

# TRIMBLE BUSINESS CENTER

## Enterprise Deployment Guide

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[www.trimble.com](http://www.trimble.com)



## Overview

This document describes the various methods a system administrator can use to install (deploy) Trimble Business Center on multiple computers on their Windows-based network (enterprise) more quickly and efficiently than taking an Installation DVD to each computer and performing the installation manually.

The document includes the following sections:

- [Windows installer package file](#) (on page 3) - This section explains the purpose of the Windows installer package file Trimble Business Center.msi and how it is used in the deployment process.
- [Deployment methods](#) (on page 3) - This section describes several basic methods you can use to deploy Trimble Business Center.
- [Prerequisite programs](#) (on page 4) - This section lists the prerequisite programs that must be installed prior to installing Trimble Business Center.
- [Deploy using Msiexec.exe](#) (on page 5) - This section describes the command options and parameters used to run Msiexec.exe directly.
- [Deploy software updates using Msiexec.exe](#) (on page 10) - This section explains how to download software updates and deploy them using Msiexec.exe.
- [Deploy using Setup.exe](#) (on page 11) - This section describes the command options and parameters used to run Setup.exe.
- [Configure application and project settings](#) (on page 13) - This section explains how to customize Trimble Business Center application and project settings on enterprise computers after installation is complete.

### Note on licensing:

To access licensed features in Trimble Business Center, each user must either have a Sentinel HASP single-user hardware key installed on his computer or have access to a Sentinel HASP multi-user key installed on a network server. For more information on network licensing, see the *Network Licensing Read Me* document.

### Note on installing on Windows 8 operating systems:

The Microsoft .NET Framework 3.5, which is required to operate Trimble Business Center, is not installed by default with the Microsoft Windows® 8 operating system. During the installation of TBC on Windows 8 systems, you are prompted to install .NET Framework 3.5 before TBC installation can complete. When installing TBC remotely, it might be more efficient to install .NET Framework 3.5 manually on each client computer, prior to installing TBC. This ensures you do not need to respond to the prompt to install .NET Framework 3.5 during each installation of TBC.

To manually install .NET Framework 3.5 on a client computer running Windows 8, open the Control Panel and select Programs and Features. Then select "Turn Windows features on or off" and select the Microsoft .NET Framework 3.5.1 check box. This option requires an Internet connection.

## Windows installer package file

Your Trimble Business Center Installation DVD or Web download folder includes the Windows installer package file Trimble Business Center.msi. This file must be processed with the Windows installer program Msiexec.exe to install Trimble Business Center on a target computer. The Msiexec.exe program is included with your Windows operating system. You can run the Msiexec.exe program to remotely install and customize Trimble Business Center on any computer on your Windows-based network from a single Trimble Business Center.msi file.

Trimble Business Center.msi can be processed to install Trimble Business Center using either of the following methods:

- Msiexec.exe - Run the Windows installer program Msiexec.exe directly to process the Trimble Business Center.msi file. Use command options and parameters to customize the installation. Note that all prerequisite programs must be installed prior to running Msiexec.exe. For more information on running Msiexec.exe directly, see [Deploy using Msiexec.exe](#) (on page 5).
- Setup.exe - Run the Trimble Business Center installation program Setup.exe to (1) install all prerequisite programs and (2) invoke the Msiexec.exe program to process the Trimble Business Center.msi file. Use command options and parameters to customize the installation. For more information on running Setup.exe, see [Deploy using Setup.exe](#) (on page 11).

## Deployment methods

You can use any of the following methods to install (deploy) Trimble Business Center on computers connected to your Windows-based network:

- Network share
- Scripting
- .MSI deployment

**Note:** Users must have Administrator privileges to install Trimble Business Center, regardless of the deployment method. If they do not have Administrator privileges, the setup must be deployed using the Windows Run As command to execute the program as an Administrator. See your Windows documentation for more information.

### Network share

This deployment method incorporates the use of a "network share" folder that is accessible by other computers connected to the network. All of the Trimble Business Center installation files from the Trimble Business Center Installation DVD or the self-extract executable destination folder (for Web downloads) can be copied into the network share folder. Users can then be notified as appropriate to install Trimble Business Center remotely by double-clicking Setup.exe in the folder.

All of the installation files, including the Trimble Business Center.msi file and the Setup.exe program, are delivered in the following folder:

- Installation DVD: <DISK>\Trimble Business Center

- Web download (default): C:\Trimble Business Center <version> Setup

**Note:** Users must have Read permissions to access the network share.

## Scripting

This deployment method incorporates the use of an installation script (typically a text file) containing a set of commands that can be executed on a computer with no user interaction. The installation script can be used to run Msiexec.exe or Setup.exe with the appropriate command-line options and parameters necessary to configure the installation as required.

You can run an installation script using any of the following methods:

- Run the script manually at each individual workstation.
- Notify each user with instructions on running the script.
- Set up the script so that it automatically runs on login.

For more information about using the Msiexec.exe program to install Trimble Business Center, see [Deploy Using Msiexec.exe](#) (on page 5).

For more information about using the Setup.exe program to install Trimble Business Center, see [Deploy Using Setup.exe](#) (on page 11).

## .MSI deployment

This deployment method incorporates an enterprise deployment tool that supports the installation of Trimble Business Center on multiple computers using the Trimble Business Center.msi file.

For more information about using Microsoft enterprise deployment methods, see your Microsoft documentation.

For more information about using the Msiexec.exe program to install Trimble Business Center, see [Deploy Using Msiexec.exe](#) (on page 5).

## Prerequisite programs

The following table lists programs that must be installed prior to installing Trimble Business Center, and programs that can optionally be installed, depending on your needs.

If you deploy using Setup.exe, the prerequisite programs are automatically installed as necessary using a built-in bootstrap application.

If you deploy using Msiexec.exe, you must first install the prerequisite programs listed here. This can be accomplished using a bootstrap application. The prerequisite programs can be downloaded from the vendor website or accessed from the following folder:

- Installation DVD: <DISK>\Trimble Business Center\ISSetupPrerequisites
- Web download (default): C:\Trimble Business Center <version> Setup\ISSetupPrerequisites

Prerequisite	Required?	Reboot required?	Subfolder in ISSetupPrerequisites folder
.NET Framework 4.0 (see note below)	Yes	Yes	dotNetFramework40Full
Windows Installer 4.5 (see note below)	Yes	Yes	Windows_Installer_45
Microsoft Report Viewer 2010 SP1	Yes	No	ReportViewer2010SP1
Sentinel HASP Runtime (version 5.95)	Yes	No	HASP_Runtime_Setup_Commandline_v595
Sentinel HASP Vendor Library	Yes	No	HASP_Vendor_Library
Microsoft ActiveSync 4.5	Yes, if you are installing Office Synchronizer with Windows XP	No	ActiveSync45
Microsoft Windows Mobile Device Center 6.1	Yes, if you are installing Office Synchronizer with Vista or Windows 7	No	WMDC61x86 (32 bit) or WMDC61x64 (64 bit)
.NET Framework 4.0 language pack	No	No	dotNetFramework40LangPack
Microsoft Report Viewer 2010 SP1 language pack	No	No	ReportViewer2010SP1LangPack

**Note:** The .NET Framework and Windows Installer programs require that the computer be restarted after installation. Therefore, it is recommended that these prerequisite programs be installed first.

## Deploy using Msiexec.exe

The Windows Installer executable program Msiexec.exe can be used to install, modify, and perform other operations on the Trimble Business Center.msi file. Msiexec.exe is located in the Windows System folder (typically C:\Windows\system32).

The Trimble Business Center.msi program is located in the following folder:

- Installation DVD: <DISK>\Trimble Business Center
- Web download (default): C:\Trimble Business Center <version> Setup

**Note:** Prior to installing Trimble Business Center on a computer, you must install the prerequisite programs listed in [Prerequisite Programs](#) (on page 4). This can be accomplished using a bootstrap application.

## Windows Installer command line options and parameters

Standard Windows installer command line parameters are used to run Msiexec.exe. The typical usage is:

```
msiexec /Option <Required Parameter> <Optional Parameter>
```

See "Command Line Examples" later in this section for examples of various commands using this syntax.

### Common Windows Installer options

The following table lists the available installer options.

Option	Parameters	Description
/i	Package (.msi file)	Installs the product
/x	Package (.msi file)	Uninstalls the product
/q	n   r	Determines how the Installation Wizard is displayed during installation:  n = The Installation Wizard does not display.  r = The Installation Wizard displays in read-only mode.

### Command line parameters

Command line parameters can be used to customize the installation by using the format <Parameter>=<Value>. The following table lists the available parameters. If a parameter is not specified on the command line, the default parameter value shown in the table is used.

Parameter	Value	Default	Description
INSTALLDIR	Path	C:\Program Files\ C:\Program Files\ Files\ <software brand name>\Trimble Business Center	Specifies the Trimble Business Center install location
FDM	1 or "" (true or false)	1 (true)	Installs Feature Definition Manager
SYNC	1 or "" (true or false)	1 (true)	Installs Office Synchronizer
TUTORIAL	1 or "" (true or false)	1 (true)	Installs Trimble Business Center Tutorials

ADDLOCAL	Feature (see Features table below)		Adds a feature to the installation
REMOVE	Feature (see Features table below)		Removes a feature from the installation
TRANSFORMS	Language transform (see Language table below)	1033.mst (English – US)	Applies Windows Installer database to modify settings of an installation

**Features for ADDLOCAL and REMOVE parameters**

The ADDLOCAL and REMOVE parameters can be used to install or remove specific features. If more than one feature is to be added or removed, use a comma to separate the features (for example, ADDLOCAL=Feature, Feature2). The following table lists the available features for the ADDLOCAL and REMOVE parameters.

Feature	Adds or Removes
Program_Files_Chinese	Files for running the program in Chinese (Simplified)
Program_Files_Czech	Files for running the program in Czech
Program_Files_Dutch	Files for running the program in Dutch
Program_Files_EnglishUK	Files for running the program in English (United Kingdom)
Program_Files_EnglishUS	Project templates for United States-based projects
Program_Files_Finnish	Files for running the program in Finnish
Program_Files_French	Files for running the program in French
Program_Files_German	Files for running the program in German
Program_Files_Italian	Files for running the program in Italian
Program_Files_Japanese	Files for running the program in Japanese
Program_Files_Korean	Files for running the program in Korean
Program_Files_Norwegian	Files for running the program in Norwegian
Program_Files_Portuguese	Files for running the program in Portuguese
Program_Files_Russian	Files for running the program in Russian
Program_Files_Spanish	Files for running the program in Spanish
Program_Files_Swedish	Files for running the program in Swedish
Program_Files_T_Chinese	Files for running the program in Chinese (Traditional)

Help_Files_Chinese	Chinese (Simplified) online help and user documentation
Help_Files_Czech	Czech online help and user documentation
Help_Files_Dutch	Dutch online help and user documentation
Help_Files_EnglishUK	English (United Kingdom) online help and user documentation
Help_Files_Finnish	Finnish online help and user documentation
Help_Files_French	French online help and user documentation
Help_Files_German	German online help and user documentation
Help_Files_Italian	Italian online help and user documentation
Help_Files_Japanese	Japanese online help and user documentation
Help_Files_Korean	Korean online help and user documentation
Help_Files_Norwegian	Norwegian online help and user documentation
Help_Files_Portuguese	Portuguese online help and user documentation
Help_Files_Russian	Adds or removes Russian online help and user documentation
Help_Files_Spanish	Spanish online help and user documentation
Help_Files_Swedish	Swedish online help and user documentation
Help_Files_T_Chinese	Chinese (Traditional) online help and user documentation
Trimble_Modules	Shared Trimble software modules
External_Modules	Third-party files required for running the software

**Languages for the TRANSFORMS parameter**

The TRANSFORMS parameter can be used to modify the language of the installation. A transform file (.MST) with the name of the locale ID is required. The following table lists the supported languages.

Language	Locale ID (LCID)
Chinese – Simplified	2052
Chinese – Traditional	1028
Czech	1029
Dutch	1043
English - UK	2057



English - US	1033
Finnish	1035
French	1036
German	1031
Italian	1040
Japanese	1041
Korean	1042
Norwegian	1044
Portuguese (Brazil)	1046
Russian	1049
Spanish	1034
Swedish	1053

## Command line examples

The following examples demonstrate how to deploy and modify the Trimble Business Center installation using Msiexec.exe.

**Note:** Any file names and file paths that include spaces must be enclosed in quotes ("...") on the command line.

### Default

The following command installs Trimble Business Center with the default settings.

```
msiexec.exe /i "Trimble Business Center.msi"
ADDLOCAL=Program_Files_EnglishUS,Trimble_Modules,External_Modules
/qr
```

- Install directory: C:\Program Files\Trimble\Trimble Business Center
- Language: US English
- Features: Tutorials
- Utilities:
  - Feature Definition Manager
  - Office Synchronizer

### Localization

The following command installs Trimble Business Center in German:

```
msiexec.exe /i "Trimble Business Center.msi"
ADDLOCAL=Program_Files_German,Trimble_Modules,External_Modules,Hel
p_Files_German TRANSFORMS=1031.mst /qr
```

- Install directory: C:\Program Files\Trimble\Trimble Business Center

- Language: German
- Features: Tutorials
- Utilities:
  - Feature Definition Manager
  - Office Synchronizer

### Minimal

The following command installs only the Trimble Business Center program to an alternative folder:

```
msiexec.exe /i "Trimble Business Center.msi"  
INSTALLDIR="D:\Trimble Business Center"  
ADDLOCAL=Program_Files_EnglishUS,Trimble_Modules,External_Modules  
FDM="" SYNC="" TUTORIAL="" /qr
```

- Install directory: D:\Trimble Business Center
- Language: US English
- Features: None
- Utilities:
  - None

### Uninstall

The following command lines uninstall Trimble Business Center and related utilities silently:

```
msiexec.exe /x "Trimble Business Center.msi" /qn  
msiexec.exe /x "Feature Definition Manager.msi" /qn  
msiexec.exe /x "TBC Tutorials.msi" /qn  
msiexec.exe /x "Office Synchronizer.msi" /qn
```

**Note:** While it is possible to uninstall Trimble Business Center silently using the /qn option, the full installation requires the /qr option due to some Windows Installer sequences and actions that need to run in the display mode.

## Deploy software updates using Msiexec.exe

Periodically, updated files associated with Trimble Business Center become available for download and installation via the Check for Updates command. Examples include software patches, help and tutorial files, antenna and receiver data files, converters, drivers, and coordinate systems.

Software updates are available in two file types:

- Full installation package (.msi) - Used to update an existing product if an earlier version is installed, or behave as a first-time installation if no earlier version is installed.

- Patch package (.msp) - Used to update an existing product. Contains only the changed data between the new and existing versions.

To deploy software updates to computers connected on the network:

1. Ensure your computer is connected to the Internet.
2. In Trimble Business Center, select Help > Check for Updates.

The Check for Updates dialog displays listing available updated files that are more current than the files currently installed on your computer.

Note that you can select or de-select the Check for Updates on Startup check box in the lower left corner of the dialog. If this option is selected and updates are available, you will be automatically prompted when you start the software.

3. Optionally, select the Show All Updates check box to view all updated files available, not just those that are newer than the ones currently installed on your computer.
4. If updated files are available that you want to download and install, select (check) the files in the Updates Available list.
5. Select the Save Update Before Installing check box.
6. Click the Install Updates button.
7. In the Save As dialog, browse or enter the full path to the folder where you want to save the installation package. Then click Save.
8. To deploy the update, use the Windows Installer executable program Msiexec.exe with the following command line options:

- For full installation files (.msi):

```
msiexec /i <path to installation package>  
INSTALLDIR=<installation directory> /qb
```

- For patch package files (.msp):

```
msiexec /p <path to patch package> /qb
```

For more information on deploying Msiexec.exe, see [Deploy using Msiexec.exe](#) (on page 5).

Note that you can use the command line above in conjunction with one of the following methods to install (deploy) the update package on computers connected to your Windows-based network:

- Network Share
- Scripting
- .MSI deployment

For more information, see [Deployment methods](#) (on page 3)

## Deploy using Setup.exe

The Trimble Business Center installation program Setup.exe installs the Trimble Business Center.msi file along with all prerequisite programs (see [Prerequisite Programs](#) (on page 4)). In addition, Setup.exe, does the following:

- Installs or updates the Windows Installer engine on the target system
- Provides end users a choice of the language in which to run the installation

## Setup.exe command line options and parameters

The Setup.exe program is located in the following folder:

- Installation DVD: <DISK>\Trimble Business Center
- Web download (default): C:\Trimble Business Center <version> Setup

The Setup.exe program accepts all of the command-line parameters used to customize how the Trimble Business Center.msi program installs the Trimble Business Center.msi file as described in [Deploy Using Msiexec.exe](#) (on page 5). The typical usage is:

```
Setup.exe /Option<Parameter>
```

### Common Setup.exe Options and Parameters

The following table lists the available options and parameters.

Option	Parameters	Description
/S	For silent install mode use: /v/qn	Suppresses the Setup.exe initialization window and/or runs the installation silently
/v	Msiexec.exe parameters For more information, see <a href="#">Deploy Using Msiexec.exe</a> (on page 5).	Passes parameters to Msiexec.exe
/L	Locale ID (LCID) For more information, see the Language table in <a href="#">Deploy Using Msiexec.exe</a> (on page 5).	Specifies the setup language

## Command line example

The following command installs Trimble Business Center in Spanish with the default settings:

```
Setup.exe /S /L1034  
/vADDLOCAL=Program_Files_Spanish,Trimble_Modules,External_Modules,  
Help_Files_Spanish /v/qn
```

- Install directory: C:\Program Files\Trimble\Trimble Business Center
- Language: Spanish
- Features: Tutorials
- Utilities:
  - Feature Definition Manager
  - Office Synchronizer

## Configure application and project settings

This section describes how to most easily and efficiently configure Trimble Business Center on multiple network computers to use the same application and project settings.

### Configuration files location

All of the configuration files listed in this section are, by default, stored in the following folder:

- Windows XP or earlier: C:\Documents and Settings\\Application Data\Trimble Business Center\- Windows Vista or Windows 7: C:\Users\\AppData\Roaming\Trimble Business Center\

### Project templates

Any project can be saved in Trimble Business Center as a project template that can be used by other users in your organization to create new projects with the same project settings. The saved template can include any of the following:

- Company, user, and file information, such as field and office operators, contact numbers, and addresses
- Coordinate system information, such as a datum transformation and geoid model
- Unit settings, such as coordinate formatting
- View settings, such as a plot scale and grid line definition
- View filters and selection sets
- Computational settings, such as horizontal and vertical tolerances

Each custom project template is stored in a <project name>.vct file in the default location listed in "Configuration files location" earlier in this section.

To share a project template, you can copy the <project name>.vct file into the equivalent folder on each target computer, or to the Template folder defined in the File Location options (Tools > Options) in Trimble Business Center. For more information, see the "File Location Options" topic in the online Help.

For information on creating a project template, see the "Create a Project Template" topic in the online Help.

### Application options

Application-wide options, such as startup preferences, default file locations, Internet download parameters, and display properties can be shared by copying the Options.bin file into the equivalent folder on each target computer. The Options.bin file is stored in the default location listed in "Configuration files location" earlier in this section.

**Note:** All folder locations for the File Location option must exist on all computers you are configuring.

For more information on setting application options, see the "Choose Application Options" topic in the online Help.

### Toolbar layouts

Customized toolbars can be shared by copying the .Layout file into the equivalent folder on each target computer. The .Layout file is stored in the default location listed in "Configuration files location" earlier in this section.

### Reports

To share customized reports on the network, you can save the report layout file (.RDLC) to a shared location on the network. You can then create or customize a report using the path to the .RDLC file. Finally, you can copy the report definition file (.RDF) from your computer into the equivalent folder on each target computer. The .RDF file is stored in the default location listed in "Configuration files location" earlier in this section.

For more information, see the "Create, Customize, and Run a Report" topic in the online Help.

### Internet data providers

If you have customized the list of data providers, you can share the list of sites by copying the INetDownload.xml file from your computer into the equivalent folder on each target computer. The INetDownload.xml file is stored in the default location listed in "Configuration files location" earlier in this section.

For more information, see the "Add New Data Providers" and the "Add New Trimble IP-Enabled Receivers" topics in the online Help.