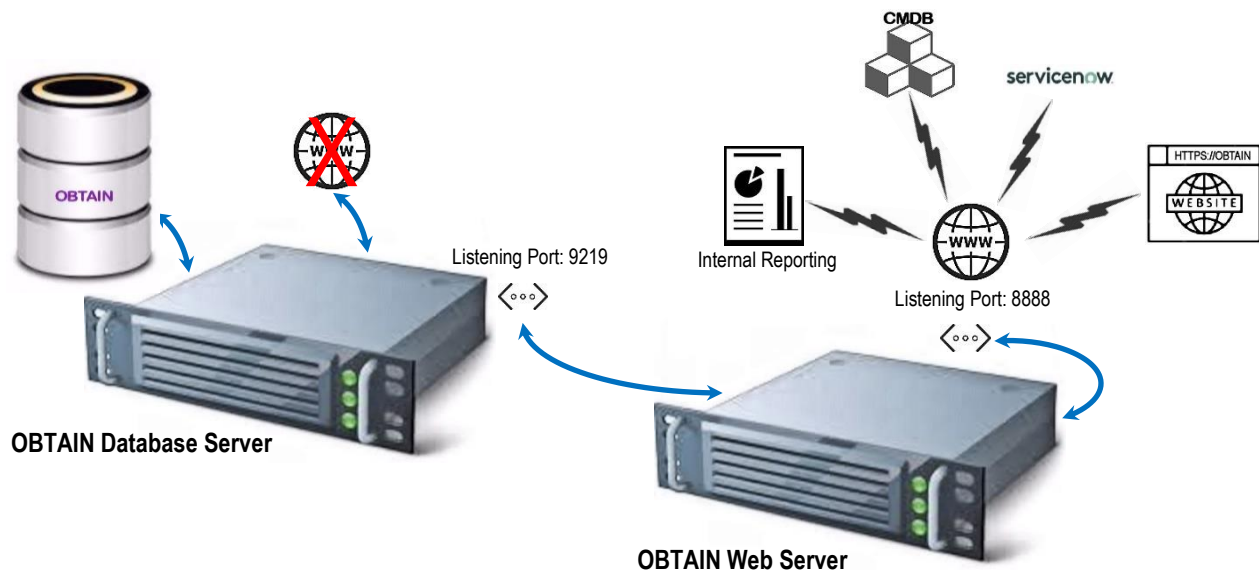


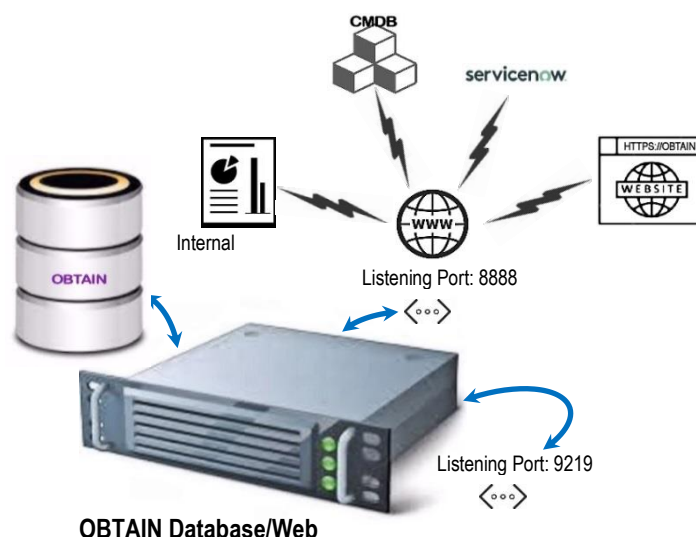
# OBTAIN Web Server Installation Guide

## Overview

OBTAIN DCIM includes a Web Access component (Web Services) that provides an internet interface to the OBTAIN Database Server. Usually the production server for OBTAIN DCIM is a secure machine that is **not allowed** internet access. If the Web Access component is required for consumers who are outside the enterprise network, then the Web Access component must be installed on a web server that **does have access** to the internet. The OBTAIN Web Server communicates with consumers via the internet and communicates with the OBTAIN Database Server's listening port 9219 via the enterprise network.



If the OBTAIN Database Server **does have internet access**, or all web consumers are within the enterprise network, then the same server can be used as the Web Server, as well.



## Prerequisites

### Web Access Component:

- Windows Server 2008/2012/2016 or later Operating System with IIS (Internet Information Services)
- Microsoft .NET Framework 4.6.1
- Microsoft .NET Core Runtime 2.1.5 (x64)
- Microsoft Visual C++ 2015 Redistributable (x64)
- A valid SSL Certificate that authenticates the Web Server machine for communications via HTTPS.
- The matching version of the OBTAIN Database Server must be installed prior to the Web component.
- To prevent possible issues during, or after installation, it is recommended that the following Roles/Features be installed/enabled on the host Web Server:

#### Roles:

- File and Storage Services
  - Storage Services
- Web Server (IIS)
  - Common HTTP Features
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - Static Content
  - Health and Diagnostics
    - HTTP Logging
    - Request Monitor
    - Logging Tools
    - Tracing
  - Performance
    - Dynamic Content Compression
    - Static Content Compression
  - Security
    - Basic Authentication
    - Centralized SSL Certificate Support
    - Request Filtering
    - URL Authorization
    - Windows Authentication
  - Application Development
    - .NET Extensibility 3.5
    - .NET Extensibility 4.6
    - Application Initialization
    - ASP .NET 4.6
    - ISAPI Extensions
    - ISAPI Filters
  - Management Tools
    - IIS Management Console
    - IIS 6 Management Compatibility
    - IIS Management Scripts and Tools
    - Management Service

#### Features

- .NET Framework 3.5 Features
  - .NET Framework 3.5
  - HTTP Activation
  - Non-HTTP Activation
- .NET Framework 4.6 Features
  - .NET Framework 4.6
  - ASP.NET 4.6
  - WCF Services
    - HTTP Activation
    - Message Queuing
    - Named Pipe Activation
    - TCP Activation
    - TCP Port Sharing
- Windows Process Activation Service
  - Process model
  - .NET Environment 3.5
  - Configuration APIs

### Plus, for the OBTAIN Web Browser Interface (if it is to be used):

- Microsoft ASP.NET 4.6
- The OBTAIN Web UI requires a browser with HTML5 capabilities to display requirements (Internet Explorer 9.0 or higher, FireFox 9.0 or higher, Chrome 10 or higher).
- JavaScript should be enabled/allowed.

## First-time Installation

- 1) Download the appropriate release version of the Web Services installer (either Client or Server – they are now a single installer) from Premium Support (support.obtain.com).
- 2) Run the **OBT-1.26.x.xxxw.exe** installer to begin the installation.
- 3) If any of the .NET related Web Server Prerequisites are not installed on the host server then the installer will ask you if you wish to install them. The installers for the missing prerequisites will then run.
- 4) Once all the .NET Prerequisites are installed, click the Install button on the main installer window.
- 5) If you are missing the required Visual C++ Redistributable then you will receive a prompt asking if you wish to install it.
- 6) Once the proper Visual C++ Redistributable is installed, the installer will begin to automatically install the OBTAIN Web Access component onto the server and configure it within IIS. This process could take several minutes.
- 7) Once the installation is complete, click the Finish button to close the installer.
- 8) Follow the instructions in the “**Post Installation IIS Configuration**” section below.
  - 1) Use <https://{HostMachineName}:8888/OBTAINWebBrowser> URL to access the OBTAIN Web Browser interface. Replace {HostMachineName} with the actual *Machine Name*, *IP Address*, or the *Web URL Name*, that identifies the **Web Server** machine – do not include the {} brackets as part of the name.
  - 9) Note that all communications with the OBTAIN Web Server is via HTTPS secure protocol.

## Upgrading from 1.25.5 to 1.26.2

**NOTE:** If you already have a 1.25.5 version of the OBTAIN Web Services installed then there will be an extra step in the installation process, as compared to a first-time installation on the server (see step 5, below).

- 2) Download the appropriate release version of the Web Services installer (either Client or Server – they are now a single installer) from Premium Support (support.obtain.com).
- 3) Run the **OBT-1.26.x.xxxw.exe** installer to begin the installation.
- 4) If any of the .NET related Web Server Prerequisites are not installed on the host server then the installer will ask you if you wish to install them. The installers for the missing prerequisites will then run.
- 5) Once all the .NET Prerequisites are installed, click the Install button on the main installer window.
- 6) A prompt will appear informing you that there is a previous version of the Web Services installed on the machine and that it needs to be uninstalled. Click OK, and then Yes to confirm, for the uninstallers to automatically run and remove the old 1.25.5 version of the Web Services.
- 7) If you are missing the required Visual C++ Redistributable then you will receive a prompt asking if you wish to install it.
- 8) Once the proper Visual C++ Redistributable is installed, the installer will begin to automatically install the OBTAIN Web Access component onto the server and configure it within IIS. This process could take several minutes.
- 9) Once the installation is complete, click the Finish button to close the installer.
- 10) Follow the instructions in the “**Post Installation IIS Configuration**” section below.
  - 11) Use <https://{HostMachineName}:8888/OBTAINWebBrowser> URL to access the OBTAIN Web Browser interface. Replace {HostMachineName} with the actual *Machine Name*, or *IP Address*, or the *Web URL Name*, that identifies the **Web Server** machine – do not include the {} brackets as part of the name.

**Note** that all communications with the OBTAIN Web Server is now via HTTPS secure protocol. If you have existing internal reporting modules, or short-cuts, that have the Web Server URL hard-coded, then these must be upgraded to use the **HTTPS** protocol and the **8888** listening-port.

## Post Installation – IIS Configuration

After installing the 1.26.2 release version of Web Services for the first time, there are some settings in IIS (Internet Information Services) that need to be configured manually.

- 1) Open the **Server Manager** window, then click **Tools > Internet Information Services (IIS) Manager**.
- 2) In the **IIS Manager**, under **Connections** on the left side, click the > to expand the **Computer Name**.
- 3) Click the next > to expand the **Sites**.
- 4) Finally, click the next > to expand **OBTAIN DCIM**.
- 5) Next, click on **Application Pools**.
- 6) Click and highlight the **.NET v4.5 Classic** entry and then in the Actions column on the far-right side click **Advanced Settings**.
- 7) In the Advanced Settings window, under General, next to **Enable 32-bit Applications**, ensure that the setting is set to **True**.
- 8) Back in the **Connections** column on the far left, click on **OBTAIN DCIM**, then on the far-right side, in the **Actions** column, click on **Bindings**.
- 9) Click and highlight the **HTTPS/8888** entry and then click **Edit**.
- 10) Enter the *hostname* of the machine on which the Web Services are installed, and then check the **“Require Server Name Indication”** box.
- 11) Click the drop-down list under **SSL Certificate** and select the *Server Certificate* for the machine.
- 12) Click **OK** and then close the **Site Bindings** window.
- 13) Finally, in the **Connections** column, click on the top entry (the *Computer Name*) and then in the far-right **Actions** column click **Restart**, so the new changes take effect.

## Post Installation – Web.config files

The installation of OBTAIN Web Access (Web Services) creates a new website (**OBTAIN DCIM**), as seen within the **IIS Manager**. Within that website, four applications are installed: **ObtainCMDB** (for synchronizing with a CMDB application); **OBTAINServiceNow** (for synchronizing with a ServiceNow application); **OBTAINWebBrowser** (for some HTML screens that allow user access to OBTAIN without requiring the OBTAIN Client installation footprint); and **OBTAINWebService** (for web-services that support a series of API calls to OBTAIN to retrieve specific information).

The first 3 applications have **Web.config** files that could require modifications. If you are going to use the ObtainCMDB app, the OBTAINServiceNow app, or the OBTAINWebBrowser, then the corresponding Web.config file contains embedded <https://localhost:8888/{app-name}> URLs, where the “localhost” portion of the URL should be changed to {HostMachineName}, similar to above installation instructions. The IIS applications each have a corresponding *virtual directory* set-up within **Program Files (x86) / Knowledge Flow Corp / {app name}** – as can be seen within the **IIS Manager** by selecting one of the applications, and then clicking on **“Explore”**, under the **Actions** list on the far-right side of the **IIS Manager**. These attached folders contain the installed files for the app.

All of applications have their own **Web.config** file that have a `<add key="OBTServer" value="localhost"/>` text line. This line (and the corresponding *OBTServerPort* line) configures the communication between the web application and the OBTAIN Database Server. If the OBTAIN Database Server is on a different machine, than the web application, then the “localhost” clause of the *OBTServer* line must be changed to the host name of the OBTAIN Database Server machine – may be required if “localhost” is not allowed by enterprise security rules.

- 1) Run **NotePad** with *Administrator Privileges*.
- 2) Click on **File / Open** and browse to the attached folder for the application you are going to use.
- 3) At the bottom of the **NotePad** window, change the selection of *Text Documents (\*.txt)* to *All Files (\*.\*)*.
- 4) Select the **Web.config** file within the folder and click the **Open** button.

- 5) Look for <https://localhost:8888/{app-name}> references (there are usually two) and replace *localhost* with the actual *Machine Name*, or *IP Address*, or the *Web URL Name*, that identifies the **Web Server** machine.
- 6) If the **OBTServer** key must be changed, look for the `<add key="OBTServer" value="localhost"/>` text line and replace *localhost* with the actual *Machine Name*, or *IP Address*, or the *Web URL Name*, that identifies the **Database Server** machine. If port 9219 cannot be used then change the *Port* text line, as well.
- 7) **Save** the changes – since the *Web.config* file is in a *Program Files (x86)* sub-folder, the *Administrator Privileges* are required to write to the file.

## Troubleshooting Installation Errors:

- **Possible Firewall Issues:**
  - Ports 80 and 8888 must be opened to allow incoming connections on the host machine with the Web Services installed.
  - Port 9219 must be opened between the OBTAIN Database Server and the OBTAIN Web Server (if they are not installed on the same host machine).
- **The installer was interrupted before the OBTAIN Web Services could be installed. You need to restart the installer to try again:**
  - IIS6 compatibility has not been enabled on the server.
    - From the windows *Start Menu* open the *Control Panel*.
    - Select *Programs > Programs and Features > Turn windows features on or off*.
    - In the tree on the left, expand *Roles*, select *Web Server (IIS)*.
    - In the main window, under the section *Role Services*, find *Web Management Tools*, and *IIS6 Management Compatibility*.
    - Ensure that the *IIS 6 Management Compatibility* and the entries in that branch (*WMI compatibility*, *Scripting Tools*, *Management Console*, *Metabase*) are installed.
    - After installing (and the server may need to restart for these changes to take effect) please retry the installer.
- **No response from the OBTAIN Database Server:**
  - Ensure that the OBTAIN Database Server is running.
  - Ensure that communication to the OBTAIN Database Server has not been blocked by firewall, etc.
  - Ensure that the web application has the correct Web.config changes (see above).
- **User ID does not have access to the requested site:**
  - The current User ID does not have user access to the Site or Workorder that you are trying to log into. The OBTAIN Web UI uses the same Site access as OBTAIN. To have your access changed, please consult your ADMIN.
  - Please log into another Site or Workorder for which you have permission.
- **The OBTAIN Web UI does not launch properly and shows a 400 or 500 error:**
  - Ensure that the “**Enable 32-bit Applications**” setting in IIS is enabled for the “.Net v4.5 Classic” **Application Pool** in the **IIS Manager**. See “**Post Installation – IIS Configuration**” section, above.
- **The OBTAIN Web UI is not displaying correctly using Internet Explorer:**
  - In **Internet Explorer** click the *gear symbol* in the top right corner and then click **Compatibility View Settings**. In the Compatibility View Settings window uncheck the “**Display Intranet Sites in Compatibility View**” box. Then, close and reopen your **Internet Explorer** and try displaying the OBTAIN Web UI again.