

# Web TimeSheet

Project & Billing Edition  
Time & Attendance Edition

Version 8.3

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## INSTALLATION GUIDE



# Notices

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# CHAPTER 1

## Welcome

Welcome to the *Web TimeSheet Installation Guide*. This document provides information on installing or upgrading the self-hosted version of Web TimeSheet. It includes step-by-step installation and upgrade procedures, as well as details of the system requirements and optional system configuration.

All information in this guide applies to both the Project & Billing Edition and the Time & Attendance Edition, unless otherwise stated.




## About Web TimeSheet


Web TimeSheet is a web-based application designed to help you and your organization manage time, time off, and expenses effectively. With Web TimeSheet, your employees can enter data quickly and easily, at any time, and from anywhere with Internet access. Once submitted, items are automatically forwarded to the appropriate supervisor or manager for approval. Additionally, reports can be generated to track data such as project costs, client billing totals, productivity rates, and payroll details.

Unlike traditional PC applications or client-server applications, the only software that is required on each user's PC is a standard Javascript-enabled web browser. The application is installed and runs on your web server, or it can be hosted by Replicon to reduce your administration and equipment costs.

## Document Conventions

This guide uses the following conventions:

- References to other areas in the document are shown *in italics and in blue* to indicate active links that are internal to the document. To automatically navigate to the section being referenced, select the link.
- Hyperlinks to websites or e-mail addresses are shown in blue and underlined to indicate active links external to the document. To open a new browser window to the website or to send an e-mail to the address, select the link.
- Key information is highlighted using a blue background for quick reference. An icon is used to indicate the type of information being provided, as follows.
  - The  icon indicates a note, which provides a reminder of an important requirement or further details on how the software operates.
  - The  icon indicates a warning notice. Warnings point out features or actions that can have negative results if used incorrectly.
  - The  icon indicates a tip or hint designed to assist you in using the product more efficiently.

 The online help system uses these same conventions for easy identification of important notes, warnings, and tips.

## Contacting Support

If you would like assistance installing or upgrading Web TimeSheet, please contact our Customer Support team using one of the following methods:

<b>Direct Phone:</b>	403-262-6519 ext 3
<b>Toll-Free Phone:</b>	
North America:	1-877-662-2519 ext 3
Europe/New Zealand:	00-800-6622-5192 ext 3
Australia:	0011-800-6622-5192 ext 3
<b>E-mail:</b>	<a href="mailto:support@replicon.com">support@replicon.com</a>
<b>Web-Based Form:</b>	<a href="http://www.replicon.com/Support/RequestHelp.aspx">www.replicon.com/Support/RequestHelp.aspx</a>
<b>Fax:</b>	403-233-8046

## CHAPTER 2

# System Requirements

## Web TimeSheet Installation Types

Web TimeSheet is available in a variety of installations:

- **Self-hosted installation (full version only)**

With a self-hosted installation, you install and manage the Web TimeSheet application and database within your organization. It can be used with a variety of database platforms. When you are ready to purchase and implement Web TimeSheet, Replicon will provide you with a file used to install the self-hosted version on your server. Once installed and implemented, the application is available to users across your network.

- **Replicon-hosted implementation**


The Replicon-hosted version of Web TimeSheet is implemented on servers managed by Replicon. The application is available to your users through the Internet, using a web address provided by Replicon or through the **Customer Login** section of the Replicon website. By signing up for the Replicon-hosted version, you eliminate the overhead of purchasing and maintaining application and database servers.

- **Trial version**

The trial version allows you to evaluate the Replicon-hosted version of Web TimeSheet. The trial is available for 30 days with a limited number of users allowed. Sample data is provided and any data entered during the trial can be migrated to the full version.

- **Full version**

The full version is for users who enter into a contract to have the application hosted by Replicon. It supports a larger number of users and does not include any sample data.

 If you choose the Replicon-hosted version, you will not need to complete the installation and upgrade processes outlined in this guide.

For information on evaluating or purchasing either type of Web TimeSheet installation, visit our website at [www.replicon.com](http://www.replicon.com).

## System Requirements

The sections that follow provide the system requirements for each type of Web TimeSheet installation.

### Self-Hosted Full Version

Below are the requirements for the full version of the self-hosted installation, which requires an application server, a database platform, and client machines.

### Server Requirements

The server on which Web TimeSheet is installed must meet the following requirements.

#### *Operating System*

One of the following:

- Windows 2000 with Service Pack 4

- Windows XP Professional with Service Pack 2 or higher (32-bit version only)
- Windows Server 2003
- Windows Vista Ultimate, Business, or Enterprise (32-bit version only)
- Windows Server 2008 (32-bit version only)

☐ While the Windows XP and Windows Vista versions listed above may be used on the server, they are not recommended due to limitations in their support for server operations.

☐ Web TimeSheet cannot be installed on Mac or Linux/UNIX operating systems. However, those using:

- Mac OS X and higher, or
- Linux workstations or UNIX terminals running X Windows

can use the Replicon-hosted version of Web TimeSheet.

### *Hardware*

Minimum (suggested only for fewer than 50 users):

- Pentium III, 800 MHz processor
- 512 MB of RAM
- 1 GB of hard disk space
- SMTP-compliant e-mail server

Recommended:

- Pentium IV, 1.4 GHz processor or higher
- 1 GB of RAM or more
- 1 GB of hard disk space or more
- SMTP-compliant e-mail server
- 1024 x 768 monitor resolution

### *Software*

All of the following:

- Microsoft Windows Installer 3.1 (installed automatically)
- Microsoft .NET Framework 2.0 (installed automatically)
- C Runtime Library 8.0 (installed automatically)
- Microsoft Data Access Components (MDAC) 2.8 or higher, if using a Microsoft SQL Server (standard, Express, or MSDE) database (installed automatically)
- Microsoft Internet Information Services (IIS) 5.0 or higher (optional)

☐ Other CGI 1.0-compliant web servers besides IIS may be supported.

If using Windows XP or Vista, IIS is not recommended due to restrictions placed on connections to the server. Install the web server available with Web TimeSheet instead.

☐ You can also install [SQL Server Management Studio Express](#) to administer your SQL Server Express database.

## Database Requirements

Web TimeSheet requires one of the following database platforms be installed, either on the Web TimeSheet server or on a server accessible by Web TimeSheet. If installed on a separate server, that server must also meet the requirements listed in [Server Requirements](#) on page 7.

- Microsoft Desktop Engine (MSDE) 2000 (not supported on Microsoft Vista and higher)
- Microsoft SQL Server 2000 with Service Pack 4 or higher
- Microsoft SQL Server 2005
- Microsoft SQL Server 2005 Express (installed automatically, if selected)
- Oracle 9.2 or higher (and Oracle Client Tools 10g release 2 or higher)

## Client Requirements

Each computer being used to access the Web TimeSheet system must meet the following requirements.

### *Operating System*

One of the following:

- Windows 9x
- Windows NT
- Windows 2000
- Windows XP
- Windows Server 2003
- Windows Vista
- Windows Server 2008
- Macintosh OS X
- Linux workstations and UNIX terminals running X Windows

### *Hardware*

Minimum:

- Pentium III, 450 MHz processor
- 128 MB of RAM

Recommended:

- Pentium III, 800 MHz processor or higher
- 512 MB of RAM or more
- 1024 x 768 monitor resolution


### *Software*

Windows-based systems require one of the following:

- Microsoft Internet Explorer 6.0 or 7.0
- Mozilla Firefox 2.0 or 3.0

Macintosh- and Unix-based systems require:

- Mozilla Firefox 2.0 or 3.0

 Your browser and any plug-ins or toolbars must be configured to allow pop-ups.

Mozilla Firefox does not support ActiveX controls. Therefore, if you plan to use the pivot table reports within Web TimeSheet, you must use Internet Explorer as your browser.

Netscape Navigator is no longer supported by Web TimeSheet, as AOL has ceased support for the browser. See [blog.netscape.com/2007/12/28/end-of-support-for-netscape-web-browsers/](http://blog.netscape.com/2007/12/28/end-of-support-for-netscape-web-browsers/) for more information.

All systems require the following, depending on the features in use:

- Adobe Flash Player 8 or higher, if using graphical reports
- Microsoft Outlook 2003 or 2007, if exporting time off to Outlook (Time & Attendance Edition only)
- Apple iCal, Microsoft Outlook 2007, or Windows Calendar, if using an iCal feed for time off (Time & Attendance Edition only)

#### *Recommended Configuration for Offline Timesheets or Expenses Sheets*

Support for offline timesheets and expense sheets has been confirmed under the following system configuration:

- Microsoft Windows 2000, XP, or 2003
- Microsoft Outlook 2003
- Microsoft Internet Explorer 6.0 or 7.0

## Replicon-Hosted Full and Trial Versions

For those using a Replicon-hosted implementation, all that is required is one or more client machines to provide users access to the system. The application server and database are managed by Replicon.

## Client Requirements


Each client machine used to access Web TimeSheet must meet the following requirements:

- The requirements listed in [Client Requirements](#) on page 9
- High-speed Internet connection

# Configuring your Database prior to Installation

Before installing or upgrading using the Oracle or SQL Server database platforms, you may need to complete some configuration.

## Configuring Oracle

 You only need to configure Oracle if you are installing or migrating an Oracle database, not if you are upgrading. For information about the difference between upgrading and migrating, refer to [Understanding Upgrading versus Migrating](#) on page 37.

If you are installing or migrating an Oracle database, you will have to configure an Oracle schema. However, if you are upgrading (not migrating) an existing Oracle database, an Oracle schema already exists, so you do not need to configure a new one.

To configure Oracle when installing or migrating Web TimeSheet, you must either:

- Install Oracle Client Tools, as detailed on page 11, and create a blank user schema, as shown on page 11.
- Use an existing schema, after first ensuring it is blank, as detailed on page 12.

In addition, Oracle users using the Windows platform must make a small alteration to their `sqlnet.ora` file to prevent Oracle Data Provider (ODP) connection problems, as outlined on page 12.

## Installing Oracle Client Tools

1. Install Oracle Client Tools (minimum version 10g release 2) on the web server where you will be installing Web TimeSheet.
2. Restart the server after the installation.

## Creating a User Schema

To create a user schema:

1. Sign into `Oracle\OraHomexx\Application Development\SQL Plus` using the default login (from the database you set up on your server):


```
Username:      <System>
Password:     <Manager>
Host String:   <SID or Global database name>
```

The `SQL>` prompt will be displayed.

2. After the `SQL>` prompt, enter the following to create a new user:
 

```
create user <user name> identified by <password>;
```
3. Select the **Enter** key on your keyboard to save the new user. Oracle will notify you when the user is created and return you to the `SQL>` prompt.
4. Enter the following at the `SQL>` prompt to provide permissions:

```
grant connect, resource to <user name>;
```

 The user schema must have connect and resource permissions to install the Oracle version of Web TimeSheet.


5. Select the **Enter** key on your keyboard. The next line displayed will read *Grant Succeeded*.
6. Enter the following at the `SQL>` prompt:

```
grant query rewrite to <user name>;
```
7. Select the **Enter** key on your keyboard. The next line displayed will read *Grant Succeeded*.

## Using an Existing Schema

If you already have a schema set up for Web TimeSheet and want to use it again:


1. Sign into Oracle through SQL Plus.
2. Delete all the tables, indexes, foreign keys, views, and sequences.

 Make sure that you have already installed Oracle Client Tools on the machine where you will be installing Web TimeSheet.

## Preventing Oracle Data Provider Connection Problems

To prevent Oracle Data Provider (ODP) connection problems, all Oracle users using Windows must make a small alteration to their `sqlnet.ora` file. To do this:

1. Find your Oracle home folder (typically located within a folder called `Oracle`), and open your Oracle `... \network \admin` folder. Alternatively, search for the `sqlnet.ora` file using Windows' search functionality.
2. Open the `sqlnet.ora` file in a text editor.
3. Check that the file contains the line `SQLNET.AUTHENTICATION_SERVICES=(NONE)`.
  - If you cannot find the line, add it as a new line anywhere in the document.
  - If you find the line `SQLNET.AUTHENTICATION_SERVICES=(NTS)` instead, change the `(NTS)` to `(NONE)`.
4. Save the file.

 If you cannot find the `sqlnet.ora` file, create one as a text file in the Oracle `... \network \admin` folder, add the `SQLNET.AUTHENTICATION_SERVICES=(NONE)` line to the file, and save the file.

## Installing the ODP.NET Driver

The Oracle Data Provider for .NET (ODP.NET) 2.0 driver is required for those using an Oracle database with Web TimeSheet. If you already have ODP.NET 2.0 installed on your server, when you install or upgrade Web TimeSheet, that driver will be detected and used automatically.

If you do not have ODP.NET 2.0 installed, after you select the Oracle option, a message will display prompting you to install ODP.NET 2.0 before proceeding with the Web TimeSheet installation. If you receive this message:

1. Exit the Web TimeSheet installation.
2. Download the ODP.NET 2.0 driver from [www.oracle.com/technology/software/tech/windows/odp-net/index.html](http://www.oracle.com/technology/software/tech/windows/odp-net/index.html).

3. Install ODP.NET 2.0 on the server.
4. Restart Web TimeSheet installation.

## Configuring an Oracle Database to Support Unicode

Users can configure new or existing Oracle databases to use Unicode and thereby support multiple languages.

### Creating a New Unicode Database

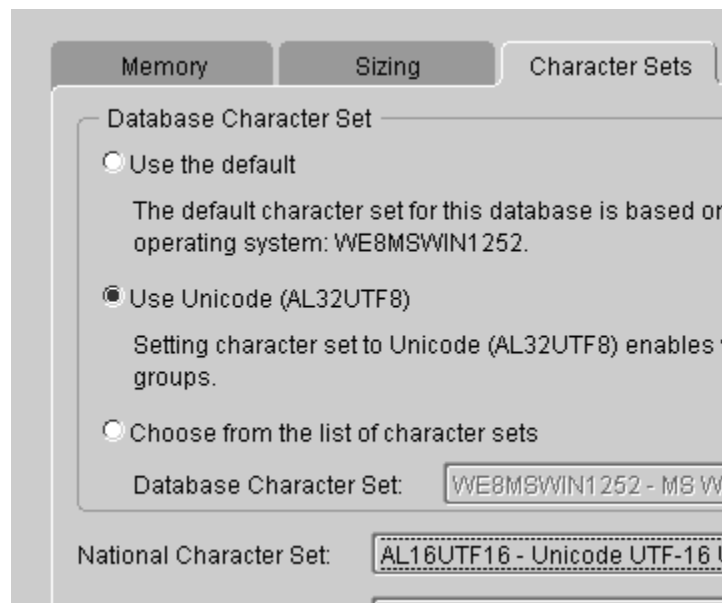
There are two ways to create a database in Oracle:

1. Use the Database Configuration Assistant (DBCA).
2. Use SQL scripts.

#### *Using the Database Configuration Assistant to Create a Unicode Database*

To create a Unicode database using the Database Configuration Assistant:

1. Follow the wizard until you reach the **Initialization Parameters** page.
2. Under the **Character Sets** tab:
  - a. Select **Use Unicode (AL32UTF8)** for the **Database Character Set**.
  - b. Leave the default values for the **National Character Set**.



## Using SQL Scripts to Create a Unicode Database

When you create your database using scripts, set the **Database Character Set** to *AL32UTF8* and the **National Character Set** to *AL16UTF16*. Your script should look similar to that shown below.

```
CREATE DATABASE sample
CONTROLFILE REUSE
LOGFILE
GROUP 1 ('diskx:log1.log', 'disky:log1.log') SIZE 50K,
GROUP 2 ('diskx:log2.log', 'disky:log2.log') SIZE 50K
MAXLOGFILES 5
MAXLOGHISTORY 100
MAXDATAFILES 10
MAXINSTANCES 2
ARCHIVELOG
CHARACTER SET AL32UTF8
NATIONAL CHARACTER SET AL16UTF16
DATAFILE
'disk1:df1.dbf' AUTOEXTEND ON,
'disk2:df2.dbf' AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
DEFAULT TEMPORARY TABLESPACE temp_ts
UNDO TABLESPACE undo_ts
SET TIME_ZONE = '+02:00';
```

## Altering an Existing Database to Support Unicode

If you already have a database and you would like to store multiple language characters:

1. Shut down the database, using either a `SHUTDOWN IMMEDIATE` or a `SHUTDOWN NORMAL` statement.
2. Do a full backup of the database because the `ALTER DATABASE CHARACTER SET` statement cannot be rolled back.
3. Complete the statements shown in the figure below.

```
STARTUP MOUNT;
ALTER SYSTEM ENABLE RESTRICTED SESSION;
ALTER SYSTEM SET JOB_QUEUE_PROCESSES=0;
ALTER SYSTEM SET AQ_TM_PROCESSES=0;
ALTER DATABASE OPEN;
ALTER DATABASE CHARACTER SET AL32UTF8;
SHUTDOWN IMMEDIATE; -- or SHUTDOWN NORMAL;
STARTUP;
```

# Configuring SQL Server

☐ If you are using SQL Server, select the link if you would like to download [SQL Server Management Studio Express](#), a tool you can use to administer your database.

If you are using a SQL Server database and meet the conditions below, you must take additional steps to configure SQL Server.

- You are installing or upgrading Web TimeSheet using an existing SQL Server instance.  
AND
- You connect to this instance using a login name and password specific to SQL Server (rather than using Windows authentication).

Configure SQL Server as follows:

1. Open the **SQL Server Enterprise Manager** from the **Start** menu.
2. Find the local server in the directory tree.
3. Right-click on the local server, and select **Properties**. A **Properties** box displays.
4. Select the **Security** tab.
5. Under the **Authentication** heading:
  - If you are using SQL 2000, select the **SQL Server and Windows** option.
  - If you are using SQL 2005, select the **Mixed Authentication** option.



6. Select the **OK** button.

## CHAPTER 4

# Installing IIS

When installing the full version of Web TimeSheet, you can choose to either install using an Internet Information Services (IIS) web server or using Replicon's web server (provided with Web TimeSheet).

If you are using an IIS server, you must ensure IIS is installed before installing Web TimeSheet. The sections that follow provide information on installing IIS.

- Installing IIS is only required if you are using the full version of Web TimeSheet with an IIS web server. If you are using the trial version, or the full version with the internal web server, you do not have to complete the steps below.

The required IIS components outlined below are minimum requirements. Your installation may contain additional components, which may be retained.

## Installing IIS on Windows Server 2008

To install the required IIS components on Windows Server 2008:

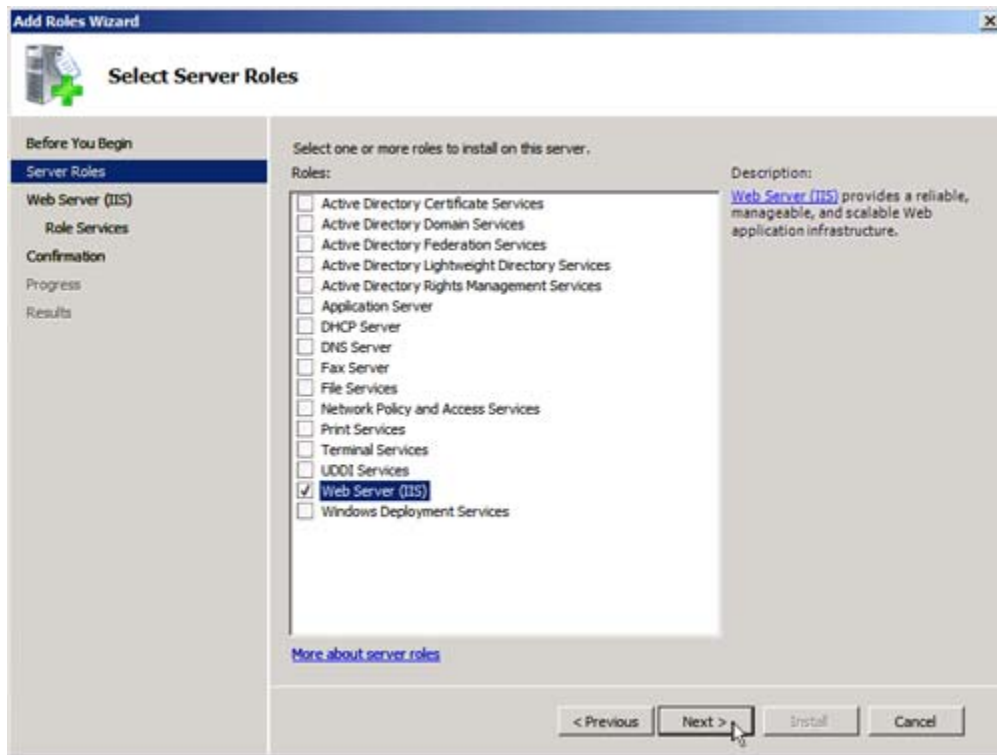
1. In the Windows **Control Panel**, select **Programs [and Features] > Turn Windows features on or off**.
2. In the **Server Manager** window that displays, select **Roles** in the left pane.
3. Select **Add Roles** in the **Roles Summary** section.



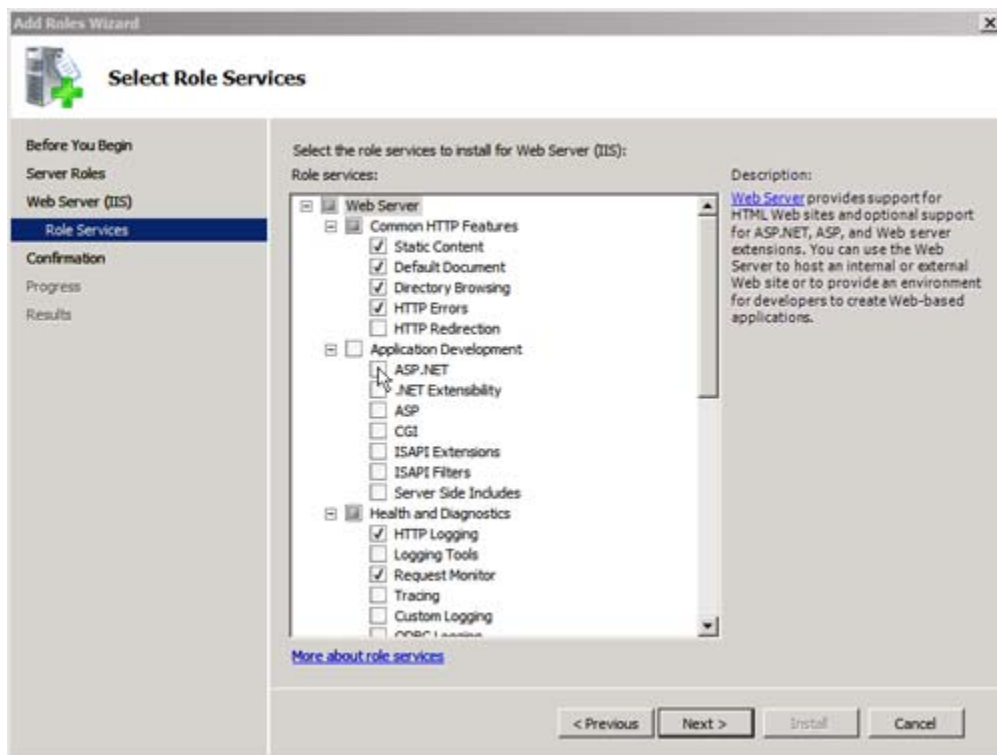
The **Add Roles Wizard** displays.

4. Select **Next** if the **Before You Begin** page displays.

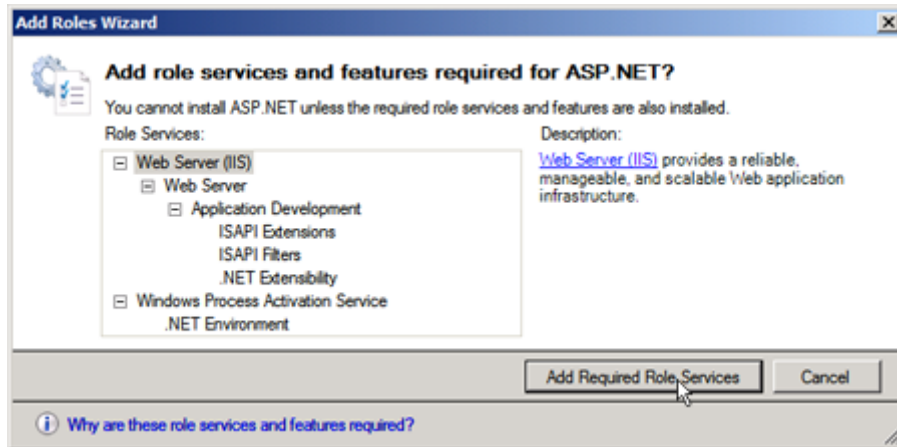
- In the **Select Server Roles** page, enable **Web Server (IIS)** and select **Next**.



- Select **Next** in the **Web Server (IIS)** information page.
- In the **Select Role Services** page, enable **ASP.NET**.



8. A window may display, indicating that additional role services and features are required to support ASP.NET. Select **Add Required Role Services**.



You will be returned to the **Select Role Services** page and the related role services will be automatically enabled.

9. If you are going to use CGI with Web TimeSheet, enable **CGI** under **Application Development**. (If you are using ISAPI, the ISAPI role services are automatically enabled with ASP.NET.)
10. If you wish to use Integrated Windows Authentication, enable **Windows Authentication** under **Security**.
11. Select the **Next** button.
12. In the **Confirm Installation Selections** page, review the enabled options and select **Install**.  
The IIS components you selected will install.
13. In the **Installation Results** page, select the **Close** button.

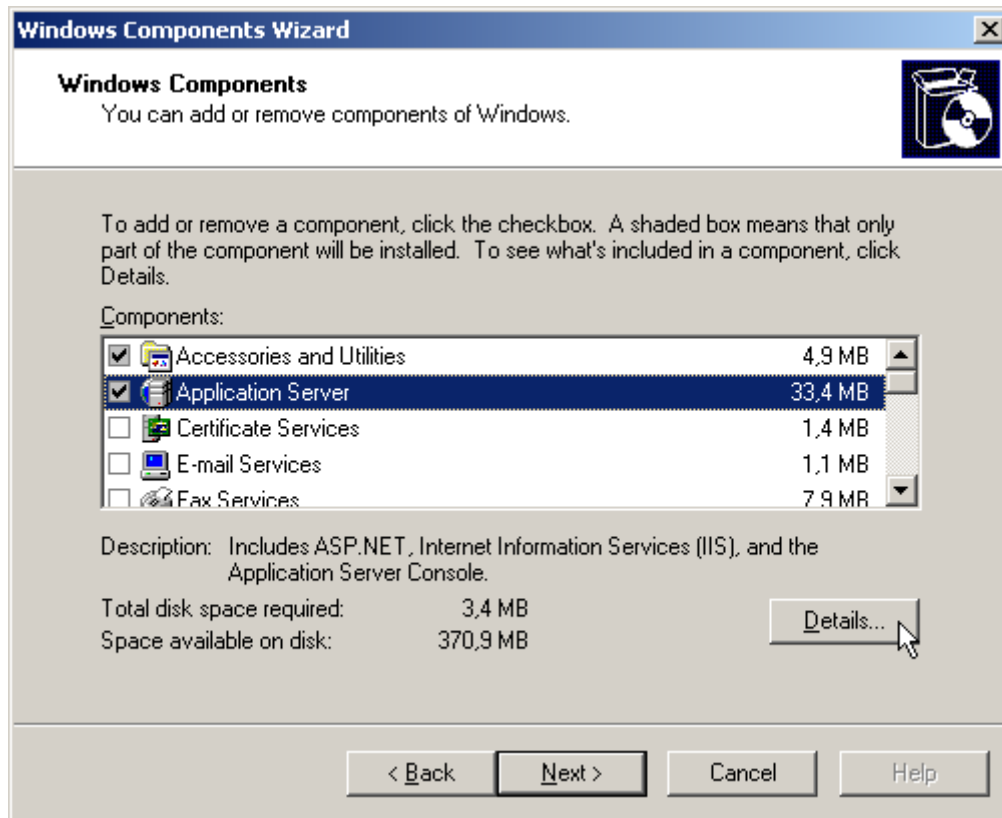
Now that the components are installed, you can install Web TimeSheet.

## Installing IIS on Windows Server 2003

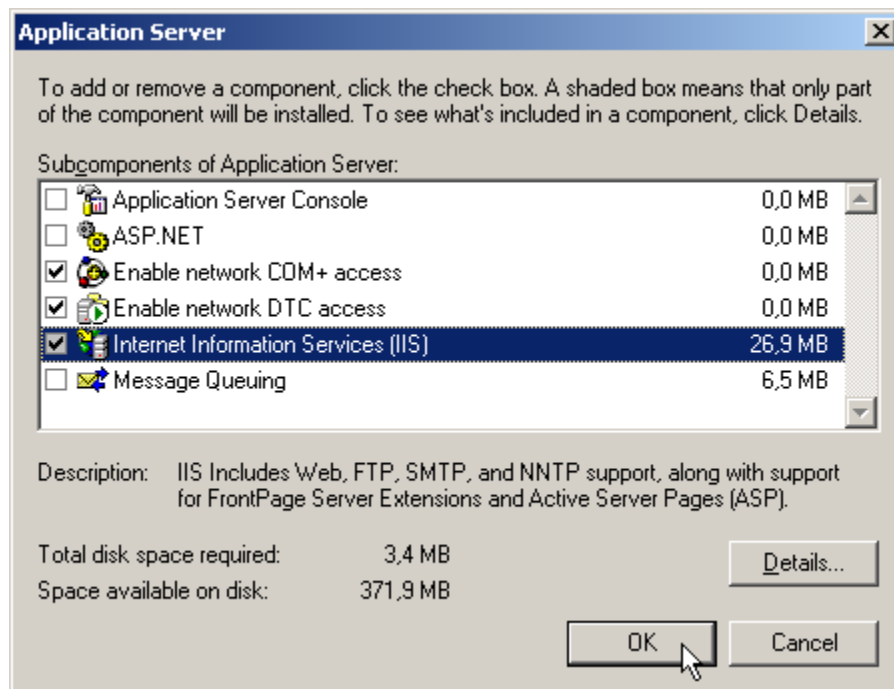
To install IIS on Windows Server 2003:

1. In the Windows **Control Panel**, select **Add or Remove Programs**.
2. In the **Add or Remove Programs** window that displays, select **Add/Remove Windows Components** from the left side.

3. In the **Windows Components Wizard** that displays, select **Application Server** from the list of components and click the **Details** button.



4. In the **Application Server** window, enable **Internet Information Services (IIS)** and select **OK**.




5. Select **Next**.

6. Once the components are installed, select **Finish**.

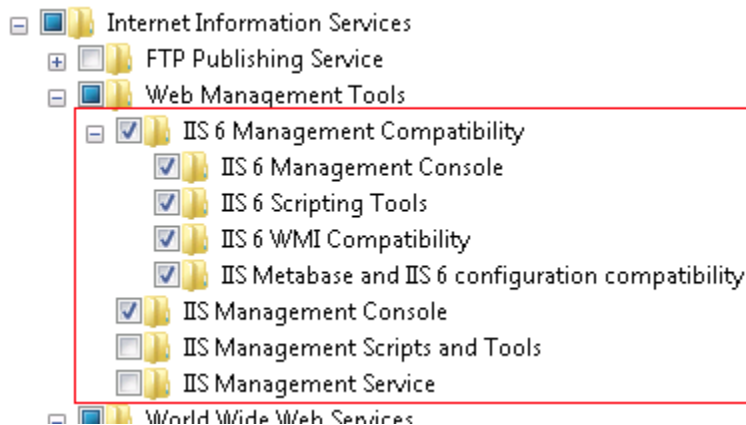
Now that IIS is installed, you can install Web TimeSheet.

## Installing IIS on Windows Vista

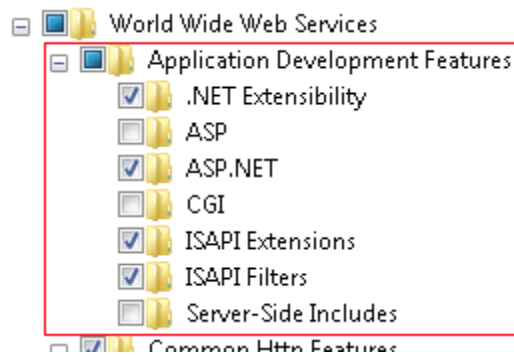
 Use of IIS on Windows Vista is not recommended due to restrictions placed on connections to the server. Install the web server available with Web TimeSheet instead.

To install the required IIS components on Windows Vista:

1. In the Windows **Control Panel**, select **Programs [and Features] > Turn Windows features on or off**.
2. In the **Turn Windows features on or off** window that displays, expand **Internet Information Services** by clicking the corresponding **+** icon.
3. Expand **Web Management Tools > IIS 6 Management Compatibility**, and enable the required components as shown in the image below.

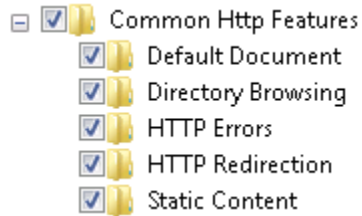


4. Expand **World Wide Web Services**.
5. Expand **Application Development Features**, and enable the required components as shown in the image below. If you wish to use IIS with CGI, enable the **CGI** option as well.



If a dialog box displays asking if you wish to install all of ASP.NET's dependencies, say **Yes**.

- Expand **Common Http Features**, and enable the required components as shown in the image below.



- Expand **Security**, and enable the required components as shown the image below. If you wish to use Integrated Windows Authentication with Web TimeSheet, enable the **Windows Authentication** option as well.



- Select the **OK** button.

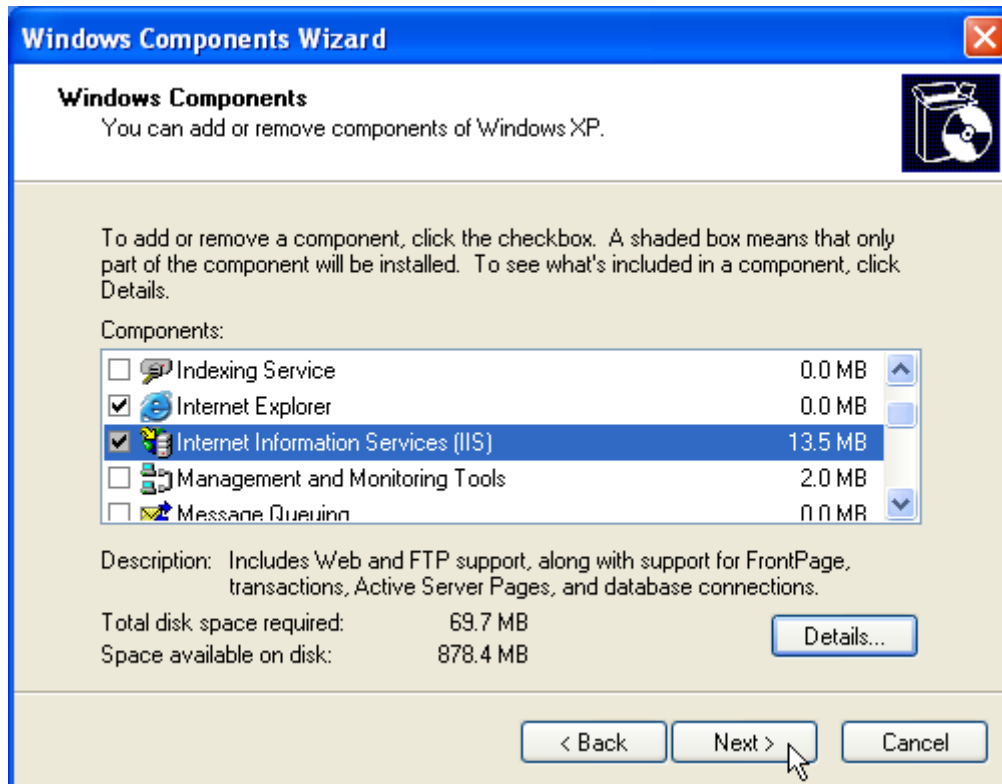
The IIS components you selected will install. Once the components are installed, you can install Web TimeSheet.

## Installing IIS on Windows XP or Windows 2000

To install IIS on Windows XP or Windows 2000:

- In the Windows **Control Panel**, select **Add or Remove Programs**.
- In the **Add or Remove Programs** window that displays, select **Add/Remove Windows Components** from the left side.

3. In the **Windows Component Wizard**, enable **Internet Information Services (IIS)** and select **Next**.




4. Once the components are installed, select **Finish**.

Now that IIS is installed, you can install Web TimeSheet.

## CHAPTER 5

# Installing Web TimeSheet

 The Replicon-hosted version of Web TimeSheet is installed by Replicon.

To install the full (non-trial) version of Web TimeSheet:

1. If you are using the SQL Server Express or MSDE database platform, proceed to [Step 2](#) below.  
If you are using the Oracle or SQL Server database platform, ensure all the required configuration is complete, as explained in [Chapter 3, Configuring your Database prior to Installation](#) on page 11.
2. Download the full version of Web TimeSheet from the Replicon website, and save it to your local computer in a known location, such as the **Desktop**.
3. Save the license file provided by Replicon to the same location.
4. Open the Web TimeSheet installation file. When the **Welcome to Replicon Web TimeSheet** window displays, select the **Next** button.



5. Read the license agreement. If you agree to its terms, select the **I accept the terms of the license agreement** option, and then select the **Next** button.



6. The installation program checks for the presence of Microsoft Windows Installer, Microsoft .NET Framework, and the C Runtime Library. If these necessary components are not present, this window displays.




Select the **Next** button, and the installer will automatically install these components.

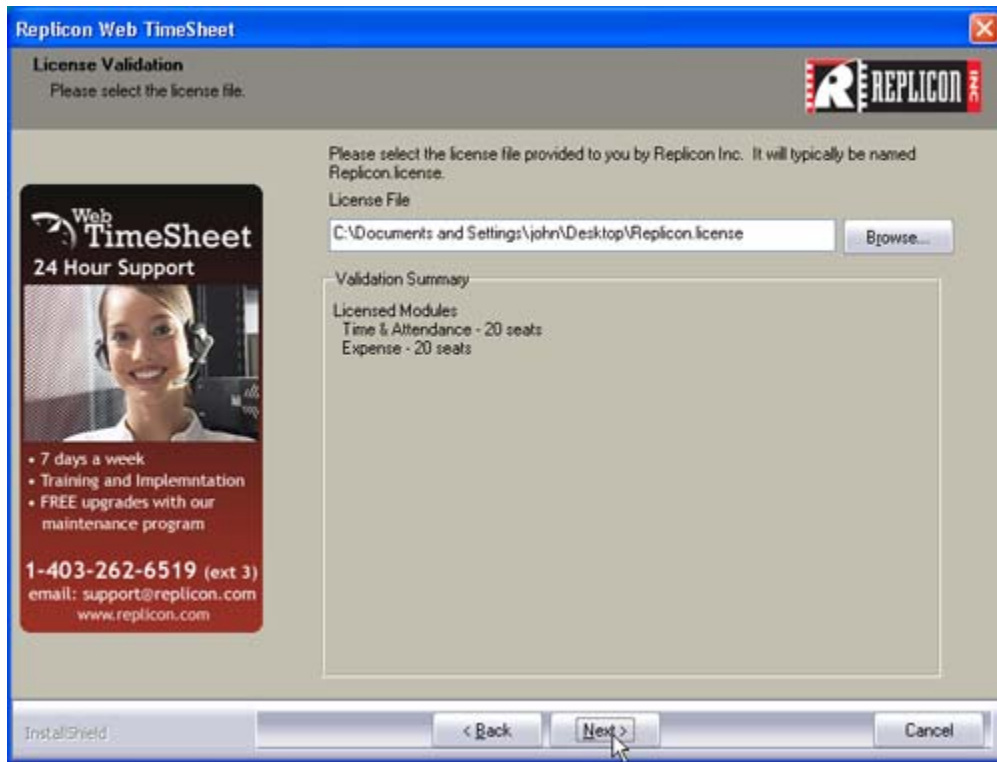
- ☐ Once the components are installed, the computer may need to be restarted. Installation will automatically resume after the computer is restarted.

7. To select the installation type:
  - a. Select the **New** option.
  - b. Select the folder where Web TimeSheet will be installed using the **Browse** button.
  - c. Select the **Next** button.



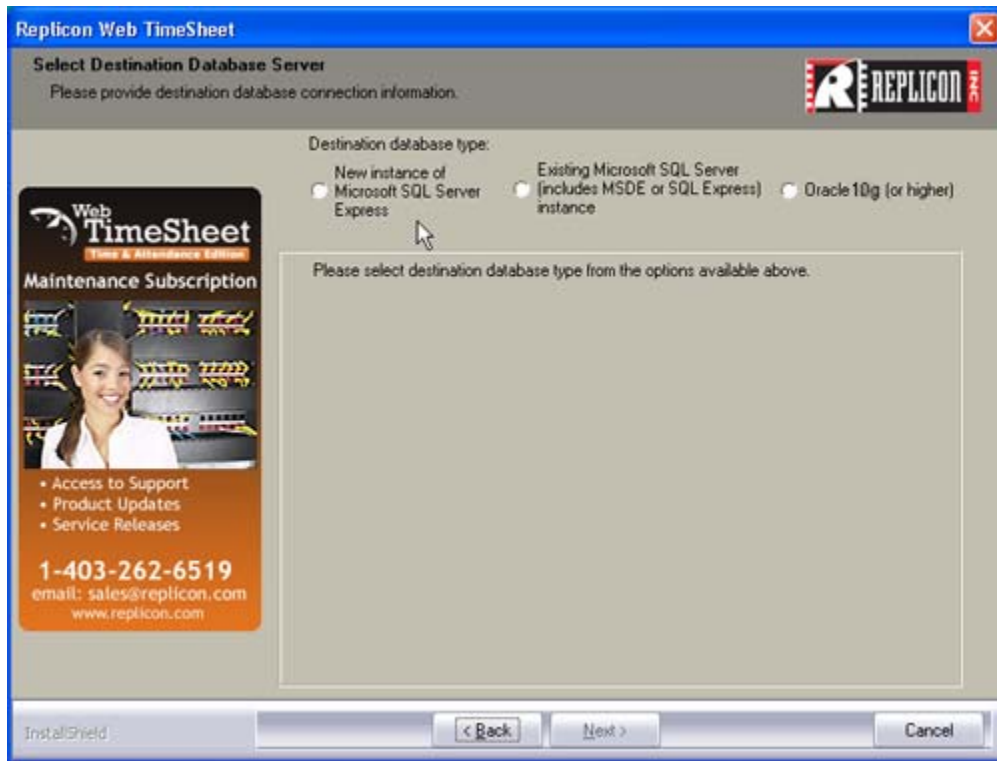
 For instructions on upgrading Web TimeSheet, refer to [Chapter 6, Upgrading Web TimeSheet](#) on page 37.

8. In the **License File** field, browse to and select the license file Replicon provided. The page will update showing the modules and seats included in the file. Once you have finished, select the **Next** button.



- ☐ If the window indicates that your license file is invalid, contact Replicon. See [Contacting Support](#) on page 6 for contact information.

9. Select the type of database to use, as explained in the table below.



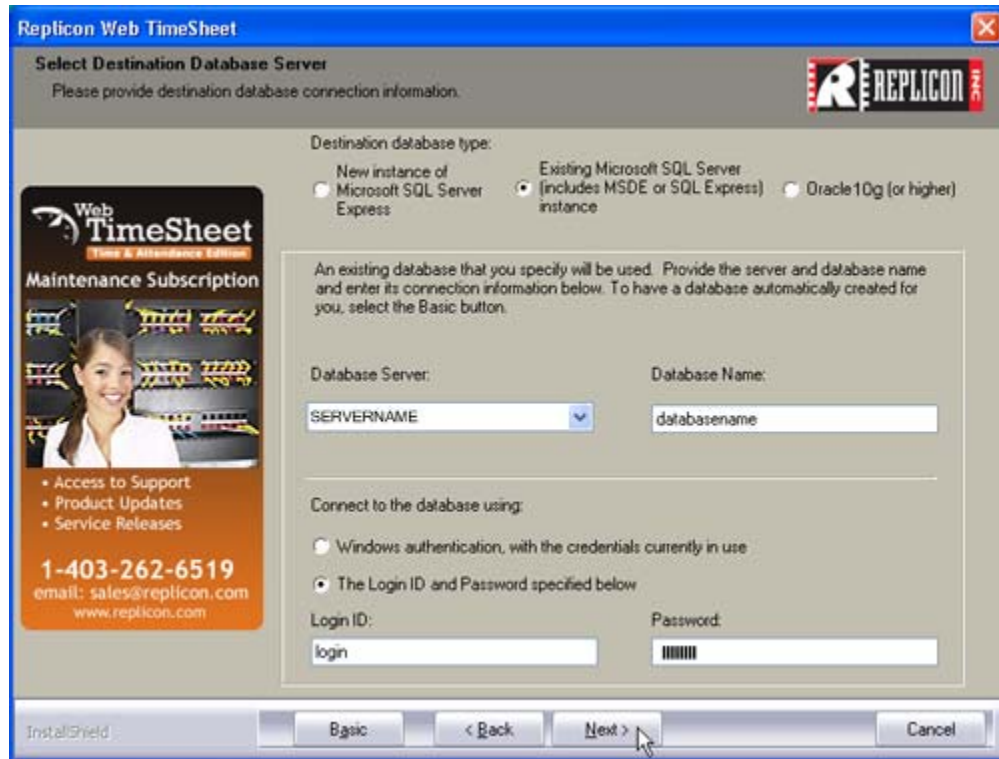
Based on the option you select, the inner pane of the page will update with options for that database type. Proceed to the step indicated below.

Database Type Option	If you select this option...
New instance of Microsoft SQL Server Express	<p>Web TimeSheet will download and install a new instance of SQL Server Express called <i>RepliconExpress</i>. A new database will be installed in this instance.</p> <p>This option will only be available if the <i>RepliconExpress</i> instance has not been previously created.</p> <p>Select <b>Next</b> and then proceed to <a href="#">Step 12</a> on page 32.</p>
Existing Microsoft SQL Server (includes MSDE or SQL Express) instance	<p>Web TimeSheet will install to an existing instance of SQL Server, SQL Server Express, or MSDE that you specify.</p> <p>You can choose to either automatically create a new database, or use an existing database.</p> <p>Proceed to <a href="#">Step 10</a> on page 29.</p>
Oracle 9i (or higher)	<p>Web TimeSheet will install to an existing Oracle database.</p> <p>Proceed to <a href="#">Step 11</a> on page 31.</p>

10. If you chose to have Web TimeSheet installed to an existing **SQL Server** instance, the **Select Destination Database Server** window updates. In the window, you can choose to have Web TimeSheet create a new database in that instance, or use an existing database.
- If you would like Web TimeSheet to create and install to a new database:
    - i. Select the database server.
    - ii. If applicable, enter your login name and password to use when connecting to the new database.
    - iii. Select the **Next** button and proceed to [Step 12](#) on page 32.



- If you would like to use an existing database:
  - i. Select the **Advanced** button.  
The window updates with an additional field.
  - ii. Select the server and enter the name of the database you would like to use.
  - iii. If applicable, enter your login name and password for your chosen database.
  - iv. Select the **Next** button, and then proceed to [Step 12](#) on page 32.



11. If your new destination is an **Oracle** database, enter the:

- **Database User Name**
- **Database User Password**
- **Oracle Host** name

Select the **Next** button, and then proceed to [Step 12](#) on page 32.



- If you are using an Oracle database, you must have the ODP.NET 2.0 driver installed before you can install Web TimeSheet. For more information, refer to [Installing the ODP.NET Driver](#) on page 12.

12. Choose the web server you want to use.



☐ The **Internet Information Services (IIS)** option is only available if IIS is installed. For information on installing IIS, see [Chapter 4, Installing IIS](#) on page 16.

If you choose:

- **Web TimeSheet Web Server**, select the **Next** button.
- **Internet Information Services (IIS)**:
  - i. Select the name of your server from the drop-down list.
  - ii. Choose whether you want to use Integrated Windows Authentication with Web TimeSheet, or if you want users to have to access Web TimeSheet through a login page.

☐ If you choose Integrated Windows Authentication, the administrator account will be created based on the Windows account currently in use.

iii. Select the **Next** button.

To use an IIS Web Server, Web TimeSheet requires both CGI and HTML virtual directories. You may be prompted to confirm that Web TimeSheet may use CGI and HTML virtual directories that exist on your computer.

To install Web TimeSheet without allowing these directories to be automatically configured, you must select the **Web TimeSheet Web Server** option and configure IIS manually after installation is complete. For information on configuring an IIS web server, refer to [Manually Configuring Internet Information Services \(IIS\)](#) on page 58.

If you elect to use an IIS web server, ensure your security settings are set to block the transmission of plain text (unencrypted) passwords. For more information, refer to [Ensuring Web TimeSheet Security](#) on page 67.

13. Ensure that the **TCP/IP Port Configuration** and **Service Name** settings are correct, and then select the **Next** button.



The port displayed is the first available port starting with the default port 80. If your web server is not on the default port, enter the correct port before selecting the **Next** button. In most cases, these settings will not require modification.

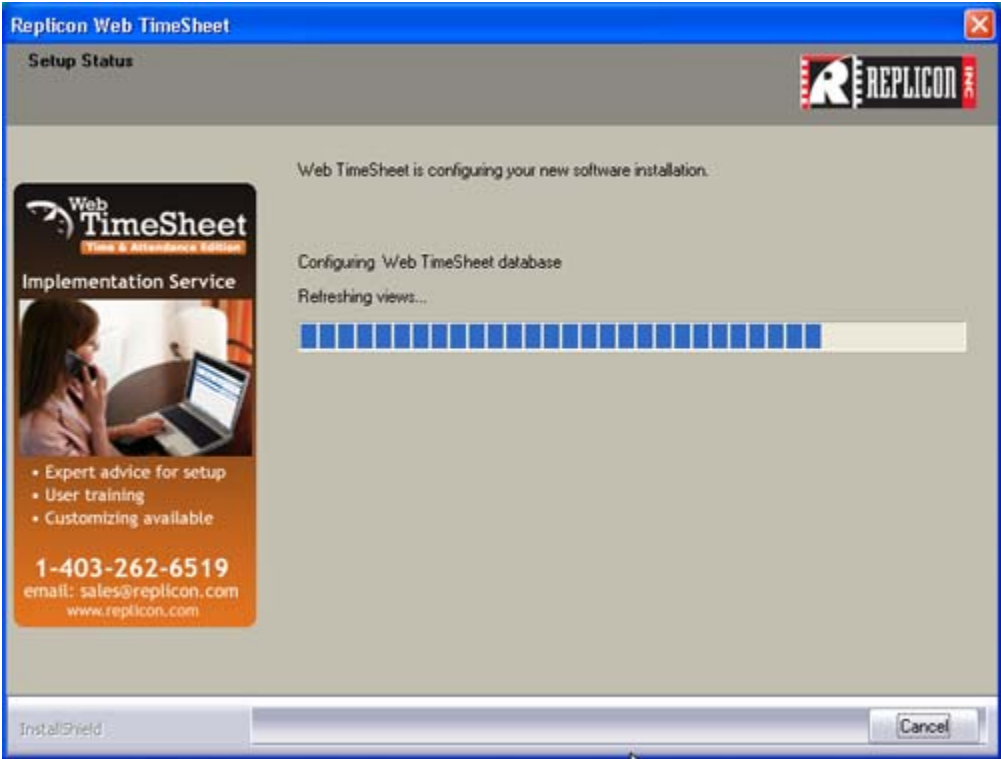
14. On the **Ready to Install the Program** summary window, select the **Back** button to modify any settings or the **Install** button to begin installation.



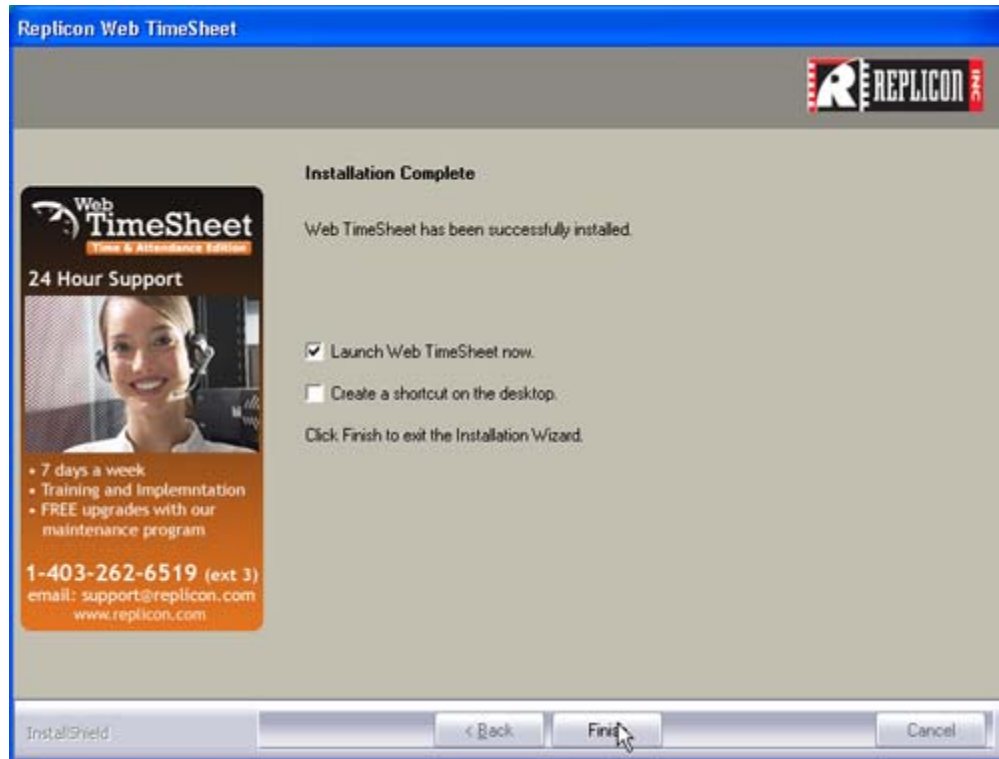
- ☐ If you are using the SQL Server (standard, Express, or MSDE) database platform, Web TimeSheet requires that Microsoft Data Access Components (MDAC) be installed on your machine. The installation program will check for the presence of MDAC, and will automatically install it if it is absent. This may take a few minutes.

Once MDAC is installed, the computer may need to be restarted. Installation will automatically resume after the computer is restarted.

A **Setup Status** window displays, tracking the progress of the installation.



15. The **Installation Complete** window displays to indicate that installation was successful. To exit the installation program:
- Enable the **Launch Web TimeSheet now** check box if you would like to launch Web TimeSheet immediately.
  - Enable the **Create a shortcut on the desktop** check box if you would like a shortcut created.
  - Select the **Finish** button.



# Upgrading Web TimeSheet

 The Replicon-hosted version of Web TimeSheet is upgraded by Replicon.

## Before Upgrading

Before upgrading Web TimeSheet:

1. Review the *Web TimeSheet Release Notes* for the version you are upgrading to. Ensure any new features and changes to existing features are compatible with your system configuration and use. If you have any concerns about the changes, contact Replicon's Support team before upgrading, using the information at [Contacting Support](#) on page 6.

The *Web TimeSheet Release Notes* are available at [www.replicon.com/products/product-documentation.aspx](http://www.replicon.com/products/product-documentation.aspx).

2. Back up your existing Web TimeSheet database.

 **You must back up your existing Web TimeSheet database before upgrading Web TimeSheet.**

When you choose to upgrade your database, all of your existing data is copied, updated, and moved to a new database in one step. Your old database will no longer exist. If the installation process is interrupted (for example, if your system crashes or the procedure runs out of disk space), your database may be lost or compromised.

In addition, no mechanism exists to “downgrade” to an older version of Web TimeSheet once you have upgraded to a new version. Therefore, you must back up your old database to retain the option of using an older version of Web TimeSheet.

## Understanding Upgrading versus Migrating

When you update Web TimeSheet to a new version, you will need to choose to either:

- Upgrade your existing database in place (upgrading)
- Copy the data to a new database that you specify (migrating)

Upgrading your database means that the installer alters your database in place. Because no copy of your data is created, if the installation process is interrupted, existing data may be lost or compromised.

Migrating your database means that your existing data is copied into your new database. Migrating your data presents less risk of loss than upgrading because your old database remains intact. However, migrating data to a new database takes longer than upgrading.

# Upgrading Web TimeSheet

If you have installed a previous version of Web TimeSheet and wish to upgrade to the current version, follow the steps below.

To upgrade Web TimeSheet:

1. If you are using the SQL Server Express or MSDE database platform, proceed to [Step 2](#) below.  
If you are using the Oracle or SQL Server database platform, ensure all required configuration is complete, as detailed in [Chapter 3, Configuring your Database prior to Installation](#) on page 11.
2. Purchase and download a full version of Web TimeSheet from the Replicon website, and save it to your local computer.
3. Launch the Web TimeSheet installation file. When the **Welcome to Replicon Web TimeSheet** window displays, select the **Next** button.



4. Read the license agreement. If you agree to its terms, select the **I accept the terms of the license agreement** option, and then select the **Next** button.



5. The installation program checks for the presence of Microsoft Windows Installer, Microsoft .NET Framework, and the C Runtime Library. If these necessary components are not present, this window displays.




Select the **Next** button, and the installer will automatically install these components.

- ☐ Once the components are installed, the computer may need to be restarted. Installation will automatically resume after the computer is restarted.

6. To select the installation type:
  - a. Select the **Upgrade** option.
  - b. Select the folder where Web TimeSheet will be installed using the **Browse** button.
  - c. Select the **Next** button.



-  For instructions on installing a new instance of Web TimeSheet, refer to [Installing Web TimeSheet](#) on page 23.

7. Select the type of database being used by your current Web TimeSheet installation.



Based on the option you select, the lower panes will update to allow you to specify details on the source database.

- If you are using an **Access** database, browse to and select the database file.



- ☐ Access is no longer supported as a database type for Web TimeSheet. The Microsoft SQL Server Express platform is included in the Web TimeSheet installer and you can choose to automatically upgrade the Access database to this platform.

- If you are using a **Microsoft SQL Server** database (either standard, Express or MSDE), enter your database server name, database name, and login information.

The screenshot shows the 'Configure Source Database Information' dialog box for Microsoft SQL Server. The window title is 'Replicon Web TimeSheet'. The main heading is 'Configure Source Database Information' with the instruction 'Please provide source database connection information.' The Replicon logo is in the top right corner.

On the left side, there is a sidebar with a 'Web TimeSheet Webinars' banner. The banner includes the text: 'Join a group webinar for a personal demo of how to set up Web TimeSheet', 'Timesheets • Approvals • Reports • And More', '1-403-262-6519', and 'email: sales@replicon.com www.replicon.com'.

The main content area is divided into three sections:

- 1. Select Source Database Type:** Three radio buttons are present: 'Access (\*.mdb)', 'Microsoft SQL Server (includes MSDE or SQL Express)' (which is selected), and 'Oracle'.
- 2. Provide Source Database Information:** This section contains:
  - 'Database Server:' with a dropdown menu showing 'SERVERNAME'.
  - 'Database Name:' with a text input field containing 'databasename'.
  - 'Connect using:' with two radio buttons: 'Windows authentication' (selected) and 'SQL Server authentication using the Login ID and Password specified below'.
  - 'Login ID:' and 'Password:' text input fields.
- 3. Select Upgrade Option:** A heading followed by the text 'The existing database can be updated using one of the following two methods:' and two radio buttons: 'Upgrade the existing database in place' (selected) and 'Copy the existing data to a database I specify'.

At the bottom of the dialog, there is an 'InstallShield' logo on the left and three buttons: '< Back', 'Next >', and 'Cancel'.

- If you are using an **Oracle** database, enter your **Database User Name** and **Database User Password**, and the **Oracle Host** name.

The screenshot shows the 'Configure Source Database Information' dialog box for Oracle. The window title is 'Replicon Web TimeSheet'. The main heading is 'Configure Source Database Information' with the instruction 'Please provide source database connection information.' The Replicon logo is in the top right corner.

On the left side, there is a sidebar with a 'Web TimeSheet Webinars' banner. The banner includes the text: 'Join a group webinar for a personal demo of how to set up Web TimeSheet', 'Timesheets • Approvals • Reports • And More', '1-403-262-6519', and 'email: sales@replicon.com www.replicon.com'.

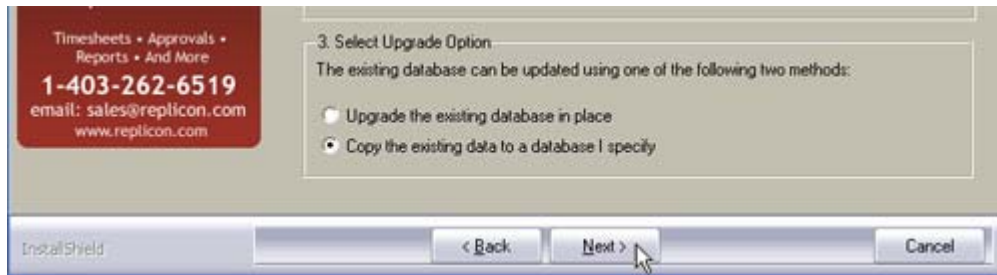
The main content area is divided into three sections:

- 1. Select Source Database Type:** Three radio buttons are present: 'Access (\*.mdb)', 'Microsoft SQL Server (includes MSDE or SQL Express)', and 'Oracle' (which is selected).
- 2. Provide Source Database Information:** This section contains:
  - 'Database User Name' with a text input field containing 'username'.
  - 'Database User Password' with a text input field containing masked characters (dots).
  - 'Oracle Host' with a text input field containing 'oracle10'.
- 3. Select Upgrade Option:** A heading followed by the text 'The existing database can be updated using one of the following two methods:' and two radio buttons: 'Upgrade the existing database in place' (selected) and 'Copy the existing data to a database I specify'.

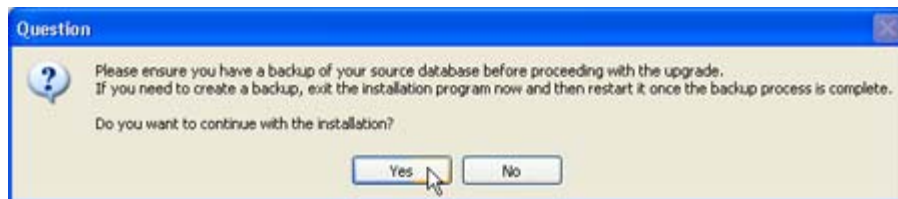
At the bottom of the dialog, there is an 'InstallShield' logo on the left and three buttons: '< Back', 'Next >', and 'Cancel'.

8. At the bottom of the page, choose whether to:
- Upgrade the existing database. (An Access database will be upgraded to the SQL Server Express platform.)
  - Copy the data to another database that you choose (that is, migrate the data).

See [Understanding Upgrading versus Migrating](#) on page 37 for more information on these options. Select the **Next** button.



The following warning box may display. Ensure your database has been backed up, then select **Yes** to proceed with the installation.



9. If prompted, browse to and select the license file provided by Replicon.



- ☐ If your existing database has fewer seat assignments than that provided by your existing license, you are not required to enter any license information and the Web TimeSheet installer will skip this step.

The page will update showing the modules and seats included in the file.

Once you have finished, select the **Next** button.

- ☐ If the updated window indicates that your license file is invalid, contact Replicon. See [Contacting Support](#) on page 6 for contact information.

10. If you are upgrading in place, proceed to [Step 13](#) on page 51.

If you chose to copy the data to another database, the **Select Destination Database Server** window displays. Select the type of database you would like your data to end up in, as explained in the table below.



Based on the option you select, the inner pane of the page will update with options for that database type. Proceed to the step indicated below.

Database Type Option	If you select this option...
New instance of Microsoft SQL Server Express	<p>Web TimeSheet will download and install a new instance of SQL Server Express called <i>RepliconExpress</i>. The data will be copied to a new database installed in this instance.</p> <p>This option will only be available if the <i>RepliconExpress</i> instance has not been previously created.</p> <p>Select <b>Next</b> and then proceed to <a href="#">Step 13</a> on page 51.</p>
Existing Microsoft SQL Server (includes MSDE or SQL Express) instance	<p>Web TimeSheet will copy the data to an existing instance of SQL Server, SQL Server Express, or MSDE that you specify. You can choose to automatically create a new database, or installed to an existing database.</p> <p>Proceed to <a href="#">Step 11</a> on page 48.</p>
Oracle 9i (or higher)	<p>Web TimeSheet will copy the data to an existing Oracle database.</p> <p>Proceed to <a href="#">Step 12</a> on page 50.</p>

11. If you selected to have the data copied to an existing **SQL Server** instance, the **Select Destination Database Server** window updates. In the window, you can choose to have Web TimeSheet create a new database in that instance, or use an existing database.
- If you would like Web TimeSheet to create and copy the data to a new database:
    - i. Select the database server.
    - ii. If applicable, enter the login name and password to use to connect to the database.
    - iii. Select the **Next** button and proceed to [Step 13](#) on page 51.

Replicon Web TimeSheet

**Select Destination Database Server**

Please provide destination database connection information.

Destination database type:

New instance of Microsoft SQL Server Express

Existing Microsoft SQL Server (includes MSDE or SQL Express) instance

Oracle 10g (or higher) instance

A database will automatically be created for Web TimeSheet on the server you specify. Select the database server and specify its connection information below. To have Web TimeSheet use an existing database, select the Advanced button.

Database Server:

SERVERNAME

Connect to the database using:

Windows authentication, with the credentials currently in use

The Login ID and Password specified below

Login ID: login

Password: [masked]

Advanced < Back Next > Cancel

Web TimeSheet  
Time & Attendance Edition  
Maintenance Subscription

• Access to Support  
• Product Updates  
• Service Releases

1-403-262-6519  
email: sales@replicon.com  
www.replicon.com

- If you would like to use an existing database:
  - i. Select the **Advanced** button.  
The window updates with an additional field.
  - ii. Select the server and enter the name of the database you would like to use.
  - iii. If applicable, enter your login and password for your chosen database.
  - iv. Select the **Next** button, and then proceed to [Step 13](#) on page 51.



12. If your destination is an **Oracle** database, enter the:

- **Database User Name**
- **Database User Password**
- **Oracle Host** name

Select the **Next** button, and then proceed to [Step 13](#) on page 51.



- ☐ If you are using an Oracle database, you must have the ODP.NET 2.0 driver installed before you can upgrade to Web TimeSheet version 8.3. For more information, refer to [Installing the ODP.NET Driver](#) on page 12.

13. Choose the web server you want to use.



☐ The **Internet Information Services (IIS)** option is only available if IIS is installed. For information on installing IIS, see [Chapter 4, Installing IIS](#) on page 16.

If you choose:

- **Web TimeSheet Web Server**, select the **Next** button.
- **Internet Information Services (IIS)**:
  - i. Select the name of your server from the drop-down list.
  - ii. Choose whether you want to use Integrated Windows Authentication with Web TimeSheet, or if you want users to have to access Web TimeSheet through a login page.
  - iii. Select the **Next** button.

☐ To use an IIS Web Server, Web TimeSheet requires both CGI and HTML virtual directories. You may be prompted to confirm that Web TimeSheet may use CGI and HTML virtual directories that exist on your computer.

To install Web TimeSheet without allowing these directories to be automatically configured, you must select the **Web TimeSheet Web Server** option and configure IIS manually after installation is complete. For information on configuring an IIS web server, refer to [Manually Configuring Internet Information Services \(IIS\)](#) on page 58.

If you elect to use an IIS web server, ensure your security settings are set to block the transmission of plain text (unencrypted) passwords. For more information, refer to [Ensuring Web TimeSheet Security](#) on page 67.

14. Ensure that the **TCP/IP Port Configuration** and **Service Name** settings are correct, and then select the **Next** button.



- The port displayed is the first available port starting with the default port 80. If your web server is not on the default port, enter the correct port before selecting the **Next** button. In most cases, these settings will not require modification.

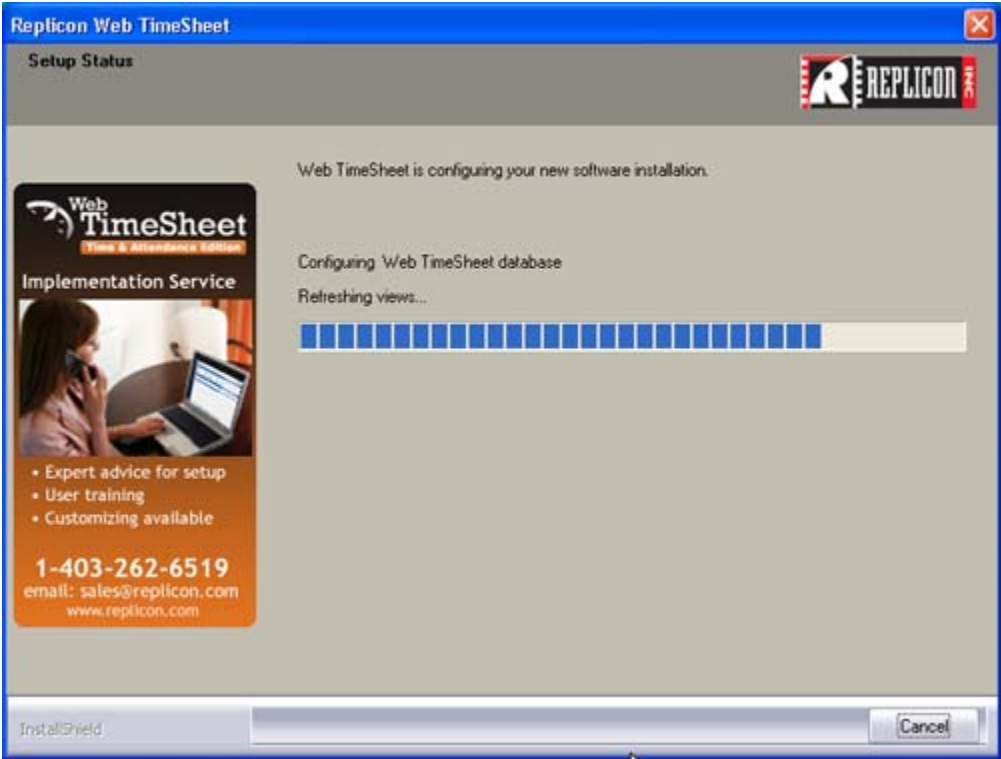
15. On the **Ready to Install the Program** summary window, select the **Back** button to modify any settings or the **Install** button to begin installation.



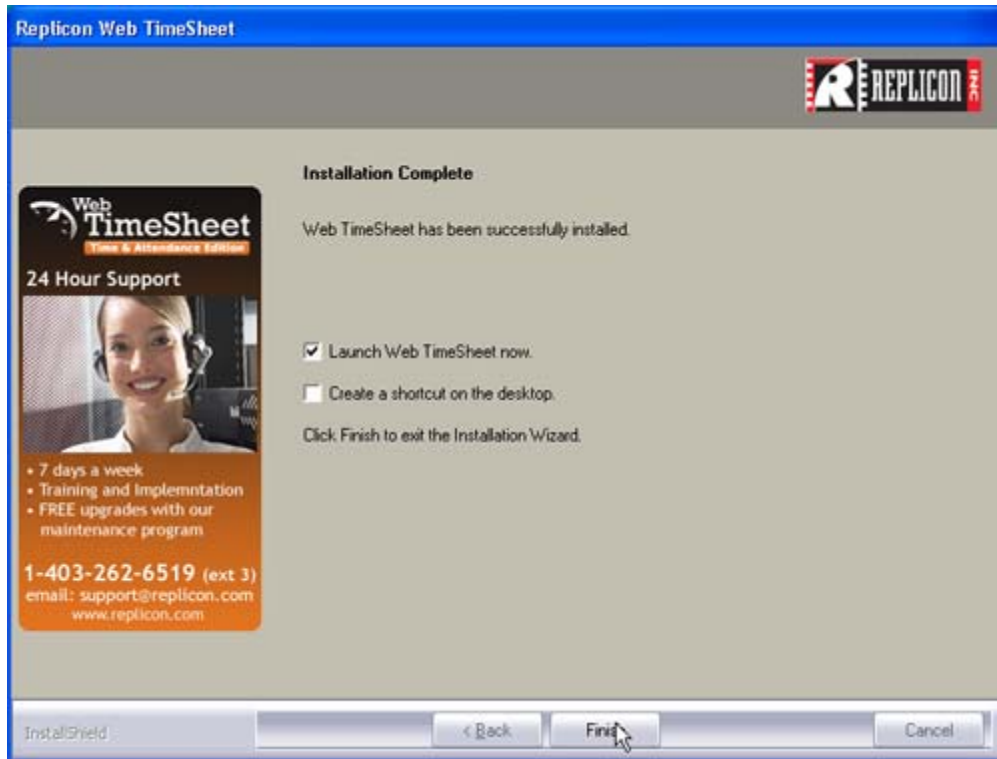
- ☐ If you are using the SQL Server (standard, Express, or MSDE) database platform, Web TimeSheet requires that MDAC be installed on your machine. The installation program will check for the presence of MDAC, and will automatically install it if it is absent. This may take a few minutes.

Once MDAC is installed, the computer may need to be restarted. Installation will automatically resume after the computer is restarted.

A **Setup Status** window displays, tracking the progress of the installation.



16. The **Installation Complete** window displays to indicate that installation was successful. To exit the installation program:
- Enable the **Launch Web TimeSheet now** check box if you would like to launch Web TimeSheet immediately.
  - Enable the **Create a shortcut on the desktop** check box if you would like a shortcut created.
  - Select the **Finish** button.



# Configuring the Server after Installation

## Understanding the Available Server Configurations

Web TimeSheet supports the following configurations for the server:

- Internal web server
- IIS web server using ISAPI
- IIS web server using CGI

See [Appendix A, Glossary](#) on page 72 for information on these terms.

When installing the full version, you can choose which web server you want to use. If you choose IIS, ISAPI will be used by default. If you are upgrading a version installed prior to 8.2, CGI is used for IIS web server installations. The trial version uses the internal web server.

You can change the configuration after installation, including:

- If you are using the internal web server, you can switch to IIS (with ISAPI) following the details given in [Switching from the Internal Web Server to an IIS Server](#) on page 57.
- If you installed a previous version of Web TimeSheet using IIS, you can switch from CGI to ISAPI following the steps outlined in [Switching from CGI to ISAPI](#) on page 64.

## Determining which Configuration is in Use

To determine which of the above configurations is in use, you can check the format of the Web TimeSheet, as explained in [Understanding the Web TimeSheet Website URL](#) on page 69. Alternately, you can check the `rtserver.ini` file on the Web TimeSheet server as follows:

1. Open the `rtserver.ini` file, which is typically found in `C:\Program Files\Replicon Inc\Web TimeSheet\APP`.
2. Locate the line starting with `preload`.
3. If the next line:
  - Starts with `cgivirtualpath`, an IIS web server is in use.
  - Is `[Reception]`, the internal web server is in use.
4. If IIS is in use, check the last section of the `cgivirtualpath` line. If the line ends with:
  - `rt.exe/`, CGI is in use with IIS.
  - `rt.dll/`, ISAPI is in use with IIS.

## Accessing the IIS Manager

To access the IIS Manager, which is used to configure settings for the Web TimeSheet IIS web server:

1. Open the Windows **Control Panel**.
2. Select **Administrative Tools > Internet Information Services**.

## Determining which Version of IIS is in Use

The version of IIS being used depends on the operating system, as follows.

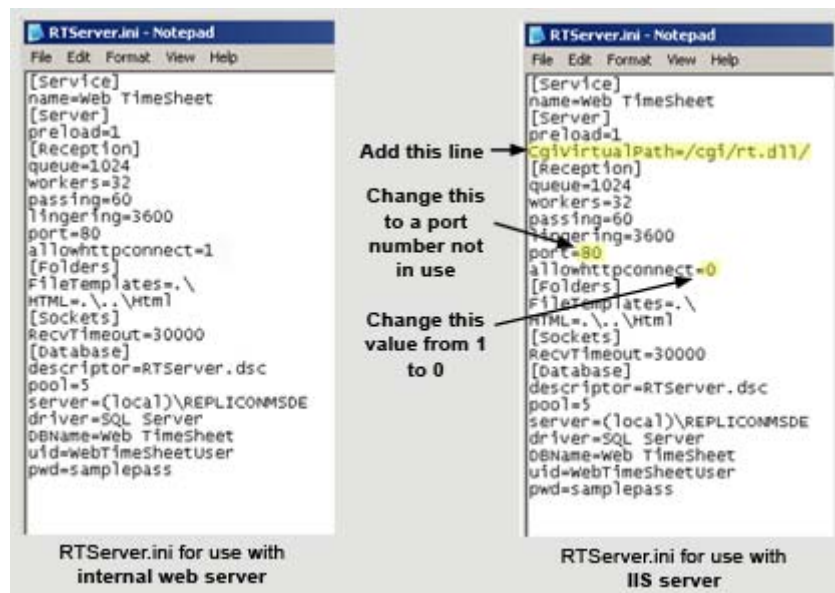
Operating System	IIS Version
Windows Server 2008	7.0
Windows Vista	7.0
Windows Server 2003	6.0
Windows XP Professional	5.1
Windows 2000	5.0

You can confirm the version of IIS by selecting **About Internet Information Services** from the IIS Manager **Help** menu.

## Switching from the Internal Web Server to an IIS Server

If you have installed Web TimeSheet on the internal web server, but decide to switch to using an Internet Information Services (IIS) server, you must:


1. Ensure IIS is installed, as detailed in [Chapter 4, Installing IIS](#) on page 16.
2. Make changes to the `rtserver.ini` file:
  - a. Open the `rtserver.ini` file, which is typically found in `C:\Program Files\Replicon Inc\Web TimeSheet\APP`.
  - b. Type `CgiVirtualPath=/cgi/rt.dll/` between the `preload=1` and `[Reception]` lines.
  - c. Change `allowhttpconnect=1` to `allowhttpconnect=0`.
  - d. Change the port number to that of any port not in use.



3. Configure IIS and create two new virtual directories, as detailed in [Manually Configuring Internet Information Services \(IIS\)](#) below.

## Manually Configuring Internet Information Services (IIS)


If you choose to use an Internet Information Services (IIS) server, Web TimeSheet requires Internet Information Services (IIS) to be installed and configured on your computer. When you select the IIS web server option during installation, Web TimeSheet will automatically configure that server correctly. You can, however, choose to configure the IIS web server yourself once installation is complete. In this case, you would have to elect to use the Web TimeSheet Web Server during the installation process.

 Additional steps are required if you choose to change from using the internal web server to using an IIS server, as detailed in [Switching from the Internal Web Server to an IIS Server](#) on page 57.

To configure IIS, you must:

1. Set up a relay in IIS, if using Windows Server 2003.
2. Create the Web TimeSheet website.
3. Create virtual directories.
4. Restart the Web TimeSheet service.
5. Provide HTML access to Web TimeSheet.
6. Configure IIS application pools.

These procedures are described below.

 You must be a member of the administrator group to perform the following procedures.

### Setting up IIS on Windows Server 2003

When IIS is first installed on Windows Server 2003, it is locked down (that is, only request handling for static web pages is enabled). Before you create the virtual directories for Web TimeSheet, you must enable the Web TimeSheet relay.

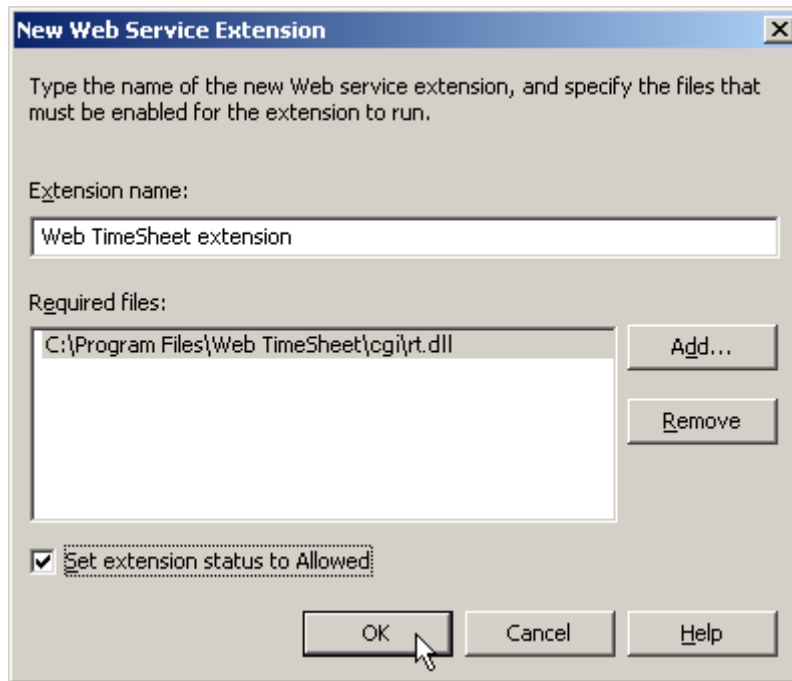
To enable the Web TimeSheet CGI relay in Windows Server 2003:

1. Run the IIS Manager.
2. In IIS Manager, select the **Web Service Extensions** folder.
3. In the details pane, click **Add a new Web service extension**.
4. In the **Extension name** box, enter a name for the new extension, for example *Web TimeSheet extension*.
5. Select **Add**.

In the **Required files** box, enter (or browse to) the path for `rt.dll`, as follows:

```
C:\Program Files\Web TimeSheet\cgi\rt.dll
```

6. Enable the **Set extension status to Allowed** check box.



7. Select **OK**.

## Creating the Web TimeSheet Website

If you do not have a website in IIS that Web TimeSheet can use, you must create one. The sections that follow detail the steps to complete this in each operating system.

### Creating the Website in Windows Server 2008 or Vista (IIS 7.0)

To create a Web TimeSheet website in Windows Server 2008 or Windows Vista, which use IIS 7.0:

1. Create an empty directory on the hard drive of the server that can be used as the root directory of the Web TimeSheet website.
2. Run the IIS Manager.
3. Select **[Web] Sites** from the left pane.
4. Select **Add Web Site** from the right.
5. Enter the name of the website (for example, *Web TimeSheet*) in the **Web site name** box.
6. In the **Physical path** box, browse to the empty directory you created in [Step 1](#).

7. Enter the IP address and port number for the website. These determine the URL used to access Web TimeSheet and the port number should be different from that used by Web TimeSheet to access IIS (shown in `RTServer.ini`).

The screenshot shows the 'Add Web Site' dialog box. The 'Site name' and 'Application pool' fields are both set to 'Web TimeSheet'. The 'Content Directory' section shows the 'Physical path' as 'C:\Web Sites\Web TimeSheet'. The 'Binding' section is configured with 'Type' as 'http', 'IP address' as '10.0.0.20', and 'Port' as '82'. The 'Start Web site immediately' checkbox is checked. The 'OK' and 'Cancel' buttons are visible at the bottom right.

8. Select **OK**.

## Creating the Website in Windows Server 2003 or 2000 (IIS 6.0/5.0)

To create a Web TimeSheet website in Windows Server 2003 or Windows 2000, which use IIS 6.0 and IIS 5.0 respectively:

1. Create an empty directory on the hard drive of the server that can be used as the root directory of the Web TimeSheet website.
2. Run the IIS Manager.
3. If using Windows Server 2003, in the left pane right click on the **Web Sites** folder. Alternatively, if using Windows Server 2000, right click on the name of the server where you are creating the website.
4. Point to **New**, and then select **Web Site**. The **Web Site Creation Wizard** appears.
5. Select **Next**.
6. In the **Description** box, enter the name of the new website (for example, *Web TimeSheet*), and then select **Next**.
7. Enter the IP address and port number for the website. These determine the URL used to access Web TimeSheet and the port number should be different from that used by Web TimeSheet to access IIS (shown in `RTServer.ini`). Select **Next**.

8. In the **Path** box, browse to the empty directory you created in [Step 1](#). Select **Next**.
9. Enable the **Read** permission check box, and then select **Next**.
10. Select **Finish**.

## Creating the Website in Windows XP (IIS 5.1)

Windows XP only allows for one website. As a result, you must use the existing website, as follows:

1. Create an empty directory on the hard drive of the server that can be used as the root directory of the Web TimeSheet website.
2. Run the IIS Manager.
3. Right-click on the existing website, typically called *Default Web Site*, and select **Properties**.
4. In the **Web Site** tab, enter the IP address and port number for the website. These determine the URL used to access Web TimeSheet and the port number should be different from that used by Web TimeSheet to access IIS (shown in `RTServer.ini`).
5. Select the **Home Directory** tab.
6. In the **Local Path** box, browse to the empty directory you created in [Step 1](#).
7. Enable the **Read** permission check box.
8. Select **OK**.

## Creating Virtual Directories

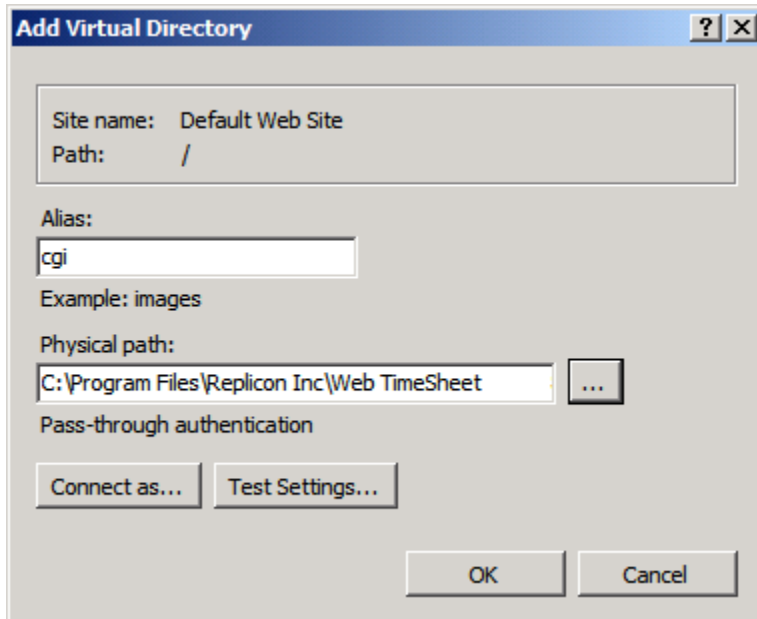
The Web TimeSheet web site requires two virtual directories, *CGI* and *HTML*. The sections that follow provide details on creating these virtual directories in each operating system.

### Creating the Virtual Directories in Windows Server 2008 or Vista (IIS 7.0)

To create virtual directories in Windows Server 2008 or Windows Vista:

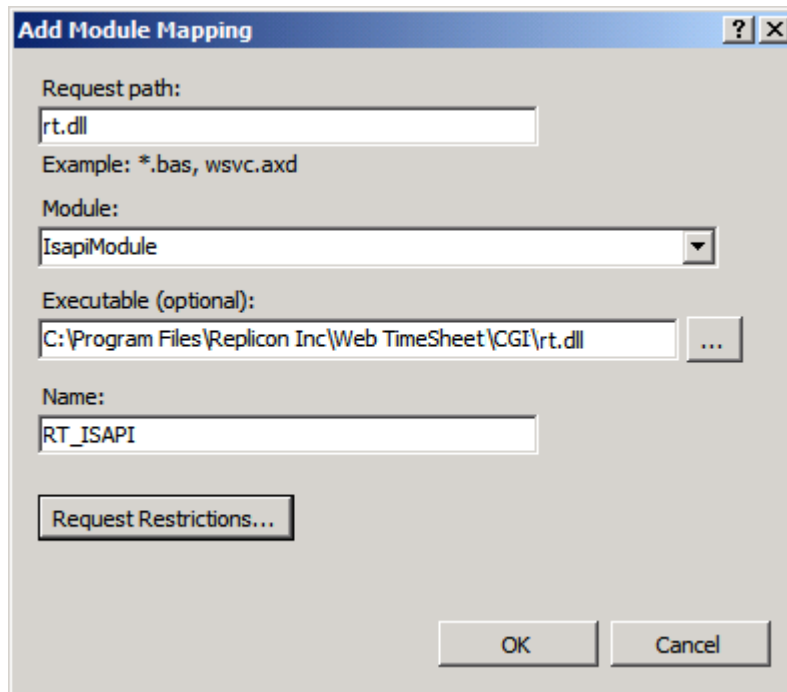
1. Run the IIS Manager.
2. Right click on the website for Web TimeSheet.
3. Select **Add Virtual Directory**.
4. In the **Alias** box, enter *CGI* as the name for the virtual directory.

5. In the **Physical path** box, browse to the `cgi` folder in the Web TimeSheet installation folder (typically `C:\Program Files\Web TimeSheet\cgi`).



6. Select **OK**. You will be returned to the main IIS Manager window.
7. Repeat [Step 3](#) through [Step 6](#) to create a virtual directory called *HTML*, and point this virtual directory to the path of the `html` folder in Web TimeSheet installation folder. Allow only **Read** access for permissions.
8. In the left pane, select the *CGI* virtual directory.
9. In the right pane, double-click on **Handler Mappings**.
10. Select **Add Module Mapping** on the right.
11. In the **Request path**, enter `rt.dll`.
12. Select *IsapiModule* for the **Module**.
13. If available, in the **Executable** box, browse to the `rt.dll` file in the Web TimeSheet installation folder (typically `C:\Program Files\Web TimeSheet\cgi`).

14. Enter a name for the mapping, such as *RT\_ISAPI*.



15. Select the **Request Restrictions** button.
16. In the **Mapping** tab, enable **Invoke handler only if request is mapped to**. Ensure **File** is selected.
17. If available, select the **Access** tab and select the **Execute** option.
18. Select **OK**.
19. In the **Add Module Mapping** window, select **OK**.
20. If asked whether you want to allow the extension, select **Yes**.
21. Select the new handler mapping and choose to edit its permissions.
22. Ensure the **Execute** permission is enabled and select **OK**.

## Creating the Virtual Directories in Windows Server 2003, XP, or 2000 (IIS 6.0/5.x)

To create virtual directories in Windows Server 2003, Windows XP, or Windows 2000:

1. Run the IIS Manager.
2. Right click on the website for Web TimeSheet.
3. Point to **New**, select **Virtual Directory**. The **Virtual Directory Creation Wizard** appears.
4. Select **Next**.
5. In the **Alias** box, enter *CGI* as the name for the virtual directory and select **Next**.
6. In the **Path** box, browse to the *cgi* folder in the Web TimeSheet installation folder (typically *C:\Program Files\Web TimeSheet\cgi*), and then select **Next**.
7. Enable the check boxes for the following and then select **Next**.
  - **Read**
  - **Execute**
8. Select **Finish**.

- Repeat [Step 2](#) through [Step 8](#) to create a virtual directory called *HTML*, and point this virtual directory to the path of the `html` folder in Web TimeSheet installation folder. Allow only **Read** access for permissions.
- Select **Finish**.

## Providing HTML Access to Web TimeSheet

When you have created the virtual directories in IIS, you can access Web TimeSheet using the appropriate URL, as explained in [Understanding the Web TimeSheet Website URL](#) on page 69.

If you want to provide access to Web TimeSheet from your local intranet site, add HTML similar to the following in your Intranet homepage at the appropriate section:

```
<A HREF="Web_TimeSheet_URL"><IMG SRC="Web_TimeSheet_URL/html/common/webts.gif" BORDER=0>Web TimeSheet </A>
```


where:

*Web\_TimeSheet\_URL* is the Web TimeSheet URL.

## Configuring IIS Application Pools

Application pools are a new feature introduced in Windows Server 2003 (IIS 6.0) and later. You may need to configure the application pools feature to allow Web TimeSheet to function correctly. By default, Web TimeSheet will run under the default application pool configured with Network Service privileges. This configuration will be adequate in many cases.

However, if you have customized your environment, Web TimeSheet may not operate under the Default Application Pool. In this case, it is suggested that you create a new Application Pool with privileges higher than Network Service, and run Web TimeSheet in this new Application Pool.

 Refer to the IIS documentation for more information on Application Pools.

## Switching from CGI to ISAPI

When using an IIS web server, Web TimeSheet supports the use of CGI or ISAPI. If you have installed Web TimeSheet 8.2 or higher using IIS, Web TimeSheet will be automatically configured to use ISAPI. If you have upgraded from a previous version, CGI will be used.

To change from CGI to ISAPI after installation:

- Ensure IIS is in use. For information on converting your installation to IIS, see [Switching from the Internal Web Server to an IIS Server](#) on page 57.
- Make changes to the `rtserver.ini` file:
  - Open the `rtserver.ini` file, which is typically found in `C:\Program Files\Replicon Inc\Web TimeSheet\APP`.
  - Change `CgiVirtualPath=/cgi/rt.exe/` to `CgiVirtualPath=/cgi/rt.dll/`.
- Restart the Web TimeSheet service.
- Notify users that any bookmarks will need to be updated to use `rt.dll`, instead of `rt.exe`.
- Modify the URL used on your Intranet page (see [Appendix 7, Providing HTML Access to Web TimeSheet](#) on page 64) to use `rt.dll`.

## Enabling Integrated Windows Authentication in Web TimeSheet

When using an IIS web server, you can choose to use Integrated Windows Authentication. With Integrated Windows Authentication, users are automatically logged into Web TimeSheet using their Windows login name and password.

When enabled, Integrated Windows Authentication will be used by all Web TimeSheet users; you cannot enable it for a portion of your users.

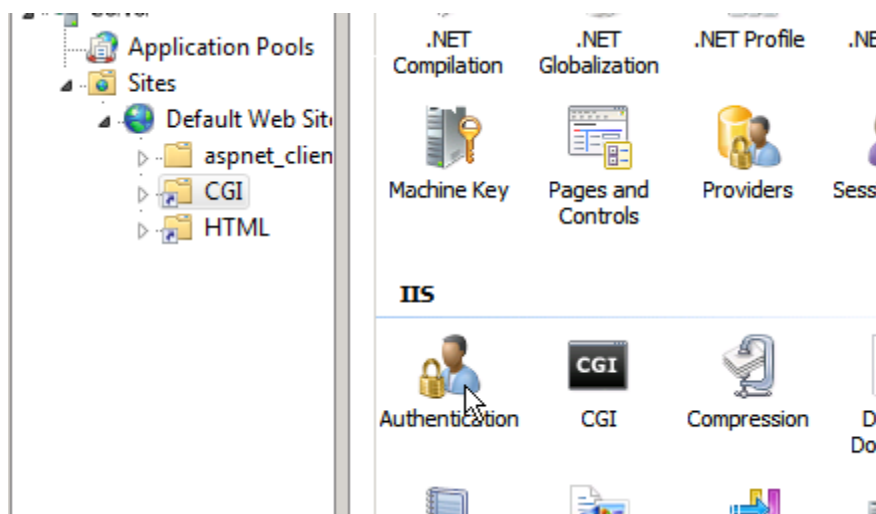
If you did not enable Integrated Windows Authentication during installation or have upgraded from a previous version, you can enable it after the fact following the steps below:

1. Ensure IIS and ISAPI are in use. If you installed a version prior to 8.2 using IIS, you will have to complete the steps in [Switching from CGI to ISAPI](#) on page 64. If you installed the internal web server, you will need to complete the steps in [Switching from the Internal Web Server to an IIS Server](#) on page 57.
2. Within Web TimeSheet, change the administrator's **Login Name** to match their Windows login name.
3. Within IIS, enable Integrated Windows Authentication and disable anonymous access for the *CGI* virtual directory. See the sections that follow for information on how to complete this in each operating system.
4. Have the Web TimeSheet administrator log in and change each user's **Login Name** to match their Windows login name.

## Changing Virtual Directory Options in Windows Server 2008 or Vista (IIS 7.0)

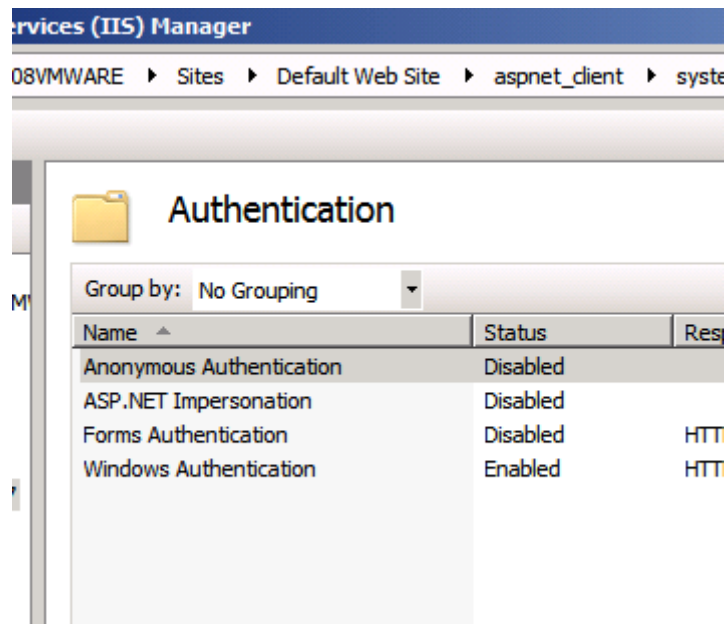
To change the CGI virtual directory settings in Windows Server 2008 or Windows Vista:

1. Run the IIS Manager.
2. In the left pane of the IIS Manager, expand the web site you chose to install Web TimeSheet to, typically named *Default Web Site*.
3. Select the *CGI* virtual directory.
4. In the right pane, double-click on **Authentication**.



5. Disable the **Anonymous Authentication** action.

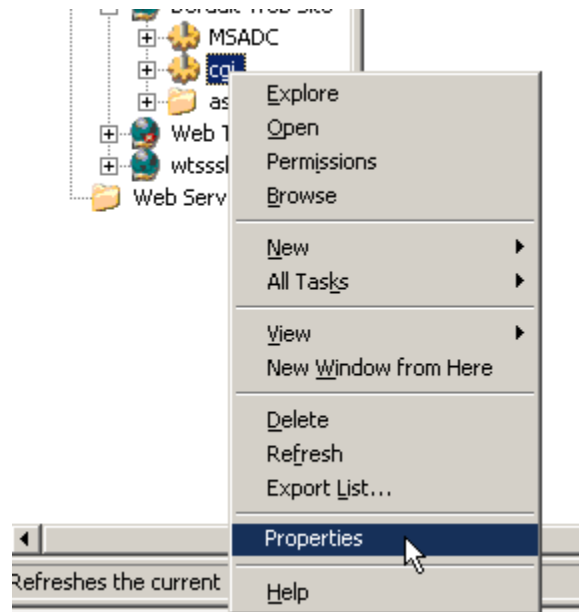
6. Enable the **Windows Authentication** action.



## Changing Virtual Directory Options in Windows Server 2003, XP, or 2000 (IIS 6.0/5.x)

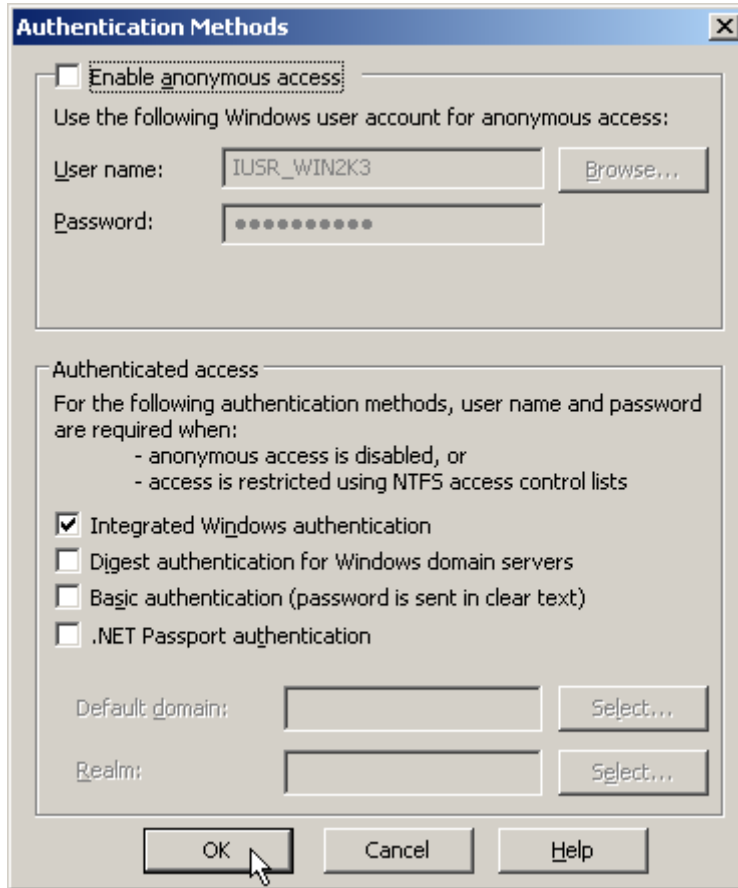
To change the CGI virtual directory settings in Windows Server 2003, Windows XP, or Windows 2000:

1. Run the IIS Manager.
2. In the IIS Manager, expand the web site you selected to install Web TimeSheet to, typically named *Default Web Site*.
3. Right-click on the *CGI* virtual directory and select **Properties**.



4. In the **CGI Properties** window that displays, select the **Directory Security** tab.
5. Select **Edit** in the **Anonymous Access** section.

6. In the **Authentication Methods** window:
  - a. Disable the **[Enable] anonymous access** check box.
  - b. Enable the **Integrated Windows authentication** check box.
  - c. Select **OK**.



7. Select **OK** to close the **CGI Properties** window.

## Ensuring Web TimeSheet Security

If you decide to use an IIS server, you may need to set up Single Socket Layer (SSL) on the server to prevent transmission of plain text (unencrypted) passwords. Web TimeSheet uses HTTP, which is a plain text protocol. Therefore, all communication between the client and the server will be in plain text unless SSL is implemented.

Consider enabling SSL if you plan:

- To use NT authentication within Web TimeSheet
- To allow external access to Web TimeSheet over the Internet

For information on how to set up SSL, refer to [support.microsoft.com/kb/299525](http://support.microsoft.com/kb/299525).

## Switching to Domain User Credentials on the Web TimeSheet Server

If Web TimeSheet and your SQL Server database are installed on separate machines, and you use Windows authentication (trusted connection), you must use domain user account credentials rather than local system account credentials on your server.

Local system credentials grant permissions on the local machine only and therefore do not allow Web TimeSheet to access a database on another machine. Switching to domain user credentials allows Web TimeSheet to connect to your database.

To switch to domain user credentials:

1. On your server, in the Windows **Control Panel**, select **Administrative Tools > Services**.
2. In the **Services** window, right-click on Web TimeSheet.
3. Select **Properties**. The **Web TimeSheet Properties** window displays.
4. Select the **Log On** tab.
5. Select the **This account** option and:
  - In the **This account** field, enter the `domain\username`.
  - In the **Password** field, enter the Windows password.
  - Confirm the password, if required.
6. Ensure the user has been added to the **SQL Server** group on the database machine.

## Changing the IIS CGI Timeout

The default timeout setting when using CGI is 120 seconds. If you need to increase this value:


- In Windows 2000, install and use the IIS Manager Snap-In.
- In Windows Server 2003 and XP, use a metabase editing tool, such as the IIS 6.0 Resource Kit's *IIS Metabase Explorer*, from the IIS 6.0 Resource Kit.
- In Windows Server 2008 and Vista, edit the value in IIS Manager.

## Starting and Stopping the Web TimeSheet Service

Web TimeSheet runs as a Windows service. You may need to stop and restart this service when backing up your database, applying a patch, making changes to the server's `.ini` file, or whenever cache must be read and restored.

To start or stop the Web TimeSheet service:

1. In the Windows **Control Panel**, select **Administrative Tools**.
2. Double-click **Services**.
3. Select the Web TimeSheet entry to highlight it, and select **Action** in the menu bar.
4. Select **Stop** to stop the service, or **Start** to start it.


 The Stop/Start status is shown in the **Status** column.

# Accessing Web TimeSheet after Installation

## Understanding the Web TimeSheet Website URL


For a self-hosted installation, Web TimeSheet's website URL depends on the type of server you are using, and has the following format:

Server Type	Protocol	URL Format
IIS	ISAPI (default)	http://server_name:port_number/cgi/rt.dll or http://IP_address:port_number/cgi/rt.dll
	CGI	http://server_name:port_number/cgi/rt.exe or http://IP_address:port_number/cgi/rt.exe
Internal web server	N/A	http://server_name:port_number/TimeSheet/ or http://IP_address:port_number/TimeSheet/

 You will only need to enter a port number if your web server uses a port other than port 80.

Once the application is installed, administrators should distribute the site's URL, together with login information, to all users so they can access Web TimeSheet via their web browser.

## Starting Web TimeSheet on the Server

 You can access Replicon-hosted implementations of Web TimeSheet through the **Customer Login** section of [www.replicon.com](http://www.replicon.com).

## Starting the Trial Version of Web TimeSheet

To start the trial, or demonstration, version of Web TimeSheet:

1. Launch the application via one of the following:
  - If you selected **Launch Web TimeSheet now** on the final installation window, Web TimeSheet will open automatically when you select the **Finish** button.
  - If you selected **Create a shortcut on the desktop** on the final installation window, double-click the desktop icon.
  - Select Programs/Replicon/Web TimeSheet/Launch Web TimeSheet from the **Start** menu.

Your browser opens and, if Integrated Windows authentication was enabled during installation, you will be automatically logged in (although you must be logged into Windows using the same account you were logged in with during installation).

Otherwise, the Web TimeSheet login page displays. The user name `admin` should appear in the **Login Name** field.

☐ “admin” is the system administrator’s account and is used to set up the Web TimeSheet system.

2. Type `password` into the **Password** field, and then select the **Enter** button.



☐ The password is case sensitive.

## Starting the Full Version of Web TimeSheet

To start Web TimeSheet:

1. Launch the application via one of the following:
  - If you selected **Launch Web TimeSheet now** on the final installation window, Web TimeSheet will open automatically when you select the **Finish** button.
  - If you selected **Create a shortcut on the desktop** on the final installation window, double-click the desktop icon.
  - Select `Programs/Replicon/Web TimeSheet/Launch Web TimeSheet` from the **Start** menu.

Your browser opens and, if Integrated Windows authentication was enabled during installation, you will be automatically logged in (although you must be logged into Windows using the same account you were logged in with during installation).

Otherwise, the Web TimeSheet login page displays. The user name `admin` should appear in the **Login Name** field.

☐ “admin” is the system administrator’s account and is used to set up the Web TimeSheet system.

2. In the **Password** field, enter a new password using a minimum of six characters, and then select the **Save** button.




The screenshot shows a web page titled "Web TimeSheet" with a sub-header "Set Up Password for 'admin' Account". Below the header, there is a note: "Passwords are case sensitive and must be at least 6 characters long". There are two input fields: "Login Name:" with the value "admin" and "Password:" with the value "NewPassword". Below the fields is an **Important** note: "Remember this password, you will need it later." and a "Save" button with a mouse cursor pointing to it.

- This password will also be used as the password for the "root" account. The root account should be used to log in to the system whenever the `admin` account cannot be used (for example, when the `admin` account password is changed, or when the `admin` user is disabled/deleted from the system).

Record this password, and keep that record in a secure place.

- The password is case sensitive.

3. The Web TimeSheet login page displays. Enter the password you just created into the **Password** field, and then select the **Enter** button.



The screenshot shows the Web TimeSheet login page. It features the "Web TimeSheet" logo at the top. Below the logo is a blue banner that says "Use your 'admin' account password to log in.". There are two input fields: "Login Name:" with the value "admin" and "Password:" with a masked password represented by ten dots. Below the fields is an "Enter" button with a mouse cursor pointing to it. At the bottom, there is a checked checkbox labeled "Remember my Login Name and Password".

- You may elect to have the system remember your login name and password by enabling the appropriate check box.

## APPENDIX A

# Glossary

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<b>ASP Implementation</b>	See <a href="#">Replicon-Hosted Implementation</a> .
<b>Common Gateway Interface (CGI)</b>	A specification used by Web TimeSheet to interact with the web server. Web TimeSheet supports either CGI or ISAPI.
<b>Database Instance</b>	A named installation of the database management system. Multiple databases can exist in one instance.
<b>Database Management System</b>	Computer software designed for the purpose of managing databases.
<b>Database Platform</b>	The type of database being used. Web TimeSheet supports the SQL Server Express, MSDE, SQL Server, and Oracle platforms.
<b>Integrated Windows Authentication</b>	A method for authenticating Web TimeSheet users. Users will be automatically logged in to Web TimeSheet using their Windows login name and password.
<b>Internet Information Services (IIS)</b>	Web server application software for Microsoft Windows. Web TimeSheet can be installed using IIS or Replicon's own web server, which is provided with Web TimeSheet.
<b>Internet Server Application Programming Interface (ISAPI)</b>	An interface used by Web TimeSheet to interact with an IIS web server. Web TimeSheet supports either ISAPI or CGI, but ISAPI typically provides better performance.
<b>Migrating</b>	A type of upgrade where the data from the existing database will be copied over to a new database that you specify. The existing database will remain untouched.
<b>Replicon-Hosted Implementation</b>	A type of Web TimeSheet implementation in which the application is installed on servers managed by Replicon. The application is available to your users through the Internet, using a web address provided by Replicon or through the <b>Customer Login</b> section of the Replicon website.
<b>Self-Hosted Installation</b>	A type of Web TimeSheet implementation in which you install and manage the application and database within your organization. It is installed using a file provided by Replicon and the application is available to users through your network.
<b>Upgrading</b>	A type of upgrade where the existing database is upgraded in place. A copy of data is not made before the changes are made.
<b>Web Server</b>	A computer that delivers (serves up) web pages.