



MapInfo Manager.®

Version 1.3

Installation Guide

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Before you Install

MapInfo Manager is a web application that facilitates the management of an organization's spatial data holdings. This is accomplished by building a library of metadata records and editing its contents to reflect a complete description about the data.

This document describes how to install, upgrade, or uninstall MapInfo Manager. It also provides information on installation troubleshooting. For information about how to work with MapInfo Manager, see the [MapInfo Manager User Guide](#) after installing.

In this section:

- [Introduction](#)6
- [System Requirements](#)6

Introduction

This document is organized in three parts. The first provides information and instructions necessary for installing MapInfo Manager for the first time. The second, titled Upgrading MapInfo Manager is for users who have already installed a previous release, and are upgrading to the current version. The third provides instructions for uninstalling MapInfo Manager.

System Requirements

Below are the guidelines for recommended system requirements. Note that hardware requirements do vary based on your use of the product and your system. In general, a higher processor speed, larger memory (RAM) and industry leading graphics cards provide a better user experience and result in better responses from MapInfo Manager. These are the system requirements for MapInfo Manager 1.3:

Web Browser: Internet Explorer versions 7 and 8; Firefox version 4.0 and higher; Google Chrome up to version 27

JDK: JDK 1.6 update 26 or later (32-bit only). Set your JAVA_HOME environment variable to point to the location of the 32-bit JDK installation. For example, JAVA_HOME= c:\Program Files (x86)\Java\jdk1.6.0_26. Add to your path environment %JAVA_HOME%\bin;.

Operating Systems (x86 and x64):

Important: If your operating system below is marked with an asterisk (*), you are required to run the installer as an administrator. Be sure to right-click on the installation file and choose Run as Administrator from the context menu. You will also be required to run the MapInfo Manager service as an administrator after installation.

- Windows Server 2008 Enterprise R2 *
- Windows Server 2003 Enterprise SP 2
- Windows 7 Ultimate *
- Windows Vista SP 2 *
- Windows XP Professional SP 3

Memory: 2 GB minimum

Install

This section guides you through the process of installing MapInfo Manager for the first time, or upgrading MapInfo Manager from a previous version.

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Installing or Upgrading MapInfo Manager

These instructions are for new installations or upgrading MapInfo Manager.

To install MapInfo Manager:

1. Start the MapInfo Manager Installer in one of two ways:
 - a) Run start.html from the product media and download the installer you need.
 - b) Double-click install.exe to run the installer directly.

If you do not have a Java virtual machine installed, be sure to download and run the package that includes the JVM.
2. In the Language screen, select the language appropriate for your installation and click **Ok**.
3. In the Introduction screen, review the introduction and click **Next**.
4. In the License Agreement screen, review the agreement. If you agree with the agreement, then select **I accept...** and click **Next** to continue with the installation. Otherwise, select **I do NOT accept...** and click **Cancel** to exit the installer.
5. In the Choose Install Set screen, select the components to install and click **Next**.
6. In the Choose Install Folder screen, enter the directory where you want to install MapInfo Manager and click **Next**.
7. In the Configure Services screen for setting up the default Tomcat application server deployment, select either the Commandline Service (default) or Windows Service and click **Next**.

MapInfo Manager will install all the components and run on the localhost machine. This is the recommended setup.

If you wish to configure multiple Tomcat servers, specify a different host and/or port number for each Tomcat container. If the service has already been deployed, check the Use Existing Service checkbox.

To understand more about the options in the Configure Services screen, see [Configure Services in Tomcat](#).
8. In the Configure WMS Services screen, define the deployment for the WMS installation. Once all settings are correct, click **Next**.

Note: The WMS instance will be deployed in the same type of application container as specified in the previous screen.
9. If an existing MapInfo Manager repository has been detected by the installer, you have the option to import the contents of that repository into your new deployment. Click **IMPORT** to use the existing repository or click **NO** to continue with the installation.

Note: After importing a previous version of the repository, you must synchronize your Library. Perform the task in the section [Synchronize the New Library](#) after the installation.

Note: If your existing repository is not located on the localhost machine, you can import your existing repository to the new installation by backing up your repository and restoring it in the new version. See the section [Migrate Existing Repository](#) for more information.
10. In the Pre-Installation Summary screen, review the installation options and click **Install** to start installing MapInfo Manager.

11. Once the installation completes, click **Done**.
Once the installer closes, you can launch the application. See [Launching MapInfo Manager](#), for more information on how to start the services and launch the application. If you deployed MapInfo Manager as a service, they are automatically running in the background.

Configure Services in Tomcat

MapInfo Manager provides two options for deploying in a Tomcat application container: Commandline or Windows Service.

Commandline Service requires that the user be logged into MapInfo Manager for the services to run.

As a Windows Service, the services continue to run even though no one is logged into the application. Choose this option when you have multiple people accessing the services. You also have more control over the management of the services versus the commandline.

The default configuration is to deploy as a commandline service where all the services are in the same container using port 8080. You may choose to have each service in a different container by specifying a different port number.

To deploy MapInfo Manager as a commandline or Windows Service:

1. At the Configure Services dialog, choose Commandline or Windows Service under the Deployment Type.
2. Make changes to the port numbers if you want to deploy the services into separate Tomcat containers on the localhost. To access services on another computer, provide the hostname and port and check the Use Existing Service checkbox. Click **Next** to continue.

See [Open Ports for Installation](#) for more information.

Note: MapInfo Manager includes your existing host and port in its configuration files, but does not attempt to check its accessibility.

3. If you have elected to install the WMS Service, the Configure WMS Services screen displays. Define the deployment for the WMS installation. Once all settings are correct, click **Next**.
4. Continue through the remainder of the installation following these [instructions](#).

Open Ports for Installation

MapInfo Manager, as a web service application, requires certain ports to be available when it is being installed. Port numbers can be any number between 1024 and 65535, with the exception of the individual port numbers presented here.

For the current release of MapInfo Manager (v 1.3), the repository RMI port is 1099. For v. 1.1 the repository RMI port is 3099. The default startup port for the services is 8080.

The following service shut-down ports for Tomcat must remain open:

- MapInfo Manager Application: 7006
- Repository Service 8006
- CSW Service: 9006
- WMS Service 9007

If you deploy all the services in one Tomcat, then the shut-down port to leave open is 8006. To find out the ports that are in use, at the command prompt, type `netstat -a`. Or contact your system administrator.

Launching MapInfo Manager

This section guides you through the process of launching MapInfo Manager for the first time.


To launch MapInfo Manager:

1. From the Windows Start menu, select **Programs > Pitney Bowes > MapInfoManager X.x > Start Services**. This will start the services and initialize the Repository.

Before launching MapInfo Manager, wait until the services have completely started.

If you have deployed MapInfo Manager as a Windows Service, skip this step. It is already running in the background. Proceed to the next step.

2. From the Windows Start menu, select **Programs > Pitney Bowes > MapInfoManager X.x > Launch Application**. This will start MapInfo Manager.


Once MapInfo Manager has started, you can access the Help by clicking  in the upper right pane of the application, or online at http://reference.mapinfo.com/software/mapinfo_manager/en/1_3/index.html.

Migrate Existing Repository

If you have already installed a previous version of MapInfo Manager located on a different machine, this process allows you to migrate your existing Library, including metadata records, Templates, and Catalogs to the newest version of MapInfo Manager.

To migrate the MapInfo Manager Repository:

1. Start your existing MapInfo Manager application.

2. Change to the **System Administration** tab and click  in the left pane of MapInfo Manager to backup your existing MapInfo Manager. Give the backup a distinct name and click **Ok**.

By backing up, all metadata, templates, and catalogs are combined and stored in a single zip file. The log files are stored within the applications log directory on the file system. For example, a typical MapInfo Manager installation will store the log files in the `c:\Program Files (x86)\Pitney Bowes\MapInfoManager X.x\PBBI_logs`. You will be required to locate these files and manually copy them in a later upgrade step.

3. Shut down your existing MapInfo Manger application.
4. Copy the backed up log files from your old MapInfo Manager to the newly installed MapInfo Manager. Copy these files to the same PBBI_logs directory in your new MapInfo Manager deployment.

5. Launch the new MapInfo Manager services. For a commandline deployment, from the Windows Start menu, select **Programs > Pitney Bowes > MapInfoManager X.x > Start Services**. This will start the services and initialize the repository.

For a Windows Service deployment, check that the services are running in the background (See **Services** under **Control Panel**).

Before launching MapInfo Manager, wait until the services have completely started.


6. From the Windows Start menu, select **Programs > Pitney Bowes > MapInfoManager x.X > Launch Application**. This will start MapInfo Manager.
7. Change to the **System Administration** tab.

8. Click  in the left pane of MapInfo Manager. The Restore Metadata dialog box displays.

9. Select the backup file you previously created and click **Submit**.

This will restore all of your metadata, templates, and catalogs in your new version of MapInfo Manager. If you encounter memory issues when restoring, see the section **Restore Out of Memory** for more information on how to increase your application server heap size.

10. A confirmation will display asking if you would like to overwrite all existing records. Click **Yes**.
11. After importing a previous version of the repository, you must synchronize your Library. Perform the task in the section **Synchronize the New Library** once your Library has been migrated.

MapInfo Manager has now been upgraded. You can access the help by clicking  in the upper right pane of the application, or online at http://reference.mapinfo.com/software/mapinfo_manager/en/1_3/index.html.

Synchronize the New Library

You must, synchronize your Library after a version migration. This allows the records in the previous repository version to use all new features in MapInfo Manager.

To synchronize the new Library:

1. Once the new version of MapInfo Manager has started, open the Library.

2. Highlight the root folder(s) in the Library and click  or right-click on the folder and choose Synchronize Data from the context menu.

3. Click the Submit button to proceed.

MapInfo Manager will re-search the paths of the folders. If it finds any newly added or updated .TAB, .SHP, .MWS or DBMS files, it creates records and adds them to the Library. The ordering of the records in the folder is done by date, with the new records added to the bottom of the list.

Restore Out of Memory

When restoring a large Library with MapInfo Manager (1,500 records or more), the server may run out of memory. We recommend that you increase the heap size for your application server.

Tomcat Deployed as a Commandline

Modify the catalina.bat (.sh) file in Tomcat. For the default installation, the file is located in c:\Program Files (x86)\Pitney Bowes\MapInfoManager X.x\tomcats\tomcat-7.0.30_repository\bin.

Search for the following Java Options:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms256m -Xmx512m -XX:MaxPermSize=256m -Dfile.encoding=UTF-8
```

Change the 512m to, for example, 1024m for a 1 GB heap size. You must re-start Tomcat for the change to take effect.

Tomcat Deployed as a Windows Service

Modify service.bat in each Tomcat container you are using. For the default installation, the file for the Repository service is located in C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\tomcats\tomcat-7.0.30_repository\bin\service.bat.

For the default location of the WMS Service, go to C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\tomcats\tomcat7_midewwms\bin\service.bat.

Search for the following Java Options:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms256m -Xmx512m -XX:MaxPermSize=256m -Dfile.encoding=UTF-8
```

Change the 512m to, for example, 1024m for a 1 GB heap size. You must re-start Tomcat for the change to take effect.

Uninstall

This section describes the uninstall process of MapInfo Manager.

In this section:

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Uninstalling MapInfo Manager

These instructions describe how to uninstall MapInfo Manager. Use this process when you are upgrading to a new version of MapInfo Manager, or if your Library has become corrupted, and either harvest or edit operations do not work, and you need to uninstall MapInfo Manager and restore your metadata from an existing backup.

To uninstall MapInfo Manager:

1. From the Windows Start menu, select **Programs > Pitney Bowes > MapInfoManager X.x > Uninstall**. The uninstaller will launch.
2. In the Introduction screen, review the introduction and click **Uninstall**.
3. A message asking if you have a backup of metadata displays. We recommend you have a backup of your Library, Templates and Catalogs prior to uninstalling MapInfo Manager. If you do not have a backup, click **Cancel** perform a backup as outlined in the [MapInfo Manager User Guide](#), then re-run the uninstaller. If you have a backup, click **Proceed**.
4. When prompted to keep Repository backup, choose **Yes**. This will keep your previously saved backups of your Library, Templates and Catalogs. The metadata records will be saved in your existing MapInfo Manager installation in the PBBI_logs directory. E.g., C:\Program Files (x86)\Pitney Bowes\MapInfoManager X.x\PBBI_logs.
5. When prompted to keep the Repository, choose **No**. This will remove the existing software portion of the repository. However, all of your metadata, Templates, and Catalogs will be saved in your backup. Click **Uninstall**.
The uninstall will complete. You are left with the PBBI_logs directory which includes the backups. Click Done to exit the uninstaller.

Installation Troubleshooting

Review the topics here if you have problems installing MapInfo Manager.

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Run As Administrator

If you encounter problems installing MapInfo Manager on Windows 7, Vista or Windows Server 2008, chances are you are not running the installer as administrator. Even though you are an administrator on the system, you must explicitly tell the installer to Run As Administrator by right-clicking on the install.exe and choosing Run As from the context menu.

Be sure to also invoke the Run as Administrator when you are uninstalling MapInfo Manager.

Memory

MapInfo Manager requires at least 2 GB of memory to run. If you have trouble installing, check the amount of memory on your system and add enough to bring it up to 2 GB.

Install JDK 1.6 Build 26

If you have trouble installing MapInfo Manager, install JDK 1.6 Build 26 (32-bit version). This will provide a JRE to run the installer and the correct JDK for running MapInfo Manager.

Set your JAVA_HOME environment variable to point to the location of the 32-bit JDK installation. For example, JAVA_HOME= c:\Program Files (x86)\Java\jdk1.6.0_26. Add to your path environment %JAVA_HOME%\bin;. You do not need to uninstall earlier versions of the JDK or JRE.

Re-install MapInfo Manager using the noVM version of the installer.

Uninstall

When uninstalling MapInfo Manager, be sure to close the browser MapInfo Manager was running in and close Windows Explorer.

When re-installing following an uninstallation in the same location, delete all folders under the install directory and shortcuts under \Start Menu\Programs\Pitney Bowes\MapInfo Manager 1.3.

Manual Installation from .WAR Files

If you are unable to install MapInfo Manager using the product installer, follow the instructions in this section to manually configure and deploy the .war files. This involves configuring some files for access to the service and deploying the services in Tomcat containers. The services are RepositoryService, CSWService, MapInfoManager service, LibraryService, and optionally WMSService.

These instructions assume you have attempted to install MapInfo Manager using the installer and did not remove the files the installer put down on your computer. You will need the .zip files that the installer placed on your system to proceed. In a default install location, find the .war and .zip files under C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars¹. We recommend that you work with the .zip files for each service (the .zip is the same as a .war with a different extension). The general process is to extract all files from a .zip, configure certain files, and copy the extracted files to a Tomcat container.

The simplest configuration is to add the services to the same Tomcat container. The configuration files are pre-configured for the default setting on port 8080. You need to verify that your machine host is specified in the configuration files and leave the port number as is. Copy the extracted files for each service into the Tomcat container located at *<installdir>\tomcats\tomcat-7.0.30_repository\webapps* and restart Tomcat².

If you want to deploy into **multiple containers**, you must provide a unique port number in the configuration files for each service.

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¹ If you do not have the .war and .zip files, contact **PBBI Support**.

² If you do not have a Tomcat container, go to the **Apache Tomcat** download page.

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Configuring and Deploying the Repository Service

The files needed for deployment are located in the C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars\RepositoryService.zip and C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\tomcats\tomcat-7.0.30_repository\conf\server.xml.

To deploy the Repository service from RepositoryService.zip:

1. Unzip RepositoryService.zip to a temporary location. Choose Yes to All at the Confirm File Replace dialog.
2. Delete the existing RepositoryService.war and the RepositoryService folder from the Tomcat container located in `<installdir>\tomcats\tomcat-7.0.30_repository\webapps`.
3. Copy the entire RepositoryService folder from the temporary location to the Tomcat container.
4. Locate bootstrap.properties.src in `<installdir>\apache-ant-1.8.1\bin\BootStrap`. If it is not available, create a file called bootstrap.properties and include the following content:

```
#bootstrap properties for the repository startup servlet \u00df
#Thu Sep 23 08:55:47 EDT 2010
java.naming.factory.initial=org.apache.jackrabbit.core.jndi.provider.DummyInitialContextFactory
repository.home=C:\\Program Files (x86)\\Pitney Bowes\\MapInfo Manager 1.3\\repository_1
rmi.enabled=true
repository.config=C:\\Program Files (x86)\\Pitney Bowes\\MapInfo Manager 1.3\\repository_1\\repository.xml
repository.name=jackrabbit.repository
rmi.host=localhost
java.naming.provider.url=http://www.apache.org/jackrabbit
jndi.enabled=true
rmi.port=1099
```

Edit the line for repository.home to point to your repository. The default repository is repository_1. Provide the path to the repository.xml for the repository.config.

Note: If the paths you enter contain non-ASCII characters, you must run the file through a native-to-ascii conversion. The native2ascii.exe conversion tool is provided in the JDK.

5. Create a folder called jackrabbit under `<installdir>\tomcats\tomcat-7.0.30_repository\bin\`. Copy bootstrap.properties to this folder.
6. Open the server.xml located under the `\tomcats\tomcat-7.0.30_repository\conf` folder. Verify that the connector port on line 94 is set to 8080. Save and close the file.
7. Stop and re-start Tomcat for this service to be deployed in the container. Run startup.bat located under `\tomcats\tomcat-7.0.30_repository\bin`.
8. Once you have configured all the services, test your installation by starting the services and launching MapInfo Manager from startup.bat.

Configuring and Deploying the CSW Service

The files to configure are located in the C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars\CSWService.zip.

To configure the CSW Service from CSWService.zip:

1. Unzip the file to a temporary location.
2. Modify the CSWConfiguration.xml located under \CSWService\WEB-INF\classes. Change line 3 to point the RepositoryURL to the appropriate Tomcat container. Leave the line as is if you want to use the default (one Tomcat for all services), as shown below.

```
<RepositoryURL>http://localhost:8080/RepositoryService/rmi</RepositoryURL>
```

Note: If you are using Windows 7, Vista or Windows Server 2008, you must run your text editor as administrator in order to save your changes. Right-click on the shortcut or .exe and choose Run As administrator from the context menu.

3. Save and close the file.
4. Delete the existing CSWService.war and the CSWService folder from the Tomcat container located in <installdir>\tomcats\tomcat-7.0.30_repository\webapps.
5. Copy the entire CSWService folder with the edited file from the temporary location to the Tomcat container.
6. Stop and re-start Tomcat for this service to be deployed in the container. Run startup.bat located under\tomcats\tomcat-7.0.30_repository\bin.
7. Once you have configured all the services, test your installation by starting the services and launching MapInfo Manager from startup.bat.

Configuring and Deploying the MapInfoManager Service

The files to configure are located in the C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars\MapInfoManager.zip.

To configure the MapInfoManager service from MapInfoManager.zip:

1. Unzip the file to a temporary location.
2. Modify the resources.xml located under \MapInfoManager\WEB-INF\spring. Edit the lines to point to the appropriate Tomcat container for the CSWService, RepositoryService, and WMSService (optional). Leave the lines as is if you want to use the default (one Tomcat for all services), as shown below.

```
<constructor-arg value="http://machinename:8080/CSWService/CSW" />
```

```
<property name="rmiUrl" value="http://machinename:8080/RepositoryService/rmi" />
```

If you wish to deploy the WMS Service, remove the comment for the section 'Begin WMS Config' and modify the host and port if necessary.

```
<!-- Begin WMS config
<bean id="wmsSettings" class="com.pbbi.mimgr.wms.WmsSettings">
  <property name="url" value="http://localhost:8080/WMSService/WMS" />
  <property name="version" value="1.3.0" />
  <property name="replacementSrsForMapInfoSrs" value="epsg:4326" />
  <property name="mapImageWidth" value="400" />
  <property name="mapImageHeight" value="300" />
  <property name="mapImageFormat" value="image/png" />
</bean>
End WMS config -->
```

Note: If you are using Windows 7, Vista or Windows Server 2008, you must run your text editor as administrator in order to save your changes. Right-click on the shortcut or .exe and choose Run As administrator from the context menu.

3. Save and close the file.
4. Delete the existing MapInfoManager.war and the MapInfoManager folder from the Tomcat container located in *<installdir>*\tomcats\tomcat-7.0.30_repository\webapps.
5. Copy the entire MapInfoManager folder with the edited file from the temporary location to the Tomcat container.
6. Stop and re-start Tomcat for this service to be deployed in the container. Run startup.bat located under \tomcats\tomcat-7.0.30_repository\bin.
7. Once you have configured all the services, test your installation by starting the services and launching MapInfo Manager from startup.bat.

Configuring and Deploying the Library Service

The files to configure are located in the C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars\LibraryService.zip.

To configure the Library service from LibraryService.zip:

1. Unzip the file to a temporary location.
2. Modify the LibraryConfiguration.xml located under \LibraryService\WEB-INF\classes. Edit lines 10 and 18 to point to the host and port number(s) for the RepositoryURL and CSWSERVICEURL. Leave the lines as is if you want to use the default (one Tomcat for all services).

```
<RepositoryURL>http://localhost:8080/RepositoryService/rmi</RepositoryURL>
```

```
<CSWSERVICEURL>http://localhost:8080/CSWSERVICE/CSWSERVICE</CSWSERVICEURL>
```

Note: If you are using Windows 7, Vista or Windows Server 2008, you must run your text editor as administrator in order to save your changes. Right-click on the shortcut or .exe and choose Run As administrator from the context menu.

3. Save and close the file.
4. Delete the existing LibraryService.war and the LibraryService folder from the Tomcat container located in *<installdir>*\tomcats\tomcat-7.0.30_repository\webapps.

5. Copy the entire LibraryService folder with the edited file from the temporary location to the Tomcat container.
6. Stop and re-start Tomcat for this service to be deployed in the container. Run startup.bat located under\tomcats\tomcat-7.0.30_repository\bin.
7. Once you have configured all the services, test your installation by starting the services and launching MapInfo Manager from startup.bat.

Configuring and Deploying the WMS Service

Configure and deploy this .WAR if you want to publish metadata records via the WMS Service. This is an optional deployment.

The files to configure are located in the C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\Wars\WMSService.zip.

To configure the WMS service from WMSService.zip:

1. Unzip the file to a temporary location.
2. Modify the WMSConfiguration.xml located under \WMSService\WEB-INF\classes. Edit the contents to point to the location of your WMS Service (host³ and port) and the Repository Service.

```
<ResourceRoot>http://machinename:portnumber/RepositoryService/rmi</ResourceRoot>
```

```
<OnlineResource>http://machinename:portnumber/WMSService/WMS</OnlineResource>
```

Fill out the remaining elements to describe your WMS Service. This information will display when a user accesses your service.

Note: If you are using Windows 7, Vista or Windows Server 2008, you must run your text editor as administrator in order to save your changes. Right-click on the shortcut or .exe and choose Run As administrator from the context menu.

3. Save and close the file.
4. Create a file called beans.xml in your temporary location where the WMS Service files are located. Copy the xml below and paste it into beans.xml. Edit the constructor args to reflect your machine name and port for the WMS Service. Save and close the file.

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:context="http://www.springframework.org/schema/context"
       xsi:schemaLocation="
http://www.springframework.org/schema/beans http://www.springframe-
work.org/schema/beans/spring-beans-2.5.xsd
http://www.springframework.org/schema/context http://www.spring-
framework.org/schema/context/spring-context-2.5.xsd">

  <context:annotation-config/>
```

³ Some WMS clients require an actual hostname, not localhost, even when requesting maps from the same computer.

```

    <bean id="configReaders" class="com.mapinfo.midev.configuration.RepositoryConfigurationReaders">
        <constructor-arg value="yourmachinename" />
        <constructor-arg value="8080" />
        <constructor-arg type="java.util.List">
            <list>
                <value>/PBBI/MIM/Configuration/WMSConfiguration.xml</value>
            </list>
        </constructor-arg>
        <property name="username" value="admin"/>
        <property name="password" value="admin"/>
    </bean>

    <!--
    <bean id="configReaders" class="com.mapinfo.midev.configuration.ConfigurationReaders">

        <constructor-arg type="java.util.List">
            <list>

                <bean class="com.mapinfo.midev.configuration.ClasspathBasedConfigReader">
                    <constructor-arg value="WMSConfiguration.xml"/>
                </bean>

            </list>
        </constructor-arg>

    </bean>
    -->

    <bean id="configFactory" class="com.mapinfo.midev.wms.config.WMSConfigurationFactory"/>

    <bean id="configManager" class="com.mapinfo.midev.multitenancy.TenantConfigurationManager">
        <constructor-arg ref="configFactory"/>
        <constructor-arg ref="configReaders"/>
        <!--property name="tenantConfigurationReaders" ref="tenantReaders"/>
        <property name="interval" value="20"/-->
    </bean>

    <bean id="serviceProxy" class="com.mapinfo.midev.wms.WMSProxy">
        <constructor-arg ref="configManager"/>
    </bean>

    <bean class="org.springframework.web.context.support.ServletContextAttributeExporter">
        <property name="attributes">
            <map>
                <entry key="serviceProxy">
                    <ref bean="serviceProxy"/>
                </entry>
            </map>
        </property>
    </bean>

    <!-- partial copy from beans-jmx.xml -->

```

```
<!-- Enable JMX Administration -->
<!-- Note: 1) only FileBasedConfigReader and RepositoryBasedConfigReader
er
        should be used in ConfigurationReaders when JMX is enabled.
        2) RepositoryConfigurationMBean should be used
        if the RepositoryConfigurationReaders is used above.
-->
<bean id="configMBean" class="com.mapinfo.midev.wms.admin.Repository-
ConfigurationMBean">
    <constructor-arg ref="configReaders" />
</bean>
<bean id="adminMBean" class="com.mapinfo.midev.wms.admin.AdminMBean">
    <constructor-arg ref="serviceProxy" />
    <constructor-arg ref="configReaders" />
</bean>
<bean id="versionMBean" class="com.mapinfo.midev.wms.admin.VersionM-
Bean"/>

<!--
<bean id="exporter" class="org.springframework.jmx.export.MBeanExport-
er">
    <property name="assembler" ref="assembler"/>
    <property name="namingStrategy" ref="namingStrategy"/>
    <property name="autodetect" value="true"/>
</bean>
<bean id="jmxAttributeSource" class="org.springframework.jmx.export.an-
notation.AnnotationJmxAttributeSource"/>
<bean id="assembler" class="org.springframework.jmx.export.assem-
bler.MetadataMBeanInfoAssembler">
    <property name="attributeSource" ref="jmxAttributeSource"/>
</bean>
<bean id="namingStrategy" class="org.springframework.jmx.export.nam-
ing.MetadataNamingStrategy">
    <property name="attributeSource" ref="jmxAttributeSource"/>
</bean>
-->
</beans>
```

5. If you have not already modified resources.xml to uncomment out the WMS Service section, see [Configuring and Deploying the MapInfoManager Service](#).
6. Delete the existing WMSService.war.war and the WMSService.war folder from the Tomcat container located in `<installdir>\tomcats\tomcat-7.0.30_repository\webapps`.
7. Copy the entire WMSService folder with the edited files from the temporary location to the Tomcat container.
8. Stop and re-start Tomcat for this service to be deployed in the container. Run startup.bat located under `\tomcats\tomcat-7.0.30_repository\bin`.
9. Once you have configured all the services, test your installation by starting the services and launching MapInfo Manager from startup.bat.

Deploy MapInfo Manager to Multiple Tomcat Containers

The simplest manual installation process of MapInfo Manager is to deploy the services to the same Tomcat container. The default port number is 8080. The default installation directory is C:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.3\tomcats\tomcat-7.0.30_repository. The service configuration files are pre-defined to install to this location.

To deploy the services to multiple Tomcat containers, you will need to specify a unique port number for each service in the configuration file. The following are the default installation directories created during the deployment of each service containing a unique port number:

- ..\tomcats\tomcat-7.0.30_repository\webapps: Contains the RepositoryService.
- ..\tomcats\tomcat7_mapinfomanager: Contains the MapInfoManager Service and the LibraryService.
- ..\tomcats\tomcat7_midevcsw: Contains the CSWService.
- ..\tomcats\tomcat7_midevwms: Contains the WMSService.

Port numbers should be greater than 1024 and not conflict with other deployments on the same system. In addition, avoid using the following ports as they are needed by MapInfo Manager and Tomcat.

- MapInfo Manager repository RMI: 1099
- Tomcat shutdown port for MapInfoManager Service: 7006
- Tomcat shutdown port for Repository Service: 8006
- Tomcat shutdown port for CSW Service: 9006
- Tomcat shutdown port for WMS Service 9007

If you deploy all the services in one Tomcat, then the shut-down port to leave open is 8006. To find out the ports that are in use, at the command prompt, type netstat -a. Or contact your system administrator.

Deploying MapInfo Manager as a Windows Service

An option in the MapInfo Manager installer is to install the application as a Windows Service. This topic explains how to do that when you are installing MapInfo Manager manually.

This procedure assumes that all the services are deployed in a single Tomcat container. The services will display under the Control Panel > Administrative Tools > Services under the heading MapInfoManager 1.3.

To deploy MapInfo Manager as a Windows Service (one Tomcat container):

1. Deploy each service into a Tomcat container.
2. From a command prompt, navigate to the \bin folder. For a default deployment, go to \tomcats\tomcat-7.0.30_repository\bin.
3. Type the following:

```
start /WAIT /B service install "MIM13" "MapInfoManager v1.3" "MapInfo
```

```
Manager v1.3" (press enter)
```

This will create a Windows service called MapInfoManager 1.3 that contains all the services in the same container.

4. To remove the Windows service, type the following from a command prompt:

```
net stop MIM13 (press enter)
start /WAIT /B service remove "MIM13" (press enter)
```

Set Encoding for Tomcat

If you are installing MapInfo Manager manually to a location that contains non-ASCII characters, you must set the encoding for Tomcat to avoid problems during harvesting.

Note: This issue will not be encountered when using the installer to deploy MapInfo Manager.

Tomcat

To change the encoding in Tomcat, modify the catalina.bat file. For the default installation, the file is located in c:\Program Files (x86)\Pitney Bowes\MapInfo Manager 1.1\tomcats\tomcat-7.0.30_repository\bin.

On Line 107, make sure the -Dfile.encoding is set to UTF-8:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms256m -Xmx512m -XX:MaxPermSize=256m -Dfile.encoding=UTF-8
```

Do this for each Tomcat container you deploy. You must re-start Tomcat for the change to take effect.

Uninstalling MapInfo Manager

If you have installed MapInfo Manager manually, you must also uninstall it manually.

We recommend that you first **backup the Repository** before uninstalling MapInfo Manager.

To uninstall MapInfo Manager manually:

1. Move the folder PBBI_logs to a safe place. This contains the backup of your repository.
2. If you have deployed MapInfo Manager as a Windows Service, from a command window, navigate to the \bin folder for your installation (default is \tomcats\tomcat-7.0.30_repository\bin) and type the following:

```
net stop MIM13 (press enter)
start /WAIT /B service remove "MIM13" (press enter)
```

3. Delete all the folders under the install directory.

Once you have re-installed MapInfo Manager (manually or with the installer.exe, remember to copy PBI_logs under the install directory and **restore the Repository**.

