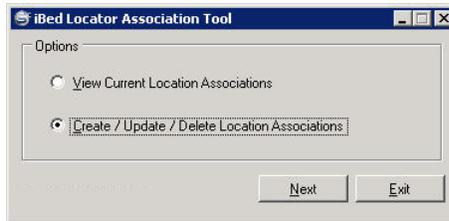


Figure 53: *iBed* Locator Association Tool

3. Make sure that the **Server Web Service URL** lists a server IP address (A,).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
4. Click **Get Server Data** (Figure 54 on page 50). Any Locator ID(s) and Hospital Location(s) on the server populate in the **Location Association List** box.

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) and hospital location(s) that are currently listed on the server (if any).
5. In the upper left corner of the **Location Association List** box, click **Select**. This selects all of the Locator ID(s) and Hospital Location(s) that were populated in step 2.
6. Click **Add (>>)** to add all the Locator ID(s) and Hospital Location(s) that were retrieved from the server onto the **Location Association List**.
7. From the drop-down **Locator ID List**, select the Locator ID number to be associated to a location.
8. From the drop-down **Hospital Location List**, select the Hospital Location to be associated with the Locator ID number selected in the previous step.
9. Click **Add** (Figure 55 on page 51) to add the association to the Location Association List.

Note: If there are multiple associations, repeat steps 7- 9.
10. In the upper left corner of the **Location Association List**, click **Select** to select all Locator ID(s) and Hospital Location(s) in the list.
11. Click **Upload Location Association(s) to Server** to upload all the selected Locator ID(s) and Hospital Location(s) to the server.
12. Click the **Close** button to close the Location Association dialog box.
13. Proceed to **iBed Configure Master Device List**.

Setup

Associating Locator ID(s) and hospital locations (Continued)

Existing Data on Server

Server Web Service URL

Location Association List

	Locator ID	Hospital Location
▶	684976140000	1TS/2ICU/1
	804776140000	1TS/1MED/1

Locator ID List

Hospital Location List

Existing Location Association List on Disk

Location Association File Name

	Locator ID	Hospital Location
--	------------	-------------------

Location Association List

Locator ID	Hospital Location
------------	-------------------

Figure 54: Get existing Location Association(s)

Setup

Associating Locator ID(s) and hospital locations (Continued)

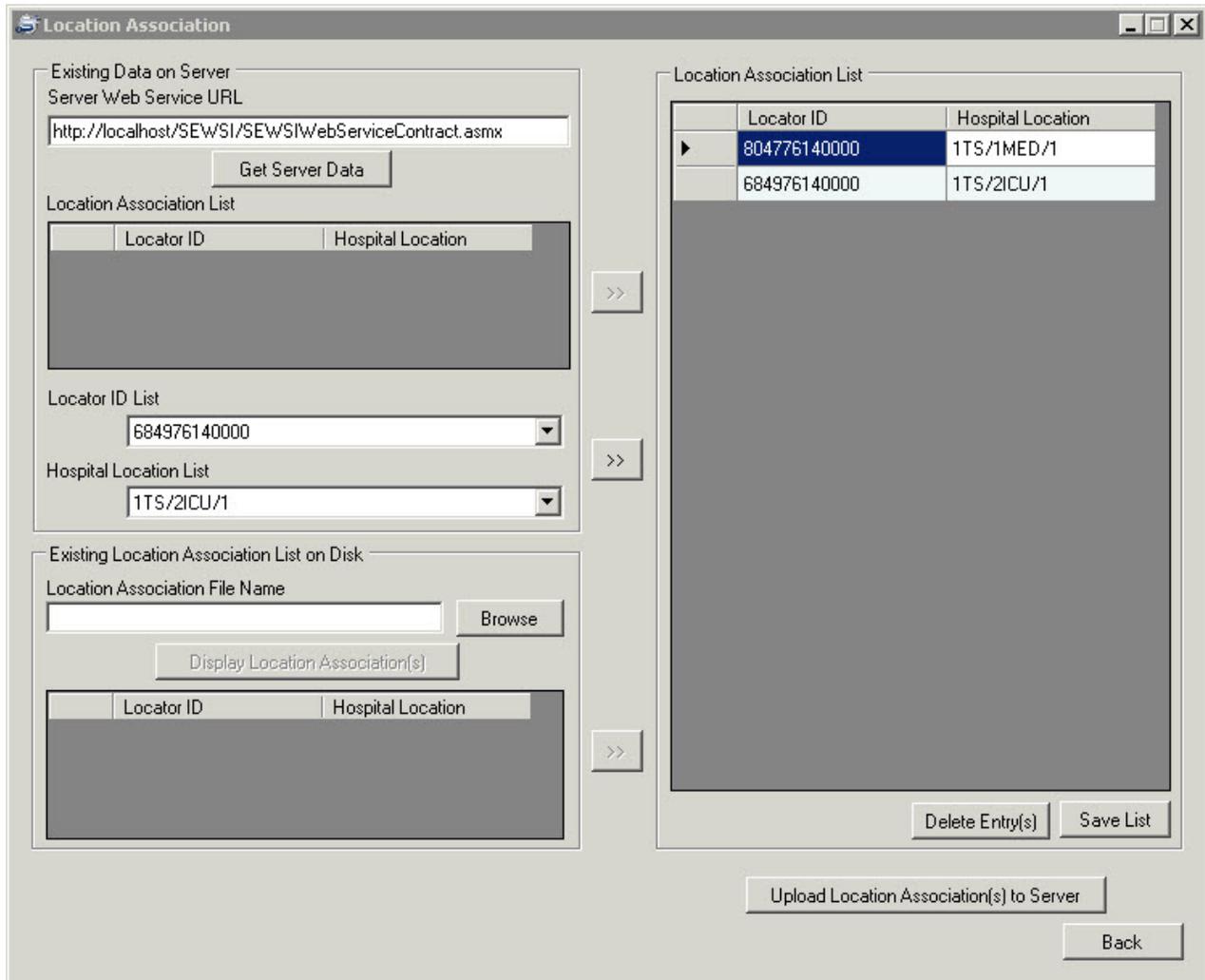


Figure 55: Adding Locator ID(s) and hospital location(s)

Upload Location Association(s) to server

Setup

Importing Locator ID(s) and hospital locations

To associate the Locator IDs and Hospital Locations, perform the following in the **Location Association** dialog box ():

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. In the *i*Bed Locator Association Tool dialog box, click the **Create/Update/Delete Location Associations** radio button, and then click **Next** (Figure 56 on page 52).



Figure 56: *i*Bed Locator Association Tool

3. In the **Existing Hospital Location List on Disk** box, click **Browse** (Figure 58 on page 54).
4. Click the **Display Hospital Locations** button (Figure 58 on page 54).
5. In the upper left corner of the **Hospital Location** list, click **Select**. This selects all **Hospital Locations** in the list.
6. Click **Add (>>)** to add the imported Hospital Locations to the **Hospital Location List** (Figure 58 on page 54).
7. In the upper left corner of the **Hospital Location List**, click **Select**. This selects all Hospital Location(s) in the list.
8. Click **Upload Hospital Location(s) to Server** (Figure 58 on page 54). This uploads all Hospital Location(s) selected in the Hospital Location List to the server.
9. Click **Next** to proceed to the **Location Association** dialog box.
10. Click **Get Server Data** (). Any Locator ID(s) and Hospital Location(s) on the server populate in the **Location Association List** box.
Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) and hospital location(s) that are currently listed on the server (if any).
11. In the upper left corner of the **Location Association List** box, click **Select** (Figure 57 on page 53). This selects all of the Locator ID(s) and Hospital Location(s) that were populated in step 2.
12. Click **Add (>>)** to add all the Locator ID(s) and Hospital Location(s) that were retrieved from the server onto the **Location Association List**.
13. From the drop-down **Locator ID List**, select the Locator ID number to be associated to a location.
14. From the drop-down **Hospital Location List**, select the Hospital Location to be associated with the Locator ID number selected in the previous step.
15. Click **Add (>>)** to add the association to the Location Association List.
Note: If there are multiple associations, repeat steps 5 - 7.
16. In the upper left corner of the **Location Association List**, click **Select**. This selects all Locator ID(s) and Hospital Location(s) in the list.
17. Click **Upload Location Association(s) to Server**. This uploads all Locator ID(s) and Hospital Location(s) selected in the Location Association List to the server.
18. Click the **Close** button to close the Location Association dialog box.
19. Proceed to **iBed Configure Master Device List**.

Setup

Importing Locator ID(s) and hospital locations (Continued)

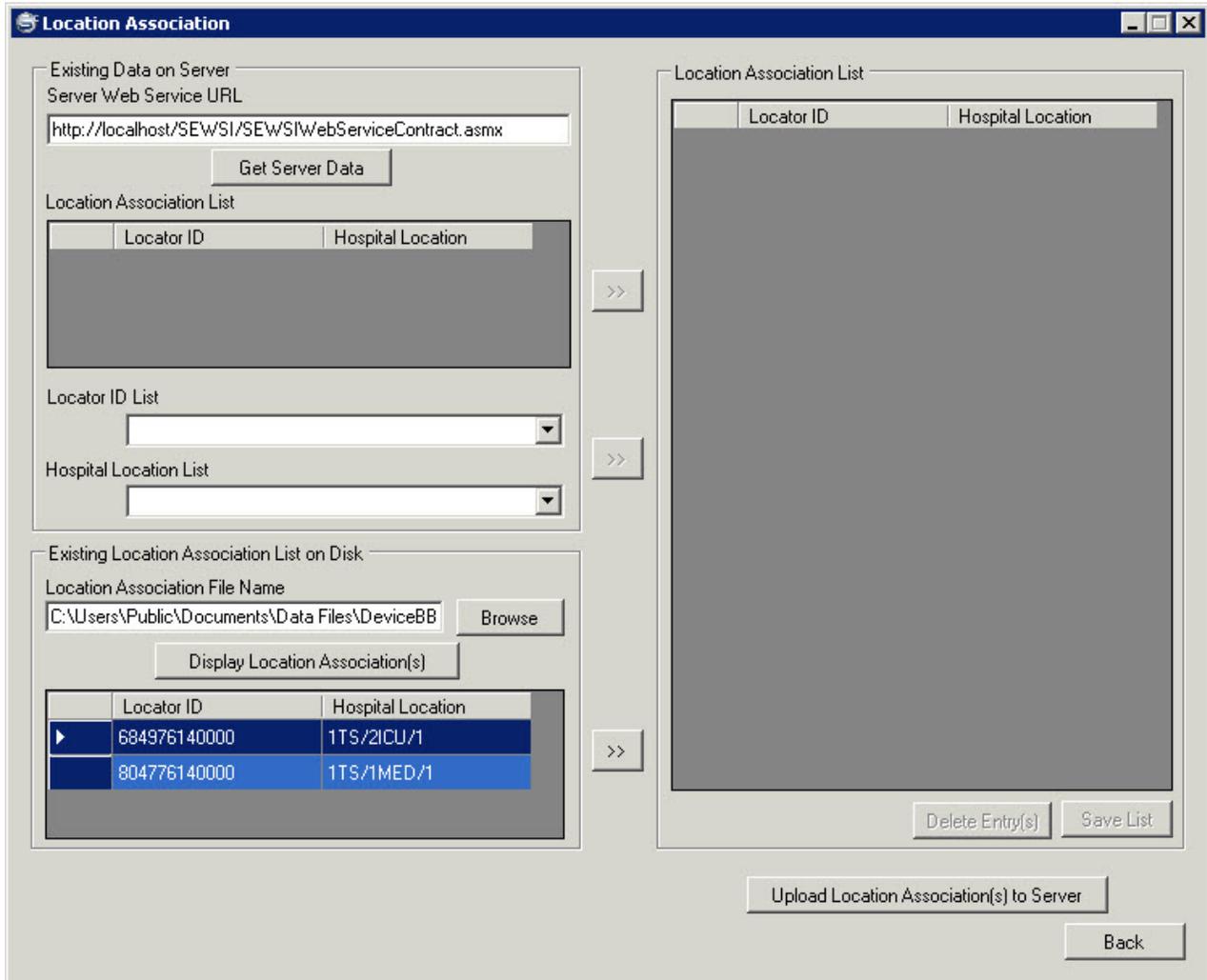


Figure 57: Getting Locator ID(s) and Hospital Location(s)

Setup

Importing Locator ID(s) and hospital locations (Continued)

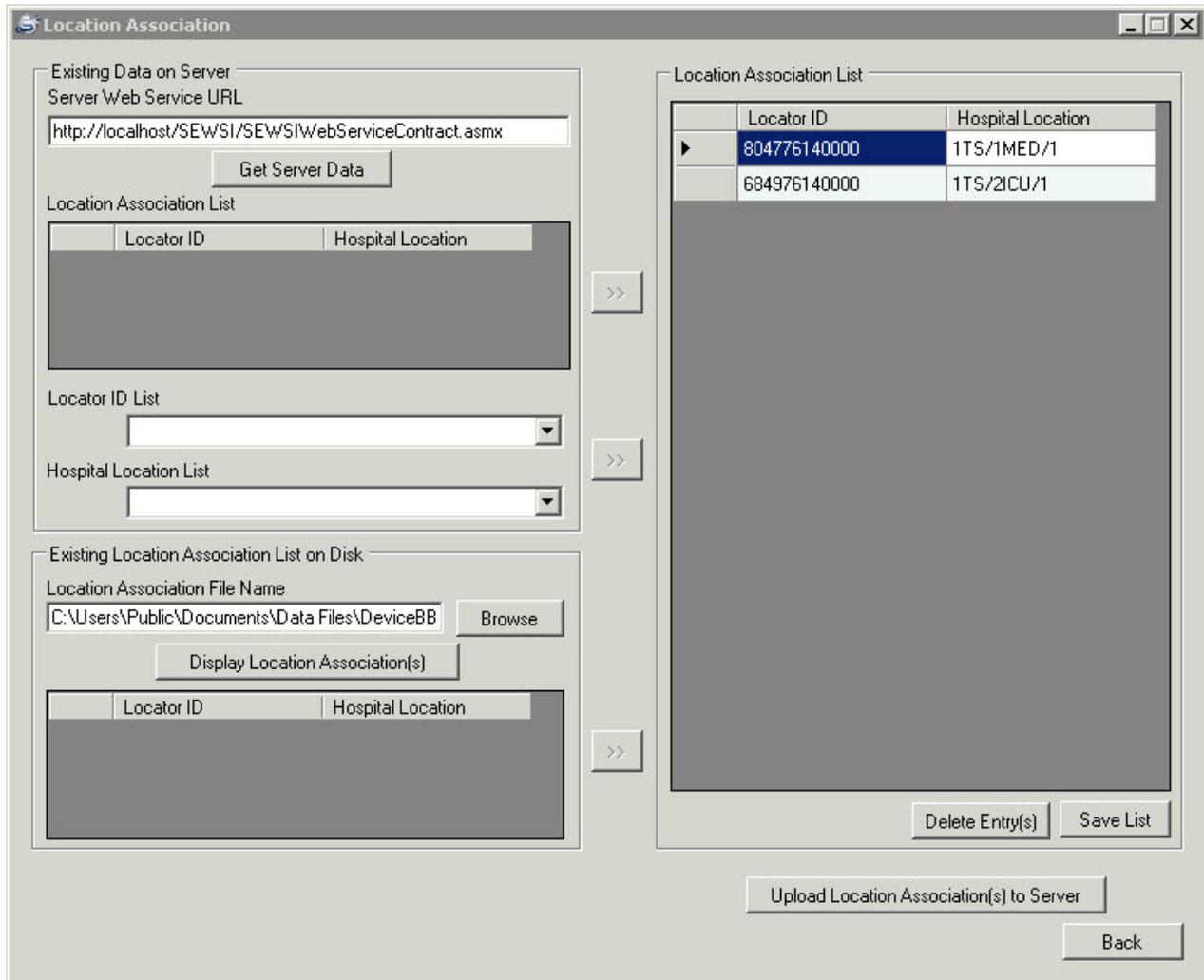


Figure 58: Importing Locator ID(s) and Hospital Location(s)

Deleting Locator ID(s) and hospital locations

To associate the Locator IDs and Hospital Locations, perform the following in the **Location Association** dialog box ():

1. Make sure that the **Server Web Service URL** lists a server IP address (A,).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
2. Click **Get Server Data** (B). Any Locator ID(s) and Hospital Location(s) on the server populate in the **Location Association List** box (C).

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) and hospital location(s) that are currently listed on the server (if any).
3. In the upper left corner of the **Location Association List** box, click **Select** (C). This selects all of the Locator ID(s) and Hospital Location(s) that were populated in step 2.
4. Click **Add (>>)** (D) to add all the Locator ID(s) and Hospital Location(s) that were retrieved from the server onto the **Location Association List**.
5. From the drop-down **Locator ID List** (E), select the Locator ID number to be associated to a location.
6. From the drop-down **Hospital Location List** (F), select the Hospital Location to be associated with the Locator ID number selected in the previous step.
7. Click **Add (>>)** (G) to add the association to the Location Association List.

Note: If there are multiple associations, repeat steps 5 - 7.
8. In the upper left corner of the **Location Association List**, click **Select** (H). This selects all Locator ID(s) and Hospital Location(s) in the list.
9. Click **Upload Location Association(s) to Server** (I). This uploads all Locator ID(s) and Hospital Location(s) selected in the Location Association List to the server.
10. Click the **Close** button (J) to close the Location Association dialog box.
11. Proceed to **iBed Configure Master Device List**.

Setup

Deleting Locator ID(s) and hospital locations (Continued)

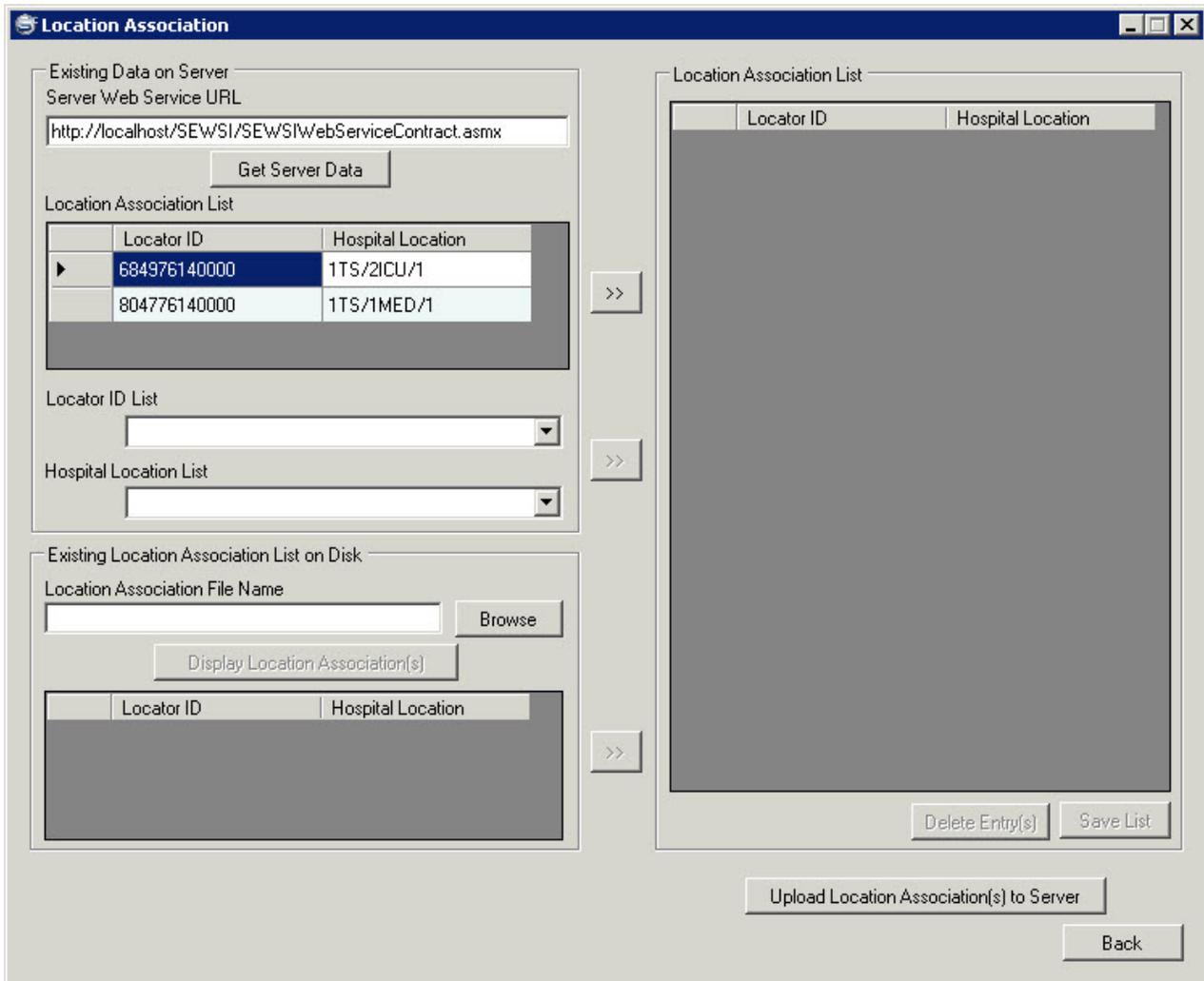


Figure 59: Deleting Locator ID(s) and hospital location(s)

Setup

Configuring the Master Device List

To load the device URLs onto the server using Stryker server tools, perform the following in the **Configure Master Device List** dialog box ():

1. Make sure that the **Server Web Service URL** lists a server IP address (A,).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
2. Click **Get existing Master Device URL(s) from Server** (J). Any Master Device URL(s) on the server populate in the **Master Device URL** box (C).
Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) that are currently listed on the server (if any).
3. In the upper left corner of the **Master Device URL** box, click **Select** (C) to select all of the existing Master Device URL(s) that populated in step 2.
4. Click **Add** (D) to add all the existing Master Device URL(s) that were retrieved from the server. This adds the URL(s) to the Master Device URL List.
5. In the **Add New Master Device URL** box (E), add the new Master Device URL(s) and type **:1639** to the end of the URL(s).
6. Click **Add** (F) to add the new Master Device URL(s) you just entered onto the **Master Device URL List**.
Note: If there are multiple Master Device URLs, repeat steps 5 and 6.
7. In the upper left corner of the **Master Device URL List**, click **Select** (G) to select all Master Device URL(s) in the list.
8. Click **Upload Master Device URL List to Server** (H) to upload all the selected Master Device URL(s) to the server.
9. Click **Exit** (I) to exit the Master Device URL List dialog box.

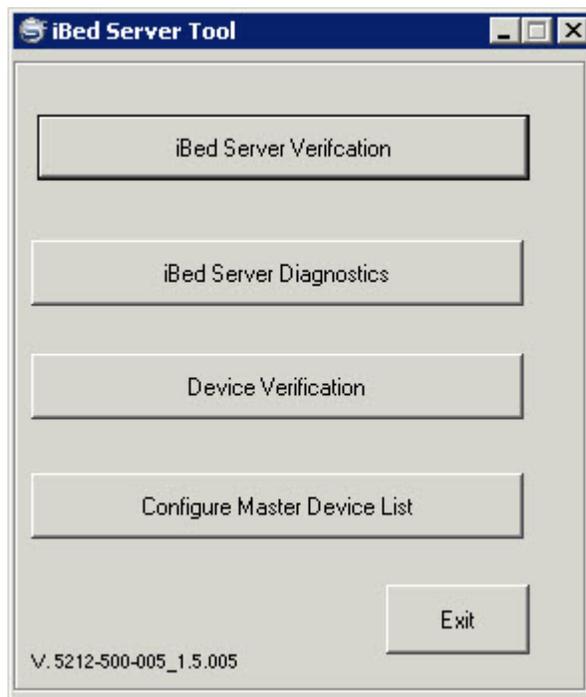


Figure 60: Adding New Master Device URL

Setup

Configuring the Master Device List (Continued)

Configure Master Device List

Server Settings
Server Web Service URL

Add New Master Device URL

Master Device URL File Name

Master Device URL List

Select	Master Device URL
<input checked="" type="checkbox"/>	http://10.32.56.101:1639
<input type="checkbox"/>	http://10.32.56.74:1639

Figure 61: Upload Master Device URL List to server

Setup

Configuring the Master Device List (Continued)

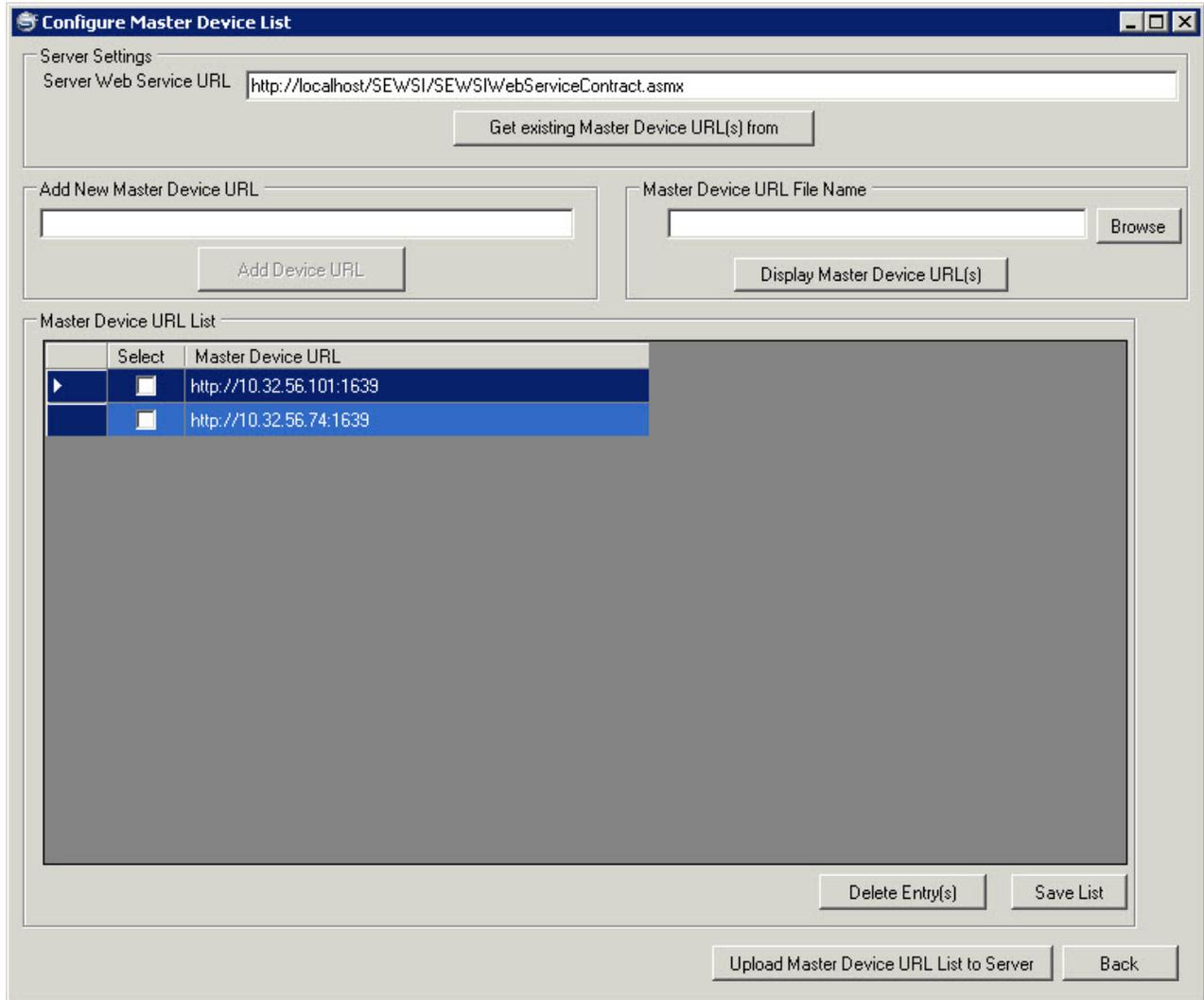


Figure 62: Delete Master Device URL List to server

Figure 63: Delete Master Device URL List

Setup

Importing the Master Device List

To load the device URLs onto the server using Stryker server tools, perform the following in the **Configure Master Device List** dialog box ():

1. Make sure that the **Server Web Service URL** lists a server IP address (A,).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
2. Click **Get existing Master Device URL(s) from Server** (). Any Master Device URL(s) on the server populate in the **Master Device URL** box (C).

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) that are currently listed on the server (if any).
3. In the upper left corner of the **Master Device URL** box, click **Select** (C) to select all of the existing Master Device URL(s) that populated in step 2.
4. Click **Add** (D) to add all the existing Master Device URL(s) that were retrieved from the server. This adds the URL(s) to the Master Device URL List.
5. In the **Add New Master Device URL** box (E), add the new Master Device URL(s) and type **:1639** to the end of the URL(s).
6. Click **Add** (F) to add the new Master Device URL(s) you just entered onto the **Master Device URL List**.

Note: If there are multiple Master Device URLs, repeat steps 5 and 6.
7. In the upper left corner of the **Master Device URL List**, click **Select** (G) to select all Master Device URL(s) in the list.
8. Click **Upload Master Device URL List to Server** (H) to upload all the selected Master Device URL(s) to the server.
9. Click **Exit** (I) to exit the Master Device URL List dialog box.

Setup

Importing the Master Device List (Continued)

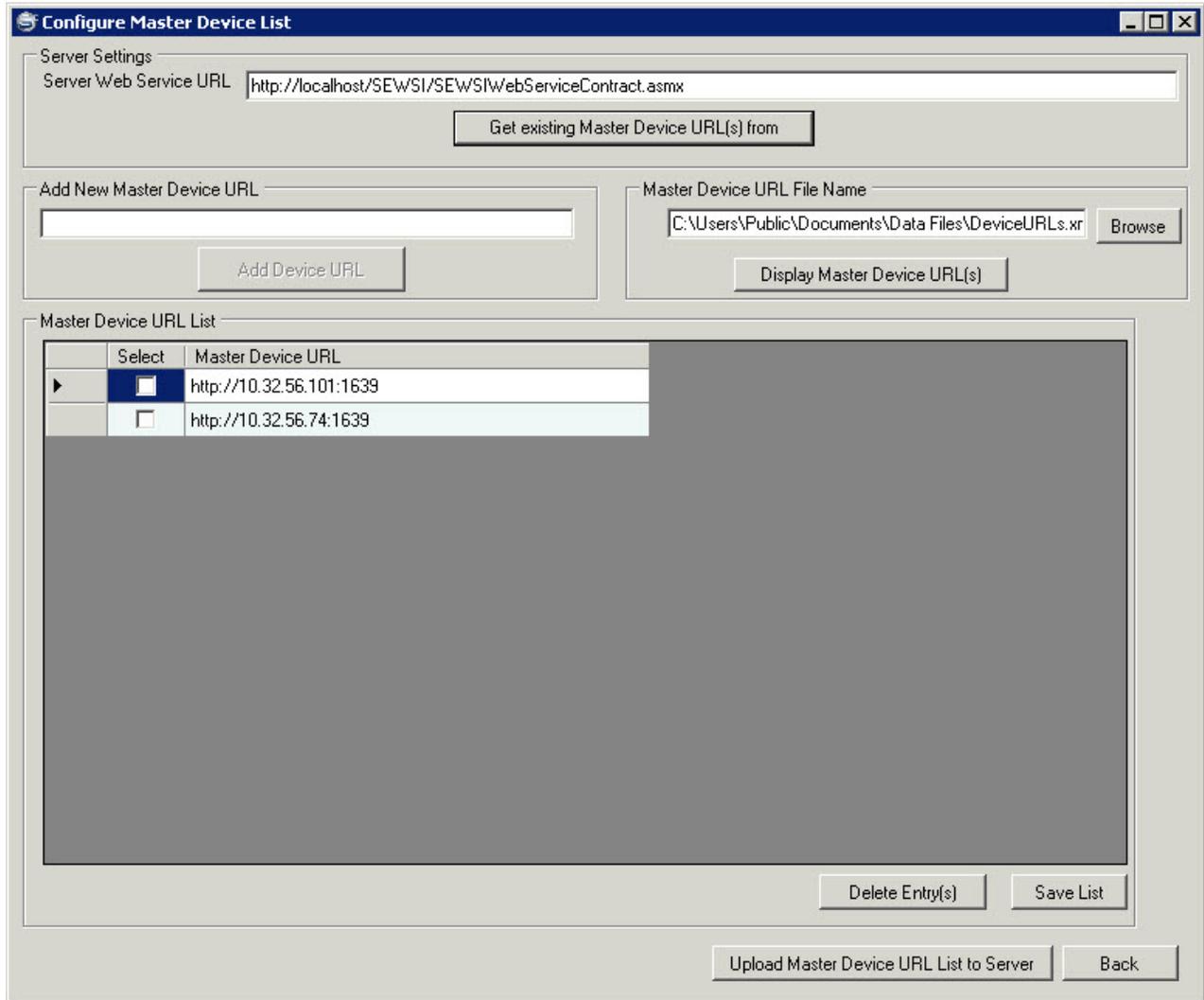


Figure 64: Importing the Master Device List

Setup

Deleting the Master Device List

To load the device URLs onto the server using Stryker server tools, perform the following in the **Configure Master Device List** dialog box ():

1. Make sure that the **Server Web Service URL** lists a server IP address (A,).
 - If the tool is being used on the server machine, the Server Web Service URL will state **localhost** after the http:// protocol.
 - If the tool is being used outside the server machine (remote machine), replace **localhost** with the server IP.
2. Click **Get existing Master Device URL(s) from Server** (). Any Master Device URL(s) on the server populate in the **Master Device URL** box (C).

Note: Do not skip this step. Skipping this step will overwrite the existing Locator ID(s) that are currently listed on the server (if any).
3. In the upper left corner of the **Master Device URL** box, click **Select** (C) to select all of the existing Master Device URL(s) that populated in step 2.
4. Click **Add** (D) to add all the existing Master Device URL(s) that were retrieved from the server. This adds the URL(s) to the Master Device URL List.
5. In the **Add New Master Device URL** box (E), add the new Master Device URL(s) and type **:1639** to the end of the URL(s).
6. Click **Add** (F) to add the new Master Device URL(s) you just entered onto the **Master Device URL List**.

Note: If there are multiple Master Device URLs, repeat steps 5 and 6.
7. In the upper left corner of the **Master Device URL List**, click **Select** (G) to select all Master Device URL(s) in the list.
8. Click **Upload Master Device URL List to Server** (H) to upload all the selected Master Device URL(s) to the server.
9. Click **Exit** (I) to exit the Master Device URL List dialog box.

Setup

Deleting the Master Device List (Continued)

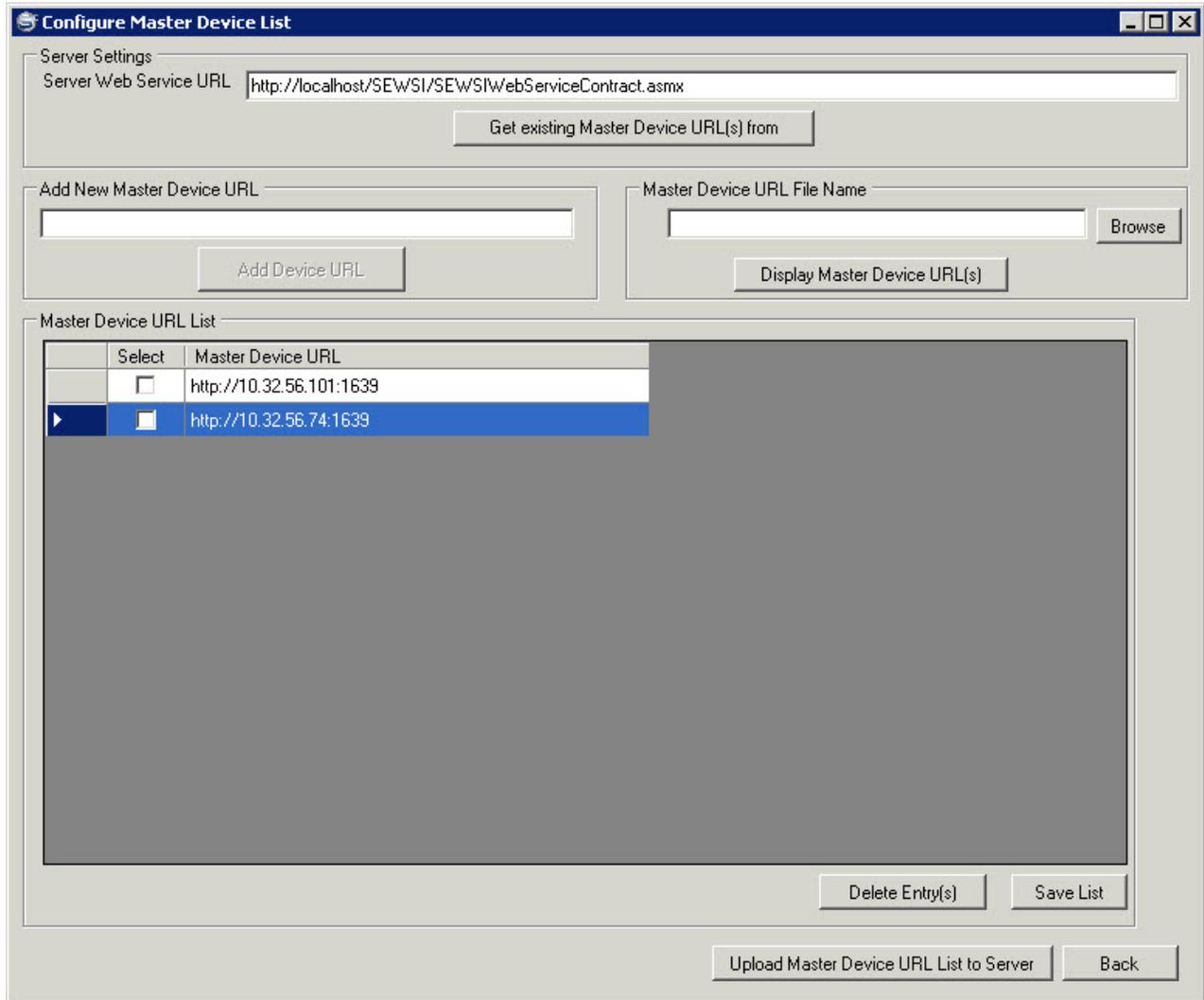


Figure 65: Deleting the Master Device List

Setup

Viewing wireless bed devices with *i*Bed Server

To view wireless bed devices on the MDL that are connected to the Stryker server and their device information ([Figure 67 on page 66](#)):

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. Click ***i*Bed Server Diagnostics** ([Figure 66 on page 65](#)).
3. Click **Next**.
4. Click the **Connected Device URL List** tab if it is not already selected (Default View).

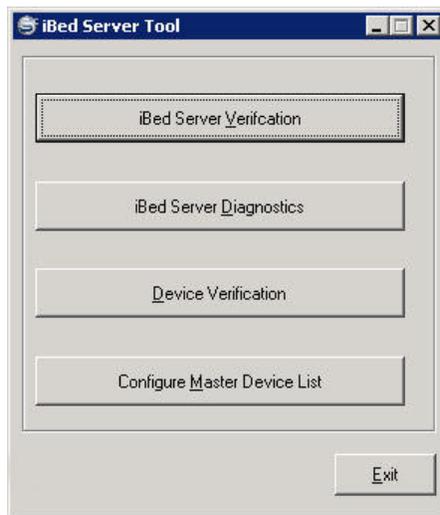


Figure 66: *i*Bed Server Tool

Setup

Viewing wireless bed devices with iBed Server (Continued)

The screenshot displays the iBed Server interface. At the top, there is a 'Server Data' window with a 'Server Settings' section containing a 'Server Web Service URL' field with the value 'http://localhost:5001/ESWS/WSWebService/Connector.aspx' and an 'Auto Refresh' dropdown menu. Below this is a 'Refresh Server Data' button and a 'Connected Device(s)' counter showing '1' out of '2' total devices.

The main area features a tabbed interface with several tabs: 'Connected Device URL List', 'Device Location List', 'Locator ID List', 'Master Device URL List', 'Location Association List', 'Subscription List', 'Hospital Location List', 'Device Schema List', and 'CHWP Registered Device'. The 'Device Location List' tab is active, displaying a table with the following data:

Device ID	Location Id	Device IP	Device Mac	Device Schema ID	Device Name	Device Schema URL
5212-500-105_00000		::1	00995931000F	serve_01	Server	http://serverURL.xcd
3000-000-000_111219739	115/1MED/1	10.32.56.101	00013618c0d2	SRSB01212010.1.2	Connected Hospital	

A 'Back' button is located at the bottom right of the interface.

Figure 67: Viewing wireless bed devices

Setup

Viewing third-party subscriptions with *i*Bed Server

To view third part subscriptions that the Stryker server currently has with the third party:

1. Open the *i*Bed Server Tool by either double-clicking the *i*Bed Server Tools Suite shortcut  located on your desktop, or by clicking **Start > All Programs > Stryker > iBed Server Tools > iBed Server Tools**.
2. Click ***i*Bed Server Diagnostics** (Figure 68 on page 67).
3. Click **Next**.
4. Click the **Subscription List** tab (Figure 69 on page 68).

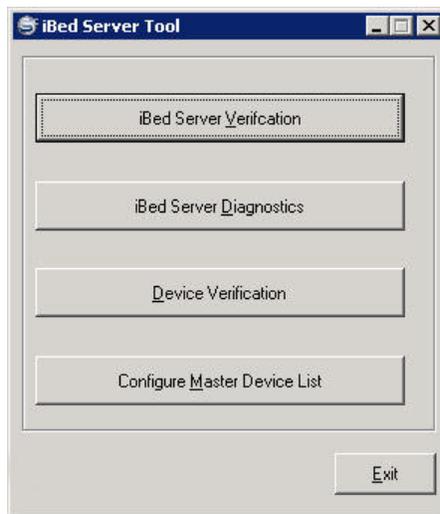


Figure 68: *i*Bed Server Tool

Setup

Viewing third-party subscriptions with iBed Server (Continued)

The screenshot displays the 'Server Data' application window. At the top, there are 'Server Settings' including a 'Server Web Service URL' and an 'Auto Refresh' checkbox. Below this is a 'Refresh Server Data' button and a status bar showing 'Connected Device(s): 2' and 'Total Device(s): 4'. The main area is a table with the following columns: Subscription ID, Device ID, Criteria XML, Payload XML, Min Update Time, Max Update Time, Subscription Time Out Period, Lower Limit, Upper Limit, Hysteresis, Repeat Period, Minimum Relative Change, and Subscriber URL. The table contains several rows of data, including subscriptions for '5212-500-005' and '3000-000-000'. The taskbar at the bottom shows the Start button, several application icons, and the system clock indicating 3:22 PM on 2/12/2014.

Subscription ID	Device ID	Criteria XML	Payload XML	Min Update Time	Max Update Time	Subscription Time Out Period	Lower Limit	Upper Limit	Hysteresis	Repeat Period	Minimum Relative Change	Subscriber URL
5212-500-005_00000_3145a223-ee45-4ee5-6407-1109b5d4c21d	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_8993a495-e6a3-43e4-8c39-131d1c3bc235	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_e62b9a43-a897-4021-86df-4f1645d98335	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_cbed706c-63ee-4086-94cd-5a9bab668323e	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_8adaa0da-1020-4ef9-bda3-8403a28375e1	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_ab6580e5-be94-4395-9207-d41cb332bc7	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
5212-500-005_00000_8ae6414c-224b-4382-8869-61374958b566	5212-500-005_00000	<device id="5212-500...		PT1M	PT2M	PT5M						Http://10.32.54.8088/mockClient?wSDL
C3000-000-000_1112157992753853300	3000-000-000_111215799	<device id="3000-000...	<device id="3000-00...	PT0H0M35	PT0H1M15	PT2H0M15						Http://10.30.51.137:8001/SEWSiWebServiceContract.asmx
C3000-000-000_U077731291721839	3000-000-000_U07773	<device id="3000-000...	<device id="3000-00...	PT0H0M35	PT0H1M15	PT2H0M15						Http://10.30.51.137:8001/SEWSiWebServiceContract.asmx
5212-500-005_00000_3e60474e-430a-445c-92a5-6c9482ac3e5c	5212-500-005_00000	<device id="5212-500...	<device id="5212-50...	PT0H0M35	PT0H1M15	PT2H0M15						Http://10.30.51.137:8001/SEWSiWebServiceContract.asmx

Figure 69: Viewing third-party subscriptions

Configuring the wireless router (Stryker device configuration)

Note: Stryker devices only authenticate with TKIP encryption.

To configure the wireless router for Stryker devices:

- Basic Setup
 - DHCP

- Wireless
 - Basic Wireless Settings
 - ◆ Configuration Mode – Manual
 - ◆ Network Mode – Mixed-Mixed
 - ◆ Network Name (SSID) – syk_med_install
 - ◆ SSID Broadcast – Enabled

 - Wireless Security
 - ◆ Security Mode – WPA2/WPA Mixed-mode
 - ◆ Encryption - TKIP
 - ◆ Passphrase – Stryk3r1#TfWxP

Configuring wireless network connection settings

Note: The hospital must associate the MAC address of the wireless module to a static IP, DHCP, or a DNS name before configuring the network settings.

Tools required: (Not required for model FL27 InTouch)

- Router (Stryker device configuration)
- Laptop (to access the router to use the *i*Bed® Wireless Configuration Tool)

Procedure:

1. Plug the power cord into the wall outlet.
2. Access the bed maintenance menu (see the appropriate maintenance manual).
3. Navigate to the **Connectivity Info.** menu to get the Wi-Fi Module IP address.
4. Using a router configured to the Stryker device defaults and a laptop with the Stryker *i*Bed® Wireless Configuration Tool, select **Configure Wireless Device.**
5. In the Wireless Device URL, enter the **IP address** of the bed.
6. Click **Get Wireless Device Configuration.**
7. Using the right column of the tool, input the specific wireless network setting required by the hospital to connect the device to the wireless network.
8. After all configuration settings have been selected, click **Upload Configuration to Device.**

Note: This will get a response from the bed with its current settings.

Note: After you upload the configuration to the device, the wireless module automatically restarts and connects to the hospital network.

Note: If the wireless module does not connect to the hospital network, verify the network connection settings. To reset the wireless module back to the factory default settings, see **Resetting the wireless module to factory defaults.**

Uploading the device schema (model 3002 Secure II)

Tools required:

- Router (Stryker device configuration)
- Laptop (to access the router to use the iBed® Wireless Configuration Tool)

Procedure:

1. Plug the power cord into the wall outlet.
2. Access the bed maintenance menu (see the appropriate maintenance manual).
3. Using a router configured to the Stryker device defaults and a laptop with the Stryker iBed® Wireless Configuration Tool, select **Upload Device Schema**.
4. In the Wireless Device URL, enter the **IP address** of the bed.
5. In the **Select Public Schema** box, browse to the location of the bed model specific device schema (provided with the iBed Server installation CD 5212-500-001).
6. Select **Secure II Device Schema.xsd**.
7. Click **Upload Device Public Schema**.
8. In the **Select Master Schema** box, browse to the location of the bed model specific reserved device schema (provided with the iBed Server installation CD 5212-500-001).
9. Select **Secure II Reserved Device Schema.xsd**.
10. Click **Upload Device Master Schema**.
11. Cycle power on the bed.
12. Make sure that the bed connects to the wireless network.

Resetting the wireless module to factory default settings (models 3002 Secure II, 3002 S3, and 3005 S3)

Tools required:

- Large paper clip

Procedure:

1. Raise the product to its highest position.
2. Using a large paper clip, insert it into the reset hole (A) on the bottom side of the wireless module (B).
3. Hold the large paper clip inside the reset hole for five seconds.

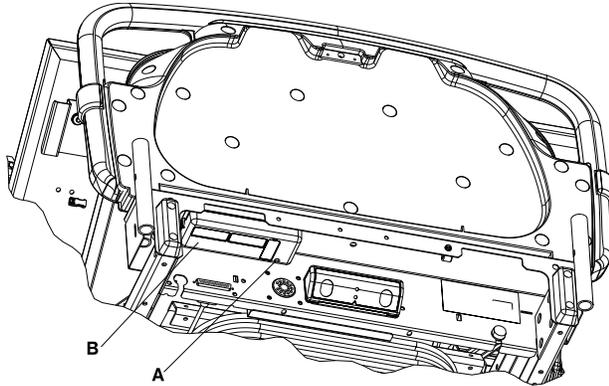


Figure 70: Non-Zoom wireless module

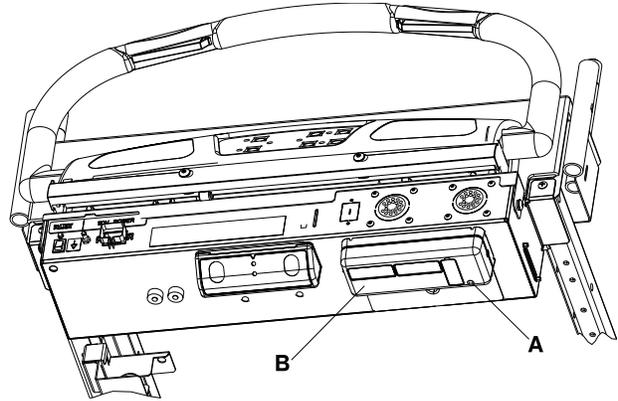


Figure 71: Zoom® wireless module

Resetting the wireless module to factory default settings (model FL27 InTouch)

Tools required:

- Appropriate FL27 InTouch maintenance manual

Procedure:

1. The appropriate maintenance FL27 InTouch maintenance manual, access the **Configuration** menu (Figure 72 on page 73).
2. Tap **Wi-Fi Configuration** (A) (Figure 72 on page 73).
3. Tap the **Advanced** tab (A) (Figure 73 on page 73).
4. Tap **Reset** (B) (Figure 73 on page 73).
5. Tap **Save**.

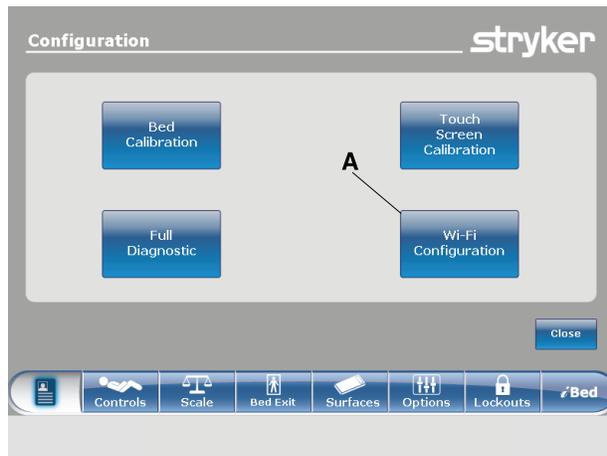


Figure 72: InTouch Configuration Menu

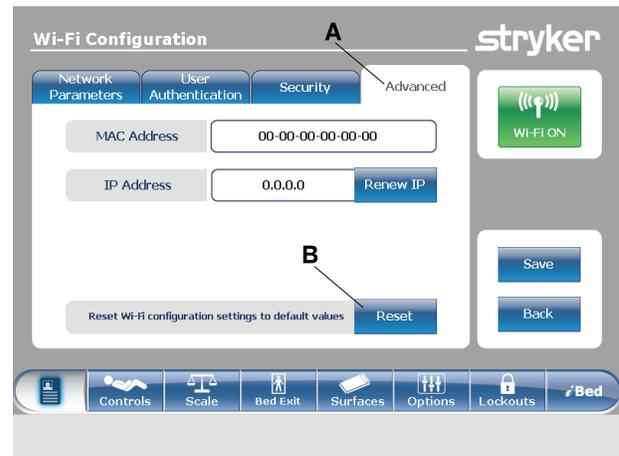


Figure 73: InTouch Wi-Fi Configuration menu

Uninstall

iBed Server application

1. Using the Programs and Features tool, choose **iBed Server Application**.
2. Click **Remove** (Figure 74 on page 74).

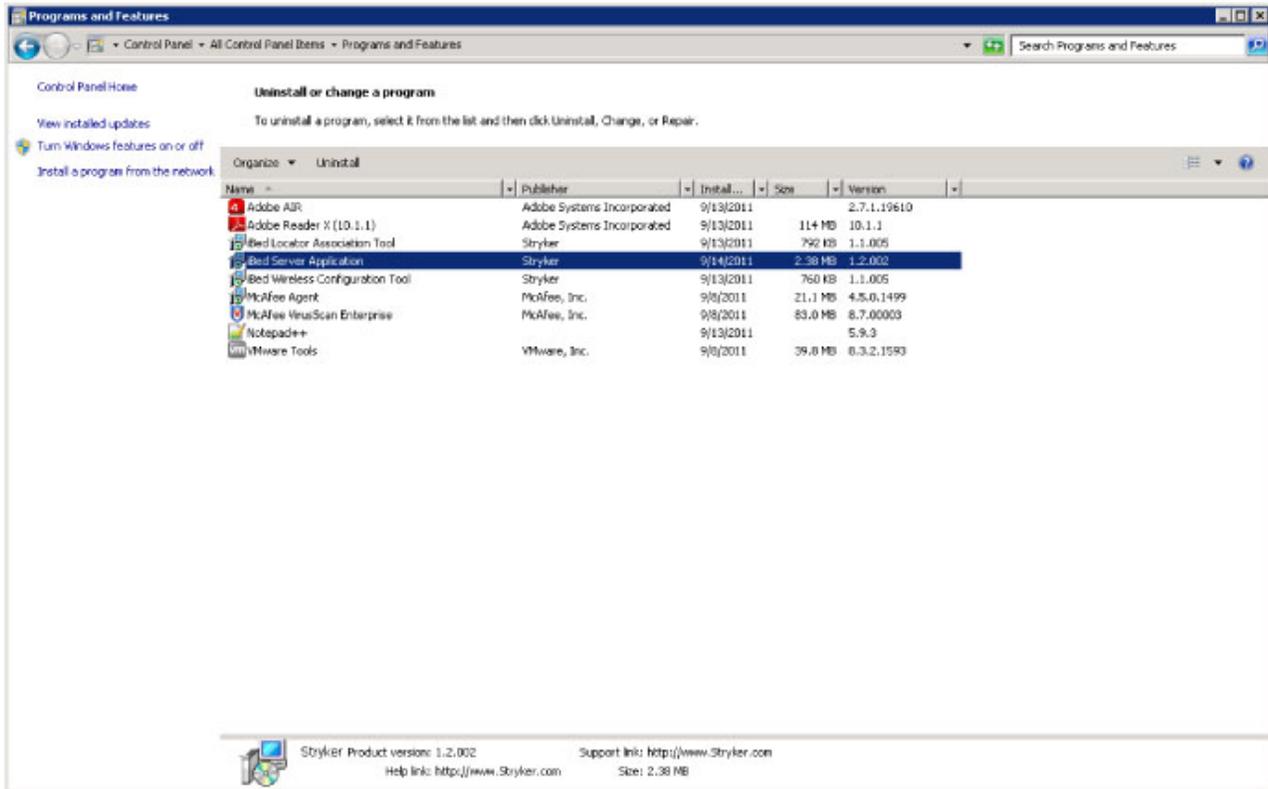


Figure 74: Windows Server 2008

3. In the **InstallShield Wizard** confirmation screen, click **Yes** to remove the application (Figure 75 on page 74).



Figure 75: Remove application

4. In the **InstallShield Wizard** confirmation screen, click **Yes** to keep the Log Files (Figure 76 on page 74).



Figure 76: Keep Log Files

Uninstall

iBed Server application (Continued)

5. In the **Uninstall Complete** screen, click **Finish** (Figure 77 on page 75).

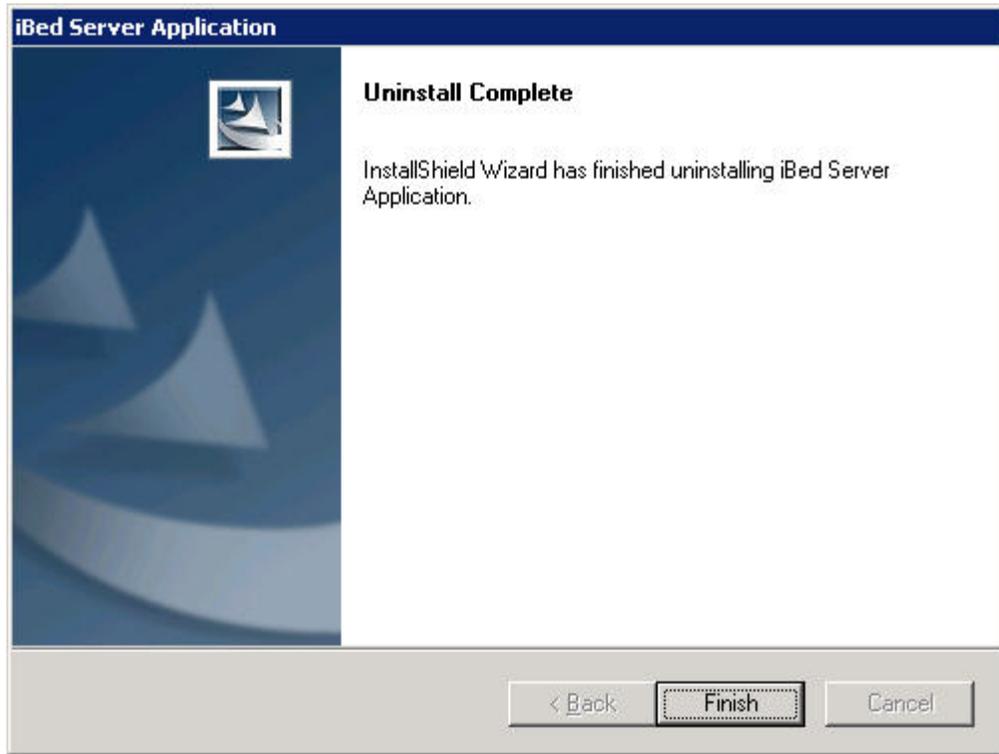


Figure 77: Uninstall complete

Uninstall

iBed Locator Association Tool

1. Using the Programs and Features tool, choose **iBed Locator Association Tool**.
2. Click **Remove** (Figure 78 on page 76).

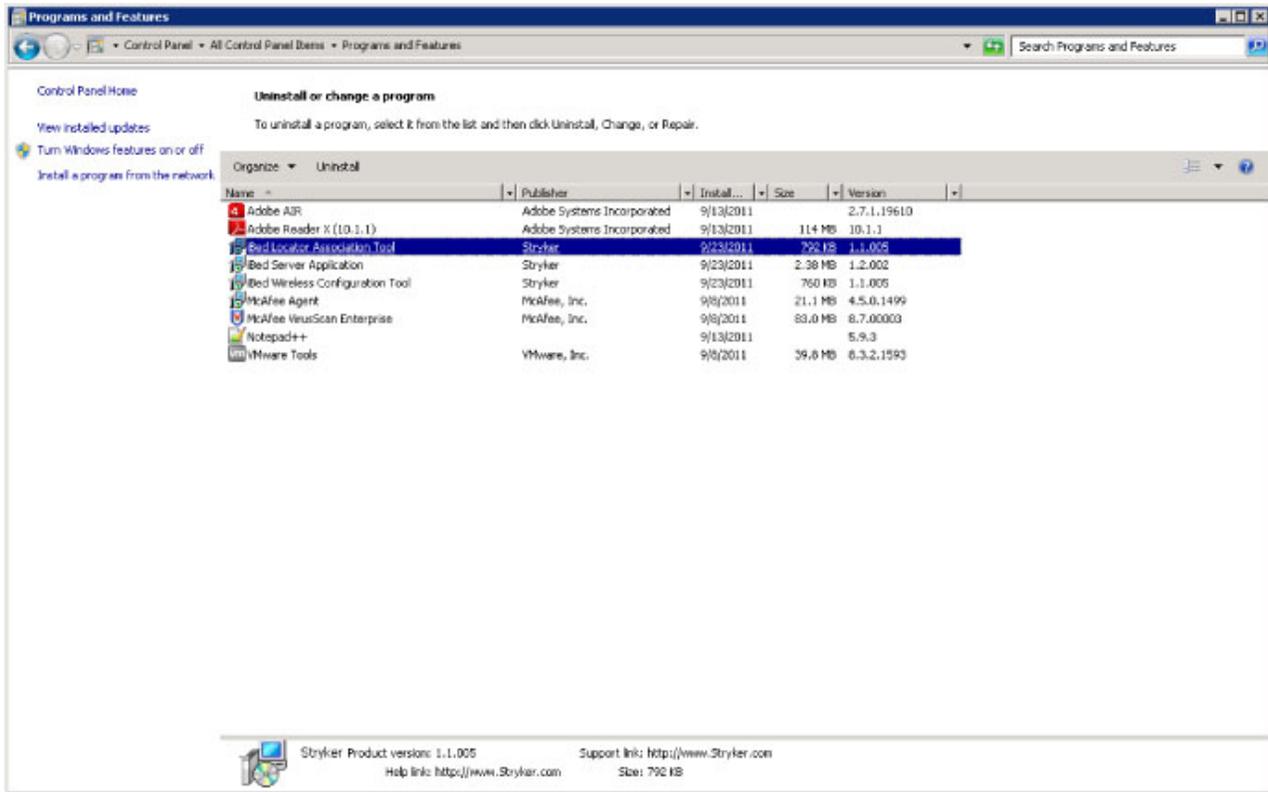


Figure 78: Windows Server 2008

3. In the **InstallShield Wizard** confirmation screen, click **Yes** to remove the application (Figure 79 on page 76).



Figure 79: Remove application

4. In the **InstallShield Wizard** confirmation screen, click **Yes** to keep the Log Files (Figure 80 on page 76).

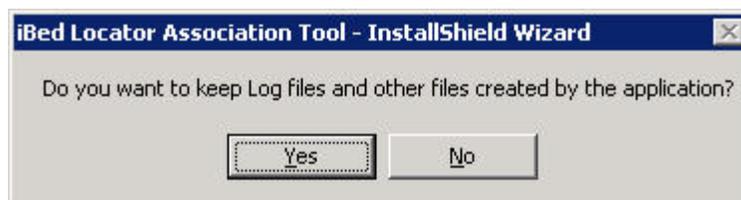


Figure 80: Keep Log Files

Uninstall

iBed Locator Association Tool (Continued)

5. In the **Uninstall Complete** screen, click **Finish** (Figure 81 on page 77).

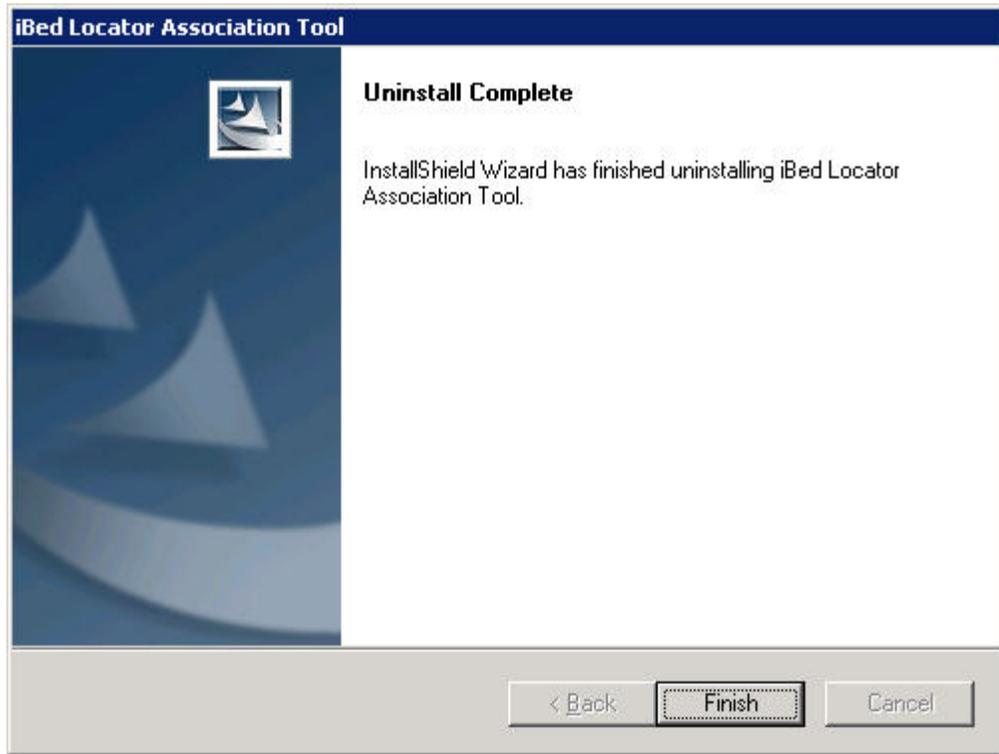


Figure 81: Uninstall complete

Uninstall

iBed Wireless Configuration Tool

1. Using the Programs and Features tool, choose **iBed Wireless Configuration Tool**.
2. Click **Remove** (Figure 82 on page 78).

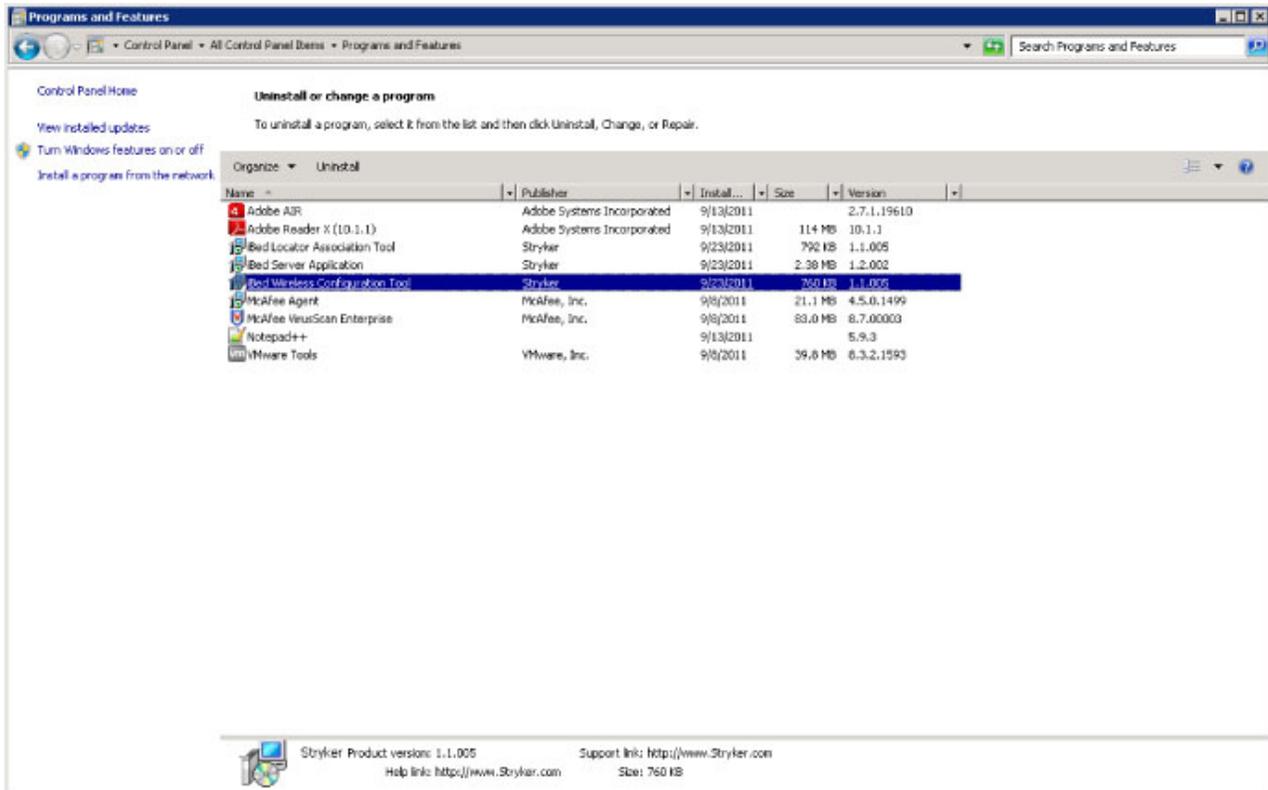


Figure 82: Windows Server 2008

3. In the **InstallShield Wizard** confirmation screen, click **Yes** to remove the application (Figure 83 on page 78).

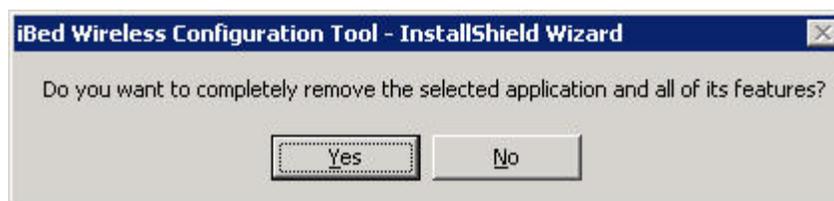


Figure 83: Remove application

4. In the **InstallShield Wizard** confirmation screen, click **Yes** to keep the Log Files (Figure 84 on page 78).

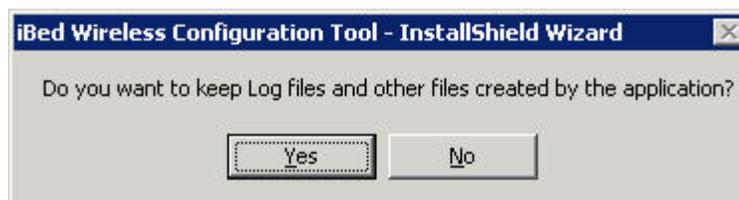


Figure 84: Keep Log Files

Uninstall

iBed Wireless Configuration Tool (Continued)

5. In the **Uninstall Complete** screen, click **Finish** (Figure 85 on page 79).

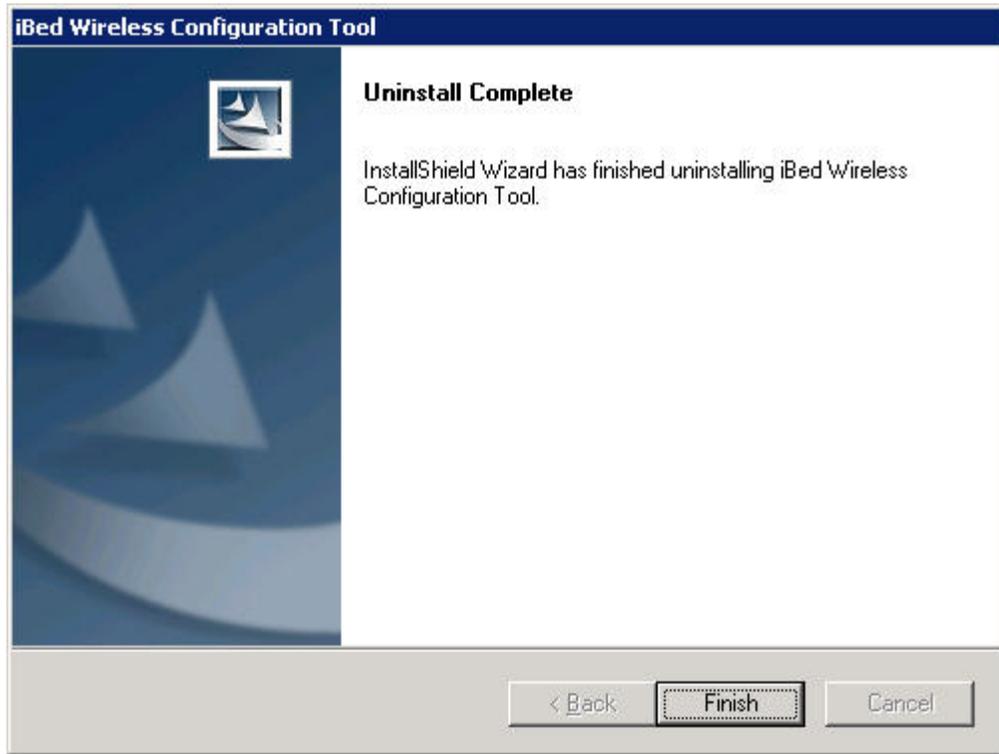


Figure 85: Uninstall complete

Troubleshooting

Problem	Possible cause	Solution
Cannot verify the iBed Server Tool	The Web Service URL is incorrect.	<p>Make sure the URL in the Web Service URL box is correct.</p> <ol style="list-style-type: none"> If the URL is incorrect, enter the following URL into the Web Service URL box (Verifying iBed Server on page 29): http://localhost/SEWSI/SEWSI-WebServiceContract.asmx. Click Verify Server.
	The Heartbeat service is not active.	<ol style="list-style-type: none"> Make sure that the Heartbeat service is running. <ol style="list-style-type: none"> If the Heartbeat service has not started, start the service, restart the server, and then reverify the iBed Server application. To start the Heartbeat service, see Starting the Heartbeat service on page 22.
	The IIS Manager does not have all of the required Default Web Sites.	<ol style="list-style-type: none"> Make sure that the IIS Manager has all of the required Default Web Sites. <ol style="list-style-type: none"> Go to Start > AdministrativeTools > Internet Information Services (IIS) Manager. Navigate to Web Sites > Default Web Site to verify that the three web sites are listed: CHAP / SERVERSCHEMA / SEWSI. If the Default Web Site is not listed, reinstall the iBed Server application.

Troubleshooting

Problem	Possible cause	Solution
Not receiving e-mail notifications for errors	The bed is not connected to the network.	<ol style="list-style-type: none"> 1. Restart the <i>i</i>Bed Server application. 2. Unplug the bed from the wall outlet. 3. Move the bed out of sight of the <i>i</i>Bed Locator. 4. Plug the bed into a wall outlet and allow the bed to connect to the network (not a location). <p>Note: The “<i>i</i>Bed Locator is not connected” icon appears on the footboard if the <i>i</i>Bed Locator is not connected to the network.</p>
	The .xml files were modified incorrectly.	<ol style="list-style-type: none"> 1. If you modified the .xml files correctly during installation, restarting the <i>i</i>Bed Server application generates an e-mail notification. <ol style="list-style-type: none"> a. If you do not receive an e-mail notification, see Setting up e-mail notifications (Admin only for server issues) on page 20. b. If you do make changes to the .xml files, save the files you modified and restart the <i>i</i>Bed Server application.

Troubleshooting

Problem	Possible cause	Solution
Cannot see the device in the <i>i</i> Bed Server application	The MAC address does not have the bed's IP address or DNS name.	<ol style="list-style-type: none">1. If the troubleshooting steps in the appropriate bed maintenance manual for this issue were followed:<ol style="list-style-type: none">a. Use the MAC address from the bed and verify with IT what the wireless module's IP address or DNS name is.b. Ping the wireless module from the server machine using the Command Prompt (ping IP address or DNS name:1639).c. Press Enter.<ol style="list-style-type: none">i. If you receive four (4) responses, then the bed is on the wireless network.ii. If you receive no response, check the wireless module on the bed.

Troubleshooting

Problem	Possible cause	Solution
<p>Cannot see a device in the Server Tools under the Device Location List, but the device shows under the connected device URL List</p>	<p>The device was not added to the device list.</p>	<ol style="list-style-type: none"> 1. Using the server tool, select Verify Device Directly. 2. Click Get Existing Device(s), and then select the device in question. 3. Add it to the Device List. 4. In the Device List, select the device, and then click Verify Device(s). 5. Check the Connection Status once it responds. <ol style="list-style-type: none"> a. If there is a response, the device is communicating properly on the wireless network.
	<p>The serial number in the CPU and the serial number on the bed specification label do not match.</p>	<ul style="list-style-type: none"> • Identify the bed serial number that is stored in the CPU. It should match the serial number on the serial label on the bed. Note: If there are two matching serial numbers in the device list, the server will only recognize the first device that logs on to the server. • To find the bed's serial number, put the bed into the Bed Configuration mode and navigate to Serial Number > Current SN to verify the serial number. • If the serial number does not match, go to the Edit SN menu to edit the serial number, and then save.

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Cannot see a location	The Locator ID was entered incorrectly.	<ol style="list-style-type: none">1. Using the iBed Locator Association Tool, select View Current Location Associations.2. Click Get Location Associations from server.3. Look through the Hospital Location and verify the Locator ID. Note: The Locator ID is alphanumeric and case sensitive. You must use lower case to enter the Locator ID letters, or the server will not recognize the locator.<ol style="list-style-type: none">a. If the Locator ID is incorrect, use the Update function to update the error.b. If the Locator ID is missing, see Adding new Locator ID numbers on page 30.



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