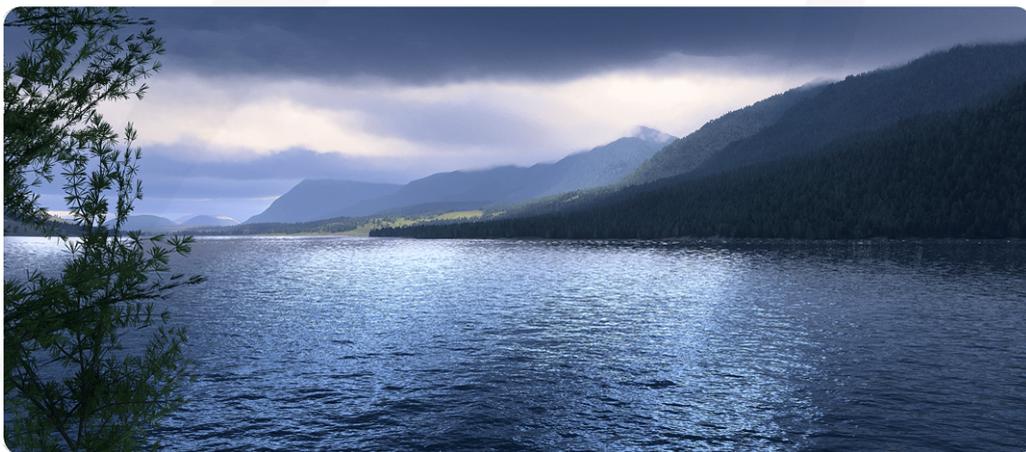


Deployment Guide



VBS World Server 23.2.0



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1. Deploy VBS World Server

VBS World Server is available for download from VBS License Manager as part of the VBS4 product.

WARNING

VBS4 and VBS World Server installations must be the same major version (e.g., 21.1.x) to ensure full compatibility.

To download and install VBS World Server, follow this process:

1. Review the [VBS World Server System Requirements \(on the next page\)](#).
2. [Download VBS4 \(on page 7\)](#) from VBS License Manager.
3. [Installing VBS World Server \(on page 9\)](#).

Your VBS World Server is installed.

WARNING

A separate VBS4 installation must be downloaded to serve as a client to the VBS World Server in addition to the VBS4 installation within the VBS World Server.

To support updates and later download of optional packages, VBS World Server includes an update utility:

- [Installing a VBS World Server Patch \(on page 14\)](#)

VBS4 and VBS World Server provide multiple methods to update the Whole-Earth Terrain:

- See [Managing the Whole-Earth Terrain in the VBS World Server Manual](#)
- See [Installing World Data \(on page 16\)](#)

VBS World Server uses a set of executables to manage its services:

- See [Managing VBS World Server in the VBS World Server Manual](#)

WARNING

If you have an older version of the VBS World Server installed and wish to update to the latest version: Carefully read [Installing a Newer VBS World Server Version \(on page 11\)](#) and [Migrating Data to a New VBS World Server Version \(on page 11\)](#) to avoid losing any user data.

2. VBS World Server System Requirements

Bohemia Interactive Simulations recommends the following hardware requirements for VBS World Server:

VBS World Server	Recommended	Optimal
CPU	Intel Core i7-12700K (or better) Ryzen 9 7900X	Intel Core i9-12900K (or better) Ryzen 9 7950X
RAM	64GB DDR4 (or better)	64GB DDR4 (or better)
GPU	Nvidia GeForce GTX 1080 (or better) DirectX 11	Nvidia GeForce GTX 1080 (or better) DirectX 11
 WARNING AMD GPUs are not currently supported.		
Disk	512GB SSD for OS, 4TB SSD for VBS World Server and Global Data (optional)	512GB SSD for OS, 4TB* SSD for VBS World Server and Global Data (optional) * or more for customer terrain data
OS	Windows 10 (v1607+), 64-bit Windows Server 2016/2019	Windows 10 (v1607+) or 11, 64-bit Windows Server 2016/2019
Network	10 Gbps	10 Gbps

NOTE

The hardware listed is not exclusive. Compare your hardware to the listed items for an indication of performance.

Operational usage can affect performance requirements. Increasing visual fidelity (detail, distance, and / or resolution), as well as scenario complexity, can have a significant impact on performance, and may warrant increasing the system specification to the next performance tier.

For hardware queries, contact us directly at <https://bisimulations.com/company/contact-us>.

3. Download VBS4

VBS4 is typically accessed and downloaded using VBS License Manager.

NOTE

Alternate distribution methods are available by contacting support@bisimulations.com.

In each case, the content you require must be copied to the same temporary folder on the machine where you want to install VBS4 or VBS World Server.

Follow these steps:

1. In VBS License Manager, open the **Downloads** page.
2. Select VBS4 from the products panel and **Choose Version**:
3. Expand **Instructions** to view the help available for product deployment.
4. Expand **Products Available to Download** to display the products available for download.
5. Select **VBS4+VWS** for a default or selective download of VBS4 and VBS World Server packages.
6. Select optional World Data packages to install procedural and generated terrain detail:
 - **World Data (23.2)** contains procedurally generated buildings for each continent and regional roads generated from OpenStreetMap data.

NOTE

Only download World Data packages if your current World Data is older than the version listed here.

WARNING

If World Data is not installed as part of your initial installation. Add it to your installation using the Updater Tool.

For more information, see [Installing World Data \(on page 16\)](#).

If you already have a VBS World Server installation, backup your World Data before installing a newer version of VBS World Server.

For more information, see [Migrating Data to a New VBS World Server Version \(on page 11\)](#).

7. Select from the additional products as required, which include:
 - Select **DeveloperSuite** to download the VBS4 Developer Suite.
 - Select **VBS Radio Standalone** to download the separate VBS Radio client application.
For more information, see VBS Radio Standalone in the Introduction to VBS4 Guide.
 - Select **READ THIS FIRST** to download supplementary PDFs.

 **FEATURE NOTICE**

The exact set of products and packages displayed depends on your licensing.

8. Do any of the following for a more selective VBS4 download:
 - For a default VBS4 and VBS World Server download, skip to step 10.
 - For a selective installation, **click** the Configure List icon to display the Configure panel.
9. Deselect **VBS4** to uncheck all items, and then select specific packages to download:
 - **VBS4** is the installer and core packages for VBS4.
 - **VBS World Server** is the installer and core packages for VBS World Server.
 - **VBS4 KEY_General** and **VBS World Server - KEY_General** contain exclusive content for your licensed version of the products.
 - **VBS4 Terrain_Inset** are optional highly detailed terrain insets.
For more information, see Terrain Insets in the VBS World Server Manual.

 **NOTE**

To deploy Terrain Insets at a later date, download them from VBS License Manager, copy the downloads to the same folder as the VBS4 Installer, and re-run the VBS4 Installation.

- **Geolocation Lookup Service** is an optional package that provides location search.

If optional packages are present in the downloads folder when the installer runs, they automatically install.

10. Expand **Save Location**, click **Change**, and select a download folder.
11. Click **Download**.

VBS License Manager downloads the selected packages to the selected location.

Copy the applicable downloads to the required computers and proceed with installation:

- [Installing VBS World Server \(on the next page\)](#)

4. Installing VBS World Server

Before getting started:

- If you are installing VBS World Server for the first time, continue to [Installing the VBS World Server \(below\)](#).
- If you are updating VBS World Server from a previous version, follow the instructions in [Installing a Newer VBS World Server Version \(on page 11\)](#).

After you [Download VBS4 \(on page 7\)](#), the VBS World Server installer and the selected download packages are available in the selected download folder.

WARNING

VBS4 and VBS World Server installations must be the same major version (e.g., 21.1.x) to ensure full compatibility.

4.1 Installing the VBS World Server

Install VBS World Server on a computer meeting the [VBS World Server System Requirements \(on page 6\)](#).

NOTE

VBS4 and VBS World Server installers must be in the same directory for the VBS World Server installer to automatically detect and install VBS4 in the correct location.

WARNING

The VBS4 installed by the VBS World Server installer is used by the server and should not be used as a VBS4 client. Download and install VBS4 Clients on separate computers.

Copy the downloaded folder containing the VBS World Server installer and the download packages to the required computer and run the installer:

`VBS_World_Server.Core.InstallerX64.version.exe`

The VBS World Server installer starts and leads you through the following installation process:

WARNING

Installation requires Windows Administrator privileges.

1. Installer Language

Select the Installer language to use and click **OK**.

NOTE

Language selection only applies to the installer and does not affect the VBS World Server installation.

2. Welcome Panel

Review the version of VBS World Server and click **Next** to continue.

3. License Agreement

Review the license agreement, and click **I Agree**.

4. Choose Components

Select which components to install, and then click **Next**:

- The **Core** package is mandatory and pre-selected.
- Your **License Key** encoded package is mandatory and pre-selected (for example, YYMEA).
- **Geolocation Lookup Service** is an optional package for location search services.
- Select **Start Menu Shortcuts** to add VBS World Server to your Start Menu list.
- Select **Desktop Shortcuts** to add VBS World Server shortcuts to your desktop.
- Select **Verify Checksum** to validate the download packages prior to installation.
- Select **VBS4 Server** to silently install VBS4 as a Dedicated Server for Scenario Execution.
- Select **Installing Drivers** to run install drivers process during VBS World Server installation.

5. Choose Install Location

Input or click **Browse** to select an installation folder, and then click **Next**.

NOTE

Select a location on an SSD drive that meets the [VBS World Server System Requirements \(on page 6\)](#) that is as close to the drive root folder as possible.

WARNING

The installation path can only contain printable [ASCII](https://www.w3schools.com/charsets/ref_html_ascii.asp) characters. VBS World Server does not start if installed to a path with characters outside this range.

6. Choose Start Menu Folder

Input a name and optionally select an existing start menu item to place it in.

Click **Install** to start the installation process.

VBS World Server installs to the selected folder and, if selected, silently installs VBS4 to:

`\WS_Installation\Services\VBS4\`

This documentation refers to the VBS World Server installation folder as `\WS_Installation\`.

When installation completes, select from the following options:

- **Open the Installation Folder**

View the content of the `\WS_Installation\` folder.

Click **Finish** to close the installer.

After installation, run the following executable to finalize the VBS World Server configuration:

- Run `\WS_Installation\vws_configure.exe`

NOTE

The `vws_configure.exe` must be run following the initial installation in order to start using the VBS World Server. For more information about the executable and its functions, see [Managing VBS World Server in the VBS World Server Manual](#).

VBS World Server is ready to start. For more information, see [Managing VBS World Server in the VBS World Server Manual](#).

If you wish to install World Data to your offline VBS4 installation, follow the instructions in [Installing World Data \(on page 16\)](#).

4.2 Installing a Newer VBS World Server Version

If you have an older version of the VBS World Server installed on your computer (for example, 20.1.x) and you wish to install a newer version (for example, 21.1.x), you must manually back up any user data that you wish to carry over to the new version. Otherwise, this user data will be deleted when you perform the update.

4.3 Migrating Data to a New VBS World Server Version

To back up your user-generated data (such as Battlespaces and VBS4 inset data) and any installed World Data packages, follow these steps:

1. Create a New Folder

Separate from the VBS World Server installation, create a new folder to act as a repository (for example, `D:\Backup`).

2. Move User Data

Cut the following folders from the VBS World Server installation:

- `\WS_Installation\data\Battlespaces\`
- `\WS_Installation\Services\VBS4\myData\`

If [World Data \(on page 17\)](#) is installed, cut these folders as well:

- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Geometry\`
- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Roads\`
- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Veg_Removal\`

WARNING

Once all desired user data has been archived, you must uninstall all older versions of the VBS World Server prior to updating to the newer version.

3. Uninstall the Older Version

Uninstall the older version of the VBS World Server. For more information, see [Uninstalling VBS World Server](#) in the VBS World Server Manual.

4. Install VBS World Server

Install the new version of the VBS World Server by following the instructions in the [Installing the VBS World Server \(on page 9\)](#).

5. Run the Stop Executable

After installing the new version of the VBS World Server, stop the service before restoring the user data.

- Run `\WS_Installation\vws_stop.exe`

6. Delete the VBS World Server Cache

Delete the VBS World Server Cache folder at the following location:

- `\WS_Installation\Services\VBS4\cache\`

7. Restore User Data

After VBS World Server has been installed, manually restore the archived data by cutting it from the backup repository folder made in **Step 2: Move User Data** to the following locations in the new installation.

- `\WS_Installation\data\Battlespaces\`
- `\WS_Installation\Services\VBS4\myData\`
- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Geometry\`
- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Roads\`
- `\WS_Installation\Services\VBS4\data\BlueBase\earth\Global_Veg_Removal\`

8. Run the Start Executable

After restoring user data, run the following executable to finalize the VBS World Server upgrade:

- Run `\WS_Installation\vws_start.exe`

5. Installing a VBS World Server Patch

The Updater Tool included with VBS World Server supports patch updates to VBS World Server.



WARNING

Updates to VBS World Server require an earlier release of the same major version. For example, updating to VBS World Server 20.1.1 requires an earlier version of VBS World Server 20.1.x.

If you have not already installed the same major version of VBS World Server, please perform a full installation instead of using the update process.

For more information, see Installing VBS World Server.

Download updates for VBS World Server through VBS License Manager.

Follow these steps:

1. Open VBS License Manager, and select the **Download** page.
2. Select VBS4 in the products panel, and **Choose Version:**, selecting the applicable major version **Y.X**.
3. Expand **Products Available to Download**, select **VBS4**, and click the **View** icon.



The Configure panel opens, displaying all VBS4 and VBS World Server packages available for download.

4. In the **Configure** panel, click **VBS4** to deselect all packages.

Select the required VBS World Server Updates between your current version and the version you require. For information about the updates, see the Patch Notes for the specific version.

Update packages use the naming convention: **VWS_x.x.x_Update_Customer**. For each update, VBS License Manager displays the update applicable to your specific customer license:

- **VWS_x.x.x_Update_General** contains updates for all customers.
- **VWS_x.x.x_Update_Customer** also contains updates specific to your customer license.

5. Expand **Save Location**, click **Change**, and select a download folder.



TIP

If VBS License Manager is running on the same computer as the VBS4 installation you want to update, select the VBS4 Installation folder.

6. Click **Download**.

VBS License Manager downloads the update packages as a set of **.zip** files in a **\VBS4 version** folder in the selected location.

Once you have the update packages, use the Updater Tool to deploy the update to your VBS World Server installation.

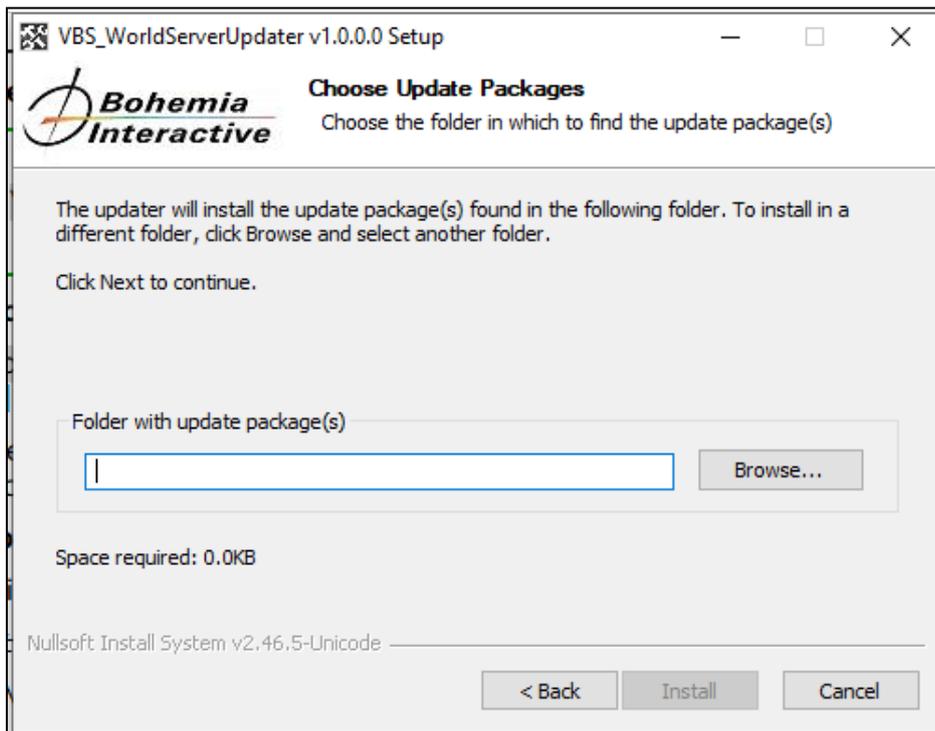


WARNING

Ensure that VBS World Server is shut down before running the Updater Tool.

Follow these steps:

1. From your existing VBS World Server installation folder run the Updater Tool:
\WS_Installation\Updater.exe
2. Specify the **\VBS4 version** folder in your VBS License Manager download location.



3. Click **Install**.

VBS World Server is updated with the changes from the selected download packages.

The Updater Tool can also be used to install World Data for the VBS4 installation on the VBS World Server. For more information, see [Installing World Data \(on the next page\)](#).

6. Installing World Data

VBS4 is available with a set of optional World Data packages that include buildings and roads. They are intended to serve as background cultural data to enhance large scale training environments.

Download World Data from VBS License Manager.

Follow these steps:

1. In VBS License Manager, open the **Downloads** page.
2. Select **VBS4** from the products panel and **Choose Version**.
3. Expand **Products Available to Download** to display the World Data available for download:

Click the **Configure List** icon, to view the available sets of World Data:



- Asia
- North America
- South America
- Europe
- Australia
- Africa
- Antarctica
- Islands

For more information, see [World Data \(on the next page\)](#).

4. Select the World Data packages to download.



TIP

Deselect **VBS4** and all other products to only download World Data packages.

5. Expand **Save Location**, click **Change**, and select a download folder.
6. Click **Download**.

VBS License Manager downloads your selected packages to the selected folder.

Once your packages are downloaded, use the Updater Tool to install them.

Follow these steps:

1. Copy the download packages to the same temporary folder on the target computers.
2. Stop VBS World Server and close all target VBS4 Clients:

On VBS World Server run `vws_stop.exe`.

3. Run the appropriate Updater Tool to install the World Data:
 - On VBS World Server:
`\WS_Installation\Updater.exe`
 - On VBS4 Clients:
`\VBS_Installation\Updater.exe`
4. Specify the folder containing the World Data packages, and click **Install**.
5. After installation, restart VBS World Server:
 - On VBS World Server run `vws_start.exe`.

The VBS World Server or VBS4 Updater Tools will update your installation of VBS World Server or VBS4 with the applicable World Data.

6.1 World Data

The World Data packages are organized by continent and include regional road coverage, and contain OpenStreetMap-based cultural data including procedurally extruded building footprints with regional texturing and roads with road type-based texturing. Shown below are examples of cities using the world data for each continent.

Image-1: Asia - Hong Kong



Image-2: North America - New York City



Image-3: South America - Rio de Janeiro



Image-4: Europe - San Marino



Image-5: Australia - Hobart



Image-6: Africa - Cape Town

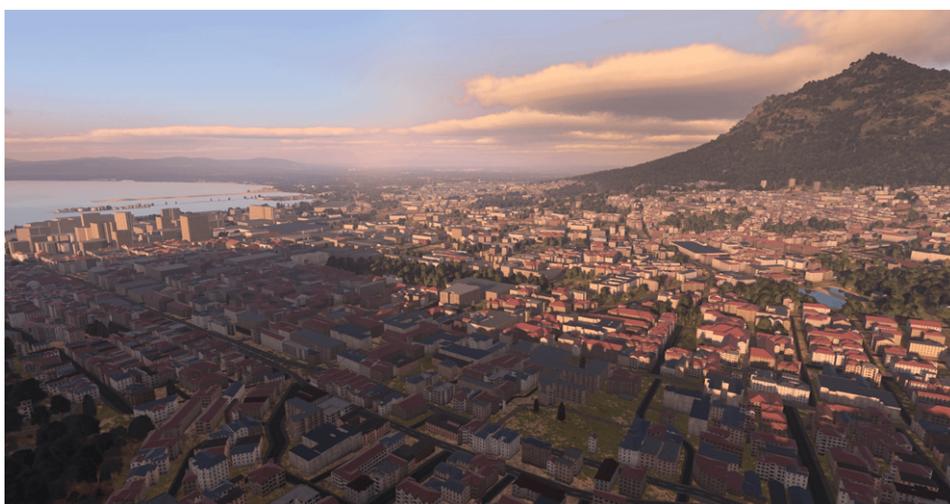


Image-7: Antarctica - Troll Research Station



Image-8: Islands - Reykjavik

