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1 - Introduction

This guide is designed to help you install, set up, and administer the Pitney Bowes License Server.

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Overview

Your organization recently purchased MapInfo Pro software from Pitney Bowes Inc. using a concurrent licensing scheme. A concurrent licensing scheme requires that a License Server be installed and maintained to handle requests for product licenses from other computers on the network.

License Server and Utility

The License Server handles requests for Pitney Bowes product licenses. The licenses will be distributable, concurrent, or borrowed.

The License Server Utility is an application that comes with the License Server. It enables you to configure the License Server and monitor the use of product licenses at your organization.

The License Server Utility supports a single license type per version. This means that you would need a License Server Utility to serve out concurrent licenses and a second License Server Utility to server out borrowable licenses when the licenses are for the same product version.

Concurrent Licenses

The concurrent license scheme enables multiple computers to run a product using a single License Server. The License Server limits the number of computers that can concurrently run a Pitney Bowes product to the number of concurrent licenses purchased by your organization.

When activating a concurrent license, you must supply the License Server computer name and port number to make the server connection. Once this information is entered correctly, the license check out occurs automatically each time the product is run.

Borrowable Licenses

Some concurrent licenses can be borrowed. Borrowable license enable you to use a product when your computer is not connected to the License Server. For example, if you have your product installed
on a laptop computer, but will be away from the office, you can borrow a license to use the product while you are away.

The product must be connected to the License Server in order to borrow a license. The method you use to borrow a license depends on the product you are using. Please see your product documentation for more specific information.

When you borrow a license, you do so for a set period of time. If you have not returned the license before the end of the borrow period, the license is automatically returned to the License Server when next connected to it. See Maximum Borrow Period for instructions.

**Distributable Licenses**

Distributable licenses are much like borrowable licenses, however they do not expire after a set time period. Instead of borrowing a license for a finite time period, you activate the license for unrestricted use of the licensed product for an indefinite duration of time.

The product must be connected to the License Server in order to activate a distributable license. The method you use to activate a license depends on the product you are using. Please see your product documentation for more specific information.

When you no longer need to use the product you have licensed, you can return the distributable license back to the License Server and make it available to others in your organization.

**License Server Administrator**

The License Server Administrator is the person at your organization assigned to set up and configure the License Server. The Administrator’s primary responsibilities are:

• Install and maintain the Pitney Bowes License Server.
• Activate a server license in order to manage product license use.
• Inform product users of the License Server computer name and port number they must use when checking in or out product licenses.
• Monitor Pitney Bowes product licenses using the License Server Utility.
• Specify the maximum borrow limit for which a user can borrow a license.
2 - Installation and Activation

This section explains how to install the License Server and activate a server license.

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- Stopping and Starting the License Server Utility: 10
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- Activating a Server License: 12
- Connecting Users to the License Server: 17
System Requirements

This product is tested on the following Microsoft Windows Desktop Operating Systems:

• Windows 10 64-bit
• Windows 8.1 64-bit
• Windows 7 Ultimate 64-bit SP1
• Windows 2016 Server 64-bit
• Windows 2012 Server R2 64-bit SP1
• Windows 2012 Server R2 64-bit with XenApp 7.5
• Windows 2008 Server R2 64-bit SP1
• Windows 2008 Server R2 64-bit SP1 with XenApp 6.0

This product supports the above Operating Systems in these virtualized environments:

• VMware Workstation 10.0
• VMware ESXi 5.5

System Notes

There are no special instructions for installing the License Server Utility on a 64-bit Windows Operating System.

The License Server Utility runs in the following virtualized environments:

• VMware Workstation 10
• VMware ESXi 5.5

OpenSource Attribution Notices

QT Assistant 5.2.0

This product contains QT Assistant, version 5.2.0, which is licensed under GNU Lesser General Public License, Version 2.1, February 1999. The license can be downloaded from: http://www.gnu.org/licenses/lgpl-2.1.txt. The source code for this software is available from http://qt-project.org/downloads.
Installation

This section explains how to install the License Server for the following scenarios:

- **New installation** – You are installing the License Server for the first time, or you have removed your earlier installation. See **New Installation** for instructions.
- **Upgrade installation** – You are installing the License Server over an earlier version of the product. For instructions, see **Upgrade Installation** on page 9.

When you install the License Server, the License Server Utility is also installed. The License Server lets you activate server licenses for Pitney Bowes products and perform server administration tasks.

**Note:** If you are upgrading a product using a borrowable or distributed license, make sure that you install a compatible version of the License Server Utility. A compatible License Server Utility version is one that is released with or after the version of the product that you are upgrading to. If you install or upgrade MapInfo® Pro 17.0, ensure that you install License Server Utility 4.9.

Using an incompatible version of the License Server Utility might result in the following issues while fetching licenses for the product:

- The product is unable to borrow a borrowable license.
- The product is unable to activate a distributed license from the License Server.

If this occurs, contact your License Server administrator and have them upgrade the License Server to a version compatible to your product.

After successfully borrowing or activating a license, if you revert back to an older version of the License Server Utility, you cannot transfer borrowed and/or activated license back to the License Server. If you try, the operation pauses without an error message.

**New Installation**

To install the License Server:

1. Insert the media into the drive. Locate the License server utility on the DVD under Install Products and MapInfo License Server, or on the DVD at Professional_PROG_DVD\Install\MILServ\MILS_Setup.exe.

   If installing from the path, right-click the MILS_Setup.exe file and select Run as Administrator from the popup menu to install using elevated privileges. A prompt for permission to continue displays. Click Allow or Yes to proceed (if you do not respond and the message times-out and the install is unsuccessful).

   The wizard begins to lead you through the installation process.
2. At the **Welcome** dialog box, click Next.

3. At the **License Agreement** dialog box, click the I accept the terms of the license agreement button. To print the license agreement, click Print. Click Next.

4. At the **Destination Folder** dialog box, select the location of the License Server. The default location is:
   
   C:\Program Files\MapInfo\License Server\

5. Click Change to select a different location. Click Next when your destination folder is set.

6. At the **Server Port** dialog box, type the port number you want to use for the server in the License Server Port Number field. The default port is 27000. Click Next.
   
   **Note:** Valid port numbers range from 1 to 64000.

7. At the **Ready to Install the Program** dialog box, click Install.
   
   The License Server and License Server Utility will be installed using the settings you specified in the previous steps.

8. At the **Installshield Wizard Completed** dialog box, click Finish.

   The License Server is installed.

### Upgrade Installation

If you have an earlier version of the License Server installed, perform an upgrade installation.

When upgrading you may have a short period of downtime if users attempt to access the License Server while the update is in progress. If licenses are already activated on your existing License Server, upgrading will not transfer the licenses back to Pitney Bowes. If you wish to transfer the licenses back to Pitney Bowes, refer to **Transferring a License** on page 24.

To install the License Server:

1. Insert the media into the drive.

   If installing from the path, right-click the MILS_Setup.exe file and select Run as Administrator from the popup menu to install using elevated privileges. A prompt for permission to continue displays. Click Allow or Yes to proceed (if you do not respond and the message times-out and the install is unsuccessful).

   The wizard begins to lead you through the installation process.

2. At the **Welcome** dialog box, click Next.

3. At the **License Agreement** dialog box, click the I accept the terms of the license agreement button. To print the license agreement, click Print. Click Next.

4. At the **Ready to Install the Program** dialog box, click Install.

   The License Server and License Server Utility will be installed using the settings you specified in the previous steps.
5. At the **Installshield Wizard Completed** dialog box, click Finish. The License Server upgrade is installed.

### Stopping and Starting the License Server Utility

You must use Windows Services to stop or start the License Server. Windows Services is located in the Windows Control Panel.

- **Accessing Windows Services** on page 10
- **Stopping the License Server** on page 10
- **Starting the License Server** on page 11
- **Starting the License Server Utility** on page 11

### Accessing Windows Services

To access Windows Services:

1. On the Start menu, click Control Panel.
2. On the **Control Panel** window, type services in the Search box.
3. From the search results, select **Administrative Tools**.
4. On the **Administrative Tools** window, double-click Services.

### Stopping the License Server

To stop the License Server:

2. Locate MapInfo License Server in the Services list and click on it to highlight it.
3. Do one of the following:
   - Click Stop, which is located on the left side of the Services window.
   - On the Action menu, click Stop.
   - Right-click to open the popup menu and click Stop.

When the service has stopped, the "Started" status is removed from the Status field of the Services window. Nothing displays in the Status field when a service is stopped.
Starting the License Server

To start the License Server:
2. Locate MapInfo License Server in the Services list and click on it to highlight it.
3. Do one of the following:
   • Click Start, which is located on the left side of the Services window.
   • On the Action menu, click Start.
   • Right-click to open the popup menu and click Start.

When the service has started, the service status changes to "Started" in the Status field of the Services window.

Starting the License Server Utility

To start the License Server Utility:

• On the Windows Start menu, point to Program Files, MapInfo, License Server, and License Server Utility.

The License Server Utility application window displays on the screen.

When you start the License Server Utility for the first time, the License Server Utility application window is empty.

The title bar of the window indicates the License Server name and port number, and whether the server is running. If the License Server is not running, go to Windows Services and start the License Server (see Starting the License Server on page 11).
Port for License Server Utility

In case the License Server Utility is running on a machine behind the firewall, TCP/IP port for license server manager (lmgrd) and the vendor daemon (unisw20) should be explicitly specified in the license file (MILICSERVER.lic). The specified ports should be opened on the firewall. The MILICSERVER.lic file is located in the LicenseServerUtility installation folder. The port information is specified in the first two (2) lines in the license file.

```
SERVER this_host ANY LicenseServerManagerPortnumber
VENDOR unisw20 PORT=VendorDemonPortNumber
```

The LicenseServerManagerPortnumber should be between 1–64000.

**Note:** After any change is done in the license file the Pitney Bowes License Server service should be restarted.

Activating a Server License

To make licenses available to Pitney Bowes product users, you must activate a server license for the Pitney Bowes product being used. You must also have the following information about the Pitney Bowes product being licensed:

- Serial number
- Access code
- Number of licenses you want on your server

**Note:** This number cannot exceed the total number of licenses that your organization purchased. If using multiple license servers, the sum of the licenses on all servers cannot exceed the number of licenses purchased.

The serial number and access code are located on the product box and on the Product Activation Card that comes with your product.

There are two activation methods:

- **Automatic Activation**
- **Email Activation**
Automatic Activation

Automatic activation requires that you have an Internet connection.

The Activation wizard will make a one-time connection with a Pitney Bowes server. Using the activation credentials that came with your product, the Activation wizard will retrieve one of the licenses your organization purchased and associate it with your computer.

To activate a server license automatically:

1. On the Windows Start menu, point to Program Files, MapInfo, License Server, License Server Utility to start the License Server Utility.
   The License Server Utility application window displays on the screen. You may see one or more existing licenses listed in the application window.

2. On the License menu, click Activate.
   The Specify Activation Credentials dialog box displays on the screen.

3. Enter the serial number, access code, and the number of licenses for the License Server, and click Next.
   The Select Activation Method dialog box displays on the screen.

4. Select Automatic Activation, and click Next.
   The Activation wizard takes a few moments to transfer the activation credentials to Pitney Bowes and perform the activation. When the activation is completed, a message dialog box displays on the screen to tell you that the activation was successful.

5. Click OK.
   The License Server Utility displays the number of licenses that you specified during the activation.
Installation and Activation

For information on server tasks and viewing license information, see **Using the License Server Utility** on page 19.

Email Activation

Select the Email Activation option if you do not have an Internet connection. The **Activation** wizard will guide you through the creation of an Activation Request file that you must then email to Pitney Bowes.

Pitney Bowes processes the request and sends back two Activation Response files. The **Activation** wizard uses the information in these files to activate the server license. These files must be processed subsequent to one another. Once you have completed the entire email activation process, you may delete the Activation Response files from your system.

To activate a server license via email:

1. On the Windows Start menu, point to Program Files, MapInfo, License Server, License Server Utility to start the License Server Utility.
   The License Server Utility application window displays on the screen. You may see one or more existing licenses listed in the application window.

2. On the License menu, click Activate.
   The **Specify Activation Credentials** dialog box displays on the screen.
3. Enter the serial number, access code, and the number of licenses for the License Server, and click Next.
   The Select Activation Method dialog box displays on the screen.

4. Select Email Activation and click Next.
   The Specify location to save Activation Request file dialog box displays on the screen.

5. Select a folder in which to save the Activation Request file. Click the Browse button to navigate to the desired location. Click OK.
   The selected path will appear in the box.

6. Click Next.
   The Save this important Information dialog box displays on the screen.

   ![Save this important information dialog box]

   This dialog box provides the information to send your Activation Request file to Pitney Bowes. The full path and filename of the Activation Request file is displayed in the Activation Request File box. Note that the Activation request filename includes the serial number, access code, and license count for the product being activated. The email address to send the file, **activation@mapinfo.com**, is displayed in the Email address box.

   Take a few moments to write down the location of the Activation Request file and email address to send the Activation Request file. Caution: Please do not edit the Activation Request file in any way. If you do, Pitney Bowes may not be able to process it and your activation will be delayed.

7. Click OK.
   The Activation wizard closes.

8. Email your Activation Request to Pitney Bowes **activation@mapinfo.com**

   You can continue with the email activation when you receive an Activation Response file from Pitney Bowes. You should receive the Activation Response file within one business day.
**Processing the First Activation Response File**

When you receive the first Activation Response file from Pitney Bowes, do the following:

1. Copy the Activation Response file you received from Pitney Bowes to an accessible folder on your computer and make note of the location.
2. Run the License Server Utility.
   The **Process Email Activation Response** dialog box displays on the screen.
4. Click Browse to navigate to the location of the Activation Response file. Click Open in the **Locate Response file** dialog box when you have located the file.
   The path and filename of the Activation Response file appear in the box.
5. Click Next.
   The **Activation** wizard processes the Activation Response File, and the **Specify location to save Request** dialog box displays on the screen. Now you must create the second Activation Request file.
6. Select a folder in which to save the second Activation Request file. Click the Browse button to navigate to the desired location. Click OK.
   The selected path will appear in the box. Note that the Activation request filename includes the serial number, access code, and license count for the product being activated.
7. Click Next.
   The **Save this important Information** dialog box displays on the screen.
   This dialog box provides the information to send your Activation Request file to Pitney Bowes.
   The full path and filename of the Activation Request file is displayed in the Activation Request File box. Note that the Activation request filename includes the serial number, access code, and license count for the product being activated. The email address to send the file, **activation@mapinfo.com**, is displayed in the Email address box.
   Take a few moments to write down the location of the Activation Request file and email address to send the Activation Request file. Caution: Please do not edit the Activation Request file in any way. If you do, Pitney Bowes may not be able to process it and your activation will be delayed.
8. Click OK.
   The **Activation** wizard closes.
9. Email your Activation Request to Pitney Bowes **activation@mapinfo.com**

You can finish the email activation when you receive the second Activation Response file from Pitney Bowes. You should receive the Activation Response file within one business day.

**Processing the Second Activation Response File**

When you receive the second Activation Response file from Pitney Bowes, do the following:

1. Copy the Activation Response file you received from Pitney Bowes to an accessible folder on your computer and make note of the location.
2. Run the License Server Utility.
   The Process Email Activation Response dialog box displays on the screen.

4. Click Browse to navigate to the location of the Activation Response file. Click Open in the Locate Response file dialog box when you have located the file.
   The path and filename of the Activation Response file appear in the box.

5. Click Next.
   The Activation wizard processes the Activation Response File and a message tells you that the activation was successful.

6. Click OK.
   The License Server Utility displays the number of licenses that you specified during the activation.

For information on server tasks and viewing license information, see Using the License Server Utility on page 19.

After you have completed activation, you can delete the Activation Response files. You do not need to keep them on your computer.

**Note:** There are some instances when the License Server Administrator will only need one email exchange with to activate a server license. When this occurs, the procedure to process the first Activation Response file is skipped.

### Connecting Users to the License Server

To run their Pitney Bowes products using a concurrent license, users must be able to connect to the License Server so that they can check out a license. To connect to the License Server, users must identify the following information about the License Server to their Pitney Bowes product:

- License Server name
- port number

After a user has established a License Server connection, the check out occurs automatically. At your earliest convenience, please provide your Pitney Bowes product users with this information.

Users are first prompted for this information when they install their product. If they do not have the information, they can complete the installation without filling in the License Server name and port number.
The next time users are prompted is when they run the product. If they do not have the information, they can run their Pitney Bowes product under the courtesy period, but at some point they will have to connect to the License Server to check out a license.
3 - Using the License Server Utility

This section explains how to use the License Server Utility to monitor and administer the License Server.

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Overview

The License Server Utility enables you to monitor the license usage on the License Server for Pitney Bowes products that your organization has purchased.

This section explains the tasks you can perform with the License Server Utility and where to find important information about the License Server and licenses.

**Note:** All procedures explained in this chapter assume that the License Server Utility is already open.

License Summary Information

When you open the License Server Utility, it updates the license usage from the License Server. A summary of the licenses and usage at your organization displays in the License Server Utility application window.

You can view the following information:

- **Product Name** – Indicates the product associated with the license or licenses.
- **Type** – The type of license your organization purchased: hybrid or concurrent.
- **Total Count** – The total number of licenses purchased.
- **Available Count** – The number of licenses available for check out.

To obtain more information about a license, use the License Properties.

License Properties

The License Properties provides more detailed information about the Pitney Bowes license usage at your organization.

To open the License Properties for a license:

1. Select an item in the license list to highlight it.
2. Choose LicenseProperties.

The **License Properties** dialog box displays on the screen. The License Properties are divided into three categories:
Summary

The Summary section of the License Properties gives an overview of your organization’s Pitney Bowes license usage. The Summary section provides all the information that you see in the application window of the License Server Utility, plus the number of licenses that have been checked out or borrowed.

The Summary section shows the following information:

Product

The name of the Pitney Bowes product as it appears in the main license list.
Total
The total number of licences that were purchased.

Checked out
The number of licenses that have been checked out.

Borrowed
The number of licenses that have been borrowed.

Available
The number of licenses available for check out.

In the License Properties example, there are a total of 4 licenses, out of which 2 have been checked out and remaining 2 have been borrowed.

License Detail

The License Detail section of License Properties provides more detail about the licenses for each product. The License Detail section shows the following information:

Serial number
The serial number associated with the product’s server license.

Access code
The access code associated with the product’s server license.

Type
Indicates whether the license is a hybrid, activatable or concurrent license.

Count
The number of licenses associated with that activation.

Trusted
Indicates whether the license is valid and is not suspected of being tampered with. (A license that is not trusted may be disabled.)

Enabled
Indicates whether a license is enabled.

There are some circumstances where it is possible to have more than one item in this list:

• If all the licenses associated with a particular serial number and access code are not activated at the same time, you will see multiple activations using the same access code.
• If you organization purchased additional licenses for the same product, you will see multiple activations using different access codes.
Usage List

The Usage List provides information about checked out and borrowed licenses.

The Usage list shows the following information:

Type
Indicates the status type of the licence: Checked out or Borrowed.

Computer
The name of the computer from which the license is being used.

Note: If the computer using the license is being remote controlled when the check out or borrow action occurs, then the name of the controlling computer will be reported.

User
Indicates the user of the checked out license. User information is not available for borrowed licenses.

Start Date
The date that the license was checked out. The Start Date is not available for borrowed licenses.

End Date
The date that the borrowed license expires. The End Date is not available for checked out licenses.

Export

The License Server Utility allows you to export all active license information on your server into a text or CSV (comma separated value) format.

If you have licenses for multiple versions of MapInfo Pro, you need to select the MapInfo Pro version before exporting the license information.

To export the license information:

1. Start the License Server Utility.
2. Choose the MapInfo Pro version in the Product Name list.
3. From the License menu, choose Properties. The License Properties dialog box displays.
4. In the License Properties dialog box, click Export. The **Save As** dialog box displays.

5. In the **Save As** dialog box, specify the file save location in the Save in box.

6. Specify a file name in the File name box.

7. Choose .txt or .csv from the Save as type list.

8. Click Save.
   The license information is exported into the selected format.

## Transferring a License

If you want to move the License Server to another computer, you will need to transfer your server license to Pitney Bowes temporarily. After you install the License Server to the other computer, you can activate the server license again.

There are two license transfer methods:

- **Automatic Transfer**
Using the License Server Utility

Select this option if you have an Internet connection on the computer where the License Server resides. Your license will be automatically transferred to Pitney Bowes. See Automatic Transfer for instructions.

Email Transfer
Select this option if you do not have an Internet connection. You will be guided through the creation of a Transfer Request file, which you must then email to Pitney Bowes. See Email Transfer for instructions.

Note: Before you can transfer a license to Pitney Bowes, all borrowed licenses must be returned. To review a list of users with borrowed licenses, on the License menu, click Properties.

Automatic Transfer

To perform an automatic transfer, you must have an Internet connection.

To transfer a license automatically:
1. Select the item in the license list for the product server license you want to transfer.
2. On the License menu, click Transfer.
   The Select Transfer Method dialog box displays on the screen.
3. Select Automatic Transfer, and click Next.
4. Do one of the following:
   - If you have one license record, go to the next step.
   - If you have more than one license record for a product license, the Choose the license record to transfer dialog box displays on the screen. Select the license record you want to transfer, and click Next.

   A message displays asking you to confirm whether you want to transfer the license to Pitney Bowes.
5. Click Yes.
   All activated licenses associated with the selected product are returned.

Note: If there is a borrowed license against the selected product, a message will display to inform you that all borrowed licenses must be returned before you can transfer the license.

Email Transfer

Email transfer requires an email exchange with Pitney Bowes where you create a Transfer Request file and send it to Pitney Bowes. Pitney Bowes processes the request and sends back a Transfer Response file. The Transfer wizard uses the information in the Transfer Response files to transfer the server license.
To transfer a server license via email:

1. Select the license you want to transfer from the license list.

2. On the License menu, click Transfer.
   The Select Transfer Method dialog box displays on the screen.

3. Select Email Transfer, and click Next.

4. Do one of the following:
   - If you have one license record, go to the next step.
   - If you have more than one license record for a product license, the Choose the license record to transfer dialog box displays on the screen. Select the license record you want to transfer, and click Next.

   A message displays asking you to confirm whether you want to transfer the license to Pitney Bowes.

5. Select a folder in which to save the Transfer Request file. Click the Browse button to navigate to the desired location. Click OK.
   The selected path will appear in the box. The Transfer Request contains your serial number and access code, plus information that identifies the computer you are activating on.

6. Click Next.
   The Save this important Information dialog box displays on the screen.

   This dialog box provides the information to send your Activation Request file to Pitney Bowes. The full path and filename of the Activation Request file is displayed in the Activation Request File box. Note that the Activation request filename includes the serial number, access code, and license count for the product being activated. The email address to send the file, activation@mapinfo.com, is displayed in the Email address box.
Using the License Server Utility

Take a few moments to write down the location of the Activation Request file and email address to send the Activation Request file. Caution: Please do not edit the Activation Request file in any way. If you do, Pitney Bowes may not be able to process it and your activation will be delayed.

7. Click OK.

The license record that you transferred still exists, but it has been marked as disabled. Users can no longer check out or borrow against the license. The license count has also been decremented.

If you view the License Properties, you will see the license record listed, but it is marked as disabled. The disabled license record will be removed if you activate another server license for the same product.

8. Email the Transfer Request file to Pitney Bowes activation@mapinfo.com

Pitney Bowes Customer Service will send you an email reply confirming that the transfer was successful. You should receive this confirmation within one business day.

Note: There is no Response file to process.

Repairing a Distributable License

You can repair broken distributable licenses up to a certain limit. You can repair up to 10% of the number of distributable licenses you own. For example, if you have 50 distributable licenses, you will be able to repair up to five (5) broken licenses.

To enable the repair of a distributable license:

1. Activate the distributable licenses in a single transaction.
2. Consume these licenses in MapInfo Pro.
3. Open the License Server Utility. On the License menu, click Properties to open the License Properties dialog box.
   The license summary section shows the number of licenses that MapInfo Pro has in use so far.
4. Click Close.
5. Exit and open MapInfo Pro. If a license is broken, MapInfo Pro checks for the broken licenses and repairs them.
6. Open the License Server Utility.
   The License Properties dialog box displays. The license summary section now shows the number of licenses that MapInfo Pro has repaired.
Overdraft Support for Distributable Licenses

You can overdraft on distributable licenses in MapInfo Pro up to 10% of the number of distributable licenses you own. For example, if you have 50 distributable licenses, you will be able to overdraft up to 5 broken licenses.

You can use the overdraft feature when, for example, you lose a license due to a machine format or crash.

To enable overdraft of a distributable license:
1. Activate the distributable licenses in a single transaction.
2. Consume these licenses in MapInfo Pro.
3. Open the License Server Utility. On the License menu, click Properties to open the License Properties dialog box.
   The license summary section shows the number of licenses that MapInfo Pro has in use so far.
4. Click Close.
5. Exit and restart MapInfo Pro.
6. Open the License Server Utility.
   The License Properties dialog box displays. The license summary section now shows the number of licenses that have been overdrafted.

License Server Utility Options File for MapInfo Pro and MapInfo Runtime

The options file allows the license administrator to control various parameters, like user access control, within the constraints of the license.

The parameters that can be controlled by a License Server Utility administrator are as follows:

• Deny or allow a user access to any product within License Server Utility
• Prevent or allow a user from borrowing any license or licenses with a specific entitlement ID
• Allow a user to use a specific product
• Set usage limitations on a particular product
• Reserve license for a particular user

Examples of a product can be:

• MAPINFO.PROFESSIONAL.1200 for MapInfo Pro version 12.0.x
• MAPINFO.PROFESSIONAL.1150 for MapInfo Pro version 11.5.X
• MAPINFO.PROFESSIONAL.RT.1150 for Mapinfo Runtime version 11.5.X

**Key Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>Defines the user name of the user running MapInfo Pro or MapInfo Runtime. User names are case sensitive and must not contain spaces. For example, user1, user1, etc. A user or multiple users can be defined as: USER user1 user2</td>
</tr>
<tr>
<td>Host</td>
<td>Defines the system host name or the IP address on which the application is being run. Host names are case sensitive. For example, host1, host2, etc. The IP address can contain wildcard characters, for example, 153.142.75.* (0-255). A host can be defined as: HOST host1 host2 153.142.75.120</td>
</tr>
<tr>
<td>Group</td>
<td>Defines a group of users by their user names. For example, group1, group2, etc. A group can be defined as: GROUP group1 user1 user2 where the group group1 consists of the users user1 and user2.</td>
</tr>
<tr>
<td>Host Group</td>
<td>Defines a particular group by its host name or its IP address. For example, host_group1, host_group2, etc. A host group can be defined as: HOST_GROUP host_group1 153.142.75.125 host1 where host_group1 consists of an IP address 153.142.75.125 and a host host1.</td>
</tr>
<tr>
<td>Comment</td>
<td>Include comments in your options file by starting each comment line with #. A comment can be used as: # Defining the group group1</td>
</tr>
</tbody>
</table>

**Modifying Options in the Options File**

The options file, unisw20.opt, located in the License Server Utility installation folder, is used to define and modify the options and control various parameters.
Using the License Server Utility

**Note:** After modifying the file unisw20.opt, you need to restart the MapInfo License Server services. Lines in the options file are limited to 4000 characters.

**Concurrent License**

The License Server Utility administrator can control access for concurrent licenses. For example, let us assume the current version is MAPINFO.PROFESSIONAL.0490 and the previous version is MAPINFO.PROFESSIONAL.1600.

**INCLUDE option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>group1 can use the license for only product1.</td>
<td>INCLUDE MAPINFO.PROFESSIONAL.0490 GROUP group1</td>
</tr>
<tr>
<td>user1 can use the license for only product1.</td>
<td>INCLUDE MAPINFO.PROFESSIONAL.0490 USER user1</td>
</tr>
<tr>
<td>host_group1 can use the license for only product1.</td>
<td>INCLUDE MAPINFO.PROFESSIONAL.0490 HOST_GROUP host_group1</td>
</tr>
<tr>
<td>host1 can use the license for only product1.</td>
<td>INCLUDE MAPINFO.PROFESSIONAL.0490 HOST host1</td>
</tr>
<tr>
<td>group2 can use license for only product2.</td>
<td>INCLUDE MAPINFO.PROFESSIONAL.1600 GROUP group2</td>
</tr>
</tbody>
</table>

**EXCLUDE option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevents group1 from using product1 on any system on the network.</td>
<td>EXCLUDE INCLUDE MAPINFO.PROFESSIONAL.0490 GROUP group1</td>
</tr>
</tbody>
</table>
### Using the License Server Utility

#### Scenario
- **Prevents user1 from using product1 on any system on the network.**
- **Prevents host_group1 from using product1 on any system on the network.**

#### Entry in the Options File
- `EXCLUDE INCLUDE MAPINFO.PROFESSIONAL.0490 USER user1`
- `EXCLUDE INCLUDE MAPINFO.PROFESSIONAL.0490 HOST_GROUP host_group1`

#### EXCLUDEALL option

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevents group1 to use any license from the License Server Utility.</td>
<td><code>EXCLUDEALL GROUP group1</code></td>
</tr>
<tr>
<td>Prevents user1 to use any license from the License Server Utility.</td>
<td><code>EXCLUDEALL USER user1</code></td>
</tr>
<tr>
<td>Prevents host_group1 to use any license from the License Server Utility.</td>
<td><code>EXCLUDEALL HOST_GROUP host_group1</code></td>
</tr>
</tbody>
</table>

#### RESERVE option

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserves two licenses for group1 for product1.</td>
<td><code>RESERVE 2 INCLUDE MAPINFO.PROFESSIONAL.0490 GROUP group1</code></td>
</tr>
<tr>
<td>Reserves two licenses for host_group1 for product1.</td>
<td><code>RESERVE 2 INCLUDE MAPINFO.PROFESSIONAL.0490 HOST_GROUP host_group1</code></td>
</tr>
</tbody>
</table>
**MAX option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricts group1 to use more than five licenses for product1.</td>
<td>MAX 5 INCLUDE MAPINFO.PROFESSIONAL.0490 GROUP group1</td>
</tr>
<tr>
<td>Restricts host_group1 to use more than five licenses for product1.</td>
<td>MAX 5 INCLUDE MAPINFO.PROFESSIONAL.0490 HOST_GROUP host_group1</td>
</tr>
</tbody>
</table>

**Preventing a Single User from using a License**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows all group1 users, except for user user2, to use licenses for product1.</td>
<td>GROUP group1 user1 user2 user3 user4 INCLUDE INCLUDE MAPINFO.PROFESSIONAL.0490 GROUP group1 EXCLUDE INCLUDE MAPINFO.PROFESSIONAL.0490 USER user2</td>
</tr>
</tbody>
</table>

**Distributed and Borrowable License**

The License Server Utility administrator can control access for distributable and borrowable licenses. For example, let serialno1= MIXXXXXXXXXXXXXX-XXXXXX and serialno2= MIYYYYYYYYYYYYYYYYYYYY.

**INCLUDE_ENTITLEMENT option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>The host group host_group1 can only borrow licenses using the serial number serialno1.</td>
<td>INCLUDE_ENTITLEMENT serialno1 HOST_GROUP host_group1</td>
</tr>
<tr>
<td>The group group1 can only borrow licenses using the serial number serialno2.</td>
<td>INCLUDE_ENTITLEMENT serialno2 GROUP group1</td>
</tr>
</tbody>
</table>
Using the License Server Utility

**EXCLUDE_ENTITLEMENT option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevents group1 from borrowing any licenses using the entitlement serialno1.</td>
<td>EXCLUDE_ENTITLEMENT serialno1 GROUP group1</td>
</tr>
<tr>
<td>Prevents user1 from borrowing any licenses using the entitlement serialno1.</td>
<td>EXCLUDE_ENTITLEMENT serialno1 USER user1</td>
</tr>
<tr>
<td>Prevents host_group1 from borrowing any licenses using the entitlement serialno1.</td>
<td>EXCLUDE_ENTITLEMENT serialno1 HOST_GROUP host_group1</td>
</tr>
</tbody>
</table>

**Excluding a User from Borrowing a License**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Entry in the Options File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows all group1 users except user2 to borrow licenses using the serial number serialno1.</td>
<td>GROUP group1 user1 user2 user3 user4</td>
</tr>
<tr>
<td></td>
<td>INCLUDE_ENTITLEMENT serialno1 GROUP group1</td>
</tr>
<tr>
<td></td>
<td>EXCLUDE_ENTITLEMENT serialno1 USER user2</td>
</tr>
</tbody>
</table>

**Important:**
- EXCLUDE_ENTITLEMENT supercedes INCLUDE_ENTITLEMENT.
- EXCLUDE supercedes INCLUDE.

**Refreshing the License List**

When you refresh the license list, the license information is updated from the last time you started the License Server Utility.

To refresh the license list:
- On the Server menu, click Refresh.

A progress window displays and the license list is updated.
Maximum Borrow Period

With MapInfo Pro using License Server Utility you can configure the maximum borrow limit on the License Server. The borrow period is between 1 and 365 days. Once a new limit is set in the License Server Utility, a product user will be able to borrow a license to a maximum of that many number of days.

**Note:** The default maximum borrow limit is 365 days. If needed, an administrator can re-set the maximum borrow limit in the License Server Utility to a new value.

To display the Maximum Borrow Period, do the following using the License Server Utility:

1. On the Server menu, click Maximum Borrow Period to open the **Maximum Borrow Limit** dialog box.
2. Enter the maximum borrow limit (1 to 365 days) and click OK.
   This value is set as the new maximum borrow limit.

License Server Information

The MapInfo Licenser Server Utility enables you to view information about the License Server using the log file. The log file is displayed in an application that is associated with a .txt file, like Notepad.

You can view the following information:

- Port number
- License Server computer name
- Service status (started or stopped)
- Version (of lmgrd.exe)

To display the log file, perform one of the following:

- On the File menu, click Open Log File.
- Browse to the License Server installation folder and open log.txt.
Troubleshooting

Creating a Log File for Capturing Error Messages

You can address licensing issues, such as the loss of licenses, by specifying that error messages from the License Server are written to a log file. You would use this capability when reporting licensing issues to your Customer Support Representative, who will assist you with setting the license logging level. Your Customer Support Representative will read the messages in this log file to assist with troubleshooting license issues.

To turn on error logging and specify the amount of information saved to a log file, you would set a License Server environment variable called MI_LOGLEVEL to a value of 1 to 3. Setting a value of zero (0) disables error logging. By default, the License Server logging level is set to one (1), which logs error messages for some specific situations and if there is a deletion of invalid licenses.

<table>
<thead>
<tr>
<th>Logging Level</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Disables logging.</td>
</tr>
<tr>
<td>1</td>
<td>Logs short error messages and error codes, and logs if there is a deletion of invalid licenses. This is the default setting.</td>
</tr>
<tr>
<td>2</td>
<td>Logs detailed error messages and error codes, logs if there is a deletion of invalid licenses, and logs additional diagnostic messages.</td>
</tr>
<tr>
<td>Logging Level</td>
<td>Action</td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td>3</td>
<td>Logs everything that level 2 logs with additional information. This level is only useful for client applications like MapInfo Pro that use borrowable or distributable licenses.</td>
</tr>
</tbody>
</table>

The License Server records every license activity that is happening on the server to a file called PBLicense.log in the Windows %temp% folder on the machine where the License Server is running. Client software, such as MapInfo Pro, records every license activity that is happening on the client machine to a file called PBLicense.log in the Windows %temp% folder on the client machine. The %temp% folder is set by default to C:\Users\<username>\AppData\Local\Temp.

When reporting a licensing issue to your Pitney Bowes Technical Support representative, you will send this log file along with the details of your issue.

If the log file reaches the maximum size limit (of approximately 1MB), then it is renamed to PBLicense.bak, and the new log entries are written in the new PBLicense.log file.

To set the logging level:

1. On the Start menu, click Run. In the Run dialog box, type Control Panel. Select System and then Advanced System Settings.
2. In the System Properties dialog, select the Advanced tab and click Environment Variables.
3. In the Environment Variable dialog box, in the User variables panel, click New.
4. In the New User Variable dialog box:
   • In the Variable name field, type MI_LOGLEVEL.
   • In the Variable value field, type the logging level (a value of 0 to 3). Setting a value of zero (0) disables error logging. Setting no value, causes the License Server to use a default logging value of one (1).
5. Click OK to close the dialog boxes and save the new variable.

If the License Server is running, then stop and restart it now to apply the new system variable and start logging messages. If MapInfo Pro is running, then you must also restart it.
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