Deltek ProPricer

Cost Volume Pro
Windows Deployment and Upgrade Guide

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Introduction

Cost Volume Pro, an n-tier web application developed with ASP.NET Core, supports various deployment options.

Cost Volume Pro requires Authorization Server Pro to provide centralized user management and licensing.

The focus of this guide is deployment on Microsoft Windows servers using Internet Information Services (IIS). It explains in detail how to install Cost Volume Pro on premises.

Cost Volume Pro

Minimum requirements

- Microsoft Windows Server 2016 (64 bits).
- Internet Information System 8.0.
- Microsoft SQL Server 2016 (13.x) or later.
- Valid SSL certificate(s) for all websites.
- DNS entry to resolve the fully qualified domain name matching the SSL certificate(s).
- Optional: Certificate for encryption of authentication tokens.

Known limitations

- Bookmarking the URL of the Log In page can cause login issues for users. To quickly open Cost Volume Pro in a browser, users should bookmark the web application start URL instead.

Cost Volume Pro deployment packages

The platform-specific and framework-dependent packages include only the application and its dependencies. The .NET runtime is provided by ASP.NET Hosting Bundle. Deployment packages include a Windows x64 platform-specific executable.

Typically, all packages will be deployed in one and the same Windows server, but you can deploy each to different servers for scalability reasons.

The ZIP packages are available in the Deltek Software Manager (DSM).

Cost Volume Pro WebAPI

DeltekProPricerCostVolumePro_WebAPI_[version]_win-x64.zip

Back-end Cost Volume Pro Web API that receives requests from the Cost Volume Pro web application, provides the WebSockets implementation for live collaboration updates, communicates with the database to persist the information. This component requires .NET 8.

Cost Volume Pro WebApp

DeltekProPricerCostVolumePro_WebApp_[version].zip

Front-end Cost Volume Pro web application. This component uses only static files (JS, HTML, CSS, etc.).

Cost Volume Pro Database Setup

DeltekProPricerCostVolumePro_DatabaseSetup_[version]_win-x64.zip

Console application that creates and upgrades Cost Volume Pro databases. This component uses .NET 8 single .exe deployment (.NET 8 contained in the .exe).

Create a Cost Volume Pro database

The first thing you must do is create your Cost Volume Pro database. Cost Volume Pro Database Setup is a command line tool that allows the database administrators to create and upgrade Cost Volume Pro databases.

1. Download and extract Cost Volume Pro Database Setup from the Deltek Software Manager (DSM).
2. Open a Command Prompt dialog and go to the folder where **CostVolumeProDatabaseSetup.exe** is extracted.
3. Run the tool with create command depending on the SQL authentication method.
    - To use SQL authentication, run the tool with the create command and follow the prompts: `CostVolumeProDatabaseSetup create`
    - To use Windows authentication, run the tool with the create command, add -w parameter, and follow the prompts: `CostVolumeProDatabaseSetup create -w`

See the Cost Volume Pro Database Setup reference section for further guidance.

Cost Volume Pro prerequisites

Cost Volume Pro is composed of two websites. You can install both Cost Volume Pro sites on a single Windows server, or on two different servers. Cost Volume Pro WebAPI and Cost Volume Pro WebApp must comply with the following requirements.

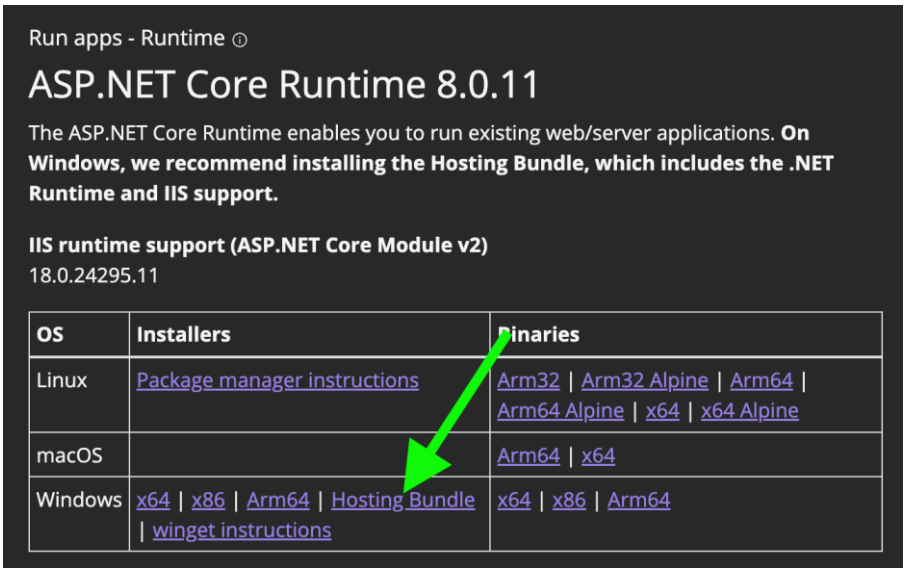
Enable Web Server (IIS)

1. Open **Add Roles and Features**.
2. Select **Web Server (IIS)**.
3. Select the following role services:
    - Common HTTP Features
        - **Default Document**
        - **Directory Browsing**
        - **HTTP Errors**
        - **Static Content**
    - Health and Diagnostics
        - **HTTP Logging**
    - Performance
        - **Static Content Compression**
    - Security
        - **Request Filtering**
    - Management Tools
        - **IIS Management Console**
    - Application Development
        - **WebSockets Protocol**

Install the .NET 8 Windows Server Hosting Bundle

Install the latest .NET 8 Hosting Bundle on the hosting system. The bundle installs the .NET 8 Runtime, .NET 8 Library, and the ASP.NET Core Module. The module allows ASP.NET Core apps to run behind IIS.

1. Go to the Download .NET 8.0 page.
2. Under **ASP.NET Core Runtime**, download the installer using the **Hosting Bundle** link.



3. Run the installer on the server.
4. Restart IIS or execute the following commands in a command shell:

```
net stop w3svc /y

net start w3svc
```

Install the URL rewrite 2.1 IIS extension

Download the extension at: https://www.iis.net/downloads/microsoft/url-rewrite

Install Cost Volume Pro WebAPI

Cost Volume Pro WebAPI communicates with the database to provide all data for the WebApp.

Prerequisites

Complete all prerequisites before continuing.

Configuration

- ProPricer 9 Server host name and port.
- Cost Volume Pro WebApp URL.
- Authorization Server Pro WebAPI URL.
- Cost Volume Pro Database connection information.

Installation

The zip packages for this procedure are available in the Deltek Software Manager (DSM).

If you experience any errors during installation, check the Troubleshoot information in this guide for a solution.

1. Download and extract the Cost Volume Pro WebAPI package.
2. Move the extracted content to the desired site location (for example, **C:\inetpub\CostVolumeProWebAPI**).
3. Open **Internet Information Service (IIS) Manager**.
4. Create a new application pool. To create a new pool:
    - Right-click **Application Pools**, then select **Add Application Pool**.
    - In the **Name** field, enter **Cost Volume Pro WebAPI App Pool**.
    - In the **.NET CLR version** field, select **No Managed Code**.
    - In the **Managed pipeline mode** field, select **Integrated**.
    - Select **Start application pool immediately**.
    - Click **OK** to create the application pool.
    - Right-click **Cost Volume Pro WebAPI App Pool**, then select **Advanced Settings**.
    - Set **Load User Profile** to **True**.
    - Click **OK** to save the change.
    - Right-click **Cost Volume Pro WebAPI App Pool**, then select **Recycle**.

5. Verify that the process model identity has the proper permissions. If the default identity of the application pool (**Process Model** > **Identity**) was changed from **ApplicationPoolIdentity** to something else, then the new identity needs permission to access the application's folder, database (when using Trusted Connection for the database connection string), and other required resources. For example, the pool needs Read and Write access to folders where the application reads and writes files.
6. Create the Cost Volume Pro WebAPI website.
    - Right-click the **Sites** folder, then select **Add Website**.
    - In the **Site name** field, enter **Cost Volume Pro WebAPI**.
    - In the **Application pool** field, select the pool created in previous steps.
    - In the **Physical path** field, enter or select the path where the files will be located. For example, **C:\inetpub\CostVolumeProWebAPI**.
    - In the **Type** field of the **Binding** section, select **https**.
    - In the **IP address** field, select **All Unassigned**.
    - In the **Port** field, enter a valid port number.

When installing all Cost Volume Pro websites on the same server and under the same domain, use a different port for each website. 44360 is the recommended port for WebAPI

    - In the **Host name** field, enter a domain.
    - Select **Require Server Name Indication**.
    - Select a valid SSL certificate for the domain.
    - Click **OK** to create the website.

Configuration

To configure Cost Volume Pro WebAPI, use the Manager tool, or edit **appsettings.json** in the target folder.

The Manager tool is recommended.

1. Open a command prompt window with Administrator permissions.
2. Go to the folder where Cost Volume Pro WebAPI is installed.
3. At the command prompt, enter: `CostVolumeProWebAPIManager.exe config`
4. Enter the information requested.
5. To apply your changes, restart the application pool and the website.

You can also provide command line parameters with all the information.

Example

The following is an example configuration of Cost Volume Pro WebAPI when all sites are running on the same server costvolumepro.mycompany.com under different ports and database connection using SQL authentication. Authorization Server Pro WebAPI is running in port 44350, Cost Volume Pro WebAPI is running in port 44360, and Cost Volume Pro WebApp is running in https default port 443:

```
CostVolumeProWebAPIManager.exe config --auth
https://authorizationserverpro.mycompany.com:44350 --appurl
https://costvolumepro.mycompany.com --dbserver sqlserver.mycompany.com --dbname
CostVolumePro --dbwinauth false --dbuser sa -dbpassword MyStrongPassword --server
propricer9.mycompany.com --port 8092 -dbtrustcert true
```

Do not include the port in the URL when using default https port 443.

Use `--dbtrustcert` true to add `TrustServerCertificate=True;` to the `DBConnection` connection string if your SQL Server certificate is invalid.

Windows authentication for database connection

If you want to use Windows authentication to connect to the Cost Volume Pro database, you must complete the following procedure.

1. Create the Cost Volume Pro database (using Windows or SQL Server authentication).
2. Create a Windows service account.
3. Configure Windows service account as WebAPI Application Pool's Identity.
4. Configure Cost Volume Pro WebAPI to use Windows authentication.

The Windows service account must be set as Identity for Cost Volume Pro Web API Application Pool at IIS. It must also be configured with the correct permissions before attempting to connect to the Cost Volume Pro database. To correctly configure the Windows service account:

1. Add the service account to the Cost Volume Pro database with the following permissions.
    - **Default schema**: dbo
    - **Database role membership**: db_owner
2. Add the service account to the Windows server where Cost Volume Pro is installed.
    - Set **Read & execute** permissions as minimum on the Cost Volume Pro Web API folder.
    - Set **Full Control** permissions on folder you want to generate log files.
    - Set **Read** permission to the certificate used to encrypt tokens.
    - Alternatively, you can add the service account to the local Administrators group. If the service account is not intended to be in the local Administrators group, make sure the service account permissions are properly configured for Cost Volume Pro. It must have minimum **Read & execute** permissions at Cost Volume WebAPI site folders.

If log files are stored in a different folder, Full Control permission must be granted for the service account to that other folder.

To configure Cost Volume Pro WebAPI to use Windows authentication for database connection, use the Manager tool, or edit **appsettings.json** in the **CostVolumeProWebAPI** folder.

The Manager tool is recommended.

1. Open a command prompt window with Administrator permissions.
2. Go to the folder where Cost Volume Pro WebAPI is installed.
3. At the command prompt, enter: `CostVolumeProWebAPIManager.exe config -wa true`
4. Enter the information requested.
5. To apply your changes, restart the application pool and the website.

You can also provide command line parameters with all the information.

Example

The following is an example configuration of Cost Volume Pro WebAPI for all sites running on the same server costvolumepro.mycompany.com under different ports and database connection using Windows authentication. Authorization Server is running in port 44350, and Authorization Server Pro WebApp is running in https default port 443:

```
CostVolumeProWebAPIManager.exe config --auth
https://authorizationserverpro.mycompany.com:44350 --appurl
https://costvolumepro.mycompany.com --dbserver sqlserver.mycompany.com --dbname
CostVolumePro --dbwinauth true --server propricer9.mycompany.com --port 8092
```

Do not include the port in the URL when using default https port 443.

Use `--dbtrustcert true` to add `TrustServerCertificate=True;` to the DBConnection connection string if your SQL Server certificate is invalid.

Azure Active Directory (Cost Volume Pro One Drive Document Link support)

Cost Volume Pro allows attaching links to your One Drive (Share Point) Documents through Azure Active Directory. Completing the steps to configure the app registration is required.

Register an application with the Microsoft Identity Platform

To enable Document Link attachments, register an app in the Azure Portal so the Microsoft identity platform can provide authentication services for Cost Volume Pro.

1. Sign into the Azure Portal.
2. If you have access to multiple tenants, use the **Directory +** subscription filter in the top menu to switch to the tenant in which you want to register the application.
3. Search for and select **Azure Active Directory**.
4. Under **Manage**, select **App registrations** > **New registration**.
5. Enter a display name for your application. For example, **Cost Volume Pro**.
6. Specify who can use the application, sometimes called its sign-in audience. **Accounts in this organizational directory only** is recommended.
7. In **Redirect URI**, select the **Single Page Application (SPA)** platform, and enter **<your-cost-volume-pro-url>** and **<your-cost-volume-pro-url>/auth-callback.html**. For example, **https://costvolumepro.mycompany.com/auth-callback.html**
8. Click **Register**. Wait for the application registration creation.
9. Under **Manage**, select **Authentication**.
10. Select **ID tokens and Access Tokens.**
11. Click **Save**.
12. Go to **API permissions** and grant the following permissions:
    - Microsoft Graph Delegated Permissions:
        - Files.Read
        - Files.ReadWrite.All
        - Files.SelectedOperations.Selected
        - Sites.Read.All
        - User.Read
        - offline_access
        - openId
        - profile
    - Microsoft Graph Application Permissions:
        - Files.SelectedOperations.Selected

- File.Read.All
- Sites.Read.All
- User.Read.All
- SharePointTenantSettings.Read.All

13. Under **Overview**, use **Application (client) ID** and **Directory (tenant) ID** in your Cost Volume Pro configuration settings.

Reference: *https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-register-app*

Configure app registration

To configure the app registration to use in Cost Volume Pro, use the Manager tool, or edit **appsettings.json** in the **CostVolumeProWebAPI** folder.

The Manager tool is recommended.

1. Open a command prompt window with Administrator permissions.
2. Go to the folder where Cost Volume Pro WebAPI is installed.
3. At the command prompt, enter: `CostVolumeProWebAPIManager.exe configazuread`
4. Enter the information requested.
5. To apply your changes, restart the application pool and the website.

You can also provide command line parameters with all the information.

Example

The following is an example configuration of Cost Volume Pro using the app registration with tenant id **1111a1a1-a11a-1111-a1a1-111a1a1a111a** and client id **111aaa11-aa11-1a11-1a11-1aa11a1111a1** on Azure Government cloud. The tenant and client IDs are only examples and should be replaced with valid IDs in your configuration:

```
CostVolumeProWebAPIManager.exe configazuread -- authendpoint
https://login.microsoftonline.us/ -- apibaseurl https://graph.microsoft.com/v1.0 -
- tenantid 1111a1a1-a11a-1111-a1a1-111a1a1a111a -- clientid 111aaa11-aa11-1a11-
1a11-1aa11a1111a1
```

Enable logging

Cost Volume Pro uses the Serilog library to provide diagnostic logging. Logging to file is optional but recommended.

1. Edit **appsettings.json** in the **CostVolumeProWebAPI** folder.
2. In the **<Serilog>** section, find the **WriteTo** array section and add one entry add for **File** above the **Console** entry.
3. Specify the path where you want the log file to be created. Ensure the application pool's identity can write to this folder.
4. To apply your changes, restart the application pool and the website.

Example

The new **File** section is highlighted yellow:

```
"Serilog": {
    "Using": [ "Serilog.Sinks.Console" ],
    "MinimumLevel": { "Default": "Information" },
    "WriteTo": [
      {
        "Name": "File",
        "Args": {
          "path": "\\inetpub\\logs\\logfiles\\costvolumepro-webapi.log",
          "rollOnFileSizeLimit": "true"
        }
      },
      {
        "Name": "Console",
        "Args": {
          "theme":
"Serilog.Sinks.SystemConsole.Themes.AnsiConsoleTheme::Literate,
Serilog.Sinks.Console"
        }
      }
    ]
```

Firewall

Your firewall must allow inbound connections to ProPricer 9 Server from the computer running Cost Volume Pro WebAPI.

References

- Host ASP.NET Core on Windows with IIS. https://learn.microsoft.com/en-us/aspnet/core/host-and-deploy/iis/?view=aspnetcore-8.0

Install Cost Volume Pro WebApp

Cost Volume Pro WebApp is the frontend User Interface for Cost Volume Pro. This website serves static files only and it's the URL users will use.

Prerequisites

Complete all prerequisites before continuing.

Configuration

- Cost Volume Pro Web API URL.
- Authorization Server Pro WebAPI URL.

Installation

The zip packages for this procedure are available in the Deltek Software Manager (DSM).

1. Download and extract the Cost Volume Pro WebApp package.
2. Move the content to the desired site location (for example, **C:\inetpub\CostVolumeProWebApp**).
3. Open **Internet Information Service (IIS) Manager.**
4. Create a new application pool. To create a new pool:
    - Right-click **Application Pools**, then select **Add Application Pool**.
    - In the **Name** field, enter **Cost Volume Pro WebApp App Pool**.
    - In the **.NET CLR version** field, select **No Managed Code**.
    - In the **Managed pipeline mode** field, select **Integrated**.
    - Select **Start application pool immediately**.
    - Click **OK** to create the application pool.

5. Create the Cost Volume Pro WebApp website.
    - Right-click the **Sites** folder, then select **Add Website**.
    - In the **Site name** field, enter **Cost Volume Pro WebApp**.
    - In the **Application pool** field, select the pool created in previous steps.
    - In the **Physical path** field, enter or select the path where the files will be located. For example, **C:\inetpub\CostVolumeProWebApp**.
    - In the **Type** field of the **Binding** section, select **https**.
    - In the **IP address** field, select **All Unassigned**.
    - In the **Port** field, enter a valid port number.

When installing all Cost Volume Pro websites on the same server and under the same domain, use a different port for each website. 443 is the recommended port for WebApp.

Ensure the ports are accessible to the Cost Volume Pro users.

    - In the **Host name** field, enter a domain.
    - Select **Require Server Name Indication**.
    - Select a valid SSL certificate for the domain.
    - Click **OK** to create the website.

Configuration

To configure Cost Volume Pro WebApp, use the Manager tool, or edit **config.js** in the target folder.

The Manager tool is recommended.

1. Open a command prompt window with Administrator permissions.
2. Go to the folder where Cost Volume Pro WebApp is installed.
3. At the command prompt, enter: `CostVolumeProWebAppManager.exe config`
4. Enter the information requested.
5. To apply your changes, restart the application pool and the website.

You can also provide command line parameters with all the information.

Example

The following is an example configuration of Cost Volume Pro WebApp when Cost Volume Pro sites are running on the same server costvolumepro.mycompany.com under different ports, and Authorization Server is running in port 44350 on hostname authorizationserverpro.mycompany.com:

```
CostVolumeProWebAppManager.exe config --auth
https://authorizationserverpro.mycompany.com:44350 --webapi
https://costvolumepro.mycompany.com:44360
```

Microsoft Clarity (Optional)

Microsoft Clarity is a user behavior analytics tool that helps you understand how users are interacting with your website through features such as session replays and heatmaps.

Enabling Microsoft Clarity is completely optional. Be aware that Microsoft collects all data and Cost Volume Pro and Deltek, Inc. have no access to the data from Clarity. Before enabling, ensure that this is not a security problem for your organization.

To enable Microsoft Clarity in Cost Volume Pro:

1. Sign into https://clarity.microsoft.com.
2. Create a new Clarity project for Cost Volume Pro.
3. Go to **Settings** > **Overview** and copy the Project ID.
4. At the command prompt, enter: `CostVolumeProWebAppManager.exe EnableClarity`
5. When prompted, enter the Project ID.
6. To apply your changes, restart the application pool and the website.

Add Cost Volume Pro to Authorization Server Pro

After creating a Cost Volume Pro database and installing and configuring the websites, it needs to be linked with Authorization Server Pro. Then users and licenses can be added.

Link Cost Volume Pro to Authorization Server Pro

To link Cost Volume Pro installation with your existing Authorization Server Pro, use Authorization Server Pro WebAPI Manager tool in the **AuthorizationServerProWebAPI** folder.

1. Open a command prompt window with Administrator permissions.
2. Go to the folder where Authorization Server Pro WebAPI is installed.
3. At the command prompt, enter: `AuthorizationServerProWebAPIManager.exe config-cvp-url`
4. Enter the information requested.
5. To apply your changes, restart the Authorization Server Pro WebAPI application pool and the website.

Add a Cost Volume Pro license

To add a Cost Volume Pro license, log in to Authorization Server Pro as an Administrator user.

1. In a web browser, go to the Authorization Server Pro WebApp URL.
2. On the Log In page, enter the Administrator user credentials.
3. Click **MENU** > **Licensing**.
4. Click **Add License**, then enter you Cost Volume Pro license.
5. Activate your license.
6. Click **MENU** > **Users**.
7. At a minimum, select an Administrator user, select **Manage Licenses**, then select **Cost Volume Pro** in the products. The Administrator user is required to set Cost Volume Pro roles for users.

Add Cost Volume Pro users

To add Cost Volume Pro users, log in to Authorization Server Pro as an Administrator user.

1. In a web browser, go to the Authorization Server Pro WebApp URL.
2. On the Log In page, enter the Administrator user credentials.
3. Click **MENU** > **Users**.
4. Click **Add User**, enter the user information, then select **Cost Volume Pro** in the products.

To assign Cost Volume Pro roles to users, log in to Cost Volume Pro as an Administrator user.

1. In a web browser, go to the Cost Volume Pro WebApp URL.
2. On the Log In page, enter the Administrator user credentials.
3. Click **MENU** > **Administration** > **Users**.
4. Users with a Cost Volume Pro license will appear with an empty role.
5. Edit the users to assign a proper Cost Volume Pro role.

Test your Cost Volume Pro installation

Test your installation by launching a web browser and go to your Cost Volume Pro WebApp URL, for example https://costvolumepro.mycompany.com.

The WebApp will redirect to the login screen as this is the first time accessing it. The login screen is provided by the Authorization Server Pro WebAPI. Enter Cost Volume Pro user credentials for a user with Cost Volume Pro license and role assigned.

If the credentials are correct, you should see the Deltek Cost Volume Pro main screen.

Make sure ProPricer 9 allows ProPricer logins. In the System Options, go to **Login Type** and select **Choose** or **ProPricer**.

1. Click **MENU** > **Cost Volumes**, then create a new cost volume.
2. On the **Connections** tab, select a **Data Server**, then enter ProPricer CE credentials.
3. In the **Proposals** field, Click the ellipsis button.
4. If the connection is successful, all ProPricer proposals you have access to will appear.

If you experience issues installing Cost Volume Pro, check the Troubleshoot section of this guide for a solution. For further assistance, contact Deltek Technical Support.

References

- Host ASP.NET Core on Windows with IIS. https://learn.microsoft.com/en-us/aspnet/core/host-and-deploy/iis/?view=aspnetcore-8.0

Upgrade Cost Volume Pro

To upgrade Cost Volume Pro, get the new version packages, upgrade the database, and upgrade both Cost Volume Pro websites.

Upgrade recommendations

- Plan for some downtime because Cost Volume Pro sites stop during the process.
- Back up a copy of your sites before upgrading them.
- Back up your database before upgrading it.
- Go to the Deltek Software Manager (DSM) to download the zip packages for the new version you want to upgrade to.

Make sure you Download and install the latest .NET 8 Hosting Bundle.

1. Download the Authorization Server Pro packages.
    - **DeltekProPricerCostVolumePro_WebAPI_[version]_win-x64.zip**
    - **DeltekProPricerCostVolumePro_WebApp_[version].zip**
    - **DeltekProPricerCostVolumePro_DatabaseSetup_[version]_win-x64.zip**
2. Using IIS Manager:
    - Stop the Cost Volume Pro WebAPI website.
    - Stop the Cost Volume Pro WebAPI application pool.
    - Stop the Cost Volume Pro WebApp website.
    - Stop the Cost Volume Pro WebApp application pool.
3. Upgrade your Cost Volume Pro database
    - Extract **DeltekProPricerCostVolumePro_DatabaseSetup_[version]_win-x64.zip**
    - Open a command prompt window.
    - Go to the folder where **CostVolumeProDatabaseSetup**.exe is extracted
    - At the command prompt, enter: `CostVolumeProDatabaseSetup.exe upgrade`
    - To connect using Windows authentication enter: `CostVolumeProDatabaseSetup.exe upgrade -w`
    - Enter the information requested.

4. Upgrade Cost Volume Pro WebAPI site
    - Using Windows Explorer, go to the folder for the Cost Volume Pro WebAPI site.
    - Back up the **appsettings.json** file.
    - Remove everything in the folder.
    - Extract **DeltekProPricerCostVolumePro_WebAPI_[version]_win-x64.zip**
    - Copy all extracted files to the WebAPI site's folder inside **C:\inetpub**. For example, **C:\inetpub\CostVolumeProWebAPI**.
    - Restore the **appsettings.json** file.
5. Verify configuration with the Manager tool.
    - Open a command prompt window with Administrator permissions.
    - Go to the folder where Cost Volume Pro Web API is installed.
    - At the command prompt, enter: `CostVolumeProWebAPIManager.exe config`
    - If you are using Windows authentication to connect to SQL Server, enter: `CostVolumeProWebAPIManager.exe config -wa true`
    - Press **Enter** key to accept the existing values.
6. Upgrade Cost Volume Pro WebApp site.
    - Using Windows Explorer, go to the folder for the Cost Volume Pro WebApp site.
    - Back up the **config.js** file.
    - Remove everything in the folder.
    - Extract **DeltekProPricer**CostVolume**Pro_WebApp_[version].zip**
    - Copy all extracted files to the WebApp site's folder inside **C:\inetpub**. For example, **C:\inetpub\CostVolumeProWebApp**.
    - Restore the **config.js** file.
7. Verify configuration with the Manager tool.
    - Open a command prompt window with Administrator permissions.
    - Go to the folder where Cost Volume Pro WebApp is installed.
    - At the command prompt, enter: `CostVolumeProWebAppManager.exe config`
    - Enter the information requested.
    - Press **Enter** key to accept the existing values.
8. Using IIS Manager:
    - Start the Cost Volume Pro WebAPI application pool.
    - Start the Cost Volume Pro WebAPI website.
    - Start the Cost Volume Pro WebApp application pool.
    - Start the Cost Volume Pro WebApp website.

Troubleshoot

Authorization Server Pro – Network error

You might receive the “Network Error.” message after entering the WebApp URL in your browser (for example, **https://costvolumepro.mycompany.com**).

Solution 1

Check your networking. Verify that your firewall is not blocking the Authorization Server Pro WebAPI port.

Solution 2

Restart the Authorization Server Pro WebAPI website.

Solution 3

1. In your browser, enter your authorization server webapi URL followed by **/.well-known/openid-configuration** (for example, **https://authorizationserverpro.mycompany.com/.well-known/openid-configuration**).
2. If you receive an error instead of the .json file, go to the Authorization Server Pro WebAPI folder, and find the file **appsettings.json**. Verify that it is a valid .json file containing the correct configuration.
3. Install or repair .NET Core hosting bundle and restart IIS service.

Solution 4

1. In this guide, follow the instructions for enabling logging in Authorization Server Pro .
2. Try logging into Cost Volume Pro again, and check the log for the error.

Solution 5

If there is no log file, check Windows Event Viewer.

Cost Volume Pro WebAPI – Common errors

HTTP Error 500.31 - Failed to load ASP.NET Core runtime

Install or repair .NET Core hosting bundle and restart IIS service.

500.119

The application pool identity cannot read **appsettings.json**. To fix this, assign permissions to the folder where the website files are located (for example, **C:\inetpub\CostVolumeProWebAPI**).

HTTP Error 503 – The service is unavailable

The service is unavailable when the application pool of the corresponding web application is stopped, disabled, or paused. It may also be unavailable when the given user identity of the application pool is invalid due to an expired password or is locked.

https://blogs.msdn.microsoft.com/webtopics/2010/02/17/a-not-so-common-root-cause-for-503-service-unavailable/

https://stackoverflow.com/questions/13322937/http-error-503-the-service-is-unavailable

Bad Request – Request header too long

“HTTP Error 400. The size of the request header is too long.”

While using Windows authentication, this error may appear instead of the Cost Volume Pro application. It is the result of the user being a member of many Active Directory user groups.

To fix this:

1. Open **Windows Registry Editor** and go to:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Parameters
```

2. Increase the settings for the `MaxFieldLength` and the `MaxRequestBytes` registry entries on the server so that the user's request headers do not exceed these values. For example:

```
"MaxRequestBytes"=dword:01000000

"MaxFieldLength"=dword:0000fffe
```

https://docs.microsoft.com/en-us/troubleshoot/iis/http-bad-request-response-kerberos

https://www.grouppolicy.biz/2013/06/how-to-configure-iis-to-support-large-ad-token-with-group-policy

Cannot access path 'Executive Business Services, Inc\PROPRICER\9'

You will receive this error if the Cost Volume Pro WebAPI Application Pool **Load User Profile** is set to **False**.

To fix this:

1. Right-click **Cost Volume Pro WebAPI App Pool**, then select **Advanced Settings**.
2. Set **Load User Profile** to **True**.
3. Click **OK** to save the change.
4. Right-click **Cost Volume Pro WebAPI App Pool**, then select **Recycle**.

Cost Volume Pro Database Setup reference

Cost Volume Pro Database Setup is a command line tool that allows the database administrators to create and upgrade Authorization Pro databases.

Download and extract Cost Volume Pro Database Setup from the Deltek Software Manager (DSM).

Options

`-v|--version` Show version information.

`-?|-h|--help` Show help information.

Commands

`create` Creates a new database for Cost Volume Pro.

`upgrade` Upgrades a database for Cost Volume Pro to the current version.

create command

`create` Creates a new database for Cost Volume Pro.

Usage

```
CostVolumeProDatabaseSetup create [options]
```

Options

`-?|-h|--help` Show help information.

`-f|--scripttofile <fileName>` Output the script to a file.

`-s|--server <servername>` Name of the database server.

`-w|--windowsauth` Use Windows authentication.

`-d|--dbname <databasename>` Name of the database. Default value is `CVProDb`.

`-u|--dbauser <dbalogin>` SQL Server database user login.

`-p|--dbapass <dbapassword>` SQL Server database user password.

`-e|--useexistingdb` Use an existing database (for example, when using Azure SQL Database).

Examples

Create a Cost Volume Pro database on an SQL Server on premises using Windows authentication:

```
CostVolumeProDatabaseSetup create -s sqlserver.mycompany.com -d CVProDb -w
```

Create a Cost Volume Pro database on an SQL Server on a VM using Windows authentication:

```
CostVolumeProDatabaseSetup create -s sqlserver.eastus.cloudapp.azure.com -d
CVProDb -w
```

Create a Cost Volume Pro database on an Azure SQL Database using SQL authentication:

```
CostVolumeProDatabaseSetup create -s mycompany.database.windows.net -u
myazureuser -p MyAzurePassword -d CVProDb -e
```

upgrade command

`upgrade` Upgrade an existing Cost Volume Pro database.

Usage

```
CostVolumeProDatabaseSetup upgrade [options]
```

Options

`-?|-h|--help` Show help information.

`-s|--server <servername>` Name of the database server.

`-w|--windowsauth` Use Windows authentication.

`-u|--dbauser <dbalogin>` Database user login.

`-p|--dbapass <dbapassword>` Database user password.

`-d|--dbname <databasename>` Name of the database. Default value is `CVProDb`.

`-f|--scripttofile <fileName>` Output the script to a file.

Examples

Upgrade a database named CVProDb on an SQL server on premises using Windows authentication:

```
CostVolumeProDatabaseSetup upgrade -s sqlserver.mycompany.com -d CVProDb -w
```

Upgrade a database named CVProDb on an Azure SQL database using SQL authentication:

```
CostVolumeProDatabaseSetup upgrade -s mycompany.database.windows.net -u
myazureuser -p MyAzurePassword -d CVProDb
```