Deltek

Deltek Costpoint® To Cobra Integration 2.0

Technical Guide

September 27, 2019

Contents

Overview

The Costpoint to Cobra Integration automates the loading of actual costs from Costpoint to Cobra. Deltek currently only supports the integration using Cobra web services. Prior to the implementation of this method, the integration process used the legacy CostpointCobra.exe API.

Cobra Web Services

The integration supports two versions of web services to post valid transactions from Costpoint to Cobra. Use the following web services depending on your Costpoint and Cobra versions:

- **Standard Cobra Web Service (Cobra.WebService.Host.exe)** — This version of the web service can be leveraged by multiple Deltek products for data integration. The Standard Cobra Web Service added the support for the Costpoint to Cobra Integration in **Cobra 8.2 Cumulative Update #14 or higher**. If you have **Costpoint 7.1.1 with System JAR 054 or higher**, you must use the Standard Cobra Web Service.

- **Cobra Costpoint Web Service (Cobra.Costpoint.WebService.Host.exe)** — This is the initial version of the web service which only supports the Costpoint to Cobra Integration. Deltek provides this web service in **Cobra 5.1 (SP1) HotFix #11 or higher**; and **Cobra 8 or higher.** The Cobra Costpoint Web Service is no longer supported in the **Costpoint 7.1.1 System JAR 054 or higher**.

Costpoint 7.0.1 Users

If you have configured your system for integration using CostpointCobra.exe API (legacy API) prior to upgrading to Cobra 5.1 SP1 HotFix #11/Cobra 8 and you want to use the Cobra web services for integration, you do **not** need to modify/remove your existing settings. You only need to install the required hotfixes for using Cobra web services and complete the procedures for enabling the use of Cobra web services.

> Existing integration users can refer to the following sections for more information on enabling Cobra Web Service for integration:
>
> - [Hot Fix Requirements for Integration Using Cobra Web Service](#)
> - [Deploy the Cobra Costpoint Web Service (Cobra.Costpoint.WebService.Host.exe)](#)
> - [Enter the Connection Settings on the Costpoint Configuration Utility](#)

CostpointCobra.exe API (Legacy API)

Using the CostpointCobra.exe API is the legacy approach of running the Costpoint to Cobra integration. Prior to the release of integration through the Cobra web services, this process was only possible through the use of CostpointCobra.exe API.

> **Warning:** Integration through CostpointCobra.exe is **no longer** supported in Costpoint 7.1.1. In addition, this method of integration was de-supported in Costpoint 7.0.1 as of **December 1, 2014**.

> **Tip:** Only use CostpointCobra.exe API if you integrate with Cobra 5.1 SP1 HotFix 10 or earlier. Deltek recommends that you use Cobra Web Service if you integrate with Cobra 5.1 SP1 HotFix 11 or higher; and Cobra 8 or higher.

Adding Custom Notes to This Guide

If you would like to add custom notes to this guide that are specific to your company, Adobe® Reader® X provides this ability. If you do not already use Adobe Reader X, you can download it here free from Adobe.

To add a custom note using Adobe Reader X, complete the following steps:

1. On the Reader toolbar, click **Comment** at the far right.

2. In the **Annotations** pane that displays, click 💬 **Sticky Note**. The cursor changes to match the button.

3. Position the cursor at the location in the guide where you want the note to appear, and click. A note icon is inserted at the location and a text box pops up.

4. Enter your information in the text box.

5. Continue adding notes as needed.

6. Save the document.

> **Note:** Deltek recommends that you save the document to a slightly different filename so as to keep the original from being overwritten.

When reading the document, cursor over a note icon to see the information. Double-click a note icon to edit the information.

Downloading Deltek Products using Deltek Software Manager

You can use Deltek Software Manager (DSM) to download complete Deltek products, hot fixes, cumulative updates, and sub-releases. You can access DSM through the Deltek Support Center or use Deltek Software Manager Lite to download Deltek products.

Accessing DSM from within the Deltek Support Center

To access DSM from within the Deltek Support Center:

1. In your Web browser, go to https://deltek.custhelp.com.
2. Enter your Deltek Support Center **Username** and **Password**, and click **Login.**
3. When the Deltek Support Center page displays, click **Product Downloads**.
4. On the Deltek Software Manager screen, click **Launch Deltek Software Manager**.
5. Click **Settings** at the top right of the dialog box to use the Settings dialog box to specify the folder where you want to download Deltek products, and click **OK**.

   > **Note:** When you log on for the first time, DSM asks you to select a default folder where Deltek products are to be downloaded.
   >
   > You can change this folder anytime in the Settings dialog box.

6. In the left pane, expand the Deltek product that you want to download, if it is not already expanded.
7. Select the product type that you want to download.

   Options include:

   - **Complete**
   - **Cumulative Updates**
   - **HotFixes**
   - **Sub-Release**

8. In the table, select the check box that corresponds to the Deltek product that you want to download.

   The right pane displays a message stating that the product has been added to the download queue.

   > **Note:** To view the items in the download queue, click **View Download Queue** at the bottom of the left pane.

9. Click **Download** at the bottom of the left pane to download the product to the folder that you selected.

Accessing DSM Lite

To access Deltek Software Manager Lite:

1. In your Web browser, go to https://dsm.deltek.com/DeltekSoftwareManagerLite.
2. Enter your Deltek Support Center **Username** and **Password**, and click **Logon.**
3. When the Deltek Software Manager Lite page displays, select a product from the drop-down list.
4. Click the product type that you want to download.

> **Note:** The download behavior and download folder may differ depending on the browser and browser settings that you are using.

DSM Documentation and Troubleshooting

- To view the online help for Deltek Software Manager, click here.
- To view a tutorial on how to use Deltek Software Manager, click here.
- To view more information on troubleshooting Deltek Software Manager, click here.

> **Note:** When you click a link, you will be asked to log into DSM if you aren't already logged in.

Minimum System Requirements

Before performing your installation, make sure the following are installed, configured, and running in your system:

Supported Costpoint Versions

Costpoint Version	Compatible Cobra Version
Deltek Costpoint 7.1.1 **with System JAR 054 or higher**	Deltek Cobra 8.2 with Cumulative Update #14 or higher **Warning:** If you upgrade your Costpoint installation to **System JAR 054 (June 2019 release)**, you must upgrade to **Cobra version 8.2 with Cumulative Update #14 or higher** in order for the integration to function.
Deltek Costpoint 7.1.1 **with System JAR 053 or lower**	Deltek Cobra 8 or higher Deltek Cobra 5.1 (SP1 HotFix #11 or higher)
Deltek Costpoint 7.0.1	Deltek Cobra 8 or higher Deltek Cobra 5.1 (SP1 HotFix #11 or higher)
Deltek Costpoint 7.0	Deltek Cobra 8 or higher Deltek Cobra 5.1 (SP1 HotFix #11 or higher)

Supported Cobra Versions

Cobra Version	Compatible Costpoint Version
Deltek Cobra 8 or higher	Deltek Costpoint 7.1.1 Deltek Costpoint 7.0.1 Deltek Costpoint 7.0
Deltek Cobra 5.1 (SP1 HotFix #11 or higher)	Deltek Costpoint 7.1.1 Deltek Costpoint 7.0.1 Deltek Costpoint 7.0

HotFix Requirements for Integration Using Cobra Web Service

To use the Cobra Web Service for integration between Costpoint and Cobra, you must apply the hotfixes and files listed in this section in your Costpoint and Cobra systems. Refer to the following table for the required hotfixes for your Costpoint and Cobra versions:

> **Note:** Each of the hotfix package in this list includes installation/deployment instructions for various deployment types. You must use the instructions that apply to your deployment scenario.

Product Name	HotFix Information
Costpoint 7.1.1	No required hotfixes. However, Deltek recommends to keep your Costpoint 7.1.1 hotfix installations up to date.
Costpoint 7.0.1	Install the following hotfixes for Costpoint 7.0.1: • **AOMCBEXT (Manage Cobra Extraction Parameters)** — cp701_aomcbext_001.zip (or higher) • **AOPCBLAB (Compute Cobra Burden Costs)** — cp701_aopcblab_004.zip (or higher) • **Deltek Costpoint 7.0.1 Framework Update** — DeltekCostpoint701FrameworkUpdate_009.exe (or higher) • **SYSTEM.ZIP - Costpoint Version 7.0.1** — cp701_sys_023.zip (or higher)
Cobra 8	No required hotfixes. However, Deltek recommends to keep your Cobra 8 hotfix installations up to date.
Cobra 5.1 (GA)	**Cobra 5.1 (SP1) HotFix #11 (or higher) – Build 5.01.1752** — DeltekCobra51SP1HotFix11.zip (or higher)

Set Up the Integration to Use Cobra Web Services

> **Note:** This section is applicable only if you are using the following Costpoint and Cobra versions:
>
> - **Costpoint 7.1.1**, or **7.0.1**
>
> - **Cobra 8 or later**; or **Cobra 5.1 SP1 HotFix 11 or later**

This section provides a step-by-step overview of the entire process to successfully set up and run the Costpoint to Cobra integration process.

Ensure all the required sofware and hotfixes are installed and operational.
See the "Minimum System Requirements" section.

Enable JDBC Distributed Transactions.
See the "Enable JDBC Distributed Transactions through JTA and XA Transactions" section.

Restore and Test the Integration Configuration File
See the "Restore and Test the Integration Configuration File in Cobra" section.

Deploy the (a) "Standard Cobra Web Service" OR the (b) "Cobra Costpoint Web Service."	
(a) See the "Deploy Standard Cobra Web Service (Cobra.WebService.Host.exe)" section.	(b) See the "Deploy the Costpoint Cobra Web Service (Cobra.Costpoint.WebService.Host.exe)" section.

Set up the Integration Connection Settings
See the "Enter the Connection Settings on the Costpoint Configuration Utility" section.

Enable JDBC Distributed Transactions through JTA and XA Transactions

This section provides instructions for enabling your Cobra Microsoft SQL Server (MSS) database to support Java Database Connectivity (JDBC) distributed transactions through the Java Transaction Application Programming Interface (JTA). Your Cobra server must support JDBC distributed transactions to communicate with your Costpoint system. This procedure also enables your Cobra database to support XA transactions. Perform these procedures on the server that hosts your Cobra MSS database.

You must perform these steps if:

- Your Cobra database uses a Microsoft SQL Server; OR

- Your Costpoint MSS database and Cobra MSS database use different servers.

> **Note:** You can **skip** this procedure if your Cobra database uses an **Oracle** server or if both your Costpoint MSS database and Cobra MSS database use the same server.

To enable JDBC distributed transactions and XA transactions, complete the following steps:

1. Make a backup of your MSS **master** database.

2. Download the Costpoint 7.1.1/7.0.1 Database Tier installation file to your Cobra MSS database server.

   > **Note:** The file name of the Costpoint Database Tier installation may vary depending on the latest version available for download on DSM for your Costpoint version.
   >
   > **Costpoint 7.1.1 File Name Examples:**
   >
   > - DeltekCostpoint711DatabaseTier.exe
   > - DeltekCostpoint711DatabaseTier_Build05.exe
   >
   > **Costpoint 7.0.1 File Name Examples:**
   >
   > - DeltekCostpoint701DatabaseTier.exe
   > - DeltekCostpoint701DatabaseTier_Build04.exe
   >
   > For more information on downloading the Deltek Costpoint 7.1.1/7.0.1 Database Tier installation file, please refer to the Downloading Deltek Products using Deltek Software Manager section. You can find the installation file under the available downloads for Costpoint 7.1.1/7.0.1.

3. Click **Start** » **Run** and enter the following command:

   ```
   <File Directory>\<Costpoint Database Tier File Name> /enableXA
   ```

   Where:

   `<File Directory>` is the folder that contains the installation file. For example, C:\.

   `<Costpoint Database Tier File Name>` is the name of the Costpoint Database tire installation file. For example, **DeltekCostpoint711DatabaseTier.exe**

4. On the Microsoft SQL Server for Deltek Costpoint 7.1.1/7.0.1 Database Information screen, perform the following:

   - **Port** — Enter the port that your Cobra database server software uses to listen for requests. The default port for Microsoft SQL Server is **1433**.

- **Instance Name** — Enter the name of your Cobra database instance.
- **SA User** — Enter the name of your Microsoft SQL Server SA user. The default is **sa**.
- **SA Password** — Enter the password for your Microsoft SQL Server SA user.

5. Click **Test Connection**. If you enter the proper database connection information, the "Connection Successful. Click Next." message displays. If this message does not display, correct the information entered and click **Test Connection** again. After the messages appears, click **Next >** to begin the installation.

> **Note:** This install could take a long time to complete. Please do not interrupt it. It will display the following: "Restarting the Distributed Transaction Coordinator (MSDTC) Service..."

6. When the installation has completed, the "Successfully configured XA transactions." message displays. Click **OK**.

Restore and Test the Integration Configuration File in Cobra

The integration between Costpoint and Cobra relies on an integration configuration file which comes with the Cobra installation. This configuration file must be restored into Cobra before using the integration.

Cobra uses the configuration as a template during the loading of actual costs. Certain values, such as the project name and actual cost transaction file, are supplied by Costpoint at runtime. Other settings in the configuration can be used to control how you want the actual costs to be loaded.

> **Attention:** For more information, refer to the *Importing Actual Costs into Cobra* topic in the Cobra online help.

Restore the Costpoint Integration Configuration File

You must restore the CostpointConfig.icd file using the Restore Integration Configuration dialog box in Cobra.

To configure the Costpoint to Cobra Integration tool, complete the following steps:

1. Log on to the Cobra application.

2. Open the Restore Integration Configuration dialog box.
   - For **Cobra 8**, click the **Cobra** button » **Manage** » **Restore**.
   - For **Cobra 5**, on the Cobra menu bar, click **File** » **Manage Files** » **Restore File**.

3. Select the CostpointConfig.icd file from the <Cobra Installation Directory> Samples\Backups\ directory. If the CostpointConfig.icd file does not appear, change the file type to Integration Configuration Definition Backups (*.icd).

> **Note:** The Costpoint to Cobra process uses this configuration as a template. The main options in the configuration are not used by the process (Project name, fields, and so on). Performing the following steps confirms that the configuration exists, and the options that are not overwritten are set correctly.

4. On the Restore Integration Configuration dialog box, make sure that the CostpointConfig.icd file is selected and then click **Restore**.

Test the Costpoint Integration Configuration

After restoring the integration configuration file, you should test the configuration by loading a valid Actual Cost file to a valid Project.

To test the configuration, complete the following steps:

1. On Cobra, open the Integration Wizard for loading actual costs.

   ▪ For **Cobra 8,** click **Integration** tab » **Actual Costs**.
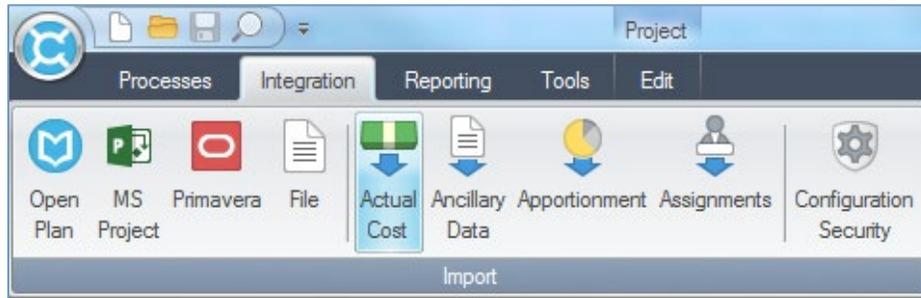
   ▪ For **Cobra 5.1**, click **File** » **Integration** to display the Integration Wizard. Select the **Actual costs** option, and click **Next**.
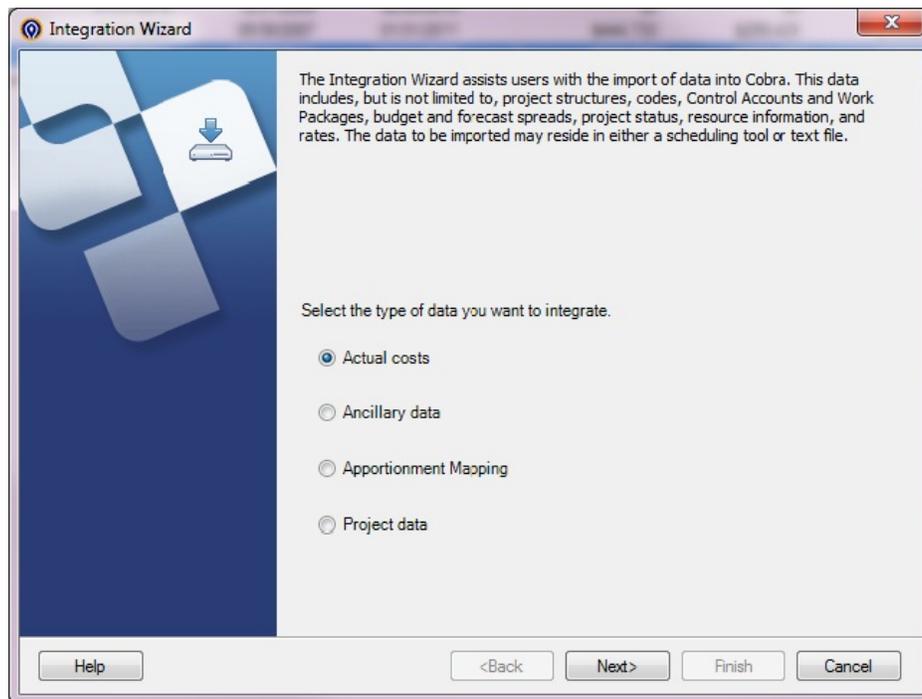
2. On the Integration Configuration page, select the **Open an existing configuration** option, and choose the restored CostpointConfig configuration file, and click **Next**.

- **Cobra 8: Integration Wizard, Integration Configuration Page**
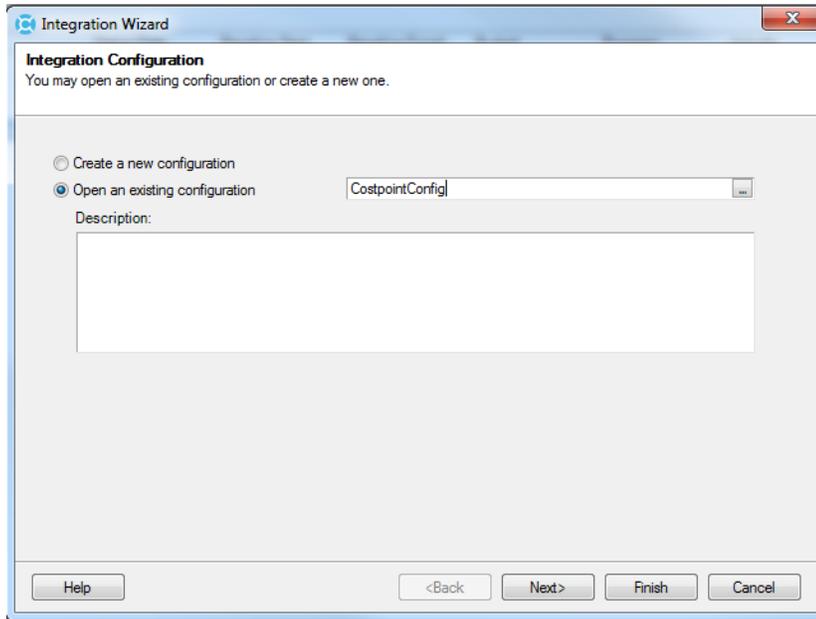
- **Cobra 5.1: Integration Wizard, Integration Configuration Page**
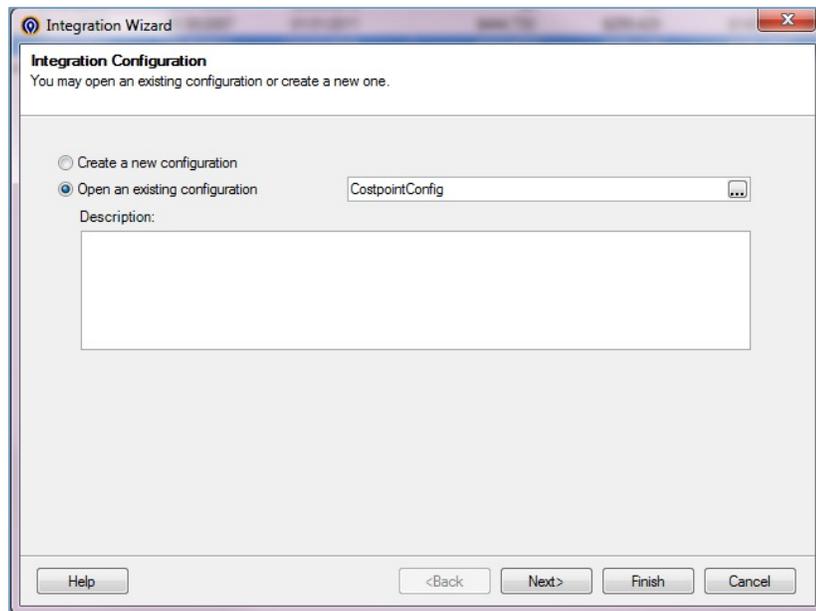
3. On the File Selection page, select a **Project** and an **Actual cost file**, and click **Next**.

    ▪ **Cobra 8: Integration Wizard, File Selection Page**
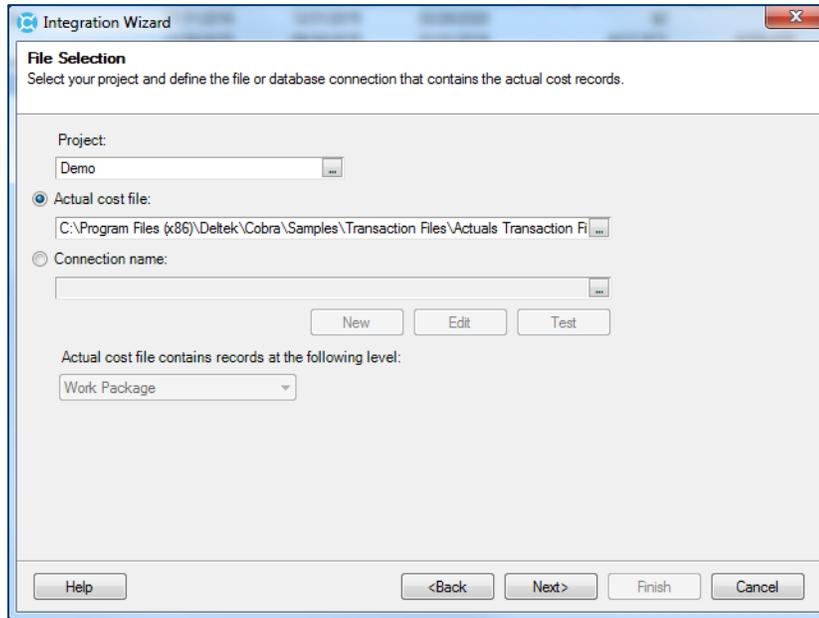
    ▪ **Cobra 5.1: Integration Wizard, File Selection Page**
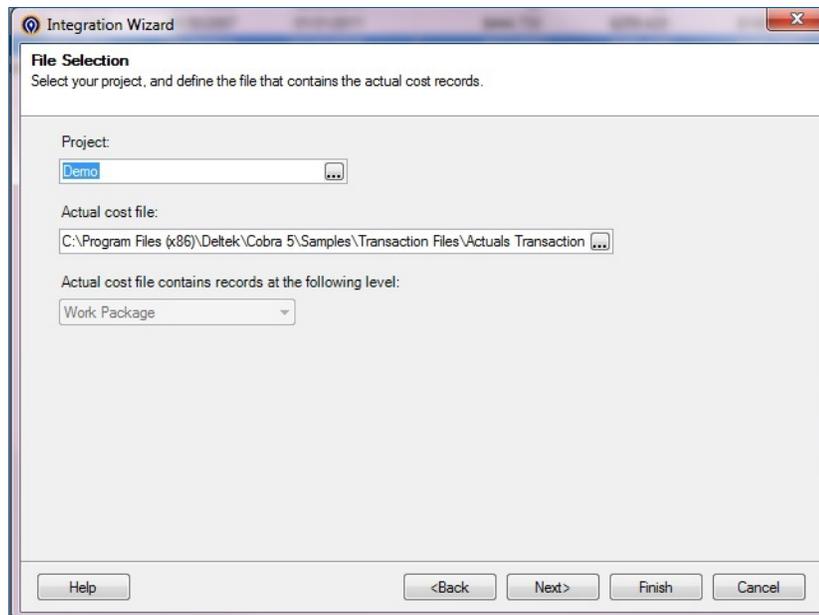
> **Note:** Make sure to select a **valid** project and actual cost file because these options are overwritten during the Costpoint to Cobra integration. You can locate the actual cost file in the following location: <Cobra Installation Directory> Samples\Transaction Files.

4. On the Field Mapper page, select the **File contains header row** option, and click **Next**.

▪ **Cobra 8: Integration Wizard, Field Mapper Page**
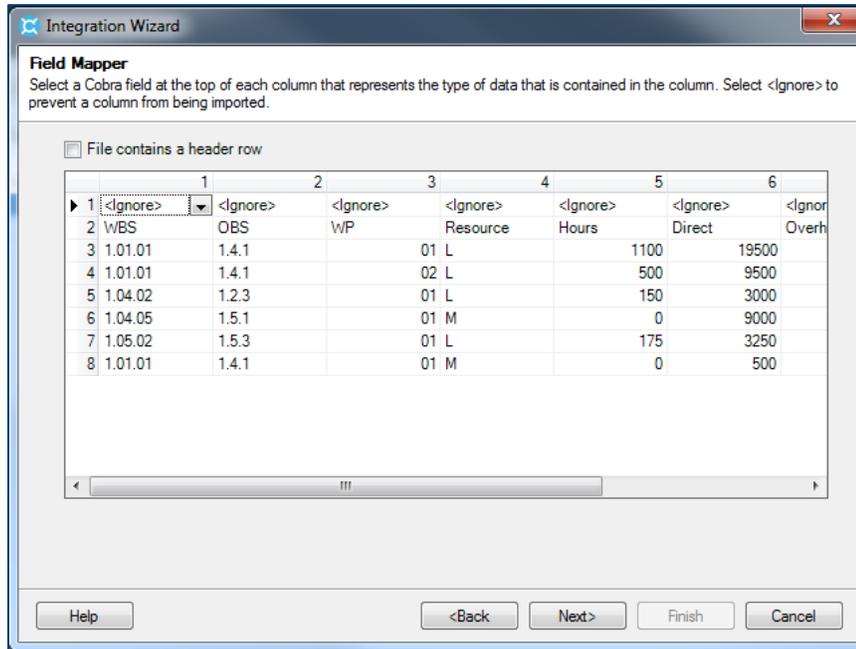
▪ **Cobra 5.1: Integration Wizard, Field Mapper Page**
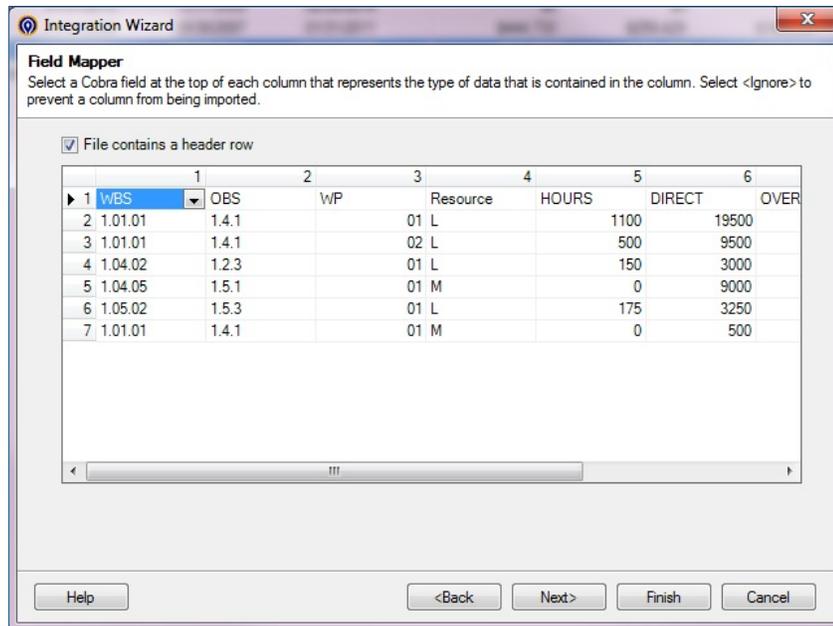
Note: If you encounter errors, set the invalid columns to **<Ignore>.** The field definitions selected are also overwritten. These definitions are not used when the tool runs.

5. On the Class and Results page, select options based on the actual costs being loaded and then click **Next**.

- **Cobra 8: Integration Wizard, Class and Results Page**
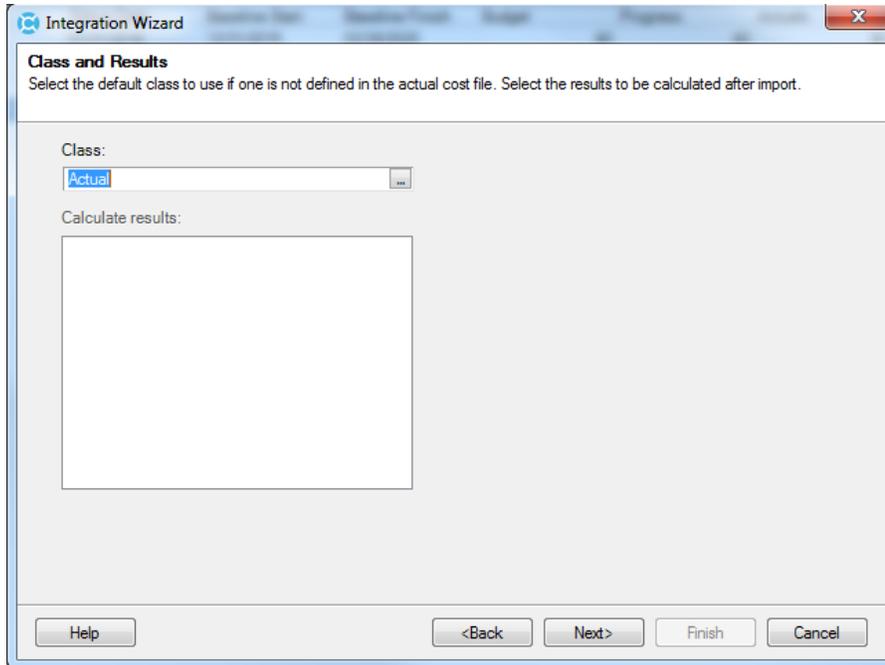
- **Cobra 5.1: Integration Wizard, Class and Results Page**
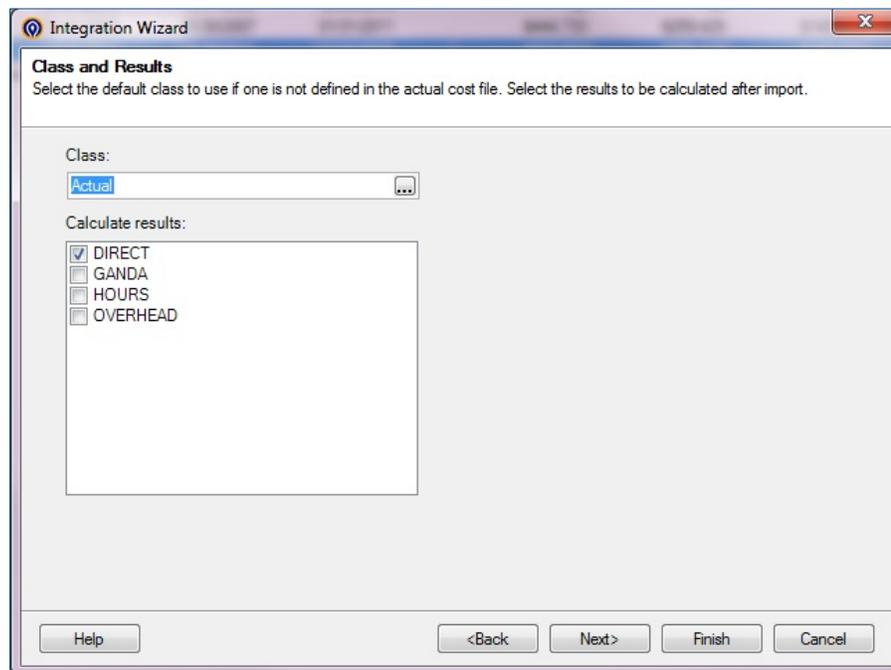
6. On the Included Costs page, select options based on the actual costs being loaded and then click **Next**.

- **Cobra 8: Integration Wizard, Included Costs Page**
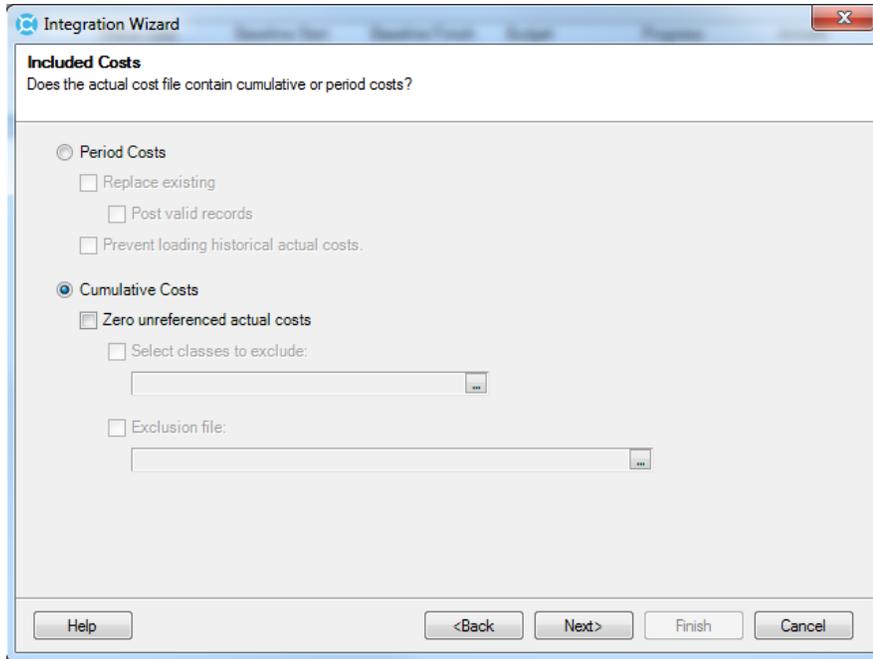
- **Cobra 5.1: Integration Wizard, Included Costs Page**
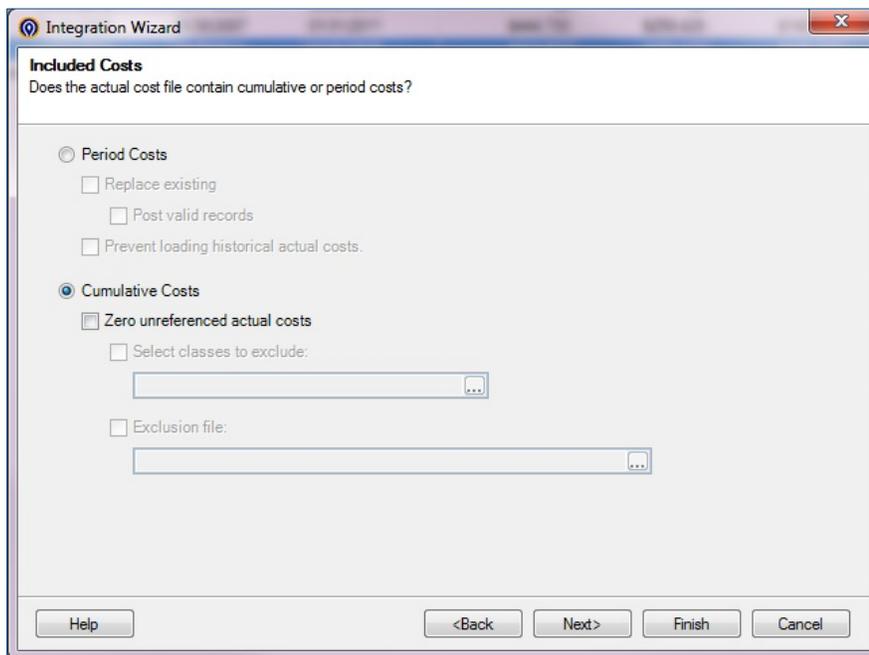
7. On the Options page, select options based on the actual costs being loaded and then click **Next**.

- **For Cobra 8: Integration Wizard, Options Page**
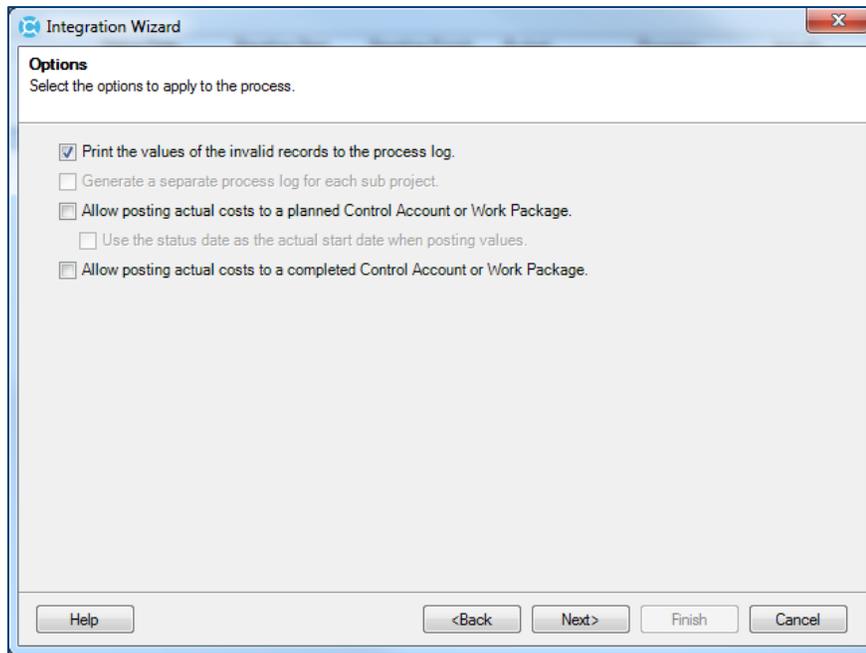
- **For Cobra 5.1: Integration Wizard, Options Page**
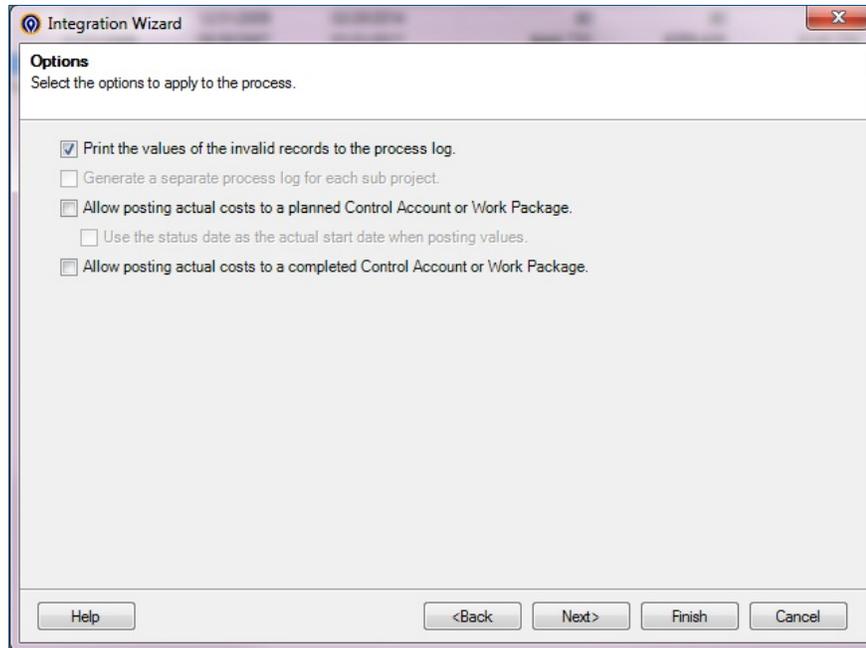
8. On the Save and Load page, select the **Save your configuration?** check box, leave the configuration name as it appears and then click **Next**.

   ▪ **For Cobra 8: Integration Wizard, Save and Load Page**
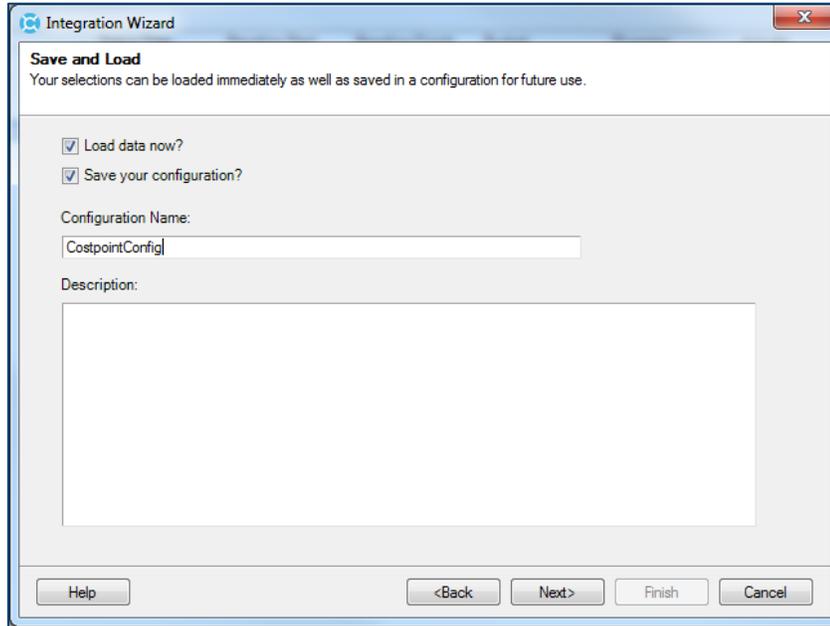
   ▪ **For Cobra 5.1: Integration Wizard, Save and Load Page**
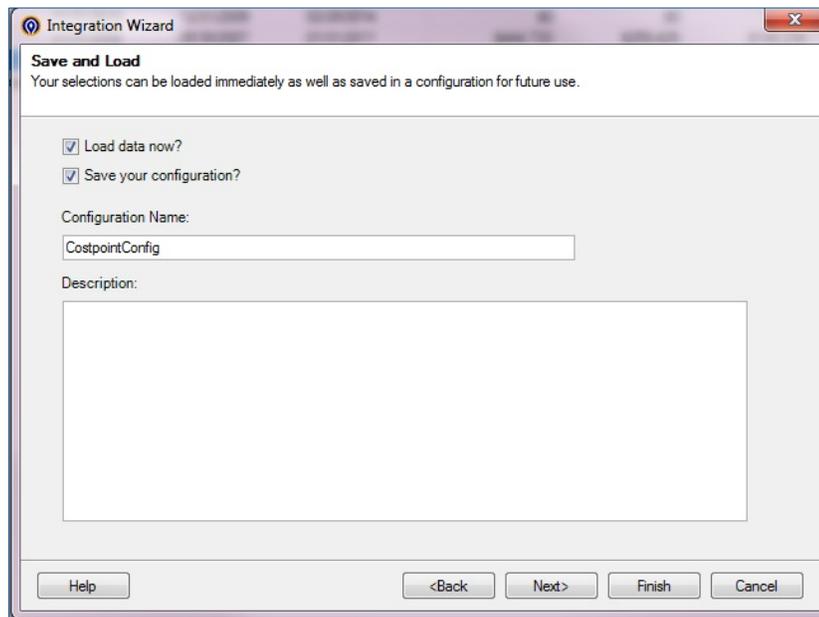
> **Note:** When prompted to overwrite the existing configuration, click **Yes**.

9. On the Access Control page, enable users or groups to access the integration configuration that you are creating and then click **Next**.

10. Click **Finish**. Cobra will run the integration process and will load actual costs from the specified field into the specified Cobra project.

Deploy the Standard Cobra Web Service (Cobra.WebService. Host.exe)

> **Warning:** Perform this procedure if you have **Costpoint 7.1.1 with System JAR 054 or higher**.
>
> You must upgrade to at least **Cobra 8.2 Cumulative Update #14 or higher** to use the Standard Cobra Web Service for the data integration from Costpoint to Cobra.

The Standard Cobra Web Service (Cobra.WebService.Host.exe) is a windows service-hosted web service that you must install on a machine that has a Cobra installation. If you use an n-tier deployment, Deltek recommends that you deploy the web service on the n-tier application server.

Obtain the Cobra Web Server Authentication Certificate Information

The Costpoint integration with the Standard Cobra Web Service requires the use of HTTPS. You must:

- Obtain the Server Authentication Certificate Thumbprint.

- Obtain the Server Authentication Certificate Subject.

- Export the associated root and intermediate certificates for later import into the Costpoint Java Trust Keystore.

To obtain the Subject and Thumbprint details, complete the following steps:

1. Open the Certificates MMC Snap-In and go to the following folder location: **Certificates (Local Computer)** » **Personal** » **Certificates**.

2. Open the Windows Server Certificate intended for Server Authentication.

   > **Attention:** For more information, refer to: https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-view-certificates-with-the-mmc-snap-in.
   >
   > If your server does not have a certificate, you need to obtain one before continuing this procedure. For more information, refer to: https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-obtain-a-certificate-wcf.

3. On the Details tab of the certificate, copy the following:

   - **Thumbprint** — Remove all spaces and save this information for the binding steps.

   - **Subject** — This is usually the fully qualified name of the server. Save this information for the Costpoint configuration.

   > **Attention:** For more information, refer to: https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-retrieve-the-thumbprint-of-a-certificate.

4. Click the Certification Path tab, select the root certificate at the top of the path, and click **View Certificate**.

5. On the root certificate window, click the Details tab and then click **Copy to File**. Save a file using the **DER encoded binary X.509 (.CER)** format. This file will be used for Costpoint connection configuration.

6. Perform similar steps (step 4-5) for any intermediate certificates that may be in the path between the root and the server.

Bind the Windows Server Certificate to the Cobra Web Service Port

You must bind the Server Authentication Certificate to the Cobra Web Service HTTPS port.

> **Attention:** For more information, refer to: https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-configure-a-port-with-an-ssl-certificate.

To bind the certificate to the port, complete the following steps:

1. Click **Start** » **All Programs** » **Accessories**, right-click **Command Prompt**, and click **Run as administrator**. The command prompt opens with administrative rights.

2. Enter the following command:

```
netsh http add sslcert ipport=0.0.0.0:<port> certhash=<server certificate
thumbprint> appid={857f24c8-58fc-4102-98d7-d11ecaa9be39}
```

   Where:

   ▪ <port> is the HTTPS port on which you choose to run the Cobra Web Service. For example, 8122, which is the default Cobra Web Service HTTPS port as shown in the next section.

   ▪ <server certificate thumbprint> is the Server Authentication Certificate Thumbprint saved earlier. For example, 69dbb276109a62d90c0d1d436ddc2278ea56d86e.

Edit the Standard Web Service Configuration File

You must change the Standard Cobra Web Service URL value from **localhost** to the name of your Cobra application server name in the **Cobra.WebService.Host.exe.config** file.

To edit the Standard Cobra Web Service configuration file, complete the following steps:

1. On your Cobra application server, go to the Cobra installation directory. For example, **C:\Program Files\Deltek\Cobra 5**, or C:**\Program Files\Deltek\Cobra**.

2. Locate the Cobra.WebService.Host.exe.config file and then open the file in Notepad or another text editor.

3. In the Cobra.WebService.Host.exe.config file, locate the `<baseAddresses>` tags, change `localhost` to the name of your Cobra application server, and set the correct TCP port number.

   For example:

   Change the following text:

```
<baseAddresses>
    <add baseAddress="http://localhost:8116/CobraWebService" />
    <add baseAddress="https://localhost:8122/CobraWebService" />
</baseAddresses>
```

To:

```
<baseAddresses>
    <add baseAddress="http://<certificate subject>:8116/CobraWebService" />
    <add baseAddress="https://<certificate subject>:8122/CobraWebService" />
</baseAddresses>
```

Where:

- `<certificate subject>` is the Server Authentication Certificate Subject saved earlier. For example, cobrawebserver.company.com.

- Port `8116` is the default HTTP port for Cobra web service and you can change this setting to avoid conflicts.

- Port `8122` is the default HTTPS port for Cobra web service and you can change this setting to avoid conflicts.

> **Warning:** If you use PM Compass-specific services on the same server, you must use a different port for the Cobra web service for Costpoint integration. Running PM Compass-specific services and the Costpoint-specific services on the same port will cause conflicts.

4. Save your changes and close the file.

Install the Standard Cobra Web Service

After editing the configuration file, you must install the Standard Cobra Web Service (Cobra.WebService.Host.exe) as an administrator.

To install the Standard Cobra Web Service, complete the following steps:

3. Click **Start** » **All Programs** » **Accessories**, right-click **Command Prompt**, and click **Run as administrator**. The command prompt opens with administrative rights.

4. Enter the following command:

    ```
    <Cobra Install Directory>\Cobra.WebService.Host.exe –install
    ```

    Where:

    `<Cobra Install Directory>` is the location of Cobra on your machine. For example, **C:\Program Files\Deltek\Cobra 5** or **C:\Program Files\Deltek Cobra**.

5. Go to **Start** » **Control Panel** » **Administrative Tools**, and open **Services**.

6. From the list of services, right-click **Cobra Web Service** and then click **Restart**.

7. Open a web browser and enter the Standard Cobra Web Service URL (`<baseAddress>` value from the Cobra.WebService.Host.exe.config file) in the address bar. The following page should display:

> **Warning:** If you get a "Page not found" error, and you are running PM Compass-specific services and the Costpoint-specific services on the same server, you may be encountering conflicting ports. To correct this issue, complete the following steps:
>
> 1. Ensure that the Cobra web service for Costpoint integration is using a different port. For more information on changing the port number in the Cobra.WebService.Host.exe.config file, see the Edit the Standard Cobra Web Service Configuration File section.
>
> 2. Restart the Costpoint Web Service.

Deploy the Cobra Costpoint Web Service (Cobra.Costpoint. WebService.Host.exe)

> **Warning:** The Cobra Costpoint Web Service is **not** supported in **Costpoint 7.1.1 with System JAR 054 or higher**. If you have this Costpoint version, you must deploy the Standard Cobra Web Service instead. For more information refer to Deploy the Standard Cobra Web Service (Cobra.WebService. Host.exe).

The Cobra Costpoint Web Service (Cobra.Costpoint.WebService.Host.exe) is the initial version of Cobra web service which only supports integration with Costpoint. This is a windows service-hosted web service which you must install on a machine that has a Cobra installation. If you use an n-tier deployment, Deltek recommends that you deploy the web service on the n-tier application server.

Edit the Cobra Costpoint Web Service Configuration File

You must change the Cobra Costpoint Web Service URL value from **localhost** to the name of your Cobra application server name in the **Cobra.Costpoint.WebService.Host.exe.config** file.

To edit the Cobra Costpoint Web Service configuration file, complete the following steps:

5. On your Cobra application server, go to the Cobra installation directory. For example, **C:\Program Files\Deltek\Cobra 5**, or C:**\Program Files\Deltek\Cobra**.

6. Locate the Cobra.Costpoint.WebService.Host.exe.config file and open the file in Notepad or another text editor.

7. In the Cobra.Costpoint.WebService.Host.exe.config file, locate the `<baseAddresses>` tags, change `localhost` to the name of your Cobra application server, and set the correct TCP port number.

   For example:

   Change the following text:

   ```
   <baseAddresses>
       <add baseAddress="http://localhost:8000/CobraWebService/service" />
   </baseAddresses>
   ```

   To:

   ```
   <baseAddresses>
       <add baseAddress="http://COBRAMACHINENAME:8000/CobraWebService/service"
   />
   </baseAddresses>
   ```

   Where:

   - `COBRAMACHINENAME` is the name of your Cobra application server.

   - Port `8000` is the default port for Cobra Costpoint Web Service and you can change this setting to avoid conflicts.

     > **Warning:** If you use PM Compass-specific services on the same server, you must use a different port for the Cobra Web Service for Costpoint integration. Running PM Compass-specific services and the Costpoint-specific services on the same port will cause conflicts.

8. Save your changes and close the file.

Install the Cobra Costpoint Web Service

After editing the configuration file, you must install the Cobra Costpoint Web Service (Cobra.Costpoint.WebService.Host.exe) as an administrator.

To install the Cobra Costpoint Web Service, complete the following steps:

1. Click **Start** » **All Programs** » **Accessories**, right-click **Command Prompt**, and click **Run as administrator**. The command prompt opens with administrative rights.

2. Enter the following command:

   ```
   <Cobra Install Directory>\Cobra.Costpoint.WebService.Host.exe –install
   ```

   Where:

<Cobra Install Directory> is the location of Costpoint on your machine. For example, **C:\Program Files\Deltek\Cobra 5** or **C:\Program Files\Deltek Cobra**.

3. Go to **Start** » **Control Panel** » **Administrative Tools**, and open **Services**.

4. From the list of services, right-click **Cobra Costpoint Web Service** and then click **Restart**.

5. Open a Web browser and enter the Cobra Costpoint Web Service URL (`<baseAddress>` value from the Cobra.Costpoint.WebService.Host.exe.config file) in the address bar. The following page should display:

> **Warning:** If you get a "Page not found" error, and you are running PM Compass-specific services and the Costpoint-specific services on the same server, you may be encountering conflicting ports. To correct this issue, complete the following steps:
>
> 1. Ensure that the Cobra web service for Costpoint integration is using a different port. For more information on changing the port number in the Cobra.Costpoint.WebService.Host.exe.config file, see the Edit the Cobra Costpoint Web Service Configuration File section.
> 2. Restart the Cobra Costpoint Web Service.

Configure the Costpoint Connections to Cobra

The connectivity information for Costpoint integrations need to be set up in the Costpoint Configuration Utility. Use the Costpoint Configuration Utility to create a Cobra database connection and also to enable integration using the Cobra Web Service.

Import the Root and Intermediate Certificates into the Trust Keystores

In order for Costpoint to verify the Cobra Web Server Authentication Certificate, the Root and Intermediate certificates (certificate chain) must be accessible in the following trust keystores:

- Java Standard Trust Keystore for the Costpoint Configuration Utility

▪ Configured Trust Keystore for WebLogic

> **Tip:** The default Trust Keystore for WebLogic is the Demo Trust Keystore. If your Costpoint installation is using a different Trust Keystore for WebLogic, you need to modify the references to the DemoTrust.jks file in the commands below. You will also need to ensure you are using the correct path to your JDK and WebLogic keystore files.

To import the certificates into the trust keystores, complete the following steps:

1. Click **Start** » **All Programs** » **Accessories**, right-click **Command Prompt**, and click **Run as administrator**. The command prompt opens with administrative rights.

2. Enter the following command to set the environment for using keytool:

   ```
   <Costpoint Install Directory>\71\bin\CPWebSetEnv.cmd
   ```

3. Enter the following command to import the root certificate into the Standard Java Trust Keystore:

   ```
   keytool -import -v -noprompt -trustcacerts -alias <server_domain>_root -file
   <root_cert_file>.cer -keystore
   D:\oracle\jdk1.8.0_212\jre\lib\security\cacerts -storepass changeit
   ```

4. Enter the following command to import the intermediate certificate(s) into the Standard Java Trust Keystore:

   ```
   keytool -import -v -noprompt -trustcacerts -alias
   <server_domain>_intermediate -file <intermediate_cert_file>.cer -keystore
   D:\oracle\jdk1.8.0_212\jre\lib\security\cacerts -storepass changeit
   ```

5. Enter the following command to import the root certificate into the Demo Trust Keystore:

   ```
   keytool -import -v -noprompt -trustcacerts -alias <server_domain>_root -file
   <root_cert_file>.cer -keystore
   D:\Oracle\Middleware12.2.1.3\wlserver\server\lib\DemoTrust.jks -storepass
   DemoTrustKeyStorePassPhrase
   ```

6. Enter the following command to import the intermediate certificate(s) into the Demo Trust Keystore:

   ```
   keytool -import -v -noprompt -trustcacerts -alias
   <server_domain>_intermediate -file <intermediate_cert_file>.cer -keystore
   D:\Oracle\Middleware12.2.1.3\wlserver\server\lib\DemoTrust.jks -storepass
   DemoTrustKeyStorePassPhrase
   ```

Where:

▪ `<server_domain>` is the Active Directory Domain of your Costpoint application server.

▪ `<root_cert_file>` is the name you assigned the root certificate file when exporting.

▪ `<intermediate_cert_file>` is the name you assigned the intermediate certificate file when exporting.

> **Note:** You will need to restart all WebLogic servers for the changes in certificates to take effect.

Configure Connection to Cobra Database

When configuring the integration in Costpoint, you need to identify the Cobra project that is linked your Costpoint data. If you want to use the Lookup function in Costpoint to select the Cobra project, you must

connect Costpoint to the Cobra database. If you do not create a Cobra database connection, you have to manually enter the Cobra project name.

> **Warning:** Creating a Cobra database connection is not applicable if you have **Costpoint 7.1.1 with System JAR 054 or higher**.
>
> Since the validation of the Cobra project name only occurs when the integration runs, manually entering the Cobra project name may cause errors during integration if you misspell the project and reference a project that does not exist.
>
> The Cobra database connection will only work if both Costpoint and Cobra are installed in the same network (On-premise). It will not work on Costpoint Cloud.

To configure the Cobra Interface connection, complete the following steps:

1. Click **Start** » **All Programs** » **Costpoint 7.1.1** (or 7.0.1) » **Start Costpoint 7.1.1** (or 7.0.1) **Config Utility** to launch the Costpoint Configuration Utility.

   > **Attention:** You can also open the utility by running the CPWebConfigUtility.cmd batch file in the Costpoint installation directory (for example, C:\Deltek\Costpoint\71\bin).

2. On the Costpoint Configuration Utility startup screen (where you are asked to select your configuration options), select the **Costpoint Application Configuration** check box and then click **Next**. The available tabs in the utility displays.

3. Click **Costpoint tab** » **System Integrations tab** » **Cobra tab**.

4. Click the **Use DB Cobra Integration with Costpoint** check box and then enter the connection information for Cobra database in the following fields in the **Cobra DB Connection Information** group box:

   - **Database Vendor** — Select Oracle® or Microsoft® SQL Server®, depending on the database vendor you are using.

   - **Host** — Enter the host name or IP address for the database server.

   - **Port** — Enter the port number where the database server is listening.

   - **User** — Enter the database user name.

   - **Password** and **Confirm Pas** — Enter and confirm the database password associated with the user name entered in the **User** field.

   - **URL** — This field displays the resulting JDBC URL that will be used to connect to the database server.

5. Click **Test** to verify the information you entered. This performs a simple database connection test.

   > **Note:** The utility creates two JDBC Connection pools that appear on the Weblogic tab, click **Save**. Please make sure you have successfully tested the custom database connection before saving. Restart the WebLogic servers for the changes to take effect.

Configure Costpoint Connection to Cobra Web Service

To use the Cobra Web Service for Costpoint to Cobra Integration, you must enter the correct settings in the Cobra tab on the Costpoint Configuration Utility.

To change settings in the Costpoint Configuration Utility, complete the following steps:

1. Click **Start** » **All Programs** » **Costpoint 7.1.1** (or 7.0.1) » **Start Costpoint 7.1.1** (or 7.0.1) **Config Utility** to launch the Costpoint Configuration Utility.

   > **Attention:** You can also open the utility by running the CPWebConfigUtility.cmd batch file in the Costpoint installation directory (for example, C:\Deltek\Costpoint\71\bin).

2. On the Costpoint Configuration Utility startup screen (where you are asked to select your configuration options), select the **Costpoint Application Configuration** check box, and click **Next**. The available tabs in the utility displays.

3. Click **Costpoint tab** » **System Integration**s tab » **Cobra tab** and then use the following settings in the **Cobra Integration Connection Information** group box:

   - **Use Cobra Integration** — Select this check box to enable Costpoint to Cobra integration.
   - **Cobra Web Service URL** — Enter the URL for the Cobra Web Service.

     For example:

     Costpoint 7.1.1 with System JAR 054 or higher:

     ```
     https://<certificate subject>:8122/CobraWebService/Costpoint
     ```

     Where:

     `<certificate subject>` is the Server Authentication Certificate Subject saved earlier. For example, cobrawebserver.company.com.

     Costpoint 7.1.1 with System JAR 053 or lower:

     ```
     http://COBRAMACHINENAME:8000/CobraWebService/Service
     ```

     Where:

     `COBRAMACHINENAME` is the name of your Cobra application server.

   - **User** — Enter the Cobra user name. You may use the SYSADMIN user. If you choose another user, make sure that that user has administrative rights in Cobra.
   - **Password** and **Confirm Password** — Enter the Cobra password.
   - **Data Source Key** — Use the default setting.
   - **Configuration Name** — Enter **CostpointConfig**.
   - **Integration Owner** — Enter the owner of the restored Costpoint Integration Configuration file (CostpointConfig.icd) in Cobra.

     > **Attention:** For more information, see the Restore the Costpoint Integration Configuration File section.
     >
     > If you restore the backup configuration that ships with Cobra, the owner will be SYSADMIN. If you connect as the SYSADMIN user (in the User and Password fields), you do not need to specify a value in this field.

4. Click **Test** to verify the information you entered. This performs a simple connection test.

5. Save your changes and exit the Costpoint Configuration Utility.

> **Note:** You will need to restart all WebLogic servers or run the Rebuild Global Settings (SYPSTNG) application for your Cobra integration connection information changes to take effect.

Costpoint to Cobra Integration Process

This section provides an overview of the process of loading actual costs from Costpoint to Cobra.

> **Note:** This section provides a general overview of the Costpoint to Cobra Integration. For more information about the available options in each of the screens mentioned in this section, please refer to the **Online Help** available in Costpoint and Cobra.
>
> Before performing the steps in this section, you need to follow the instructions in the previous sections to ensure that your system is configured properly for integration with between Costpoint and Cobra.

Cobra Configuration

The following procedure must be performed in the Cobra application server.

Rename Cost Class and Project ID in Cobra

Before you can import actual costs from Costpoint, you will need to adjust the cost class and project ID values in Cobra. Since Costpoint only supports two characters for cost class and eight characters for project ID, you need to perform the following:

- Limit the **Actuals** cost class length to two characters.
- Limit **project ID** length to eight characters or less.
- Rename **Actual** cost class to **AC**.

A set of SQL scripts has been included with Cobra which enable this process. The RenameClass.SQL script is located in the following folder: <Cobra Installation Directory>\Samples\Scripts.

> **Note:** <Cobra Installation Directory> represents the folder where the Cobra application is installed. For example, C:\Program Files\Deltek\Cobra\Samples\Scripts folder.

To rename cost class and project ID in Cobra, complete the following steps:

1. Locate the RenameClass.SQL script in the following folder: <Cobra Installation Directory>\Samples\Scripts folder.

2. Open in RenameClass.SQL in a text editor (for example, Notepad), and edit the three SET statements near the top of the SQL script file. The variables for the SET statements are:

   ```
   SET vpcOldClass='Actual';
   SET vpcNewClass='AC';
   SET vpcProgram='Cobra v5 project name';
   ```

3. Save and close the RenameClass.SQL file.

4. Start Cobra, and click **Tools** » **SQL Command Utility** from the main menu.

5. On the SQL Command Utility window, click **Open**. You are prompted to locate for a .SQL file.

6. Browse for the RenameClass.SQL, and click **Open**.

7. Click Execute.

Costpoint Configuration

The following procedures must be performed in Costpoint.

Set the Correct Mapping Mode Options

The Manage Cobra Charge Templates screen is used to initialize and define mapping of default and/or project-specific Costpoint fields or charge elements to Cobra charge element code values. On this screen, you need to select the **Sample Cobra Project** option in the **Mapping Mode** group box if there is a link to the Cobra database. If there is no link available, select the **Manual Mode** option.

> **Note:** Only the key fields for the project will be enabled in the **Cobra Key Fields** column when you select the **Sample Cobra Project** option. No validation of field names will occur if you select the **Manual Mode** option.

These mapping settings must be consistent with the settings on the Manage Project User Flow, Manage Organization Elements, and Manage Cobra Resource Templates screens.

Select the Correct Options for the Transaction File

The Costpoint to Cobra Integration creates a .csv transaction file using the settings on the Manage Cobra Extraction Parameters screen. You will need to set the correct import options on this screen for the transaction file.

To set the correct option for the transaction file, complete the following steps:

1. Go to the Manage Cobra Extraction Parameters screen in Costpoint (**Administration » System Administration » System Administration Interfaces**).
2. Clear the **Advance Calendar** check box in the **Cobra Import/File Settings** group box.
3. Select the **Generate File Only** check box.
4. Select the remaining extraction parameters as required by the Cobra project that is interfacing with Costpoint.

When you run the Cobra extraction, the format of the .csv file should resemble the following:

Cobra Fields

Project Name	Key Field 1	Key Field 2	Key Field 3	Resource	Cost Class	Cost Date	Hours	Direct	COMG A	COMOH	GANDA	FEE
ProjName	4K18B.0 00.100			103A1	AC	01/15/2 009	18	319	0.53	3.23	126	400
ProjName	4K18B.0 00.100			106A2	AC	01/15/2 009	59.5	1509	2.5	15.2	593	1894
ProjName	4K18B.0 00.100			107A1	AC	01/15/2 009	109.5	1838	2.54	17.4	676	2293

Project Names are only required if the .CSV file will be imported into a master project in Cobra. The previous Cobra Import/File settings mentioned is used when setting up the interface with a Master Project.

At least one Key Field must exist in the .csv file, with use of the additional Key Fields optional based on Cobra project requirements. Use of the Class and Cost Date fields are also optional based on Cobra project requirements.

Integration Process Overview

Step 1: Create the Default Charge, Resource, and Cost Templates

The purpose of these templates is to map the Costpoint structures to the Cobra structures. The structure of each Cobra project is highly configurable by a user. You can use a key data field such as work package or WBS in one Cobra project in a different way (or not at all) in another Cobra project. In order to load actual costs from Costpoint to Cobra, the information must be defined or linked to the Cobra data. These templates make it easy to replicate linking across projects.

- **Charge Templates** — These templates are initialized and maintained in the Manage Cobra Charge Templates screen and identify how the Costpoint project/organization information is linked to the Cobra control account or work package. You can link the Project ID, Project ID less Level 1, Project Abbreviation, Project/Organization ID combination, Project User-defined fields, or Project less Level 1/Organization ID combination in Costpoint to a work package or work package code (if you are collecting costs at the work package level in Cobra) or to the WBS, WBS and OBS combination, or a code on the control account in Cobra. Create as many charge templates as you need to establish the linkages for all Costpoint projects and Cobra projects.

- **Resource Templates** — These templates are initialized and maintained in the Manage Cobra Resource Templates screen and are used to establish the relationship between Costpoint labor and non-labor information and Cobra resources. Using this template, you create a labor rule for mapping Costpoint labor charge information to Cobra resources using PLCs, GLCs, Employee ID, Project Labor Category User-Defined fields, or an Advanced SQL definition. Skill-based bid codes used to determine average labor rates for estimating in Cobra are examples of Cobra resources that can be linked to Costpoint GLCs or PLCs.

  You should consider using GLCs to link resources if you are a first time user. Under most circumstances you must avoid using employee ID to link resources as you must adjust the budget or explain variances each time there is a staff change. For non-labor accounts, Cobra does not generally require the same level of detail for non-labor accounts as is required in Costpoint. You can link most Costpoint non-labor accounts to one Cobra resource. However, you must address the needs of each Cobra project and Costpoint project individually.

  > **Note:** You can use wildcard characters to link Costpoint non-labor accounts to Cobra resources.

- **Cost Templates** — These templates are initialized and maintained on the Manage Cobra Cost Templates screen and are used to map Costpoint hours, direct costs, indirect cost pools, and Cost of Money (COM) to Cobra results. The Hours and Direct cost elements in Costpoint cannot be edited but can be mapped to the same Cobra result, if available, or another Cobra result that serves the same function. Most companies have multiple fringe, overhead, and general and administrative pools in Costpoint. Generally this level of detail is not necessary in Cobra and many fringe and overhead pools can be mapped to one Cobra result.

Step 2: Set the Software Location, Output File Location, and Default Templates

On the Configure Cobra Interface Settings screen, you need to specify the location of your Cobra Software Location and your output file folders. The location of your Cobra software and output folders must be already be set up in Manage Alternate File Location screen.

> **Note:** If you are integrating using Cobra Web Service, the specified output folders must also be accessible from the Cobra server by the login account associated with the "Cobra Web Service" service.

You can also select default charge, resource, and cost templates on the Configure Cobra Interface Settings screen after you create them in their respective screens (see Step 1: Create the Default Charge, Resource, and Cost Templates).

Step 3: Create the Cobra to Costpoint Project Map

This optional step links the Costpoint projects to the Cobra projects. You can perform this step on the Manage Cobra Project Mapping screen. It is only required if the Cobra project is different from the Costpoint top-level project number and/or you want to send the project data at a level above the level where the data is recorded in Costpoint. See the online help on Manage Cobra Project Mapping screen for more information.

Step 4: Create Extractions

You can create extractions on the Manage Cobra Extraction Parameters screen in Costpoint. The parameter IDs that you enter when you create the extractions are used in the Compute Cobra Burden Cost screen. Use the extraction parameter tool to associate the templates and other options to Costpoint projects and Cobra run-time options. You can create as many parameters as you need for all Costpoint projects and Cobra projects.

In addition to the templates, there are several other features that you can use to load data into Cobra:

- **Values** — Use this feature to establish the values to be used in the extraction: Hours Only, Hours and Labor Dollars, Hours and Direct Dollars, and Hours and Total Dollars.

- **Rates** — Use this feature to choose whether to use target or actual rates for the burden costs to be loaded into Cobra.

- **Timeframe** — Use this feature to choose the timeframe for which you want to collect actual costs in Costpoint. The options are sub-period, period, and inception-to-date. Use the sub-period feature to extract actual costs for the sub-period to analyze the progress of the project.

- **Calendar** — Use this feature to specify whether or not to automatically advance the Cobra calendar.

- **Post Valid Transactions** — Use this feature to specify whether or not to load data for valid records only. Records containing errors are automatically written to the error log and can be reprocessed at a later time.

  - **Use Cobra Web Service** — This check box is only available in Costpoint 7.0.1. Select this check box if you want to use Cobra Web services to transfer data when your run the Compute Cobra Burden Cost process. If this check box is not selected, the Compute Cobra Burden Cost process uses the locally installed Costpoint to Cobra application (CostpointCobra.exe) to transfer data.

> **Note: For Costpoint 7.0.1 users:** If you are not setup to use the CostpointCobra.exe for integration, ensure that the **Use Cobra Web Service** check box is also selected when the **Post Valid Transactions** check box is selected. Otherwise, an error will occur when you run the Cobra Extraction process for the extraction parameter ID.

- **Use Asynchronous Call** —Select this check box if you want the invocation of the Cobra Web service to be asynchronous. In this case, the Compute Cobra Burden Cost process will not wait for the Cobra Web service to finish the transaction. When the request is sent, the Compute Cobra Burden Cost process continues to run and not wait for responses from Cobra Web services.

  If this check box is **not** selected, the invocation of the Cobra Web service will be synchronous. This means the Compute Cobra Burden Cost process waits for the Cobra Web Services to be done with transactions. The Cobra Burden Cost process receives responses from the Web service before continuing to run.

- **Replace Cost Classes** — Use this feature to generate forecasts based on booked actual costs. You can replace a single class or all classes to run special extractions.

- **Create a CSV File** — Use this feature to save the extractions in CSV format.

Step 5: Initialize the Maintain Prior Year Cobra Costs

You must initialize the Manage Prior Year Cobra Costs screen before you run the extraction process to extract inception-to-date actual costs from Costpoint. This allows you to archive prior year costs.

> **Note:** This step is only necessary when you are implementing the interface in the middle of a project's performance. It is not needed for new projects.

Step 6: Run the Compute Cobra Burden Costs Process

Costpoint calculates burden at the project/account/organization level but Cobra requires burden at the resource level (employee/PLC/GLC). The Compute Cobra Burden Cost screen process uses the Manage Project labor History (LAB_HS table for labor and PROJ_SUM for non-labor) to calculate burden at the resource level for projects that have been identified as Cobra projects.

> **Note:** You can establish a project as a Cobra project on the Manage Project User Flow screen by selecting the **Cobra Project** check box. Please refer to the Manage Project User Flow online help for more information.

The Compute Cobra Burden Cost process performs following functions:

- Computes burden at the resource level using the data on the Manage Project Labor History screen

- Updates the Cobra Direct and Indirect tables in Costpoint with the sub-period, period, fiscal year, year-to-date labor, non-labor, and indirect costs and updates prior year information if the copy prior flag is checked.

- Updates the fiscal year, period, and sub-period in the Cobra Interface Settings screen.

Step 7: Run the Cobra Extraction

You can run the Cobra extraction on the Compute Cobra Burden Costs screen by selecting the **Compute Cobra Burden and Run Cobra Extraction** option in the **Extraction** group box. You will need to enter a **Cobra Extraction Parameter ID** that you create on Manage Cobra Extraction Parameter screen. The Cobra extraction process runs after computing burden costs.

Integration Troubleshooting

You can access log files that were created after the Costpoint to Cobra data integration process and then use the information to troubleshoot issues.

View Cobra Log Information

The integration stores warnings and errors encountered during the process in a file in the Cobra log directory. You can view the information in these logs by accessing the Process Logs dialog box in Cobra.

To view the Process Logs in Cobra, complete the following steps:

1. Launch Cobra and open Process Logs.

   ▪ For **Cobra 8**, click **Tools** tab » **Process Logs**.

   ▪ For **Cobra 5.1**, click **Tools** » **Process Logs**.

2. From the **Process** drop-down list, select **Integration Actual Costs** to filter Costpoint to Cobra integration-related logs.
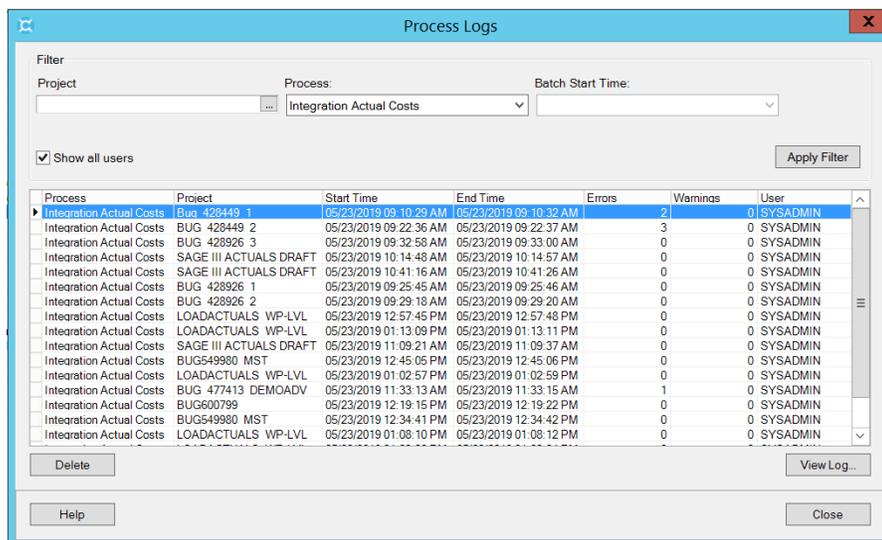
3. Click a log entry from the list and click **View Log**.

Cobra Log File Location

In case a corresponding log entry is not listed in the Cobra Process Log dialog box, you can try to access the log files created by the Cobra Web Services in the Cobra log directory (For example, C:\Deltek\Cobra\Logs\ServerDebuglog.xml).

Appendix A: If You Need Assistance

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

Customer Services

For over 30 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 Deltek Support Center.
- Phone and email support from Customer Care analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Attention: Find out more about these and other services from the Deltek Support Center.

Deltek Support Center

The Deltek Support Center is a support Web site for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options that the Deltek Support Center provides:

- Search for product documentation, such as release notes, install guides, technical information, online help topics, and white papers
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Support Center Community
- Access Cloud-specific documents and forums
- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Submit a support case and check on its progress
- Transfer requested files to a Customer Care analyst
- Subscribe to Deltek communications about your products and services
- Receive alerts of new Deltek releases and hot fixes
- Initiate a Chat to submit a question to a Customer Care analyst online

Attention: For more information regarding Deltek Support Center, refer to the online help available from the Web site.

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to https://deltek.custhelp.com.

2. Enter your Deltek Support Center **Username** and **Password**.

3. Click **Login**.

> **Note:** If you forget your username or password, you can click the **Need Help?** button on the login screen for help.

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