

MassTransit 6.0 Enterprise Web Configuration For Windows

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Using This Document

This document is a comprehensive guide to [installing](#) and [upgrading](#) the MassTransit Web (MTWeb) component provided with MassTransit Enterprise. MassTransit supports the following features via the web interface: file transfer, job tickets, log viewing, password change and reporting. MassTransit 6.0 introduces new reporting features including system based reports and contact based reports; passkey login enabling users to log into the web interface without having to know a username and password; and two new levels of SSL encryption for secure data transfer. To learn more about the new 6.0 features, please go to the “[Other MassTransit 6.0 Resources](#)” section of this document.

MTWeb requires four components – MassTransit Enterprise, MySQL 5, a web server (IIS or Apache), and PHP 5. Please view the latest ReadMe for a comprehensive list of the recommended system requirements located at <http://www.grouplogic.com/files/glidownload/mtreleases.cfm>.

Before You Begin

To configure the MassTransit Web Interface on Windows 2003 or Windows XP Professional you will need to have:

- MySQL 5 installed and configured
- MassTransit Enterprise 6.0 installed and configured
- Internet Information Services (IIS) 5 or 6; 6 is recommended

NOTE: You MUST install the MassTransit web site files corresponding to your MassTransit engine version. **MassTransit 6.0 requires version 6.0 web files.**

System Requirements

MassTransit Web requires the following components:

- MassTransit Enterprise version 6.0 or higher.
- MySQL version 5.0.42 is required for MassTransit 6.0.
- PHP 5.2.x.
- Internet Information Services (IIS) 5 or 6; 6 is recommended.

Along with the above components, MassTransit Web requires one of the following web browsers:

Windows

- Internet Explorer 7 or higher
- Firefox 2 or higher

Macintosh

- Safari 3 or higher
- Firefox 2 or higher

For a complete listing of all system requirements, please see the MassTransit ReadMe.

MassTransit Web Setup for New Installations

These instructions will properly configure the MassTransit web interface for new MassTransit installations. If you are upgrading from a previous version of MassTransit that had the web interface configured, please use the instructions in the “Upgrading MTWeb 5.x Installation to MTWeb 6.0” section.

The MassTransit web setup consists of three steps:

1. MassTransit web configuration
2. PHP installation and configuration
3. Web Server setup.

The following sections provide a comprehensive guide to setting up MTWeb on Windows operating systems with specific instructions for IIS.

MassTransit Enterprise and MySQL must be installed and running before configuring MTWeb. See the Installation Guides for Macintosh and Windows included on the CD or with your download package for assistance.

Step 1: Configuring MassTransit

The following instructions provide steps to configure MassTransit Web. The *MassTransit.cfg* and *mtweb.ini* files must be configured.

1. Navigate to the **Extras** folder within the **MassTransit** directory. Copy the *MassTransit.cfg* file to the **MassTransit Server 6** directory. If there is already a version of *MassTransit.cfg* in the **MassTransit Server 6** directory, skip this step.
2. Open the *MassTransit.cfg* file and make sure to uncomment (delete the “%%”) the `ENABLE_SOAP_API` and `SOAP_API_PORT` flags. Set the `ENABLE_SOAP_API` flag to `TRUE`. Leave the `SOAP_API_PORT` set to the default, 50050.

NOTE: You must restart MassTransit Enterprise Engine for any changes to take affect. On Windows the MassTransit Engine service can be restarted from the Services control panel. To verify that these changes have taken effect, launch the MassTransit Administrator and look at the log; a message appears stating, “SOAP interface enabled on port 50050.”

3. Give `READ & WRITE` permissions to the user running the web process for the **parsed** and **templates_c** folders which can be found inside the **MTWeb** directory. On Windows this is normally the “Internet Guest” or “Anonymous Internet” account. Please consult the [FAQ](#) section at the end of this document for enabling writable permissions on folders.

NOTE: Any time the MTWeb files are updated, you must delete the contents of the **parsed** and **templates_c** folders with the exception of the *readme.txt* files.

4. Edit the *mtweb.ini* file. By default, the file is located inside the **MassTransit Server 6\MTWeb** directory.

NOTE: All lines beginning with “#” in the *mtweb.ini* file are considered commented and therefore ignored. You must uncomment all lines mentioned in the steps below.

- a. Enter a valid username and password in the DB_USER and DB_PASSWORD fields respectively. The username and password created during the MassTransit installation can be used for MTWeb. The default MySQL installation username is "masstransit". Please consult the [FAQ](#) for information on creating a new user in MySQL.
- b. Verify that the following lines in the *mtweb.ini* file are configured correctly. Please view the file for detailed definitions of each field. In general, the SOAP_PROXY_ADDRESS and DB_HOST will both be localhost; the DB_NAME will be mtdatabase.
 - SOAP_PROXY_ADDRESS
 - DB_HOST
 - DB_NAME

Step 2: PHP Setup

The steps below provide setup instructions for PHP. The instructions below assume that your operating system is installed on the "C:\\" drive. They also assume that you do not have a previous version of PHP installed. If you do, please follow [Step 2: PHP Setup](#) from the upgrading instructions, which provides information on how to upgrade your PHP installation.

1. Install PHP 5.2.6, which is available at: <http://www.grouplogic.com/files/glidownload/mtreleases.cfm>. Use the PHP zip package and extract the package into a directory called **php** (e.g. "C:\php"). It is strongly recommended that PHP be installed on the same drive as the operating system. Installing PHP on a different drive will prevent MTWeb from working properly.

WARNING: Do NOT use the PHP installer; use only the zip package as stated above.

NOTE: If Stuffit Expander was used to open the PHP zip package and the required PHP files mentioned below are not present, try using another application to open the PHP zip package.

2. Copy the *php.ini-dist* file from the **php** folder to your system directory (e.g. "C:\Windows\") and rename it *php.ini*.
3. Open the *php.ini* file (located in "C:\Windows\") in an application suitable for plain text editing and continue with the following steps to make changes to the default PHP settings.

NOTE: All lines beginning with ";" in the *php.ini* file are considered commented and therefore ignored. Please ensure that all lines mentioned in the steps below are uncommented (if you see a ";" character at the beginning of any of the lines mentioned below, delete it).

4. Change the line beginning with "display_errors =" as shown below.
 - display_errors = Off**
5. Change the line starting with "doc_root =" as shown below if MassTransit was installed in the default location.
 - doc_root = "C:\Program Files\Group Logic\MassTransit Server 6\MTWeb\webroot"**
6. Change the line beginning with "extension_dir" as shown below.
 - extension_dir = "C:\php\ext"**
7. Change the line beginning with "cgi.force_redirect =" as shown below.
 - cgi.force_redirect = 0**

8. Add the following line(s) to the Dynamic Extensions section of the *php.ini* file.
extension=php_mysqli.dll
extension=php_mysql.dll
extension=php_soap.dll
9. Change the line beginning with "session.cache_limiter" to blank as shown below.
session.cache_limiter =
10. Create a directory named "tmp" within the PHP folder and then change the line beginning with "session.save_path" as shown below.
session.save_path = "C:\php\tmp"
The Windows user account associated with the IIS web site that MassTransit will use (generally IUSR_COMPUTERNAME) needs to have write access to that directory.
11. Edit the following lines to enable PHP logging for troubleshooting purposes:
error_reporting = E_ALL
log_errors = on
error_log = "MT-PHPLog.log"

NOTE: that for the error log to be written, the Windows user account associated with the IIS web site that MassTransit will use (generally IUSR_COMPUTERNAME) needs to have write access to the log file. By default (if you don't specify a folder), the default log file location will be your webroot folder. If you do not want to give the Windows user account associated with the IIS web site full access to a folder, you may create an empty log file with this name manually and then grant that Windows user account write access to that file only.
12. After completing the above modifications to the *php.ini* file, save the file and then close the application being used to edit the file.
13. Verify that the *php_mysqli.dll* library file is included in the "C:\php\ext\" directory.
14. Copy the *libmysql.dll* file from "C:\php\" to "C:\Windows\System32\".
15. Confirm that the PHP installation directory has appropriate system permissions.
 - a. Locate the directory where PHP has been installed. By default, this directory is **C:\php**.
 - b. Right-click on this directory, and select "Properties" from the pull-down menu.
 - c. Select the "Security" tab from the PHP Properties window.
 - d. Confirm that the machine's "Network Service" user has **Read**, **Execute**, and **List** permissions for the PHP installation directory.

NOTE: The Network Service user rarely shows up explicitly, but is a member of the Users group. Depending on the security structure for the particular machine, you may want to add the **Users** group to the PHP folder (and propagate permissions downstream to the contained files and folders), or just add the Network Service user by itself.

PHP setup is now complete. More information regarding PHP installation on Windows can be found at <http://www.php.net/manual/en/install.windows.php>. You can verify that PHP is running successfully by consulting the [FAQ](#).

Step 3: IIS Web Server Configuration

The steps below indicate how to configure MTWeb as the default website in IIS. Please note that IIS is not installed by default in some Windows installations. For instructions on installing IIS, please refer to: <http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/750d3137-462c-491d-b6c7-5f370d7f26cd.msp?mfr=true>.

1. Open the IIS Manager from Control Panel → Administrative Tools.
2. Under the **Web Sites** folder right click on the Default Web Site entry and select Properties.
3. Select the **Home Directory** tab.
 - a. Click on the **Browse** button to specify the **webroot** folder. For the default MassTransit installation path is:
C:\Program Files\Group Logic\MassTransit Server 6\MTWeb\webroot
 - b. Ensure that the 'Read' checkbox is checked while the 'Write' and 'Directory browsing' checkboxes are unchecked.
 - c. Change the 'Execute Permissions' combo box to "Scripts only".
 - d. Under the Application Settings group click on the **Configuration...** button.
 - e. Click the **Add...** button and set the Executable path by clicking on the **Browse** button. The default path should be as follows:
C:\php\php5isapi.dll
 - f. In the 'Extension' text field enter ".php" (no quotations).
 - g. Verify that 'Script engine' checkbox is checked. Click **OK** twice.

NOTE: Steps **e** through **g** above must be repeated for each extension that is to be associated with PHP scripts. Extensions such as .php3 may be required for legacy applications, but are not necessary for MassTransit.

4. Go to the **HTTP Headers** tab.
 - a. Click the **MIME Types...** button (**File Types** in Windows XP).
 - b. In the window that appears, click the **New...** button.
 - c. In the 'Extension' text field type ".dmg" (without quotes).
 - d. In the 'MIME type' field type "x-application/applediskimage" (without quotes).
 - e. Click the **OK** button to save the changes and exit this window.
 - f. The information that was entered in the previous window should now appear in the list of Registered MIME types. Click the **OK** button to save the changes and exit this window.
5. Go to the **Documents** tab.
 - a. Click the **Add...** button and enter "index.php" (no quotations) and click **OK**.
 - b. Move the "index.php" to the top by clicking the **Move Up** button.
 - c. Click **Apply** and **OK** to close this window.
6. **Skip this step if you are configuring MTWeb on IIS version 5.0.**
 - a. Select the **Web Service Extensions** folder and click on "Add a new Web service extension".
 - b. Enter "PHP" in the Extension field and click **Add**.
 - c. Select the ISAPI file by clicking the **Browser** button and select following:
C:\php\php5isapi.dll
 - d. Check "Set extension status to Allowed" and click **OK**.

7. Restart IIS so that the changes made to PHP and IIS settings are properly loaded. The IIS service can be restarted from the Services control panel.

The Web Server configuration is now complete. At this point, the website should be running. You can verify this by opening up a browser and entering the IP Address of the machine on which MTWeb was configured. The MassTransit Web login page should appear. The MassTransit Engine must be running for the login page to appear. You must create a valid web client account in MassTransit to successfully login.

Restart the machine. This is required to ensure that all new settings for IIS and MassTransit are properly loaded and to remove any cached versions of the old website that may be in memory.

Upgrading MassTransit 5.x Web Installation to MassTransit 6.0

These instructions will properly update the MassTransit web interface to 6.0 for MassTransit installations upgrading from 5.x to 6.0.

The MassTransit web upgrade consists of three steps:

1. MassTransit 6.0 web configuration
2. Upgrade to PHP 5.2
3. Web Server setup

The following sections provide a comprehensive guide to setting up MTWeb on Windows with specific instructions for IIS.

MassTransit Enterprise 6.0 and MySQL 5 must be installed and running before configuring MTWeb. See the Installation or Upgrade Guides for Macintosh and Windows included on the CD or with your download package for assistance.

Step 1: Configuring MassTransit

The following instructions provide steps to configure MassTransit 6.0 for the web. The *MassTransit.cfg* and *mtweb.ini* files must be configured.

1. Update the *mtweb.ini* file. DO NOT simply drop your old *mtweb.ini* file in the new MTWeb folder. Some changes may have been made to the settings in this file and using the newest version ensures proper operation.
 - a. Open the *mtweb.ini* file in a text editor. By default, the file is located in the **MassTransit Server 6\MTWeb** directory.
 - b. Open the *mtweb.ini* file that you backed up from your old installation in a text editor. Renaming this file *oldmtweb.ini* will make comparing these two files easier.
 - c. For each enabled setting in your *oldmtweb.ini* file, uncomment the same setting and set the value appropriately in the new *mtweb.ini* file. Settings with a '#' preceding them are not enabled.
 - d. Save the new *mtweb.ini* file.
2. Carefully update any customized code using the MTWeb back up folder. Please note that there have been many changes to the MassTransit website for version 6. Contact Group Logic Technical Support if you have questions.
3. Give READ & WRITE permissions to the user running the web process for the **parsed** and **templates_c** folders which can be found inside the **MTWeb** directory in the MassTransit 6.0 installation folder. On Windows this is normally the "Internet Guest" or "Anonymous Internet" account. Please consult the [FAQ](#) section at the end of this document for enabling writable permissions on folders.

NOTE: Any time the MTWeb files are updated, you must delete the contents of the **parsed** and **templates_c** folders with the exception of the *readme.txt* files.

Step 2: PHP Setup

Use the following steps to upgrade to PHP 5.2.6 if you are running an older version of PHP. To determine your current version of PHP:

1. Open a command prompt by choosing Start->Run and entering *cmd* in the dialog that appears.
2. Type the following command (where *c:\php* is your current PHP installation folder):

```
C:\php\php -v
```

The first line of the output will display the version of your current PHP installation.

If you are already running PHP version 5.2.6 or later, skip directly to step 7 of this section.

The instructions below assume that your operating system is installed on the "C:\\" drive.

1. Before upgrading, stop the Internet Information Services (IIS) website that is associated with MTWeb. The IIS service can be stopped from the Services control panel.
2. Prior to installing PHP 5.2.6, open the *php.ini* file located in "C:\Windows\" and make a backup of this file. Remove it from "C:\Windows".
3. Rename or archive the *c:\PHP* folder (or wherever your current version of PHP is installed). The *c:\PHP* folder should be removed or empty before proceeding with Step 4.
4. Install PHP 5.2.6, which is available on your CD as *php5.2.6-Win32.zip* or at: <http://www.groupllogic.com/files/gldownload/mtreleases.cfm>. Use the PHP zip package and extract the package into a directory called **php** (e.g. "C:\php"). It is strongly recommended that PHP be installed on the same drive as the operating system. Installing PHP on a different drive will prevent MTWeb from working properly.

WARNING: Do NOT use the PHP installer; use only the zip package as stated above.

NOTE: If Stuffit Expander was used to open the PHP zip package and the required PHP files mentioned below are not present, try using another application to open the PHP zip package.

5. Copy the *php.ini-dist* file from the **php** folder to your system directory (e.g. "C:\Windows\") and rename it *php.ini*. Replace the *php.ini* file that was backed up.
6. Open the *php.ini* file (located in "C:\Windows\") in an application suitable for plain text editing and continue with the following steps to make changes to the default PHP settings.
NOTE: All lines beginning with ";" in the *php.ini* file are considered commented and therefore ignored. Please ensure that all lines mentioned in the steps below are uncommented (if you see a ";" character at the beginning of any of the lines mentioned below, please delete it).
7. Change the line beginning with "display_errors =" as shown below.
display_errors = Off
8. Change the line starting with "doc_root =" as shown below if MassTransit was installed in the default location.
doc_root = "C:\Program Files\Group Logic\MassTransit Server 6\MTWeb\webroot"
9. Change the line beginning with "extension_dir" as shown below.
extension_dir = "C:\php\ext"
10. Change the line beginning with "cgi.force_redirect =" as shown below.

cgi.force_redirect = 0

11. Add the following line(s) to the Dynamic Extensions section of the *php.ini* file.

extension=php_mysql.dll
extension=php_mysqli.dll
extension=php_soap.dll

12. Change the line beginning with “session.cache_limiter” to blank as shown below.
session.cache_limiter =

13. Create a directory named “tmp” within the PHP folder and then change the line beginning with “session.save_path” as shown below.

session.save_path = “C:\php\tmp”

The Windows user account associated with the IIS web site that MassTransit will use (generally IUSR_COMPUTERNAME) needs to have write access to that directory.

14. Edit the following lines to enable PHP logging for troubleshooting purposes:

error_reporting = E_ALL
log_errors = on
error_log = “MT-PHPLog.log”

NOTE: that for the error log to be written, the Windows user account associated with the IIS web site that MassTransit will use (generally IUSR_COMPUTERNAME) needs to have write access to the log file. By default (if you don’t specify a folder), the default log file location will be your web root folder. If you do not want to give the Windows user account associated with the IIS web site full access to a folder, you may create an empty log file with this name manually and then grant that Windows user account write access to that file only.

15. After completing the above modifications to the *php.ini* file, please save the file and then close the application being used to edit the file.

16. Verify that the *php_mysqli.dll* library file is included in the “C:\php\ext\” directory.

17. Copy the *libmysql.dll* file from “C:\php\” to “C:\Windows\System32\”. Replace the existing file if there is already a copy in “C:\Windows\System32”.

18. Confirm that the PHP installation directory has appropriate system permissions.

- a. Locate the directory where PHP has been installed. By default, this directory is **C:\php**.
- b. Right-click on this directory, and select “Properties” from the pull-down menu.
- c. Select the “Security” tab from the PHP Properties window.
- d. Confirm that the machine’s “Network Service” user has **Read**, **Execute**, and **List** permissions for the PHP installation directory.

NOTE: The Network Service user rarely shows up explicitly, but is a member of the Users group. Depending on the security structure for the particular machine, you may want to add the **Users** group to the PHP folder (and propagate permissions downstream to the contained files and folders), or just add the Network Service user by itself.

PHP setup is now complete. More information regarding PHP installation on Windows can be found at <http://www.php.net/manual/en/install.windows.php>. You can verify that PHP is running successfully by consulting the [FAQ](#).

Step 3: IIS Web Server Configuration

The steps below indicate how to configure the MassTransit website as the default website in IIS. Please note that IIS is not installed by default in most Windows installations. For instructions on installing IIS, please refer to: <http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/750d3137-462c-491d-b6c7-5f370d7f26cd.msp?mfr=true>.

1. Open the IIS Manager from Control Panel → Administrative Tools.
2. Under the **Web Sites** folder right Click on the Default Web Site entry (or whichever entry is configured for your MassTransit 5 web setup) and select Properties.
3. Select the **Home Directory** tab.
 - a. Click on the **Browse** button to specify the **webroot** folder. For the default MassTransit installation path is:
C:\Program Files\Group Logic\MassTransit Server 6\MTWeb\webroot
 - b. Ensure that the 'Read' checkbox is checked while the 'Write' and 'Directory browsing' checkboxes are unchecked.
 - c. Change the 'Execute Permissions' combo box to "Scripts only".
 - d. Under the Application Settings group click on the **Configuration...** button.
 - e. Click the **Add...** button and set the Executable path by clicking on the **Browse** button. The default path should be as follows:
C:\php\php5isapi.dll
 - f. In the 'Extension' text field enter ".php" (no quotations).
 - g. Verify that 'Script engine' checkbox is checked. Click **OK** twice.

NOTE: Steps **e** through **g** above must be repeated for each extension that is to be associated with PHP scripts. Extensions such as .php3 may be required for legacy applications.
4. Go to the **HTTP Headers** tab.
 - a. Click the **MIME Types...** button (**File Types** in Windows XP).
 - b. In the window that appears, click the **New...** button.
 - c. In the 'Extension' text field type ".dmg" (without quotes).
 - d. In the 'MIME type' field type "x-application/applediskimage" (without quotes).
 - e. Click the **OK** button to save the changes and exit this window.
 - f. The information that was entered in the previous window should now appear in the list of Registered MIME types. Click the **OK** button to save the changes and exit this window.
5. Go to the **Documents** tab.
 - a. Click the **Add...** button and enter "index.php" (no quotations) and click **OK**.
 - b. Move the "index.php" to the top by clicking the **Move Up** button.
 - c. Click **Apply** and **OK** to close this window.
6. **Skip this step if you are configuring MTWeb on IIS version 5.0 or earlier.**
 - a. Select the **Web Service Extensions** folder and click on "Add a new Web service extension".
 - b. Enter "PHP" in the Extension field and click **Add**.
 - c. Select the ISAPI file by clicking the **Browser** button and select following:
C:\php\php5isapi.dll
 - d. Check "Set extension status to Allowed" and click **OK**.

7. Restart IIS so that the changes made to PHP and IIS settings are properly loaded. The IIS service can be restarted from the Services control panel.

The Web Server configuration is now complete. At this point, the website should be running. You can verify this by opening up a browser and entering the IP Address of the machine on which MTWeb was configured. The MassTransit Web login page should appear. You must create a valid web client account in MassTransit to successfully login.

Restart the machine. This is required to ensure that all new settings for IIS and MassTransit are properly loaded and to remove any cached versions of the old website that may be in memory.

MassTransit Web Setup with SSL File Transfer

Enabling SSL using MTWeb allows for secure data transfer between the MassTransit Enterprise Server and MassTransit web clients.

To setup MassTransit Web with SSL:

1. In the MassTransit Administrator edit a Web Client contact entry by selecting the entry from the Contacts window and clicking the 'Edit' button.
2. Select the Security tab and locate the Web Privileges section.
3. Check the checkbox labeled **Use Secure Connection To Transfer Files**.
4. Select an Encryption Level and click 'OK' to save.

NOTE: The SSL transfer is enabled in the MassTransit Enterprise Server on a per contact basis. Therefore, this must be followed for all Web Client contacts that require SSL encryption for data transfer.

MassTransit Web Setup Using SSL Certificates or HTTPS

Do I Need A Secure Configuration?

Information sent to and from the web server in a basic configuration is unencrypted. You can configure your web server to use secure sockets (SSL) to encrypt web traffic. Instead of communicating on the default web port (80), your web server will use the default secure port (443).

To simultaneously serve SSL and non-SSL traffic requires two installations of the MassTransit Web folder, each with their own mtweb.ini. This configuration is not officially supported and is not covered by this document.

Note that a using SSL for your web server encrypts your web traffic; encryption of MassTransit file transfers is configured separately in the MassTransit application. See the section "[MassTransit Web Setup With SSL File Transfer](#)".

Before you Begin

In order to ensure a successful setup of a secure IIS web server for the MassTransit web interface, first:

- Configure a working basic web configuration (see "[MassTransit Web Setup for New Installations](#)" or the "[Upgrading MassTransit 5.x Web Installation to MassTransit 6.0](#)" section above).
- Determine what port you want to run your secure web traffic over. The default port for secure traffic is 443. Note that MassTransit and the web server must use different ports. If you want to run both on the same port, you will need to follow the instructions in the "[MassTransit Web Setup for Multihoming](#)" section.

- Obtain a signed certificate file in .pfx format. For information on generating or obtaining these files, see "[Appendix B: Generating SSL Keys for IIS](#)".
- Confirm that you are running IIS 6. If you are running IIS 5, please contact Group Logic Technical Support for assistance in configuring secure web connections.

Configuring IIS for Secure Connections

To configure IIS to run as a secure web server using SSL, follow the steps below.

Configure MassTransit for Secure Web Connections

1. Within MassTransit edit the *mtweb.ini* file located inside the **MTWeb** directory and change the following line:
WEB_SERVER_SECURE = "true"
2. Save the *mtweb.ini* file.

Install the Server Certificate

3. Open IIS from **Control Panel → Administrative Tools → Internet Information Services (IIS)**.
4. Right-click on "Default Web Site" from the left pane and select **Properties** from the menu.
5. Select the **Directory Security** tab.
6. Click **Server Certificate...** to launch the Web Server Certificate Wizard.
7. Click **Next** to start the Web Server Certificate Wizard.
8. Choose "Import a certificate from a .pfx file" and click **Next**.
9. Browse to and select your .pfx certificate file and click **Next**.
10. Enter the password for your certificate and click **Next**.
11. Enter the SSL port you would like to use for the website and click **Next**. It is highly recommended to use the default of 443.
12. Click **Next** to accept the certificate.
13. Click **Finish** to complete the wizard.

At this point, IIS is ready to accept secure web traffic on the port you specified.

Disable Unencrypted and Low Security Traffic (optional)

14. Under Secure Communications on the Directory Security tab, click the **Edit** button.
15. Check **Require Secure Channel (SSL)** to disable unencrypted traffic.
16. Check **Require 128-bit Encryption** to disable low security encryption.
17. Click **OK** twice to save your settings.

18. Restart IIS so that the changes made to PHP and IIS settings are properly loaded. The IIS service can be restarted from the Services control panel.

Verifying Your Setup

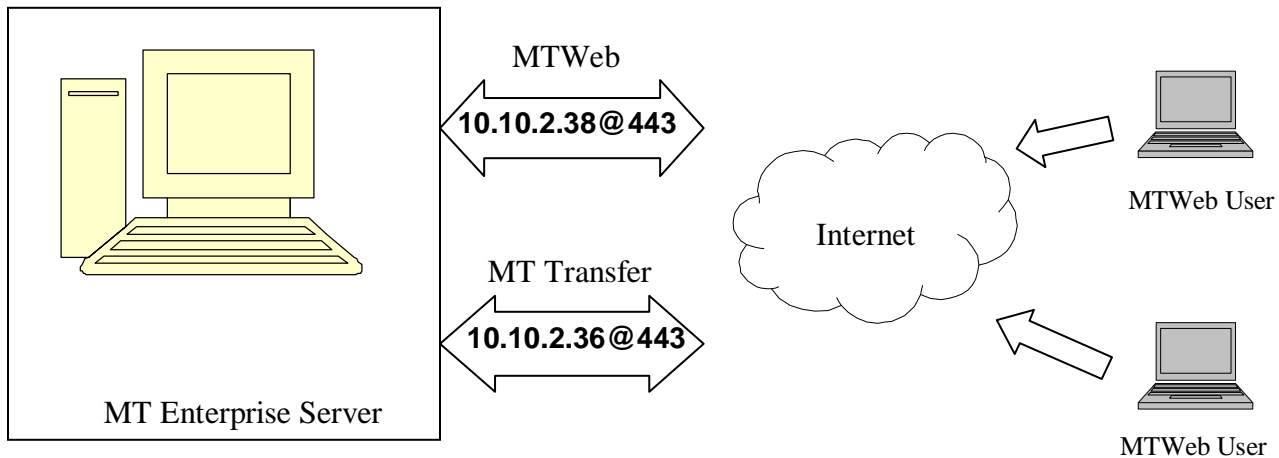
19. Open a web browser.
20. Point the web browser at `https://localhost`. If you are using a port other than 443, point the web browser at `https://localhost:xxx` where xxx is the port you are using.

You should see the MassTransit login page and be able to login with a configured web client login and password. After you login, you should be able to upload and download files.

MassTransit Web Setup with Multi-homing

By default MassTransit (MT) listens on all IP Addresses at the specified port. If the machine is configured with multiple IP Addresses, it is often useful to designate an IP Address for MassTransit and the web server. This is especially valuable when both the website and the MassTransit server must run on SSL (port 443). In such cases, you must configure MassTransit with multi-homing.

The figure below provides an example where the MassTransit Server will transfer files using SSL on IP Address 10.10.2.36 on port 443. The website (MTWeb) will be configured on IP Address 10.10.2.38 on port 443.



The setup instructions below are based on the diagram above.

1. Move the *MT IP Addresses.txt* file from the **Extras** folder to the same location as the MassTransit Engine executable.
2. Edit the file and enter the IP Address that MassTransit should listen on. The *MT IP Address.txt* file should look like the following based on the above example:

ssl=10.10.2.36

NOTE: Ensure that the line does not start with “%%”.

3. Edit the *mtweb.ini* file located in the **MTWeb** directory and change the following line:
HOST_IP_ADDRESS = “10.10.2.38@443”
4. Save and close the *MT IP Addresses.txt* and the *mtweb.ini* files.

The multi-homing setup is now complete. The above setup allows users to access MTWeb via IP Address 10.10.2.38 while the file transfers (communication between MT Server & MT Assistant) will occur on IP Address 10.10.2.36.

Other MassTransit 6.0 Resources

Go to <http://www.grouplogic.com/files/mt/60/OtherMassTransit60Resources.html> for additional articles to help you set up, configure, and use MassTransit 6.0 and its new features. The [Group Logic Knowledge Base](#) contains many articles that provide detailed information on MassTransit 6.0 and its features and components. The HTML version of this file, “OtherMassTransit60Resources.html”, is provided with your MassTransit 6.0 CD or with your download package.

Frequently Asked Questions

Q: How do I give writable permissions to a folder?

A: Follow the steps below to give writable permissions to a folder on Windows:

1. Right click on the folder and select **Properties**.
2. Click on the **Security** tab and verify that the appropriate Groups and Users have Full Control. At a minimum, the Administrator account (local computer) should have Full Control. If a folder needs to be accessed by a domain user then the domain user must also be given full control.
3. The web site configured in IIS for MassTransit use has a specific Windows user account associated with it to provide anonymous access to the web site. For the MassTransit web system to function properly, that user account must be granted “write permissions” to the “templates_c” and “parsed” folders (located within MassTransit’s “MTWeb” folder). To determine the user account that the IIS website associated with MassTransit is using for anonymous access, please follow these steps:
 - a. Open “Internet Information Services (IIS) Manager” (Control Panel > Administrative Tools > Internet Information Services (IIS) Manager).
 - b. Within the “Web Sites” folder, right click the IIS website name for the site that was configured for MassTransit use, and then click “properties”.
NOTE: If you do not see the list of websites, you may need to click the plus sign icon to expand the listing so that it shows all entries
 - c. Click the “Directory Security” tab, and then under the “Authentication and Access Control” section, click the “Edit” button.
 - d. In the “Enable Anonymous Access” section, look in the “User Name” field and it will indicate the user account that is being used by the website in the format: “COMPUTER NAME\USER ACCOUNT NAME”.
 - e. Click the “Cancel” button to exit out of the properties screens without making changes.

NOTE: For further information please consult the following Microsoft KB Article:

<http://www.microsoft.com/technet/prodtechnol/windows2000serv/deploy/confeat/13w2kadc.mspx>

Q: How do I create a user for MTWeb in MySQL?

A: You can use the MySQL Administrator to create a user.

1. Launch the MySQL Administrator and sign on with **root** privileges.
2. Select the **User Administration** option from the left pane and click the ‘New User’ button.
3. Enter username and password under the Login Information group of the **User Information** tab.
4. Select the **Schema Privileges** tab.
5. Click on the **mtdatabase** schemata from the left and apply SELECT privileges by selecting the row labeled “SELECT” and clicking the ‘<’ (left arrow) button.
6. Verify that SELECT now appears under the Assigned Privileges column.
7. Click on ‘Apply Changes’ button located on the bottom right corner. You should now see a newly created user under the **User Accounts** group.
8. You must now add a valid host for this user. To do so, right click on the user created above located in the **User Accounts** group and select the ‘Add Host from Which The User can Connect’ option.
9. Enter a host name (i.e. IP Address or DNS such as “localhost”) and click ‘OK’.

NOTE: In order to setup MTWeb to use this username and password, the newly created username and password must be specified in the *mtweb.ini* file.

Q: How do I verify if PHP is installed and configured correctly?

A: Copy the *test.php* test file from the **Extras** folder, and place within your webroot directory. In your browser, navigate to the *test.php* file. If configured with MTWeb as the default site, you can just go to *localhost/test.php*. If PHP is configured correctly, you should see a listing of the PHP configuration settings. Once you have verified that PHP is set up correctly, you should put the *test.php* file back in the Extras folder for security reasons.

Q: Where are the error messages logged?

A: Most of the key error messages are logged to the MT-PHPLog.log file in the MTWeb webroot folder. Additional error messages are logged to the webserver's default error log. For IIS, the default is:
C:\WINDOWS\system32\LogFiles.

Q: Upon login, I get a "Server Connection error".

A: There may be several factors causing this error. Verify following settings:

- Make sure the user specified in the *mtweb.ini* file has the correct MySQL privileges.
- Make sure `ENABLE_SOAP_API = TRUE` is uncommented (delete "%") in *MassTransit.cfg*.

Q: IIS launches with an error saying "Unexpected error 0x8ffe274".

A: This means that another application is using the TCP/IP port 80. You should either change the port bindings for the website to a port other than port 80 or you should stop the application that is using port 80 and then start the website from the IIS manager.

Q: How do I view the php.ini file configuration?

A: Copy the *test.php* test file from the **Extras** folder, and place within your webroot directory. In your browser, navigate to the *test.php* file. If configured with MTWeb as the default site, you can just go to *localhost/test.php*. This will display the configuration information about PHP. One useful thing is to look at is the "Configuration File (php.ini) Path" to make sure you know where the active *php.ini* file is.

Q: How do I find out the version of MTWeb I'm running?

A: Login to MTWeb using a browser. Click on the System Information link in the top right hand corner. This page will display information on the MTWeb Version and Build Number, PHP Version, Plugin version and other relevant system information.

Q: Why do I see a blank page when attempting to load a PHP page in my browser?

A: Check the MT-PHPLog.log file (the default location is your webroot folder) for error messages. If this doesn't reveal anything, temporarily turn on `display_errors` and/or `display_startup_errors` in the *php.ini* to see what's happening.

Q: Why do I see a blank page when I click on the Log tab?

A: You most likely have a configuration problem relating to PHP or MySQL. Confirm the following:

1. Verify that *php_mysql.dll* and *php_mysqlqli.dll* are being loaded by making sure they are listed on the *phpinfo* test page (see steps above). If they are not loaded, make sure they are specified correctly in *php.ini* and that the files are in the *C:\php\ext* directory. Make sure your extensions directory is set to `extension_dir = "C:\php\ext"`.

2. Make sure the database configuration in mtweb.ini is correct. Verify that you have properly specified the DB_HOST, DB_NAME, DB_USER, and DB_PASSWORD and that they correspond to what is specified in MySQL.
3. If you still have problems on Windows, you can try the following:
 - a. Right click on the My Computer icon and click Properties. Navigate to Advanced\Environment Variables\System Variables.
 - b. Locate the "Path" variable. Click 'Edit'.
 - c. Add ";c:\php" (without the quotes – note semicolon) to the end of the string variable. Click OK.
 - d. Next, click the 'New' button under 'System variables' to create a new system variable.
 - e. Under Variable Name, enter "PHPRC" (without quotes).
 - f. Under Variable Value, enter "c:\php" (indicating the location to the PHP directory; without quotes).
 - g. Click OK to save.
 - h. Save all configuration changes.
 - i. Next, open the REGEDIT utility.
 - j. Go to: HKEY_LOCAL_MACHINE\SOFTWARE.
 - k. Add a key called "PHP".
 - l. Inside PHP, add a string value called "IniFilePath" and set its value to "c:\php" (without quotes).
 - m. Reboot the machine to ensure the setting is applied.

Appendix A: Using Secure Socket Layers (SSL)

SSL Certificates

To use SSL, a PEM format x509 certificate is required. A certificate consists of a certificate file and a key file. The certificate is used both to encrypt data being sent and as a form of identification. There are three steps to obtaining a certificate. These three steps are carried out differently for each web server, but the purpose of each step remains the same.

1. Generate a private server key. This key is later used to encrypt the outgoing data.
2. Generate a CSR (certificate signing request). The CSR is linked to the key, the identity of the server's owner, and the URL of the server. **The server URL is stored in the common name (CN) field of the certificate.**
3. Obtain CA (certificate authority) signature. The CA signs the CSR after verifying that the holder of the CSR and private server key matches the identity specified in the CSR. **The signed CSR is the certificate.** Because the receiving party trusts the CA, the CA signature proves to the receiving party that the certificate holder really is the party named in the certificate.

There are three ways to sign the CSR. The first is to have it signed by a publicly known Root CA such as Verisign or Thawte. This is optimal, since these Root CAs are known and trusted.

The second alternative is to have another CA, such as an in-house IT department or a lesser known 3rd party CA, sign the CSR. When using a CA that is not well known, it is necessary to distribute the CA's certificate to clients. Keep in mind that the CA's certificate is independent of the server's certificate! Without the CA's certificate, the receiving party cannot trust the CA and therefore cannot assign any validity to the CA's signature on the server certificate.

CA certificate distribution can be done easily via the web server itself or with MassTransit, but to guarantee security the fingerprint of the certificate must be communicated securely and verified. If the receiving party is able to verify the fingerprint of the CA certificate, then the recipient knows she or he has an authentic CA certificate and not a spoof. The task of distributing CA certificates to web browsers is complicated by the fact that different browsers expect the CA certificate to be distributed in different formats. The default format for keys, requests, and certificates is PEM. Some older versions of Internet Explorer, including IE 5.1 Mac, will only accept CA certificates in DER format. The process of distributing a CA certificate is similar for all web servers; see the "Distributing CA Certificates" section for more information.

The final method of signing the CSR is to self-sign it with the private server key. **A self-signed certificate allows encrypted communication but provides no guarantee whatsoever that the holder of the certificate has any connection to the identity specified in the certificate.** Without proof of identity the client cannot distinguish between communications with the true server and a spoof. As such, self-signed certificates do not offer true security and should only be used for testing purposes. Microsoft IIS cannot use a self-signed certificate.

All web server sections below refer to obtaining a CA signature as a single-step process. For explanations of both how to create CA signatures as well as how to self-sign certificates, see the "Appendix B: Generating and Signing SSL Certificates" document.

Web Server Certificates vs. MassTransit Server Certificates

The MassTransit certificate serves a somewhat different purpose than the web server certificate. Because the web server and the MassTransit server cooperate closely when communicating with web clients, there is no need for the MassTransit Assistant to verify the identity of the MassTransit server: the MassTransit server is automatically known to be the same entity as the web server. For communication with web clients it therefore is inconsequential whether the MassTransit server uses a CA signed certificate or an automatically generated, self-signed one.

In communication between two MassTransit servers, however, the web server is not involved and cannot act as a proof of identity. To have truly secure communication here requires that the MassTransit servers use CA signed certificates.

Appendix B: Generating SSL Keys for IIS

As described above in the SSL Overview section, a private server key and CSR must be generated. IIS has a built-in tool that can be used to generate the private server key and certificate request required to configure SSL. Follow the steps below to generate these files if you do not already have them.

1. Open IIS from **Control Panel → Administrative Tools → Internet Information Services (IIS)**.
2. Click the plus signs to expand the hierarchy in the left pane until you find “Default Web Site.”
3. Right-click on “Default Web Site” and select **Properties** from the menu.
4. Click on the **Directory Security** tab.
5. Click **Server Certificate...** to launch the Web Server Certificate Wizard.
6. Click **Next**.
7. Select “Create a new Certificate” and click Next.
8. Select “Prepare the request now, but send it later” and click Next.
9. Enter the requested information and click Next.
 - a. *Name* is used locally when multiple websites are running on the same machine to distinguish which website the certificate belongs to. This property is not part of the certificate itself and can be set to *MassTransit Web Certificate* or anything else you like.
 - b. *Bit length* should be set to the desired encryption level. 1024 is standard; 2048 is becoming increasingly popular.
10. Enter your organization’s name and your organizational unit and click **Next**.
11. Enter your *Common Name* and click **Next**. Common Name must be set to the URL that clients will type in their browsers to access the MassTransit web interface, like *hostname.company.com*.
12. Enter your Country, State, and City, and click **Next**.
13. The generated request is stored in c:\certreq.txt by default. You will need to have the certificate request signed by a CA such as Verisign or Thawte; IIS does not accept self-signed certificates.

You can use the certificate you receive from the certificate authority and the associated CA to configure SSL for IIS as described in this document.