

Deltek WorkBook 12.1

Installation Guide

June 26, 2020

While Deltek has attempted to verify that the information in this document is accurate and complete, some typographical or technical errors may exist. The recipient of this document is solely responsible for all decisions relating to or use of the information provided herein.

The information contained in this publication is effective as of the publication date below and is subject to change without notice.

This publication contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, or translated into another language, without the prior written consent of Deltek, Inc.

This edition published June 2020.

© Deltek, Inc.

Deltek's software is also protected by copyright law and constitutes valuable confidential and proprietary information of Deltek, Inc. and its licensors. The Deltek software, and all related documentation, is provided for use only in accordance with the terms of the license agreement. Unauthorized reproduction or distribution of the program or any portion thereof could result in severe civil or criminal penalties.

All trademarks are the property of their respective owners.

Contents

Overview	1
If You Need Assistance	2
Customer Services	2
Additional Documentation	2
WorkBook Update Program	3
Before You Begin Deployment	4
Logical Tiers Overview	4
Installation Order: High-Level Overview	4
What Type of Installation Am I Performing?	4
Preinstallation Checklists	5
Single-Server	5
Dual-Server (Two-Tier)	6
System Requirements	7
Software Requirements	7
Hardware Requirements	7
Other Requirements	8
Restore the WorkBook Database	8
Permissions Required for Installing WorkBook	8
WorkBook Credentials for Microsoft SQL Server Database	8
Verify the Name of Your SQL Server Instance	9
Internet Access	9
Platform Virtualization	9
Technical Considerations	10
Unsupported Environments	10
Recommended Daily Activities	10
Installation Procedures	11
Single-Server Installation	11
Step 1: Install the Web/Application (IIS) and Database Server Tiers	11
Step 2: Create the Website and Configure the IIS Settings	13
Step 3: Download the Agent for Your WorkBook Version	14
Step 4: Configure the Agent Server Tier	14
Step 5: Create a Scheduled Task	15
Two-Server Installation	17

Step 1: Install the Web/Application (IIS) Server Tier	17
Step 2: Create the Website and Configure the IIS Settings	19
Step 3: Download the Agent for Your WorkBook Version	20
Step 4: Configure the Agent Server Tier.....	20
Step 5: Create a Scheduled Task.....	22
Upgrade Procedures	23
Upgrade from WorkBook 9.1 or above	23
Upgrade from WorkBook 8 or Earlier Versions	23
Migrate/Upgrade to a New Server.....	23
Step 1: Install the Web/Application (IIS) Server Tier	23
Step 2: Download the Agent for Your WorkBook Version	25
Step 3: Configure the Agent Server Tier.....	26
Step 4: Remove Obsolete Websites	26
Post Installation/Upgrade	27
WorkBook Configuration.....	27
Appendix A: Microsoft Internet Information Server (IIS) Installation on Windows Server	28
Microsoft (IIS) Is Already Installed on Windows Server 2012 R2 or 2016	28
Installing Microsoft IIS for the First Time on Windows Server 2012 R2 or 2016.....	28
Appendix B: Creating the Website and Configuring the IIS Settings (Alternate Method).....	30
Create the Website and Configure the IIS Settings	30
Remove Report as Application	30
Rename the Report Folder	30
Create a Separate Report Website	30
Configure the Web.config File	31
Edit the Rules Using URL Rewrite	31

Overview

This guide contains technical installation and setup information for the staff at your company who maintain the hardware and software required to install Deltek WorkBook.

Notes:

- This WorkBook release contains major technology and configuration changes that affect the typical upgrade scenario. Before performing the upgrade, review the [Before You Begin Deployment](#) section to understand how these changes will affect your deployment.
- This document assumes that the person installing WorkBook is capable of installing, configuring, or troubleshooting MS SQL databases, IIS, Windows Authentication, and Task Scheduler, among others.

If You Need Assistance

If you need assistance installing, implementing, or using WorkBook, Deltek makes a wealth of information and expertise readily available to you.

Customer Services

For over 20 years, Deltek has maintained close relationships with client firms, helping with their problems, listening to their needs, and getting to know their individual business environments. A full range of customer services has grown out of this close contact, including the following:

- Extensive self-support options through the Customer Care Connect Web portal.
- Phone and email support from Customer Care analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Note: To contact WorkBook's Customer Care Support, send your emails to support@workbook.net.

Additional Documentation

WorkBook has a public online help site containing additional documentation for WorkBook, including the release notes. For more information, see <https://help.workbook.net/>.

WorkBook Update Program

WorkBook uses its own update manager, WorkBook Update 6, to update and install WorkBook files. This tool connects to the Internet and downloads the necessary files required to complete a WorkBook update or installation.

Note: If you are having issues installing the WorkBook Update 6 application, try to download the application using your browser.

Before You Begin Deployment

Logical Tiers Overview

WorkBook uses a multitier architecture. Various components of the WorkBook application are distributed to logical tiers for performance and scalability. The logical tiers are as follows:

- **Web/Application (IIS) Server Tier** — This tier performs WorkBook's functional process logic. After a request is sent by the client browser, this tier processes that request, such as retrieving stored data, and then returns the result to the client browser. This tier uses IIS to host the WorkBook applications.
- **Agent Server Tier** — This tier allows the user to schedule agents that will run in the background. Examples of agents that can run on the Agent Server are the following:
 - Scheduled reports
 - Mail imports
 - Calendar synchronization
 - Database maintenance
- **Database Tier** — This tier consists of the SQL Server Database Server(s) where the WorkBook data is stored and retrieved.

Installation Order: High-Level Overview

To install WorkBook correctly, you must complete installation of the server roles in the following order:

1. Install a blank and/or sample WorkBook database on the Database Server tier. You have the option to update an existing database.
2. Install WorkBook on the Web/Application Server tier.
3. Install Agent Server on the machine running the Web/Application Server tier.

What Type of Installation Am I Performing?

Your WorkBook installation falls into one of the following categories:

- Install WorkBook for the first time with a new database. For information, see [Installation Procedures](#).
- Upgrade a server that already has WorkBook installed. For information, see [Upgrade Procedures](#).

Preinstallation Checklists

This section includes a separate checklist for each of the following installation models:

- Single Server
- Dual-Server (Two Tier)

Single-Server

Step	Related Topics
1. Verify that your system meets WorkBook 10's software and hardware requirements. This includes the Windows server, SQL Server, .NET, and IIS versions, as well as the hard disk storage size.	<ul style="list-style-type: none"> ▪ System Requirements ▪ Microsoft .NET Framework 4.7.2 Download Site ▪ Appendix A: Microsoft Internet Information Server (IIS) Installation on Windows Server
2. If you will not use the default installation folder, make sure that your preferred folder exists before installing WorkBook.	
3. Verify that the user account performing the installation is a member of the local Windows System Administrators group.	<ul style="list-style-type: none"> ▪ Permissions Required for Installing WorkBook
4. Make sure that you have valid SQL Server credentials or a domain account available for use during the installation.	<ul style="list-style-type: none"> ▪ WorkBook Credentials for Microsoft SQL Server Database
5. Use the SQL Server Configuration Manager to enable the "TCP/IP" and "Shared Memory" protocols on the SQL Server.	<ul style="list-style-type: none"> ▪ Enable or Disable a Server Network Protocol (SQL Server Configuration Manager)

Dual-Server (Two-Tier)

Database Tier

You must perform this step before you install WorkBook on your Web Server.

Step	Related Topics
1. Verify that the Database Server meets WorkBook's software and hardware requirements.	<ul style="list-style-type: none"> ▪ System Requirements
2. Verify that the user account performing the installation is a member of the local Windows System Administrators group.	<ul style="list-style-type: none"> ▪ Permissions Required for Installing WorkBook
3. Make sure that you have valid SQL Server credentials or a domain account available for use during the installation.	<ul style="list-style-type: none"> ▪ WorkBook Credentials for Microsoft SQL Server Database
4. Use the SQL Server Configuration Manager to ensure that the "TCP/IP" and "Shared Memory" protocols are enabled on your report server and database server.	<ul style="list-style-type: none"> ▪ Enable or Disable a Server Network Protocol (SQL Server Configuration Manager)

Web Application and Process Server Tier

Step	Related Topics
1. Verify that the Web Application and Process Server meets WorkBook's software and hardware requirements.	<ul style="list-style-type: none"> ▪ System Requirements ▪ Microsoft .NET Framework 4.7.2 Download Site ▪ Appendix A: Microsoft Internet Information Server (IIS) Installation on Windows Server
2. If you will not use the default installation folder, make sure that your preferred folder exists before installing WorkBook.	
3. Verify that the user account performing the installation has the proper account credentials as stated in the database tier checklist.	<ul style="list-style-type: none"> ▪ WorkBook Credentials for Microsoft SQL Server Database
4. Ensure that you have the following information prior to starting the installation: <ul style="list-style-type: none"> ▪ Database Server\SQL instance name ▪ Database Server credentials 	<ul style="list-style-type: none"> ▪ WorkBook Credentials for Microsoft SQL Server Database ▪ Verify the Name of Your SQL Server Instance.

System Requirements

Make sure your software and hardware systems meet the minimum WorkBook requirements.

Software Requirements

Software	1 to 100 Users	101 to 500+ Users
SQL Server	MS SQL Server Standard or Enterprise 2016 NOTE: If you have less than 20 WorkBook users in your organization, you may use MS SQL Server Express 2016.	
Windows Server	MS Windows Server 2012 R2 or 2016	
Number of Servers	1 Server	1 Web Server 1 Database Server
Internet Information Services (IIS)	8.5 or higher NOTE: Make sure that the IIS features required by WorkBook are installed or enabled. For more information, see Installing Microsoft IIS for the First Time on Windows Server 2012 R2 or 2016 .	
ASP.NET	Enabled	
.NET Framework	3.5 (Full) + 4.7.2	
Browser	<ul style="list-style-type: none"> ▪ Latest Chrome version for Windows and macOS ▪ Latest Safari version for macOS ▪ Latest Firefox version for Windows and macOS ▪ Latest Microsoft Edge version for Windows 10 	

Hardware Requirements

Software / Hardware	1 to 100 Users	101 to 500+ Users
Processor (Web and SQL Servers)	2.5GHz Quad Core	2.5GHz Quad Core
RAM	8 Gb	SQL Server: 32 Gb Web Server: 8 Gb
Hard Disk Drive	High-performance SATA or SAS Disks in RAID 1	Web Server: 2 x SATA Disks in RAID 1

Software / Hardware	1 to 100 Users	101 to 500+ Users
Hard Disk Space (Estimated)	Web Server: 3 Gb + 10 Gb temporary space on the operating system disk. NOTE: This estimate does not include file storage and the space used by the operating system and other applications.	

Other Requirements

Restore the WorkBook Database

Before installing WorkBook, you must restore the WorkBook database on your SQL Server. If you do not have the WorkBook database, contact [Deltek Customer Care](#).

For information on how to restore an SQL database, see [Restore a Database using SQL Server Management Studio](#).

Note: If you experience connection errors to your database and have verified the previous steps, check that access is not being blocked by Windows or your firewall. For more information, see [Configure a Windows Firewall for Database Engine Access](#).

Permissions Required for Installing WorkBook

When installing WorkBook installation, there are several rights and privileges required for the person performing the installations on the server tiers.

Tier	Permissions Required
Web Server Tier and Agent Server Tier	<ul style="list-style-type: none"> The Windows account of the person performing the installation must be a member of the Local Administrator group on the server. The person performing the installation must have/know the credentials of the user account created in the database as specified in the WorkBook Credentials for Microsoft SQL Server Database section. This account has the user rights that the installation will require when it displays the database platform connection information.
Database Server Tier	<ul style="list-style-type: none"> The person performing the installation must know the credentials of the user account created in the database as specified in the WorkBook Credentials for Microsoft SQL Server Database section. This account has the user rights that the installation will require when it displays the database platform connection information.

WorkBook Credentials for Microsoft SQL Server Database

During the installation of WorkBook, you need to provide a set of SQL Server Authentication credentials or a domain account that, at minimum, should have the roles of **db_owner** of the WorkBook database and **dbcreator** on the SQL Server.

Note: If you choose to use a Domain Account, Deltek recommends that you rotate the password at least once yearly. Create this account before installing WorkBook as it will be used by the Web and Agent Tiers to connect with the database.

WorkBook supports both SQL Server authentication modes: **Windows Authentication Only** mode or **SQL Server and Windows Authentication** mode, also known as "Mixed Mode."

Note: For more information about SQL Server authentication modes, see *Change Server Authentication Mode* at [https://msdn.microsoft.com/en-us/library/ms188670\(v=sql.120\).aspx](https://msdn.microsoft.com/en-us/library/ms188670(v=sql.120).aspx).

Verify the Name of Your SQL Server Instance

The default installation uses the Server Name for the connection and installs as an instance named SSQSERVER. Sometimes, Microsoft SQL Server is installed using an instance name other than the default name (MSSQLSERVER). The SQL Server Express Edition installs as the named instance **SQLEXPRESS**.

- When connecting to the default SQL Server Database Engine instance, use the name of your database server. The SQL Server automatically maps the default instance of the Database Engine to the Server Name when accepting connections.
- When connecting to a named instance of SQL Server Database Engine, specify the name of the SQL Server plus the instance in the connection in the format of SERVERNAME\INSTANCENAME.

For example, if your SQL Server is named SQLSERVER1 and you installed to an instance named SQLExpress, you must specify the server connection information in the format of **SQLSERVER1\SQLEXPRESS**.

- If you do not know the name of your SQL Server instance or you are unable to connect to your database server after installation, see *Determine Whether the Database Engine Is Installed and Started* at <http://msdn.microsoft.com/en-us/library/ms366339.aspx>.

If you still experience connection errors to your database server, verify that the Windows firewall or any other firewall is not blocking access to the SQL Server Database Engine.

Note: See *Configure a Windows Firewall for Database Engine Access* at <http://msdn.microsoft.com/en-us/library/ms175043.aspx>.

Internet Access

For single-server installations, you need access to the Internet to renew your license. For dual-server installations, the Web Server must have access to the Internet for you to renew your license.

If you do not have Internet access, you can renew your license manually within 14 days after installation.

Platform Virtualization

Virtual environment software, such as VMware®, resides in the hardware layer underneath the operating system and is used to partition a single server into a multiple server/multiple operating system environment. Deltek's product development makes limited use of virtual environments.

Note: See KB Article 78800, *Customer Use of Cloud-Based and Virtualized Environments*, on the Deltek Customer Care Connect site (<http://support.deltek.com>) for more information.

Technical Considerations

Unsupported Environments

WorkBook does not support the following environments:

- You cannot perform a Single-Server deployment on the Microsoft Small Business Server. Only the WorkBook database tier can be installed on this server.
- You cannot install any WorkBook tier on:
 - The Microsoft ISA/TMG server or any other software-based firewall (except Windows firewall).
 - A domain controller.

Recommended Daily Activities

Deltek recommends completing the following activities on your database daily:

1. Check database integrity.
2. Make a complete backup.

Installation Procedures

Note: If you encounter any errors during the installation, send them the installation log file to support@workbook.net.

Single-Server Installation

This section provides instructions for installing all WorkBook tiers on a single server for organizations that prefer the one-server deployment model. This deployment model is suitable for demonstration purposes or for small organizations with simple deployment needs.

When you choose the one-server deployment model, you install all WorkBook tiers (Web, Agent, and Database) on the same machine.

Notes:

- Before you begin your installation, see [Preinstallation Checklists](#) and [System Requirements](#).
- To review the various deployment options, see the [Before You Begin Deployment](#).

Step 1: Install the Web/Application (IIS) and Database Server Tiers

1. Create the WorkBook installation folder on your machine.
2. Go to <https://update.workbook.net/wbupdate6/> and click **Install** on the page to download WorkBook Update 6. This option also downloads the Microsoft .NET Framework and Windows Installer prerequisites.

If you already have the prerequisites installed, you can launch WorkBook Update 6 directly from the page.

Note: Make sure to restore the WorkBook database before launching WorkBook Update 6. For more information, see [Restore the WorkBook Database](#).

3. Right-click **setup.exe** and then click **Run as administrator** on the shortcut menu. Alternatively, you can double-click **setup.exe** and then click **File » Elevate Application** in the WorkBook Update 6 dialog box.

4. Use the WorkBook Update 6 dialog box to specify the database information and installation path for WorkBook V9 Website. If you are using Trusted Authentication, leave the username and password fields empty.

Note: When you select a Database Server in WorkBook Update 6, it automatically populates the **V9 Website Path** field, as shown in the example below. If you want to change the default paths, make sure that the destination folders you want to use already exist before you start with the installation.

5. In the **Update** group box, select the following options:
 - **Patch**
 - **Static Data**
 - **V9**

- **Backend**

Note:

- Select the **Backend** option only if you are upgrading from one major version to another. For example, select this option if you are upgrading from version 911000 to version 912000. If you are upgrading from version 911000.102 to version 911000.107, do not select this option as both versions belong to the same major release (911000).
- If you intend to install a SSL Certificate for HTTPS, select **Use HTTPS**. Deltek highly recommends selecting this option.

6. In the **New version** section, use the dropdown to select the version of WorkBook you wish to install.

Note: You should select a stable version of WorkBook, unless told otherwise by Deltek.

7. In the **V9 Website Path** field, specify the location where you want to install the V9 Website Application files.
8. Click **Start** and wait for the installation to finish.

Step 2: Create the Website and Configure the IIS Settings

Note: If you want to create a separate website for reports, use the following method instead: [Appendix B: Creating the Website and Configuring the IIS Settings \(Alternate Method\)](#). Having the reports in a separate website may help speed up processing time and should generally be less demanding of system resources.

1. Open the Internet Information Services (IIS) Manager.
2. Expand the server element.
3. Right-click **Sites** and click **Add Website** on the context menu.
4. Use the fields and options in the Add Website dialog box to create the WorkBook website, and click **OK**.

Make sure that the **Physical path** field points to the WorkBook installation folder that you specified when installing the Database and Web tiers, and that the **Port** field points to an unused port number.
5. Expand the newly created WorkBook website.
6. Right-click the **api** folder and click **Convert to Application** on the context menu.
7. In the Add Application dialog box, accept the default settings and click **OK**.
8. Right-click the **Report** folder and click **Convert to Application** on the context menu.
9. In the Add Application dialog box, accept the default settings and click **OK**.
10. Expand Report.
11. Right click the **api** folder and click **Convert to Application** on the context menu.
12. In the Add Application dialog box, accept the default settings and click **OK**.

Step 3: Download the Agent for Your WorkBook Version

When installing WorkBook in a single-server or dual-server setup, you must download the agent version that matches your WorkBook installation.

1. Click <http://update.workbook.net/912000> to go to the download site.
The agent version number after the slash corresponds to the version number of the base WorkBook application.
2. Download the WorkBook agent version that corresponds to your installation's build number. The last two digits of the file name corresponds to the build number of your WorkBook installation. For example, if your WorkBook build number is 912000.27, download **workbookagentconsole_27.zip**. The build number is displayed in the **New version** field of the WorkBook Update 6 dialog box.
3. Create an Agent folder for the WorkBook agent on the machine where your Web/Application Server is installed. The Agent folder must be in the same level as the installation folder for your WorkBook installation.
4. Extract the contents of the zip file to the Agent folder.

Step 4: Configure the Agent Server Tier

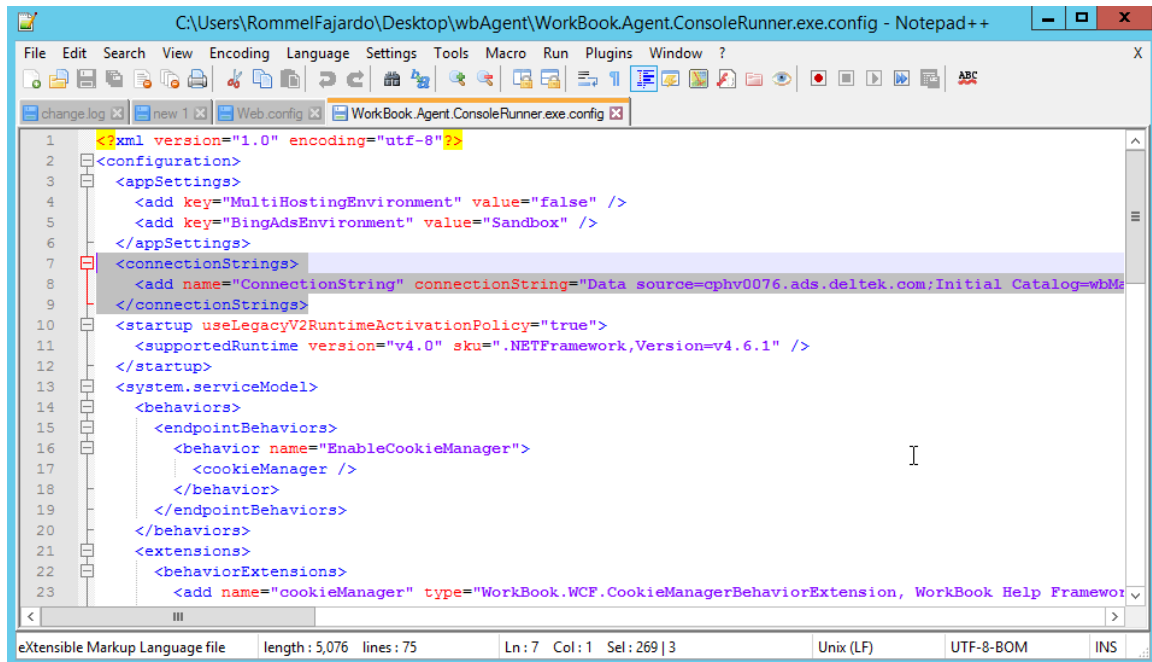
1. In the WorkBook installation folder on your Web/Application (IIS) Server, right-click the **Web.config** file and use the context menu to open it in Notepad.
2. In Notepad, copy the connection string from the **Web.config** file.

```

4      <sectionGroup name="devExpress">
5          <section name="xpf.printing" type="DevExpress.Xpf.Printing.Service.ConfigSections.PrintingServiceSection, DevExpress.Web.v16.1, Version=16.1.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
6      <section name="themes" type="DevExpress.Web.ThemesConfigurationSection, DevExpress.Web.v16.1, Version=16.1.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
7      <section name="compression" type="DevExpress.Web.CompressionConfigurationSection, DevExpress.Web.v16.1, Version=16.1.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
8      <section name="settings" type="DevExpress.Web.SettingsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
9      <section name="errors" type="DevExpress.Web.ErrorsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.0.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
10     </sectionGroup>
11     <sectionGroup name="system.serviceModel">
12         <section name="domainServices" type="System.ServiceModel.DomainServices.Hosting.DomainServicesSection, System.ServiceModel.DomainServices.Hosting, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089">
13     </sectionGroup>
14     <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, System.Data.Entity, Version=6.0.0.0, Culture=neutral, PublicKeyToken=7b4632b2c6881020">
15     <!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/?LinkID=284534 -->
16     </configSections>
17     <!-- Connection String -->
18     <connectionStrings>
19         <add name='ConnectionString' connectionString='Data Source=makv0031;Initial Catalog=wbDemoInt;Integrated Security=SSPI;' providerName='Microsoft.SqlServer.SqlClient' />
20     </connectionStrings>
21     <!-- Application Settings -->
22     <appSettings>
23         <!-- Basicly, don't make new users for each login, this does not work with AZURE!-->
24         <add key="LegacyUserConnectionString" value="True" />
25         <add key="MultiHostingEnvironment" value="false" />
26         <add key="ConfiguredForHTTPS" value="true" />
27         <add key="SilverlightCDN" value="false" />
28         <add key="UseForwardFor" value="true" />
    
```

3. In the wbAgent folder of your Web/Application (IIS) Server, right-click the **WorkBook.Agent.ConsoleRunner.exe.config** file and use the context menu to open it in Notepad.

4. In the **WorkBook.Agent.ConsoleRunner.exe.config** file, overwrite the Agent's connection string with the one that you copied from the **Web.config** file in the WorkBook installation folder.



5. Save the file.

Step 5: Create a Scheduled Task

1. Launch Task Scheduler and create a new task (**Action » Create Task**).
2. On the General tab of the Create Task dialog box, enter the task name.
3. Select the following options:
 - **Run whether user is logged on or not**
Do not select the **Do not store password** option.
 - **Run with highest privileges**
4. On the Trigger tab of the Create Task dialog box, click **New**.
5. In the New Trigger dialog box, select the following options, and then click **OK**:
 - Begin the task on a schedule
 - Daily
 - Recur every 1 day
 - Repeat task every 1 hour for an indefinite duration
 - Enable the trigger
6. On the Actions tab of the Create Task dialog box, click **New**.
7. In the New Action dialog box, take the following actions, and then click **OK**:

- Select **Start a program** in the **Action** field.
 - Use the **Browse** button to locate the **WorkBook.Agent.ConsoleRunner.exe** file in the Agent folder.
8. In the Create Task dialog box, click **OK**.

Two-Server Installation

This model is designed for medium to large-sized firms that have adequate technical staff. In this setup, your SQL and IIS installations run on different servers.

Notes:

- Before you begin your installation, see [Preinstallation Checklists](#) and [System Requirements](#).
- To review the various deployment options, see the [Before You Begin Deployment](#) .

Step 1: Install the Web/Application (IIS) Server Tier

1. Create the WorkBook installation folder on the machine that hosts the IIS Server.
2. Go to <https://update.workbook.net/wbupdate6/> and click **Install** on the page to download WorkBook Update 6. This option also downloads the Microsoft .NET Framework and Windows Installer prerequisites.

If you already have the prerequisites installed, you can launch WorkBook Update 6 directly from the page.

Note: Make sure to restore the WorkBook database before launching WorkBook Update 6. For more information, see [Restore the WorkBook Database](#).

3. Right-click **setup.exe** and then click **Run as administrator** on the shortcut menu. Alternatively, you can double-click **setup.exe** and then click **File » Elevate Application** in the WorkBook Update 6 dialog box.

4. Use the WorkBook Update 6 dialog box to specify the database information and installation path for WorkBook V9 Website. If you are using Trusted Authentication, leave the username and password fields empty.

Note: When you select a Database Server in WorkBook Update 6, it automatically populates the **V9 Website Path** field, as shown in the example below. If you want to change the default paths, make sure that the destination folders you want to use already exist before you start with the installation.

5. In the **Update** group box, select the following options:
 - **Patch**
 - **Static Data**
 - **V9**

▪ **Backend**

Note:

- Select the **Backend** option only if you are upgrading from one major version to another. For example, select this option if you are upgrading from version 911000 to version 912000. If you are upgrading from version 911000.102 to version 911000.107, do not select this option as both versions belong to the same major release (911000).
- If you intend to install a SSL Certificate for HTTPS, select **Use HTTPS**. Deltek highly recommends selecting this option.

6. In the **New version** section, use the dropdown to select the version of WorkBook you wish to install.

Note: You should select a stable version of WorkBook, unless told otherwise by Deltek.

7. In the **V9 Website Path** field, specify the location where you want to install the V9 Website Application files.
8. Click **Start** and wait for the installation to finish.

Step 2: Create the Website and Configure the IIS Settings

Note: If you want to create a separate website for reports, use the following method instead: [Appendix B: Creating the Website and Configuring the IIS Settings \(Alternate Method\)](#). Having the reports in a separate website may help speed up processing time and should generally be less demanding of system resources.

1. On the machine where you installed the Web/Application (IIS) Server tier, open the Internet Information Services (IIS) Manager.
2. Expand the server element.
3. Right-click **Sites** and click **Add Website** on the context menu.
4. Use the fields and options in the Add Website dialog box to create the WorkBook website, and click **OK**.

Make sure that the **Physical path** field points to the installation folder that you specified when installing the Database and Web tiers, and that the **Port** field points to an unused port number.
5. Expand the newly created WorkBook website.
6. Right-click the **api** folder and click **Convert to Application** on the context menu.
7. In the Add Application dialog box, accept the default settings and click **OK**.
8. Right-click the **Report** folder and click **Convert to Application** on the context menu.
9. In the Add Application dialog box, accept the default settings and click **OK**.
10. Expand Report.
11. Right click the **api** folder and click **Convert to Application** on the context menu.
12. In the Add Application dialog box, accept the default settings and click **OK**.

Step 3: Download the Agent for Your WorkBook Version

You must run the Agent from the machine where your Web/Application (IIS) Server is installed.

Notes:

- This section applies only to clients who host WorkBook on their own servers.
- You must extract the Agent to the Web/Application (IIS) Server and not to the SQL server.

When installing WorkBook in a single-server or dual-server setup, you must download the Agent version that matches your WorkBook installation.

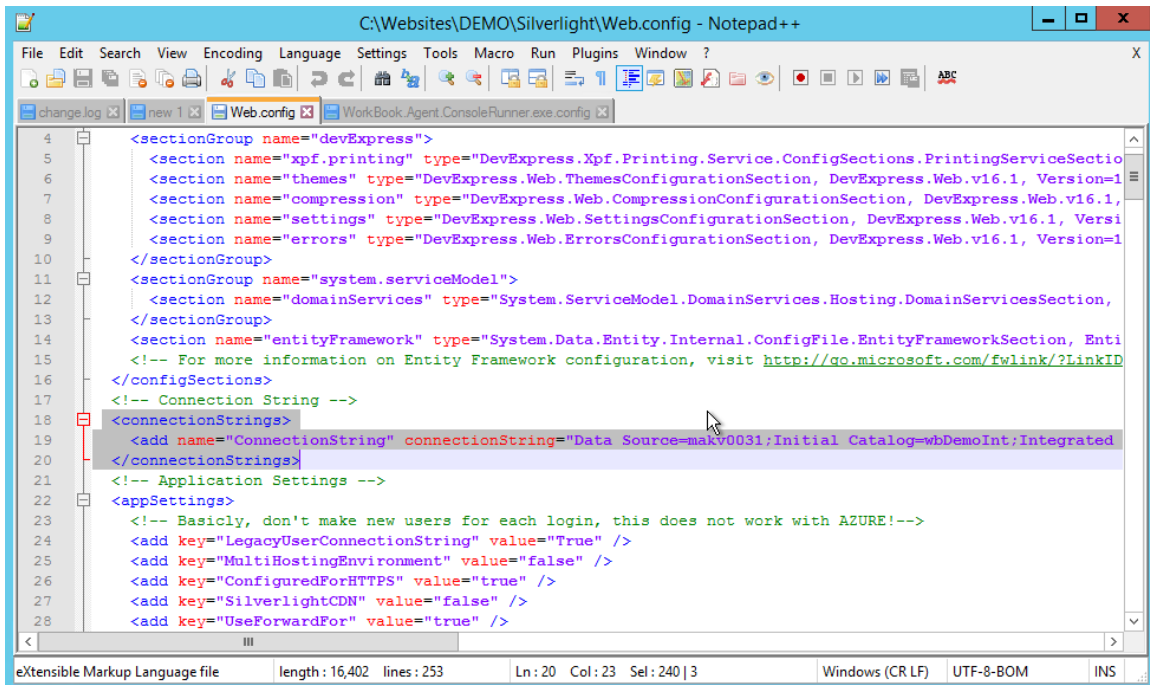
1. Click <http://update.workbook.net/912000> to go to the download site.
The agent version number after the slash corresponds to the version number of the base WorkBook application.
2. Download the WorkBook agent version that corresponds to your installation's build number. The last two digits of the file name corresponds to the build number of your WorkBook installation. For example, if your WorkBook build number is 912000.27, download **workbookagentconsole_27.zip**. The build number is displayed in the **New version** field of the WorkBook Update 6 dialog box.
3. Create an Agent folder for the WorkBook agent on the machine where your Web/Application Server is installed. The Agent folder must be in the same level as the installation folder for your WorkBook installation.
4. Extract the contents of the zip file to the Agent folder.

Step 4: Configure the Agent Server Tier

1. In the WorkBook installation folder on your Web/Application (IIS) Server, right-click the **Web.config** file and use the context menu to open it in Notepad.

Installation Procedures

2. In Notepad, copy the connection string from the **Web.config** file.

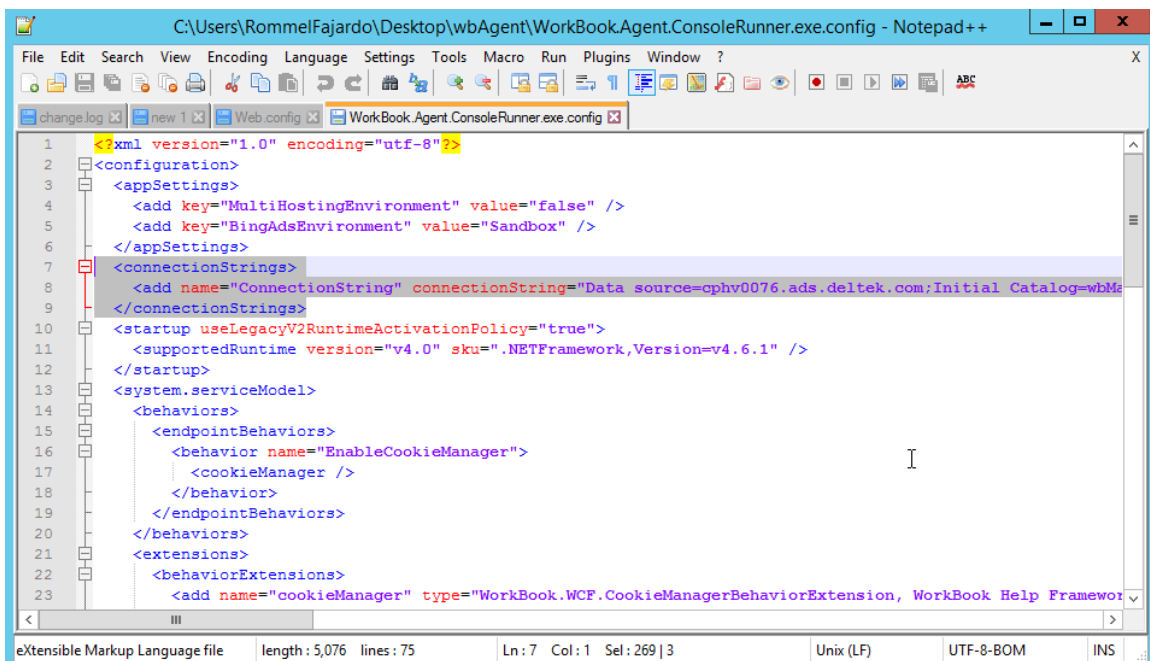


```

4 <sectionGroup name="devExpress">
5 <section name="xpf.printing" type="DevExpress.Xpf.Printing.Service.ConfigSections.PrintingServiceSection, DevExpress.Xpf.Printing, Version=16.1.1, Culture=neutral, PublicKeyToken=95b641db4fb687d0">
6 <section name="themes" type="DevExpress.Web.ThemesConfigurationSection, DevExpress.Web.v16.1, Version=16.1.1, Culture=neutral, PublicKeyToken=95b641db4fb687d0">
7 <section name="compression" type="DevExpress.Web.CompressionConfigurationSection, DevExpress.Web.v16.1, Version=16.1.1, Culture=neutral, PublicKeyToken=95b641db4fb687d0">
8 <section name="settings" type="DevExpress.Web.SettingsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.1, Culture=neutral, PublicKeyToken=95b641db4fb687d0">
9 <section name="errors" type="DevExpress.Web.ErrorsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.1, Culture=neutral, PublicKeyToken=95b641db4fb687d0">
10 </sectionGroup>
11 <sectionGroup name="system.serviceModel">
12 <section name="domainServices" type="System.ServiceModel.DomainServices.Hosting.DomainServicesSection, System.ServiceModel.DomainServices.Hosting, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934ef0c">
13 </sectionGroup>
14 <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, System.Data.Entity, Version=6.0.0.0, Culture=neutral, PublicKeyToken=7b4632b2c68710d0">
15 <!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/?LinkID=283271 -->
16 </configSections>
17 <!-- Connection String -->
18 <connectionStrings>
19 <add name="ConnectionString" connectionString="Data Source=mkv0031;Initial Catalog=wbDemoInt;Integrated Security=True" providerName="System.Data.SqlClient" />
20 </connectionStrings>
21 <!-- Application Settings -->
22 <appSettings>
23 <!-- Basically, don't make new users for each login, this does not work with AZURE!-->
24 <add key="LegacyUserConnectionString" value="True" />
25 <add key="MultiHostingEnvironment" value="false" />
26 <add key="ConfiguredForHTTPS" value="true" />
27 <add key="SilverlightCDN" value="false" />
28 <add key="UseForwardFor" value="true" />
29 </appSettings>
30 </configuration>

```

3. In the wbAgent folder of your Web/Application (IIS) server, right-click the **WorkBook.Agent.ConsoleRunner.exe.config** file and use the context menu to open it in Notepad.
4. In the **WorkBook.Agent.ConsoleRunner.exe.config** file, overwrite the Agent's connection string with the one that you copied from the **Web.config** file in the WorkBook installation folder.



```

1 <?xml version="1.0" encoding="utf-8"?>
2 <configuration>
3 <appSettings>
4 <add key="MultiHostingEnvironment" value="false" />
5 <add key="BingAdsEnvironment" value="Sandbox" />
6 </appSettings>
7 <connectionStrings>
8 <add name="ConnectionString" connectionString="Data source=cphv0076.ads.deltek.com;Initial Catalog=wbDemoInt;Integrated Security=True" providerName="System.Data.SqlClient" />
9 </connectionStrings>
10 <startup useLegacyV2RuntimeActivationPolicy="true">
11 <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.6.1" />
12 </startup>
13 <system.serviceModel>
14 <behaviors>
15 <endpointBehaviors>
16 <behavior name="EnableCookieManager">
17 <cookieManager />
18 </behavior>
19 </endpointBehaviors>
20 </behaviors>
21 <extensions>
22 <behaviorExtensions>
23 <add name="cookieManager" type="WorkBook.WCF.CookieManagerBehaviorExtension, WorkBook Help Framework" />
24 </behaviorExtensions>
25 </extensions>
26 </system.serviceModel>
27 </configuration>

```

5. Save the file.

Step 5: Create a Scheduled Task

1. On your Web/Application (IIS) Server, launch Task Scheduler and create a new task (**Action » Create Task**).
2. On the General tab of the Create Task dialog box, enter the task name.
3. Select the following options:
 - **Run whether user is logged on or not**
Do not select the **Do not store password** option.
 - **Run with highest privileges**
4. On the Triggers tab of the Create Task dialog box, click **New**.
5. In the New Trigger dialog box, select the following options, and then click **OK**:
 - Begin the task on a schedule
 - Daily
 - Recur every 1 day
 - Repeat task every 1 hour for an indefinite duration
 - Enable the trigger
6. On the Actions tab of the Create Task dialog box, click **New**.
7. In the New Action dialog box, take the following actions, and then click **OK**:
 - Select **Start a program** in the **Action** field.
 - Use the **Browse** button to locate the **WorkBook.Agent.ConsoleRunner.exe** file in the Agent folder.
8. In the Create Task dialog box, click **OK**.

Upgrade Procedures

Deltek encourages clients to upgrade to the latest version of WorkBook because:

- New features are added only to the latest version.
- Deltek fixes software issues only in the latest version, except in critical situations.
- Deltek support is typically available only for the latest and the next previous versions.
- The latest version incorporates the newest technologies and tools.

Before upgrading, review the *Deltek WorkBook Release Notes* and perform a test conversion and test installation of the new version to ensure that your firm's business processes are working properly in the new version.

Notes:

- Before you begin your installation, review the [Preinstallation Checklists](#).
- To review the various deployment options, see the [Before You Begin Deployment](#).
- If you encounter any errors during the upgrade process, send them the installation log file to <http://support.deltek.com>.
- When updating of the Database Server tier, WorkBook creates a backup of the database in the default backup directory.

Upgrade from WorkBook 9.1 or above

If you are upgrading from WorkBook 9.1 or a later version, the upgrade installs directly into the existing folder structure using the current WorkBook settings.

Upgrade from WorkBook 8 or Earlier Versions

If you are upgrading from WorkBook 8 or an earlier version, you may need to create one or more of the Application websites if they are missing. WorkBook will use any existing websites.

Migrate/Upgrade to a New Server

- If your existing WorkBook database server is on an SQL Server version that is no longer supported, you must restore or move your database to a supported version prior to performing the installation.
- If your existing WorkBook Web/Application Server is on a version of Windows that is no longer supported, you must perform a new installation. WorkBook will not migrate any custom reports, DLLs, web.config settings, or other configuration changes that are on the server. For more information, see [Installation Procedures](#).

Step 1: Install the Web/Application (IIS) Server Tier

1. Go to <https://update.workbook.net/wbupdate6/> and click **Install** on the page to download WorkBook Update 6. This option also downloads the Microsoft .NET Framework and Windows Installer prerequisites.

Upgrade Procedures

2. Right-click **setup.exe** and then click **Run as administrator** on the shortcut menu. Alternatively, you can double-click **setup.exe** and then click **File » Elevate Application** in the WorkBook Update 6 dialog box.
3. Use the WorkBook Update 6 dialog box to specify the database information and installation path for WorkBook's V9 Website components. If you are using Trusted Authentication, leave the username and password fields empty.

4. In the **Update** group box, select the following options:
 - **Patch**
 - **Static Data**
 - **V9**
 - **Backend**

If you intend to install a SSL Certificate for HTTPS, select **Use HTTPS**. Deltek highly recommends selecting this option.

5. In the **New version** section, use the dropdown to select the version of WorkBook you wish to install.

Note: You should select a stable version of WorkBook, unless told otherwise by Deltek.

6. Click **Start** and wait for the installation to finish.

Step 2: Download the Agent for Your WorkBook Version

Notes:

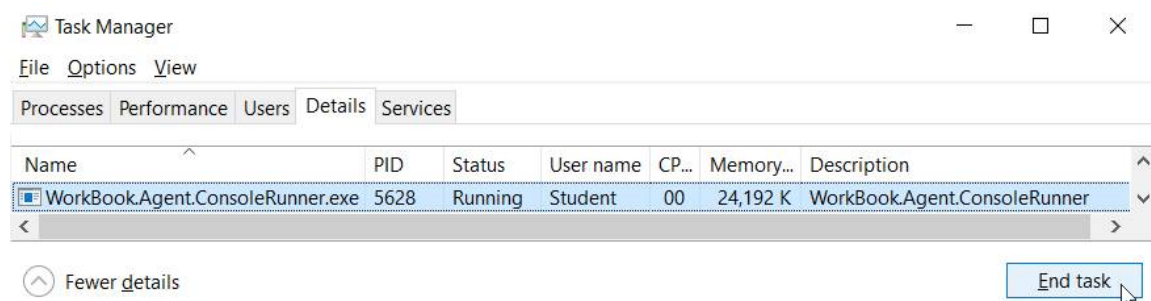
- This section applies only to clients who host WorkBook on their own servers.
- If your SQL and IIS installations run on different servers, extract the Agent to the Web/Application (IIS) Server and not to the SQL server.

When installing WorkBook in a single-server or dual-server setup, you must download the Agent version that matches your WorkBook installation.

1. Click <http://update.workbook.net/912000> to go to the download site.

The agent version number after the slash corresponds to the version number of the base WorkBook application.

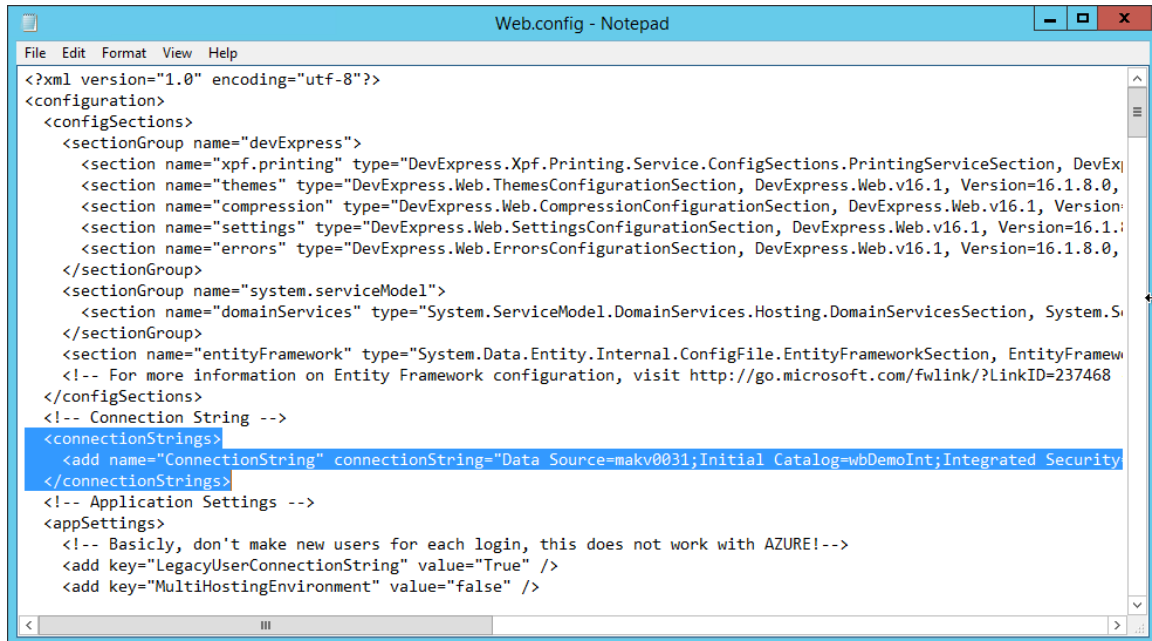
2. Download the WorkBook agent version that corresponds to your installation's build number. The last two digits of the file name corresponds to the build number of your WorkBook installation. For example, if your WorkBook build number is 912000.27, download **workbookagentconsole_27.zip**. The build number is displayed in the **New version** field of the WorkBook Update 6 dialog box.
3. Go to **Task Manager » Details** and stop **WorkBook.Agent.ConsoleRunner**.



4. Delete the content of the Agent folder on the machine where your Web/Application Server is installed.
5. Extract the contents of the zip file to the Agent folder.

Step 3: Configure the Agent Server Tier

1. In the WorkBook installation folder on your Web/Application (IIS) Server, right-click the **Web.config** file and use the context menu to open it in Notepad.
2. In Notepad, copy the connection string from the **Web.config** file.



```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <configSections>
    <sectionGroup name="devExpress">
      <section name="xpf.printing" type="DevExpress.Xpf.Printing.Service.ConfigSections.PrintingServiceSection, DevExpress.Xpf.Printing.Service, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
      <section name="themes" type="DevExpress.Web.ThemesConfigurationSection, DevExpress.Web.v16.1, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
      <section name="compression" type="DevExpress.Web.CompressionConfigurationSection, DevExpress.Web.v16.1, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
      <section name="settings" type="DevExpress.Web.SettingsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
      <section name="errors" type="DevExpress.Web.ErrorsConfigurationSection, DevExpress.Web.v16.1, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
    </sectionGroup>
    <sectionGroup name="system.serviceModel">
      <section name="domainServices" type="System.ServiceModel.DomainServices.Hosting.DomainServicesSection, System.ServiceModel.DomainServices.Hosting, Version=16.1.8.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"/>
    </sectionGroup>
    <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, EntityFramework, Version=6.0.0.0, Culture=neutral, PublicKeyToken=7b463d7baca78843"/>
  </configSections>
  <!-- Connection String -->
  <connectionStrings>
    <add name="ConnectionString" connectionString="Data Source=mkv0031;Initial Catalog=wbDemoInt;Integrated Security=True;User=mkv0031" providerName="System.Data.SqlClient" />
  </connectionStrings>
  <!-- Application Settings -->
  <appSettings>
    <!-- Basically, don't make new users for each login, this does not work with AZURE!-->
    <add key="LegacyUserConnectionString" value="True" />
    <add key="MultiHostingEnvironment" value="false" />
  </appSettings>
</configuration>
```

3. In the wbAgent folder of your Web/Application (IIS) server, right-click the **WorkBook.Agent.ConsoleRunner.exe.config** file and use the context menu to open it in Notepad.
4. In the **WorkBook.Agent.ConsoleRunner.exe.config** file, overwrite the Agent's connection string with the one that you copied from the **Web.config** file in the WorkBook installation folder.
5. Save the file.
6. Go to **Task Manager » Details** and check if the **WorkBook.Agent.ConsoleRunner.exe** is running. If not, open Task Scheduler and run the scheduled task.

Step 4: Remove Obsolete Websites

WorkBook has rendered the following websites obsolete:

- "Mobile" API website.
- WebAccess website.

You may delete these websites and the files related to them.

Post Installation/Upgrade

After you complete the installation or upgrade process, verify the installation to confirm that all prerequisite software is installed and all installation steps were completed.

To verify that your installation was successful:

1. Open your browser and enter the URL to the WorkBook application.
For example, `http://<Web Server>.`
2. Enter your **User ID**. If you are unsure of your user ID, enter admin.
3. Enter your **Password**. If you are unsure of your password, leave this field blank.
4. If you are able to log in or receive a notification about incorrect username or password, then WorkBook has been successfully installed.

Notes: If there are any errors during the installation process when reloading reports, they will be listed in the installation log. Resolve any errors and reload your reports manually through the application.

WorkBook Configuration

Review the WorkBook Administrator's Guide: <http://help.workbook.net/knowledgebase/administrative-guide-installation/>

Appendix A: Microsoft Internet Information Server (IIS) Installation on Windows Server

Microsoft (IIS) Is Already Installed on Windows Server 2012 R2 or 2016

If you have already enabled the Web Server role on your web server, then you need to check Features and Role Services.

To check features and role services on Windows Server 2012 R2 or 2016:

1. Launch Server Manager.
2. In the left menu, click **IIS**. If the IIS option is not listed, perform the steps below for installing Microsoft IIS for the first time.
3. In the Roles and Features group, verify that all of the required role services (as listed in the *Installing Microsoft IIS for the First Time* steps below) are installed.

Installing Microsoft IIS for the First Time on Windows Server 2012 R2 or 2016

If you are installing Microsoft IIS for the first time, follow the steps below. These steps are necessary for proper detection of ASP.NET.

To install Microsoft IIS on Windows Server 2012/2012 R2:

1. Logon to Microsoft Windows Server as a domain or local administrator.
2. Launch Server Manager.
3. On the Server Manager dashboard, **Add roles and features**.
4. On the Before you begin page, click **Next**.
5. On the Select installation type page, select **Role-based or feature-based installation** and click **Next**.
6. On the Select destination server page, select **Select a server from a server pool** and click **Next**.
7. On the Select server roles screen, expand **Web Server (IIS)** and enable the following options:
 - **Web Server (IIS) » Web Server » Common HTTP Features**
 - Default Document
 - HTTP Errors
 - Static Content
 - HTTP Redirection
 - **Web Server (IIS) » Web Server » Health and Diagnostics**
 - HTTP Logging
 - Request Monitor

- Tracing
- **Web Server (IIS) » Web Server » Performance**
 - Static Content Compression
- **Web Server (IIS) » Web Server » Security**
 - Windows Authentication
 - Request Filtering
- **Web Server (IIS) » Web Server » Application Development**
 - .NET Extensibility 3.5
 - .NET Extensibility 4.7.2
 - ASP.NET 4.7.2
- **Web Server (IIS) » Management Tools**
 - IIS Management Console
 - IIS Management Scripts and Tools

Click **Next**.

8. On the Select features screen, expand **.NET Framework 4.7.2 Features** and select **.NET Framework 4.7.2 and ASP.NET 4.7.2**.

Click **Next**.

Notes: These steps enable the .NET Framework features. However, you must also install the current supported version of the .NET Framework on the server, if you haven't already. For more information see, [Software Requirements](#).

9. On the Confirm installation selections page, click **Install**.

Appendix B: Creating the Website and Configuring the IIS Settings (Alternate Method)

Use this method if you want to create a dedicated website for reports. Having a separate report website should generally be less demanding of system resources and may help speed up processing time.

Create the Website and Configure the IIS Settings

1. In your browser, go to <https://www.iis.net/downloads/microsoft/url-rewrite>.
2. Download and install the URL Rewrite extension.
3. Open the Internet Information Services (IIS) Manager.
4. Expand the server element.
5. Right-click **Sites** and click **Add Website** on the context menu.
6. Use the fields and options in the Add Website dialog box to create the WorkBook website, and click **OK**.

Make sure that the **Physical path** field points to the installation folder that you specified when installing the Database and Web tiers, and that the **Port** field points to an unused port number.

7. Expand the newly created WorkBook website.
8. Right-click the **api** folder and click **Convert to Application** on the context menu.
9. In the Add Application dialog box, accept the default settings and click **OK**.
10. Right-click the **Report** folder and click **Convert to Application** on the context menu.
11. In the Add Application dialog box, accept the default settings and click **OK**.

Remove Report as Application

12. Right-click **Report** and click **Remove** on the context menu.
13. When prompted for confirmation, click **Yes**.

Rename the Report Folder

14. Right-click the WorkBook website you created and click **Explore** on the context menu.
15. Locate the **Report** folder and rename it into something else. For example, ReportSite.

Create a Separate Report Website

16. Go back to the IIS Manager and press F5 to refresh.
17. Right-click **Sites** and click **Add Website** on the context menu.
18. Use the fields and options in the Add Website dialog box to create the report website, and click **OK**.

Important: Make sure that the **Physical path** field points to the folder that you just renamed (in this example, ReportSite), and that the **Port** field points to an unused port number (different from that of the WorkBook website).

19. Expand the report website that you just created.
20. Right-click the **api** folder and click **Convert to Application** on the context menu.
21. In the Add Application dialog box, accept the default settings and click **OK**.

Configure the Web.config File

22. Right-click the WorkBook website and click **Explore** on the context menu.
23. Locate the **Web.config** file and use the context menu to open it in Notepad.
24. Scroll to the bottom and place your mouse cursor just before **<system.webServer>**.
25. Paste the following string and save the file.

```
<rewrite>
  <rules>
    <rule name="WorkBook Report Redirect" stopProcessing="true">
      <match url="^report/(.*)" />
      <conditions trackAllCaptures="true">
        <add input="{CACHE_URL}" pattern="^(.+):/" />
        <add input="{CACHE_URL}"
pattern="(report/api/)| (report/.*\a) | (report/.*(\.html))" />
      </conditions>
      <action type="Rewrite" url="http://{SERVER_NAME}:1000/{R:1}" />
    </rule>
    <rule name="DXR.axd" stopProcessing="true">
      <match url="DX[X]?R.*\axd" />
      <action type="Rewrite" url="http://{SERVER_NAME}:1000/{R:0}" />
    </rule>
    <rule name="WebResource.axd" stopProcessing="true">
      <match url="WebResource\axd" />
      <action type="Rewrite" url="http://{SERVER_NAME}:1000/{R:0}" />
    </rule>
  </rules>
</rewrite>
```

Edit the Rules Using URL Rewrite

26. Navigate to the WorkBook website.
27. In the right pane of the IIS Manager, double-click **URL Rewrite**.
28. In the URL Rewrite pane, double-click a rule.
29. In the Edit Inbound Rule pane, modify the value of the **Rewrite URL** field:
 - Replace **1000** with the port that you used in the report website.
 - Make sure the binding type (http or https) matches that of the WorkBook website.

Appendix B: Creating the Website and Configuring the IIS Settings (Alternate Method)

30. In the Actions pane, click **Apply**.
31. Apply the same changes to the two other rules.



Deltek is the leading global provider of enterprise software and solutions for government contractors, professional services firms and other project-based businesses. For decades, we have delivered actionable insight that empowers our customers to unlock their business potential. 22,000 organizations and millions of users in over 80 countries around the world rely on Deltek to research and identify opportunities, win new business, recruit and develop talent, optimize resources, streamline operations and deliver more profitable projects. www.deltek.com