

Deltek

Deltek Costpoint®

Deltek Costpoint 8.2 Manufacturing
Integrations Technical Guide

October 26, 2023

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Overview

This guide provides instructions for integrating Deltek Costpoint 8.2 with Deltek TIP (QA and/or SFE) 16.0 and/or Shop Floor Time (SFT) 2.1.

This guide assumes that you have already downloaded and installed the three software components (or two components if you are not using both TIP and SFT). Now you are ready to get the products to communicate with each other and share data.

In general, you perform the configuration steps in this order:

1. Configure Costpoint.
2. Configure TIP.
3. Configure SFT.

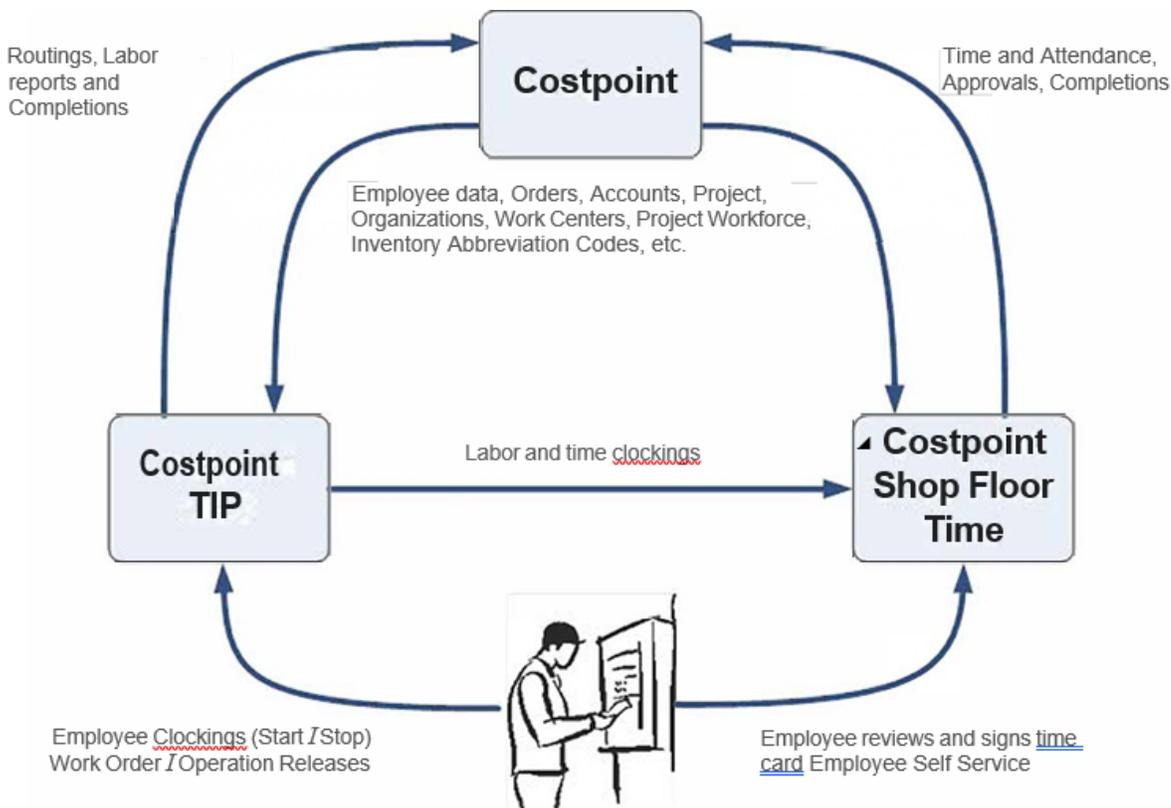
Supported Versions

This guide is intended for use with:

- Deltek Costpoint 8.1.5 or higher
- Deltek TIP (QA and/or SFE) 16.02 or higher
- Deltek Shop Floor Time (SFT) 2.1 or higher

Integration Between Products

After you complete the integration process, data will flow between the three products. However, you will need to perform additional data integration steps to ensure that the correct data is moved from product to product.



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:

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.

Configure IIS for Costpoint Web Services

These steps are performed on your Costpoint IIS web server.

To configure IIS for Costpoint:

1. Create a new **webservices** folder under your DEWebApp\ folder.
For example, E:\Deltek\Costpoint\82\applications\DEWebApp**webservices**.
2. Click **Start » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the Your Computer name tree on the left pane, expand Sites, expand Default Web Site, expand CPWeb, and click the **webservices** folder.
4. Under IIS, in the right pane of the Internet Information Services (IIS) window, double-click **Handler Mappings**.
5. On the Handler Mappings screen, right-click **WLProxy** and select **Edit**.
6. On the Edit Script Map screen, for the requested path, change the ***.cps** value to *****, and click **OK**.
7. On the **Do you want to allow this ISAPI extension** screen, click **Yes**.
8. Right-click your IIS computer name icon in the left pane of the Internet Information Services (IIS) Manager window and click **Stop**.
9. Right-click it again and click **Start**.
10. Close the Internet Information Services (IIS) Manager window.

Integrate Costpoint 8.2 with TIP 16.02

Configure Costpoint for Integration with TIP

Deltek GovCon Cloud customers will submit a Service Request to deploy the Costpoint TIP Database Extensions and Web Services. See [Deltek Costpoint Cloud TIP Integration Setup Guide](#) for more information.

Create Costpoint User for Web Service Connections from TIP

Use the following procedure to create the Costpoint User, set Company Access and Application Rights, and Allow Application Access via Web Services.

To create the Costpoint User for Application Access via Web Services:

1. Log into Costpoint.
2. On the main menu screen, click **Administration » Security » System Security » Manage Users**.
3. On the Manage Users screen Information tab, enter values for the **User ID** (for example, **TIPCP**), **User Name**, **Email**, and **Default Company**.

The screenshot shows the 'Identification' window for a user named 'TIP-CP Integration' with User ID 'TIPCP'. The 'Information' tab is active, displaying fields for Employee ID, Phone, Extension, Locale ID, Email (svc_pmf@deltekdemo.com), and Preferred Notification Method. The 'Status' section includes Deactivation Date, Date Password Changed, Last Login Date, and checkboxes for 'Force Password Change', 'Notify When Batch Job Is Completed', 'Allow User to Override Batch Job Priority', and 'Can Report Issues From Application Screen'. The 'Preferences User Can Change' section has checkboxes for Name, Default Company, Can Change Notification Options, Phone and Extension, Can Add New FIDO Device, and Password. A 'Default Company' dropdown is also present. At the bottom, there are links for 'Company Access', 'Assigned User Groups', 'Module Rights', 'Application Rights', 'UI Profiles', and 'FIDO/Biometric Devices'.

4. On the Authentication tab, set the **Authentication Method**.

Note: The Database authentication method is not available when Costpoint is in Deltek's GovCon Cloud Moderate environment.

The screenshot shows the 'Authentication' tab for the same user. The 'Authentication Method' is set to 'SAML Single Sign-on'. Other options include 'FIDO Single Sign-on', 'Generate Temporary Password', 'Manage User Groups in Active Directory', and 'Allow Access to Integration Console'. The '2FA Settings' section includes radio buttons for 'None', 'Mobile Application', and 'Notification', along with a 'FIDO' checkbox, 'Effective Date', and 'PIN' field. At the bottom, there are links for 'Company Access', 'Assigned User Groups', 'Module Rights', 'Application Rights', 'UI Profiles', 'FIDO/Biometric Devices', and 'Notification Override'.

5. In Company Access, click **New** and enter the **Company ID** and **Default Taxable Entity ID**.

Company ID *	Default Taxable Entity ID	Org Security Group ID	Suppress Labor	Suppress SSN	Suppress Cost	Suppress Price	Suppress AP Tax ID	Company Name
1	1	ALL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Applied Technologies Inc

6. In Application Rights, add full rights for the following Modules.

Module	Name	Rights	Company	Purpose
AP	Accounts Payable	FULL	*	Enables the VendorApproval object to be able to post supplier status updates.
PC	Production Control	FULL	*	Enables the Manufacturing and Operation objects to be able to send operation and inspection level completions to specific manufacturing orders.
PO	Purchasing	FULL	*	Enables the ReceiverOut object to properly update receipts and purchase orders for those receipts.
PD	Product Definition	FULL	*	Enables the ASLOut object to add or update suppliers to items.
RC	Receiving	FULL	*	Enables the ReceiverOut object to properly update receipts and purchase orders for those receipts.

* - The Company ID is required to match the one used for the Inbound configuration with this Business Unit.

7. Click **Save & Continue** or press F6 on your keyboard.



8. On the Web Services page, check the box for **Allow Application Access via Web Services**.

The image shows a configuration page for 'Web Services Access Settings'. Under the 'Web Services Access Settings' section, the checkbox 'Allow Application Access via Web Services' is checked. Other settings include 'Authenticate with JWT' (checked), 'File Location' (ALTERNATE), and 'File Name' (sft-public.txt). Buttons for 'Validate Certificate', 'Add Certificate', and 'Remove Certificate' are visible at the bottom. A breadcrumb trail at the bottom reads: 'Company Access > Assigned User Groups > Module Rights > Application Rights'.

Deploy Costpoint TIP Database Extensions

You must perform these steps on your Costpoint WebLogic application admin server.

Note: If your Costpoint is GCCM or GCCS, please open a Service Request or contact your Deltek Professional Services for assistance.

To deploy Costpoint 8.2 Extensions:

1. Click **Start » All Programs » Costpoint 8.2 » Start Costpoint 8.2 Database Wizard**.

Note: Due to enhanced security in Windows Server, use the **Run as Administrator** option when launching this command, even if you have local administrative rights.

2. From the list of **Available options**, select **Deploy Extension**, and click **Next**.
3. Select the **System** to use and click **Next**.
4. In the **Mode** section, select **Single**:
5. Click the browse button and navigate to: `\\Deltex\Costpoint\82\cpupdates\ext\PMFG\TIPQA`

Note: This folder is created and populated by the Costpoint MR installer.
See MR Release Notes for notifications about updates to these database extensions.

6. Select the appropriate Costpoint TIP Database Extension file for your system:
 - Oracle Database: `xt_tipqa_ora_v11`, `xt_tipqa_ora_v12`, etc.
 - SQL Server Database: `xt_tipqa_ms_v11`, `xt_tipqa_ms_v12`, etc.
7. Click **Next**.

Note: See TIP (QA and/or SFE) documentation for version compatibility information.

8. Be sure the box is checked for **Deploy Custom DB Scripts**.
9. Click **Next**.
10. Verify that the information is correct and click **Run** to start the process.
11. When the process completes, exit the Database Wizard.

Deploy Costpoint TIP Web Services

You must perform these steps on your Costpoint WebLogic application admin server.

To deploy Costpoint 8.2 Web Services:

1. Click **Start » All Programs » Costpoint 8.2 » Start Costpoint 8.2 Integration Console**.

Note: Due to enhanced security in Windows Server, use the **Run as Administrator** option when launching this command, even if you have local administrative rights.

2. On the Costpoint Integration Login screen, configure the following options, and click **Login**:

Option	Action
User	Enter the following value: CPSUPERUSER This user must have access to the Integration Console.
Password	Enter the password for your CPSUPERUSER user.

Option	Action
System	Select your Costpoint system from the drop-down list, for example: DELTEKCP

3. Under **Available Options**, select **Modify Integration Console Properties**, and click **Next**.
4. On the Advanced Properties tab, select **System** for **Show Web Services**.
5. When the “System web services are intended to be used internally by Costpoint. Modifying or invoking them directly can break the integration with Costpoint.” message displays, click **OK**.
6. Click **Save**.
7. Click **Close**.
8. Under **Available Options**, select **Import/Export Integration Modules**, and click **Next**.
9. Click **Import...**
10. On the Please select Web Service jar files you want to import screen, configure the following options, and click **Select**:
 - For **Mode**, select **Single**.
 - For **Web Service File**, click the ellipsis (...), navigate to and select the **C:\Deltek\Costpoint\82\cpupdates\wspmfg\TIPQA\TIPCPGENINT_CP8_V12** file.

Note: This folder is created and populated by the Costpoint MR installer.
See MR Release Notes for notifications about updates to these web services.

11. Click **Import**.
The following Web Services will be deployed:
 - PCMMOISSINVTTRN (TPQA Inventory Transaction Inbound)
 - RCVINSPDISPUPDATE (Receiving Inspection Deposition (Update))
 - TPQAASL (TIPQA ASL Control)
 - TIPQAPCMCOMP2 (Manage MO Operation Completions2)
 - TIPQAPCMINSP2 (Manage MO Quality Control Inspection Results2)
 - TIPQAPCMOMNT (TIPQA Manage Manufacturing Orders)
 - TIPQA_LOCATION_TRANS (Location Transfers of Qty)
 - VENDAPPROVAL (Vendor Approval)
12. When the “Hot fixes have been applied without errors.” message displays, click **OK**.
13. Click **Close**.
14. Under **Available Options**, select **Modify Integration Console Properties**, and click **Next**.
15. On the Advanced Properties tab, select **Regular** for **Show Web Services**.
16. Click **Save**.
17. Click **Close**.
18. Click **Exit**.

Configure TIP for Integration with Costpoint

Configure the TIP Interface Profile

When the TIP (QA and/or SFE) Integration Service Request and ODBC Read Only Access Service Request have been completed, Deltek will contact you and provide the information needed to complete the following steps.

Attention: Refer to [TIPWEB Downloads - 10.0.0.16.02](#) documentation for detailed information.

If this is a new Install, make sure your superuser account has access to the Integration Menu.

To enable Integration menu:

You must perform these steps on your TIPWeb application server.

1. Login to the TIPWEB using the following URL: <http://localhost/TipQAWeb/views/home.html>
2. Login ID: **admin**
3. Password: **admin**
4. Navigate to **MODULES » Access Control » Menu Item Access** under Security Group, select **SUPERUSER**.
5. On the same screen, click the drop-down arrow next to **Module** and select **AC**.
6. Click the **Menu Item Access**, change the **No Access** box to **Edit Access** and click **Default All**.
7. On the same screen, navigate to **Module Setup**, check all the boxes under Integration, and hit **OK**.
8. Click **Save**.

Warning: You will need to remove this access once the integration is done. You don't want users with SUPERUSER security group accidentally deleting Interface Profiles.

To add an interface profile:

1. Navigate to **Access Control » Business Unit » Interface** tab.
2. On the Add Interface Profile screen, enter the following:
 - a. Profile Name: **Costpoint**
 - b. Interface Type: **DELTEK**
 - c. Interface Version: **V8.0**
 - d. Interface Timezone: **Leave the Default**
 - e. Database Type: **MSSQL**
 - f. Connection URL: **Enter the JDBC URL provided by the Deltek Cloud Team for your systems.**

Note: Refer to the following section for a list of URLs.

- g. Schema Name: Enter the schema owner that you created during **TipQA SQL Utility** (for example, TIPWEB)
- h. Password: Enter the password from the **MsSql_Schema_setup.sql**. The Default password is **TipqaAdmin1**.

Add Interface Profile

Profile Name	<input type="text" value="Costpoint"/>	
Interface Type	<input type="text" value="DELTEK"/>	<input type="button" value="Deltek Webservice Config"/>
Interface Version	<input type="text" value="V8.0"/>	Costpoint Views Version: 1.2
Interface Timezone	<input type="text" value="America/Indianapolis (-05:00)"/>	
Database Type	<input type="text" value="MSSQL"/>	
Connection Url	<input type="text" value="jdbc:sqlserver://db:1433;databaseName=DELTEKCP"/>	
Schema Name	<input type="text" value="TIPWEB"/>	
Password	<input type="password" value="....."/>	<input type="button" value="Test Connection"/>

3. **Test Connection and Save.**

Connection Success!

Interface Type	<input type="text" value="DELTEK"/>	<input type="button" value="Deltek Webservice Config"/>
Interface Version	<input type="text" value="V8.0"/>	Costpoint Views Version: 1.2
Interface Timezone	<input type="text" value="America/Indianapolis (-05:00)"/>	
Database Type	<input type="text" value="MSSQL"/>	
Connection Url	<input type="text" value="jdbc:sqlserver://db:1433;databaseName=DELTEKCP"/>	
Schema Name	<input type="text" value="TIPWEB"/>	
Password	<input type="password" value="....."/>	<input type="button" value="Test Connection"/>

4. After getting a successful connection to Costpoint, continue to the TIP-Cospoint Configuration Interface section for detailed configuration.

Connection URL Format and FQDNs:

URL Format

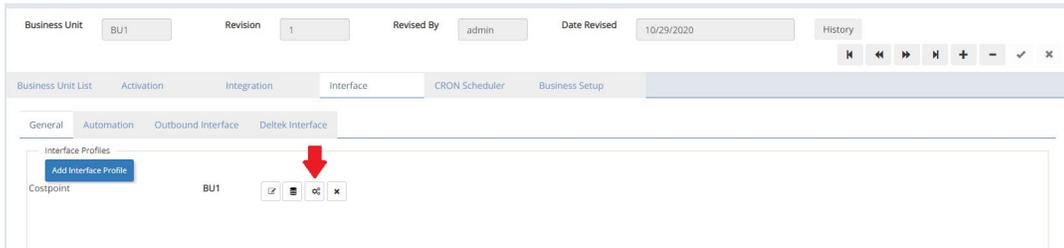
```
jdbc:datadirect:ddhybrid://<FQDN>:443;hybridDataPipelineDataSource=<CUSTOMER>;ValidateServerCertificate=False;User=<ODBC_USER>;
```

FQDNs

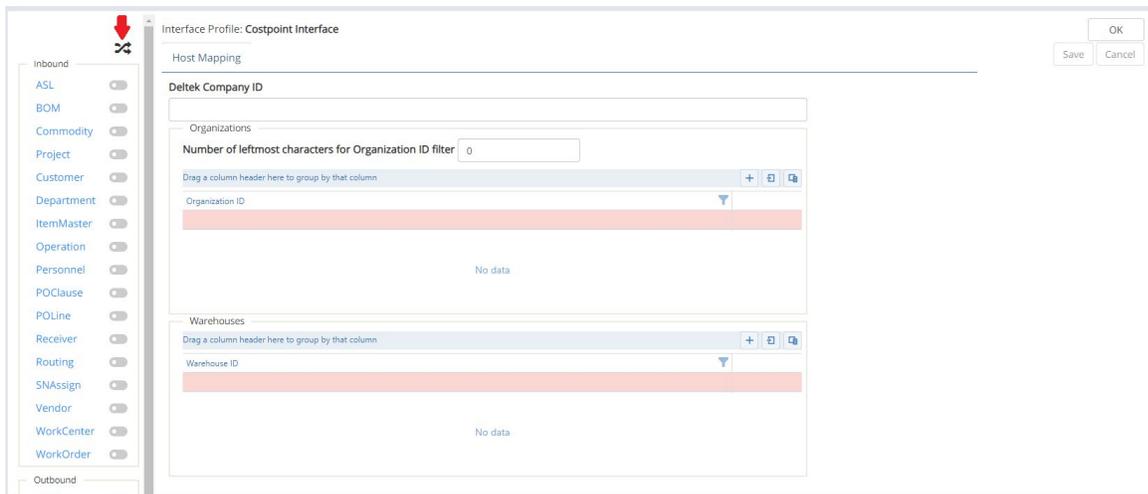
- Costpoint Enterprise GCC Moderate
Production Systems: cp-hdp01.prd.mydeltekgcc.com
Test/Dev Systems: cp-hdp01.npr.mydeltekgcc.com
- Costpoint Enterprise GCC Standard
All Systems: hdp2-usea-cp.deltekenterprise.com

TIP-Costpoint Configuration Interface

1. To configure the Costpoint interface in TIPWEB, click the **“Configure Agents”** button on your Costpoint Profile in **Access Control » Business Unit » Interface » General** tab



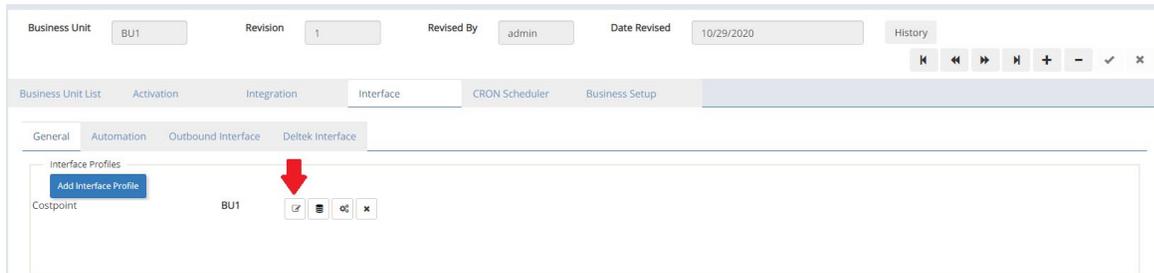
2. **Host Organization Mapping:** The Costpoint system to TIPWEB requires the Host Mapping to have the Deltek Company ID populated (Costpoint uses Company Code 1 as default). You can also set Organizations and Warehouses on this page, which are optional. To get to this page, click the crossing arrows button.



Note: The **Inbound Agents** move data from the **Costpoint** system to **TIPWEB** and the **Outbound Agents** move data from **TIPWEB** to **Costpoint**. Refer to TIPWEB Downloads - 10.0.0.16.02 documentation for detailed information.

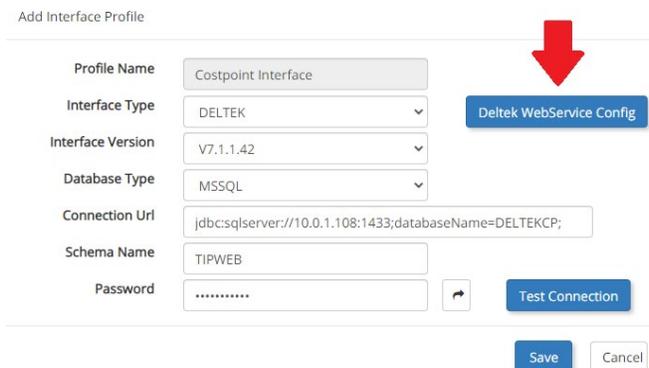
Deltek Web Services Configuration

There are unique parameters required for the Outbound interface process. To set these parameters
Access Control > Business Unit > Interface / General Tab and select the “Edit Interface Profile” button.



To configure Deltek Web Services:

1. Click **Deltek WebService Config**.



Add Interface Profile

Profile Name	Costpoint Interface	
Interface Type	DELTEK	Deltek WebService Config
Interface Version	V7.1.1.42	
Database Type	MSSQL	
Connection Url	jdbc:sqlserver://10.0.1.108:1433;databaseName=DELTEKCP;	
Schema Name	TIPWEB	
Password	Test Connection
	Save	Cancel

2. On the Deltek Web Services Configuration screen, enter the following information.
3. **Deltek Web Service URL:** Enter one of the following URLs.
 - For Costpoint GCC Moderate:
 - PROD: https://cp-<customer>-prod.prd.mydeltekgcc.com/cpweb/
 - TEST: https://cp-<customer>-test.npr.mydeltekgcc.com/cpweb/
 - DEV: https://cp-<customer>-dev.npr.mydeltekgcc.com/cpweb/
 - For Costpoint GCC Standard:
 - PROD: https://<customer>-cp.deltekenterprise.com/cpweb/
 - TEST: https://<customer>-cpt.deltekenterprise.com/cpweb/
 - DEV: https://<customer>-cpd.deltekenterprise.com/cpweb/
4. **WebService Security Token Username:** Enter the security token username (for example, TIP CP)
5. **WebService Security Token Private Key:** Enter the security token private key (for example, tip-private.pem).
6. **Deltek System (Database):** Enter the system name (for example, <CUSTOMER>).

Deltek Web Services Configuration

Ok

Deltek WebService URL: http://10.0.0.240:7009/

WebService Security Token Username: TIPQAINTTWJ

Authentication Mode: JWT Token

WebService Security Token Private Key: -----BEGIN PRIVATE KEY-----
MIIJQQIBADANBgqhkiG9w0BAQEFAASCCS
swggknAgEAAoICAQCWj10kM2SgK5Tn
TeyjwHXUjlayDgEdwrfANDD8P3Bg2ZzxYr6V
MP/Q7zXI/CGglfYTqBTAKaEtdN1UF

Test Connection

Deltek System (Database): DELTEKCP (Case Sensitive - Should match host)

Default Personnel ID to be sent to Deltek for an Automated Receiver Disposition: ALEXGEMP

Save Cancel

Attention: Refer to [TIPWEB Downloads - 10.0.0.16.02](#) documentation for detailed information.

Configure TIP for JWT Authentication to Costpoint

JSON Web Token (JWT) is an open standard used to share security information between a client and a server.

Create Private/Public Keypair for JWT Authentication

JWT is the preferred authentication method for accessing Costpoint Web Services. This is a requirement when Costpoint is in Deltek's GovCon Cloud Moderate environment. These commands require Java. Use these exact commands, replacing <text> and also validity days if desired. The resulting keystore.jks file should only be accessible to the SFT system administrators.

1. Create a Private/Public Key Pair with Keytool:

```
%JAVA_HOME%\bin\keytool -genkeypair -alias jwtcostpoint -keyalg RSA -validity 1825 -dname "CN=TIPCP, OU=CP, O=<Company>, L=<City>, ST=<ST>, C=US" -keystore keystore.jks -keypass <password> -storepass <password>
```

2. Export the Public Key for Costpoint Web Service User Configuration:

```
%JAVA_HOME%\bin\keytool -export -alias jwtcostpoint -keystore keystore.jks -rfc -file tip-public.pem -keypass <password> -storepass <password>
```

3. Rename **tip-public.pem** to **tip-public.txt** for easier upload to Costpoint.

4. Export the Private Key for TIP WebService Security Token Key:

```
C:\OpenSSL\bin\openssl pkcs12 -in cpint-identity.p12 -nodes -nocerts -out tip-private.txt -password pass:Deltek123
```

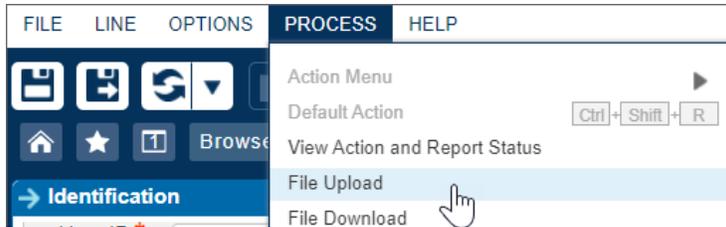
Copy TIP Private Key to the TIP Application Server

You must perform this step on the SFT application server.

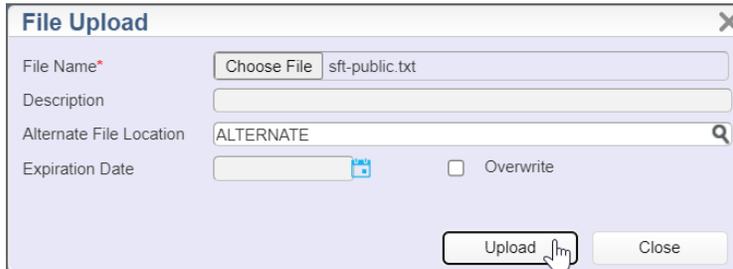
1. Create the C:\TIP Technologies, Inc\certificate folder.
2. Copy the **tip—private.txt** file to the C:\TIP Technologies, Inc\certificate folder.

Enable JWT Authentication for Costpoint User

1. Upload the **tip-public.txt** file to Costpoint:
 - a. Select **File Upload** from the PROCESS menu:

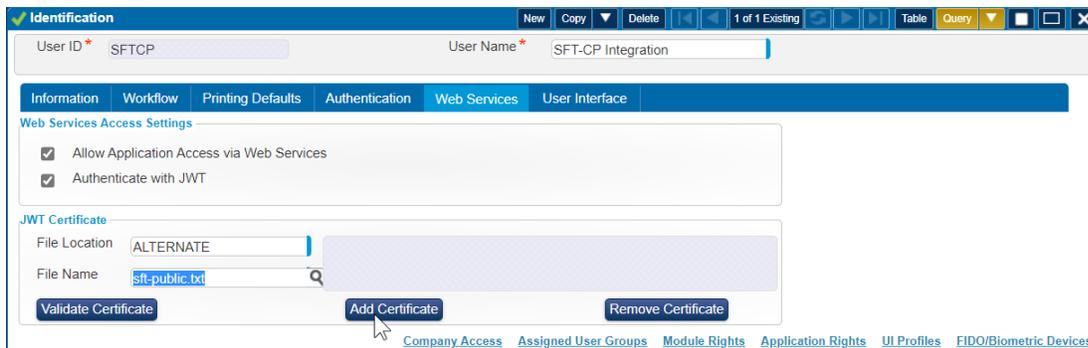


- b. Click **Choose File** and select the **tip-public.txt** file, select an Alternate File Location, and click **Upload**.

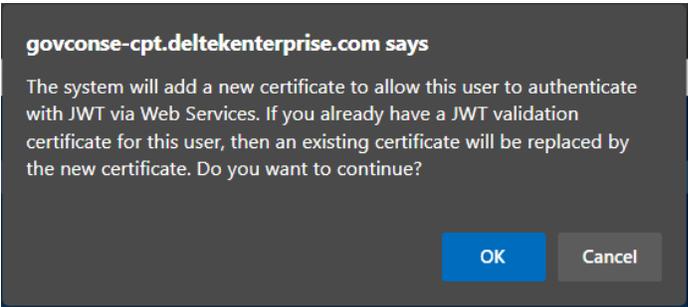


2. Add Certificate (Public Key) to Costpoint User:

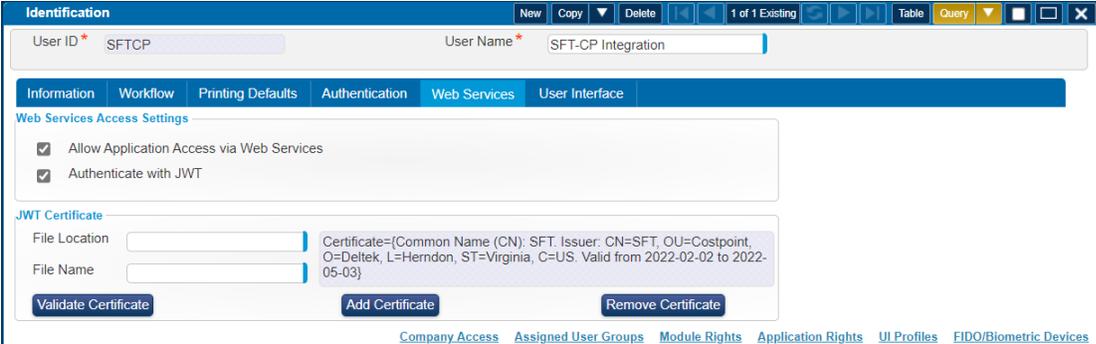
- a. On the **Web Services** page, enter the **File Location** and **File Name** from step 1, and click **Add Certificate**.



3. Click **OK** when prompted.



4. If the certificate is added successfully, the record will be saved, and you will see the certificate information:



Integrate Costpoint 8.2 with SFT 2.1

Configure Costpoint for Integration with SFT

Deltek GovCon Cloud customers will submit a Service Request to deploy the Costpoint SFT Web Services. See [Deltek Costpoint Cloud SFT Integration Setup Guide](#) for more information.

Create Costpoint User for Web Service Connections from SFT

Use the following procedure to create the Costpoint User, set Company Access and Application Rights, Allow Application Access via Web Services.

To create the Costpoint User for Application Access via Web Services:

1. Log into Costpoint.
2. On the main menu screen, click **Administration » Security » System Security » Manage Users**.
3. On the Manage Users screen Information tab, enter values for the **User ID** (for example, **SFTCP**), **User Name**, **Email**, and **Default Company**.

The screenshot shows the 'Identification' window for a user named 'SFT-CP Integration' with User ID 'SFTCP'. The 'Information' tab is active, showing fields for Employee ID, Phone, Extension, Locale ID, and Email (notify@company.com). The 'Status' section includes 'Deactivation Date', 'Date Password Changed', and 'Last Login Date' (all with 'None' selected). There are checkboxes for 'Force Password Change' (checked), 'Notify When Batch Job Is Completed', 'Allow User to Override Batch Job Priority', and 'Can Report Issues From Application Screen'. The 'Preferences User Can Change' section has checkboxes for Name, Default Company, Can Change Email Notification, Phone and Extension, Can Add New FIDO Device, and Password. The 'Default Company' is set to '1'. At the bottom, there are links for 'Company Access', 'Assigned User Groups', 'Module Rights', 'Application Rights', 'UI Profiles', and 'FIDO/Biometric Devices'.

4. On the Authentication tab, set the **Authentication Method**.

Note: The Database authentication method is not available when Costpoint is in Deltek's GovCon Cloud Moderate environment.

The screenshot shows the 'Authentication' tab for the same user. The 'Authentication Method' is set to 'SAML Single Sign-on'. There are checkboxes for 'FIDO Single Sign-on', 'Generate Temporary Password', and 'Manage User Groups in Active Directory'. The '2FA Settings' section has radio buttons for 'None' (selected), 'Mobile Application', and 'Email'. There are also checkboxes for 'FIDO' and 'Effective Date'. At the bottom, there are checkboxes for 'Allow Access to Integration Console' and 'Allow Access to Extensibility Console'. The same bottom links as the previous screenshot are present.

5. In Company Access, click **New** and enter the Company ID and Default Taxable Entity ID:

Company ID *	Default Taxable Entity ID	Org Security Group ID	Suppress Labor	Suppress SSN	Suppress Cost	Suppress Price	Suppress AP Tax ID	Company Name
1	1	ALL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Applied Technologies Inc

- In Application Rights, add full rights for LDMTIME, PCMCOMP, and PCMINSP.

Application *	Name	Application Rights *	Company ID *
LDMTIME	Manage Timesheets	Full	1
PCMCOMP	Manage MO Operation Completions	Full	1
PCMINSP	Manage MO Quality Control Inspection Results	Full	1

[Result Set Rights by Application](#)

- Click **Save & Continue** or press **(F6)** on your keyboard:



- On the Web Services page, check the box for **Allow Application Access via Web Services**.

Identification New Copy Delete 1 of 1 Existing

User ID * SFTCP User Name * SFT-CP Integration

Information Workflow Printing Defaults Authentication **Web Services** User Interface

Web Services Access Settings

Allow Application Access via Web Services

Authenticate with JWT

JWT Certificate

File Location ALTERNATE

File Name sft-public.txt

Validate Certificate **Add Certificate** Remove Certificate

[Company Access](#) [Assigned User Groups](#) [Module Rights](#) [Application Rights](#)

Configure Costpoint Connection to SFT

You must perform this step on your Costpoint application server.

Note: If your Costpoint is GCCM or GCCS, please open a Service Request or contact your Deltek Professional Services for assistance.

To configure Costpoint 8.2 for integration with SFT:

- Click **Start » All Programs » Costpoint 8.2 » Start Costpoint 8.2 Config Utility**.

Note: Due to enhanced security in Windows Server, you should use the **Run as Administrator** option when launching this command, even if you have local administrative rights.

-
2. On the Select Your Configuration Options screen, select the **Product Application Configuration** check box, and click **Next**.
 3. On the Product Configuration Utility screen, click the Systems tab and perform the following steps:
 - a. In the **Displaying System** field, select your Costpoint system (for example, **DELTEKCP**).
 - b. Click the Systems Integrations tab.
 - c. Click the Project Manufacturing tab.
 - d. Under **Shop Floor Time (SFT) Connection Information Setup**, click **Add**.

This is where you will add information about each of the manufacturing plants that you have set up in Costpoint for use with SFT.

Follow steps e through k for each of your plants:

- e. In the **Enter New Projection Manufacturing Instance ID**, enter a name to identify this plant, and click **OK**.

In the **Name** field, enter a descriptive name for this plant.
- f. In the **Connection URL** field, replace **host:port** in the default URL value, `http://host:port/IHTTPLCE`, with your Costpoint SFT URL.

For example, `http://CostpointSFTAppServer:7001/IHTTPLCE`.
- g. In the **User** field, enter **import** (case-sensitive, needs to match import user entered in SFT Interfaces/Interface Host IMPORT row).
- h. In the **Password** field, enter your password for the import user (case-sensitive, needs to match import user password entered in SFT Interfaces/Interface Host IMPORT row), and confirm the password.
- i. Enter a value for **Number Of Parallel Requests**.

The default is **1**. Enter a value greater than 1 to allow Costpoint to send more than one concurrent request with data, assuming that there are no logical dependencies. This provides for greater throughput and may help improve the performance of the data export process. This assumes that there is enough bandwidth on the SFT server, in terms of CPU and memory resources, to process multiple parallel requests.
- j. In the **Buffer Size** field, enter the number of records that you want to batch together and send in a single request to SFT.

The default is **100**. A large value will reduce the number of requests, but make each one larger, which may be desirable for networks with high latency and enough memory on CP and SFT servers.
- k. Click **Test**.
- l. When the **Connected** message displays, click **OK**.
- m. Click **Save**.
- n. Click **Ok**, and then click **Close**.

Deploy Costpoint SFT Web Services

You must perform these steps on your Costpoint WebLogic application admin server.

To enable Costpoint 8.2 Web Services:

1. Click **Start » All Programs » Costpoint 8.2 » Start Costpoint 8.2 Integration Console**.

Note: Due to enhanced security in Windows Server, use the **Run as Administrator** option when launching this command, even if you have local administrative rights.

2. On the Costpoint Integration Login screen, configure the following options, and click **Login**:

Option	Action
User	Enter the following value: CPSUPERUSER This user must have access to the Integration Console.
Password	Enter the password for your CPSUPERUSER user.
System	Select your Costpoint system from the drop-down list, for example: DELTEKCP

3. Under **Available Options**, select **Modify Integration Console Properties**, and click **Next**.
4. On the Advanced Properties tab, select **System** for **Show Web Services**.
5. When the “System web services are intended to be used internally by Costpoint. Modifying or invoking them directly can break the integration with Costpoint.” message displays, click **OK**.
6. Click **Save**.
7. Click **Close**.
8. Under **Available Options**, select **Import/Export Integration Modules**, and click **Next**.
9. Click **Import....**
10. On the Please select Web Service jar files you want to import screen, configure the following options, and click **Select**:
 - For **Mode**, select **Multiple**.
 - For **Web Service Folder**, click the ellipsis (...), and navigate to your **C:\Deltek\Costpoint\82\cpupdates\wspmfg\SFTgeneric** folder.

Note: This folder is created and populated by the Costpoint MR installer.
See MR Release Notes for notifications about updates to these web services.

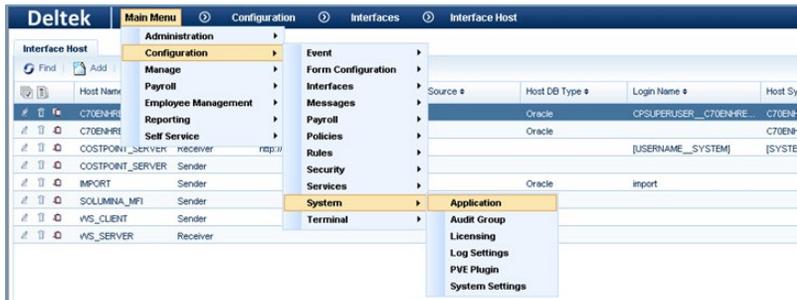
11. Click **Import**.
The following Web Services will be deployed:
LDMTIME_GEN (Manage Timesheets)
PCMCOMP_GEN (MO Operation Completions)
PCMINSP_GEN (MO QC Inspection Results)
12. When the “Hot fixes have been applied without errors.” message displays, click **OK**.
13. Click **Close**.
14. Under **Available Options**, select **Modify Integration Console Properties**, and click **Next**.
15. On the Advanced Properties tab, select **Regular** for **Show Web Services**.
16. Click **Save**.
17. Click **Close**.
18. Click **Exit**.

Configure SFT for Integration with Costpoint

These steps are performed in the Costpoint Shop Floor Time application.

Configuration » System » Application

1. From the main menu screen, click **Main Menu » Configuration » System » Application**.



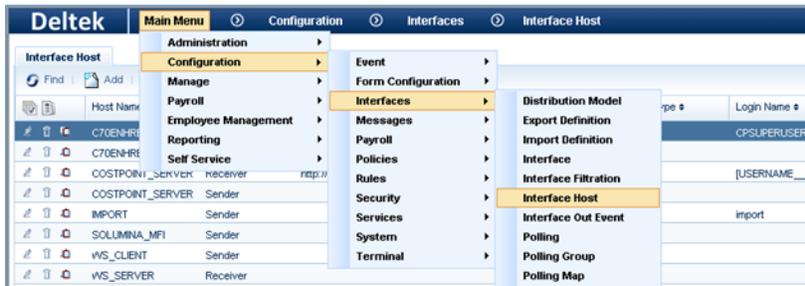
2. At the top of the screen, click the Servers tab.
3. Click **Add** and configure the following options:

Option	Action
Host Name	<p>Open a command prompt on your SFT WebLogic application server and run the hostname.exe command, for example:</p> <pre>C:\>hostname.exe SFTAPPSERVER</pre> <p>Enter the returned value, for example: SFTAPPSERVER</p>
Port	Enter the following value: 80
HTTPS Port	Enter the following value: 443

4. Click **Save**.

Configuration » Interfaces » Interface Host

1. Click **Main Menu » Configuration » Interfaces » Interface Host**.



2. On the Interface Host screen, highlight the **IMPORT** line, click **Modify**, and configure the following options:

Option	Action
Host DB Type	Select the SFT database type: Oracle or SQL Server .

Option	Action
Login Name	Enter the following value: import The login name is case-sensitive and must be entered in all lowercase.
Password	Enter a password. The password is case-sensitive. The login name and password must match the values you entered in Costpoint through the Config Utility.

3. Click **Save**.
4. Highlight the **COSTPOINT_SERVER Receiver** row, click **Copy**, and configure the following options:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

Option	Action
Host Name	Change value to your Costpoint <System Name> followed by an underscore and your Costpoint <Company ID>, for example: DELTEKCP_1
Host Type	Accept the default value of: Receiver
Host URL	Change value to: On premise Costpoint Installations: http://<CostpointIISServer>/cpweb or http://<CostpointAppServer>:7009 Costpoint GCC Moderate: PROD: https://cp-<customer>-prod.prd.mydeltekgcc.com/cpweb/

Option	Action
	<p>TEST: <a href="https://cp-<customer>-test.npr.mydeltekgcc.com/cpweb/">https://cp-<customer>-test.npr.mydeltekgcc.com/cpweb/ DEV: <a href="https://cp-<customer>-dev.npr.mydeltekgcc.com/cpweb/">https://cp-<customer>-dev.npr.mydeltekgcc.com/cpweb/</p> <p>For Costpoint GCC Standard:</p> <p>PROD: <a href="https://<customer>-cp.deltekenterprise.com/cpweb/">https://<customer>-cp.deltekenterprise.com/cpweb/ TEST: <a href="https://<customer>-cpt.deltekenterprise.com/cpweb/">https://<customer>-cpt.deltekenterprise.com/cpweb/ DEV: <a href="https://<customer>-cpd.deltekenterprise.com/cpweb/">https://<customer>-cpd.deltekenterprise.com/cpweb/</p>
Host Data Source	Leave this field blank .
Host DB Type	Select your Costpoint database type: Oracle or SQL Server .
Connection Type	Select the blank option.
Login Name	<p>Enter the user from the “Create Costpoint User for Web Service Connections from SFT” section above followed by <u>two</u> underscores and your Costpoint <System Name>.</p> <p>For example: SFTCP__DELTEKCP</p>
Password	<p>Enter the password for your Costpoint SFT Integration User.</p> <p>The username and password that you enter here are very important because they allow SFT to transfer data to and from Costpoint. Therefore, you should treat this password as sensitive information.</p>
Host System Name	Replace [SYSTEM] with your Costpoint <System Name>. For example, DELTEKCP .
Host Company	Replace [COMPANY] with your Costpoint <Company ID>. For example, 1 .

Host Name *

Host Type *

Host URL

Host Data Source

Host DB Type

Connection Type

Login Name

Password

Host System Name

Host Company

Host Timezone

5. Click **Save**.

-
- On the Interface Host screen, highlight the **DELTEKCP_1 Receiver** line and click **Test Connection**.

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

A successful connection will display “Test Connection Successful” under the Interface Host toolbar. If connection is not successful, you’ll need to go back through these steps and check your configuration.

- Highlight the **COSTPOINT_SERVER Sender** row, click **Copy**, and configure the following options:

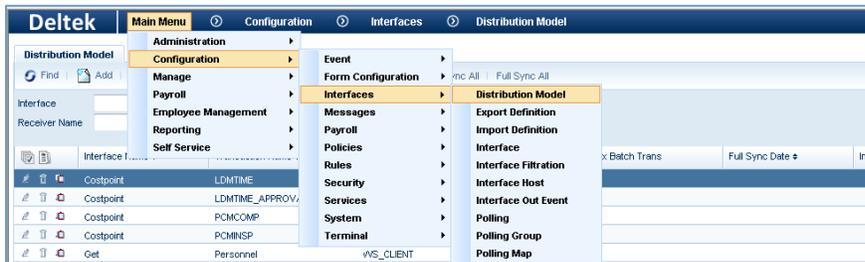
Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

Option	Action
Host Name	Replace COSTPOINT_SERVER with your Costpoint <System Name> followed by an underscore and your Costpoint <Company ID>. For example, DELTEKCP_1 .
Host Type	Accept the default of Sender .
Host URL	Leave this field blank .
Host Data Source	Leave this field blank .
Host DB Type	Select your Costpoint database type: Oracle or SQL Server .
Connection Type	Select the blank option.
Login Name	Leave this field blank .
Password	Leave this field blank .
Host System Name	Enter your Costpoint <System Name>. For example, DELTEKCP .
Host Company	Enter your Costpoint <Company ID>. For example, 1 .

8. Click **Save**.

Configuration » Interfaces » Distribution Model

1. Click **Main Menu » Configuration » Interfaces » Distribution Model**.



2. On the Distribution Model screen, perform the following steps:

Warning: You will need to repeat this for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

- a. In the **Receiver Name** field, select **COSTPOINT_SERVER** from the drop-down list, and click **Find** at the top under **Distribution Model**.

Interface Name	Transaction Name	Interface	Trans Name	Sender Name	Receiver Name	Enabled	Max Batch Tr	Full Sync Date	Incr Sync Date
Costpoint	LDMTIME			WS_CLIENT	COSTPOINT_SERVER	<input type="checkbox"/>	1		
Costpoint	LDMTIME_APPROVAL			WS_CLIENT	COSTPOINT_SERVER	<input type="checkbox"/>	1		
Costpoint	LDMTIME_APPROVAL_GEN			WS_CLIENT	COSTPOINT_SERVER	<input type="checkbox"/>	1		
Costpoint	LDMTIME_GEN			WS_CLIENT	COSTPOINT_SERVER	<input checked="" type="checkbox"/>	1		
Costpoint	PCMCOMP			WS_CLIENT	COSTPOINT_SERVER	<input type="checkbox"/>	1		
Costpoint	PCMCOMP_GEN			WS_CLIENT	COSTPOINT_SERVER	<input checked="" type="checkbox"/>	1		
Costpoint	PCMINSP			WS_CLIENT	COSTPOINT_SERVER	<input type="checkbox"/>	1		
Costpoint	PCMINSP_GEN			WS_CLIENT	COSTPOINT_SERVER	<input checked="" type="checkbox"/>	1		

- b. Highlight the **Costpoint LDMTIME_GEN** line and click **Copy**.
- c. In the **Receiver Name** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**), and click **Save**.
- d. Highlight the **Costpoint LDMTIME_APPROVAL_GEN** line and click **Copy**.
- e. In the **Receiver Name** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**), and click **Save**.
- f. Highlight the **Costpoint PCMCOMP_GEN** line and click **Copy**.
- g. In the **Receiver Name** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**), and click **Save**.
- h. Highlight the **Costpoint PCMINSP_GEN** line and click **Copy**.
- i. In the **Receiver Name** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**), and click **Save**.
- j. Verify the changes by changing the Receiver Name to **DELTEKCP_1** and click **Find**.

Interface Name	Transaction Name	Interface	Trans Name	Sender Name	Receiver Name	Enabled	Max Batch Tr	Full Sync Date
Costpoint	LDMTIME_APPROVAL_GEN			WS_CLIENT	CPPMFG_1	<input checked="" type="checkbox"/>	1	
Costpoint	LDMTIME_GEN			WS_CLIENT	CPPMFG_1	<input checked="" type="checkbox"/>	1	
Costpoint	PCMCOMP_GEN			WS_CLIENT	CPPMFG_1	<input checked="" type="checkbox"/>	1	
Costpoint	PCMINSP_GEN			WS_CLIENT	CPPMFG_1	<input checked="" type="checkbox"/>	1	

Configuration » Services » Service Instance

1. Click **Main Menu » Configuration » Services » Service Instance**.

Process Name	Instance Name	Instance Group
ATTENDANCE	Attendance Instance	ATTENDANCE
AUTOMATIC_CLOCKOUT	Auto Clock out Instance	AUTOMATIC
BADGE_RESET	Purge	BADGE_RESET
CALCULATE_RATES	Service Instance	Calculate Rates
COMPLETE_OFFLINE_STATE_CONTROLLER	Complete Offline State Controller Instance	COMPLETE

2. On the Service Interface screen, perform the following steps:

-
- a. Highlight the **IMPORT_FILES** line.
 - b. At the top of the screen, click **Modify**.
 - c. In the **HOST** field, select <your Costpoint SFT app server> from the drop-down list (for example, **CostpointSFTAppServer**).
 - d. In the **PORT** field, select <your Costpoint SFT app server port> from the drop-down list (for example, **80**).
 - e. Click **Save**.
 - f. At the bottom of the screen, click the Service Parameters tab.
 - g. In the **LOAD_TYPE** field, accept the default of **Incremental Load** from the drop-down list.
 - h. In the **SENDER_NAME** field, select **WS_CLIENT** from the drop-down list.
 - i. In the **TRANSACTION_GROUP** field, accept the default of **IMPORT** from the drop-down list.
 - j. Click **Save**.
3. On the Service Interface screen, perform the following steps:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

- a. At the top of the screen, scroll down and highlight the **OUT_COSTPOINTS** line.
 - b. At the top of the screen, click **Modify**.
 - c. In the **HOST** field, select <your Costpoint SFT app server> from the drop-down list (for example, **CostpointSFTAppServer**).
 - d. In the **PORT** field, select <your Costpoint SFT app server port> from the drop-down list (for example, **80**).
 - e. Click **Save**.
 - f. At the bottom of the screen, click the Service Parameters tab.
 - g. In the **SENDER_NAME** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**).
 - h. In the **TRANSACTION_GROUP** field, select **TIMECARD** from the drop-down list.
 - i. In the **NUMBER_PARALLEL_SEND** field, accept the default of **1** from the drop-down list.
 - j. Click **Save**.
4. On the Service Interface screen, perform the following steps:
 - a. At the top of the screen, scroll down and highlight the **OFFLINE_DATA_PROCESSOR** line.
 - b. At the top of the screen, click **Modify**.
 - c. In the **HOST** field, select <your Costpoint SFT app server> from the drop-down list (for example, **CostpointSFTAppServer**).
 - d. In the **PORT** field, select <your Costpoint SFT app server port> from the drop-down list (for example, **80**).
 - e. Click **Save**.

Configuration » Policies » Process Policy

1. Click **Main Menu » Configuration » Policies » Process Policy**.

-
2. On the Process Policy screen, configure the following:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

- a. Highlight the **COSTPOINT** line.
 - b. Click **Copy**.
 - c. In the **Policy Name** field, enter a name that signifies your Costpoint system (for example, **COSTPOINT_COMPANYNAME_POLICY**).
 - d. Click **Save**.
3. On the Process Policy screen, configure the following:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

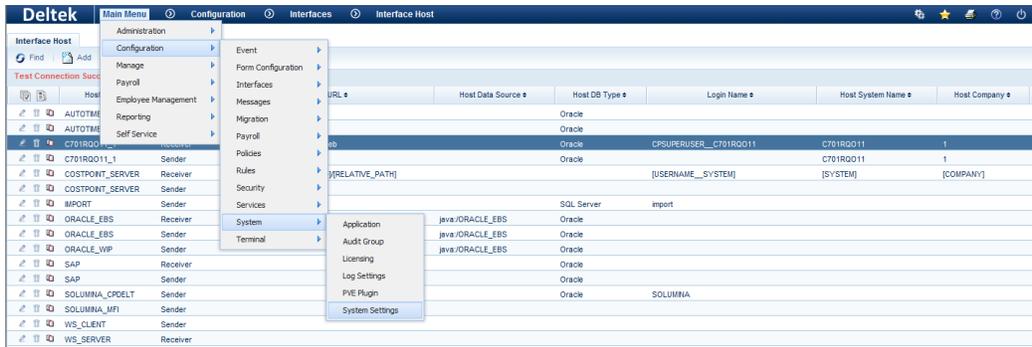
- a. Highlight the **COSTPOINT_DELTEKCP_POLICY** line.
 - b. At the bottom of the screen, click the Process tab.
 - c. Highlight the **COSTPOINT_DELTEKCP_POLICY** line.
 - d. Click **Modify**.
 - e. In the **SENDER_NAME** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**).
 - f. Click **Save**.
4. Highlight the **COSTPOINT_DELTEKCP_POLICY** line.
 5. At the bottom of the Process Policy screen, click the Event tab and configure the following:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

- a. Highlight the **PCMCOMP_EXPORT** line.
- b. Click **Modify**.
- c. In the **SENDER_NAME** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**).
- d. Click **Save**.
- e. Highlight the **PCMINSP_EXPORT** line.
- f. Click **Modify**.
- g. In the **SENDER_NAME** field, select your Costpoint <System Name> underscore <Company ID> from the drop-down list (for example, **DELTEKCP_1**).
- h. Click **Save**.

Configuration » System » System Settings

1. Click **Main Menu » Configuration » System » System Settings**.



2. On the System Settings screen, click **Add**, and configure the following options:

Warning: If you are configuring Costpoint SFT 2.1 to work with more than one Costpoint system, you **must** skip this step. You will need to set the proper Process Policy in the corresponding Employee Group (Policy Group or Facility) instead of the System Settings so that different employees can be assigned to different Process Policies.

Option	Action
Setting Type	Select Process Policy .
Setting Value	Select COSTPOINT_COMPANYNAME_POLICY .

3. Click **Save** and exit SFT.

Configure SFT for JWT Authentication to Costpoint

JSON Web Token (JWT) is an open standard used to share security information between a client and a server.

Create Private/Public Keypair for JWT Authentication

JWT is the preferred authentication method for accessing Costpoint Web Services. This is a requirement when Costpoint is in Deltek's GovCon Cloud Moderate environment. These commands require Java. Use these exact commands, replacing <text> and also validity days if desired. The resulting keystore.jks file should only be accessible to the SFT system administrators.

1. Create a Private/Public Key Pair with Keytool:

```
%JAVA_HOME%\bin\keytool -genkeypair -alias jwtcostpoint -keyalg RSA -validity 1825 -dname "CN=SFTCP, OU=CP, O=<Company>, L=<City>, ST=<ST>, C=US" -keystore keystore.jks -keypass <password> -storepass <password>
```

2. Export the Public Key for Costpoint Web Service User Configuration:

```
%JAVA_HOME%\bin\keytool -export -alias jwtcostpoint -keystore keystore.jks -rfc -file sft-public.pem -keypass <password> -storepass <password>
```

3. Rename **sft-public.pem** to **sft-public.txt** for easier upload to Costpoint.

Copy JKS Keystore to the SFT Application Server

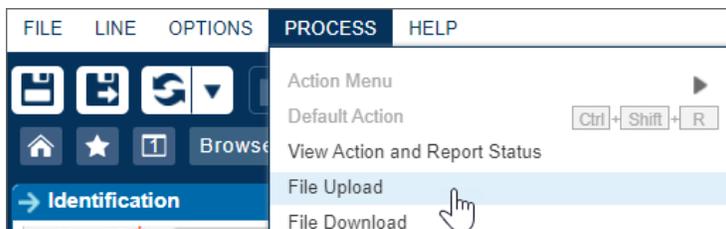
You must perform this step on the SFT application server.

1. Create the C:\Deltek\CostpointSFT\certificate folder.
2. Copy the **keystore.jks** file to the C:\Deltek\CostpointSFT\certificate folder.

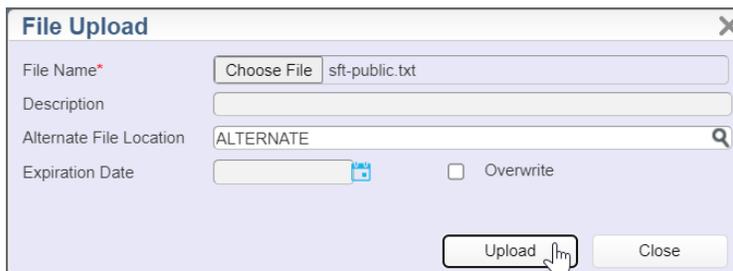
Enable JWT Authentication for Costpoint User

1. Upload the **sft-public.txt** file to Costpoint:

- a. Select **File Upload** from the PROCESS menu:

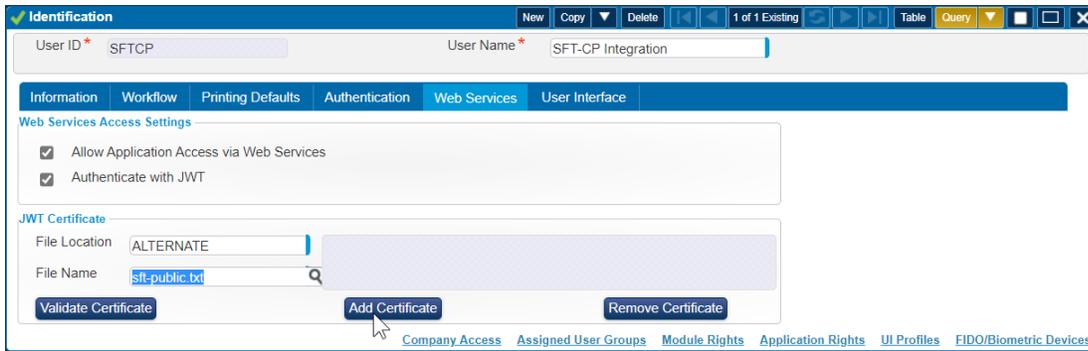


- b. Click **Choose File** and select the **sft-public.txt** file, select an Alternate File Location, and click **Upload**.

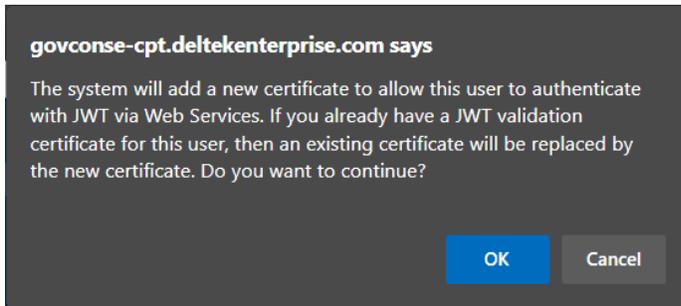


2. Add Certificate (Public Key) to Costpoint User:

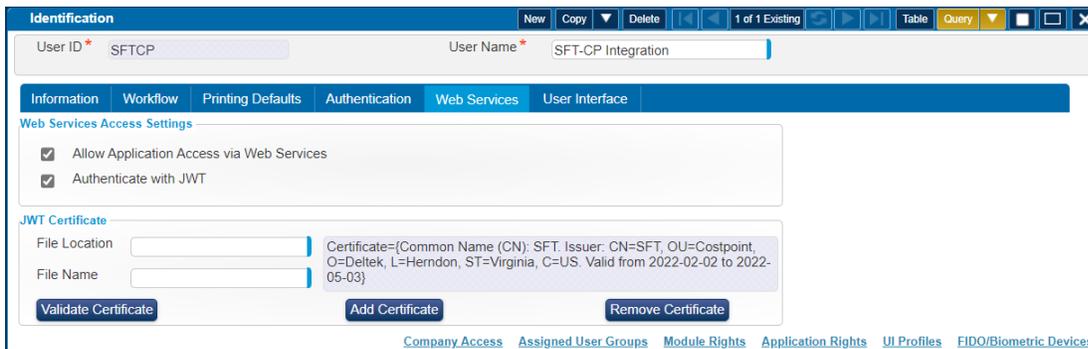
- a. On the **Web Services** page, enter the **File Location** and **File Name** from step 1, and click **Add Certificate**.



3. Click **OK** when prompted.



4. If the certificate is added successfully, the record will be saved, and you will see the certificate information:



Modify Transaction Request Authentication Method

1. Click **Main Menu » Configuration » Interfaces » Transaction Request**.
2. In the **Interface Name** field, select **Costpoint** from the drop-down list, and click **Find** at the top under **Transaction Request**.

Deltek Main Menu Configuration Interfaces Transaction Request Process Name

Transaction Request

Filter Find Clear Add Modify Delete Copy Download

Interface Name: Costpoint Transaction Name: Document Type: Record Type: Data Type:

Interface Name	Transaction Name	Interface Version	Document Type	Record Type	Data Type	Http Method	Relative Uri
Costpoint	LDMTIME	7.0	Data	Out Bound	Xml	Post	/
Costpoint	LDMTIME_APPROVAL	7.0	Data	Out Bound	Xml	Post	/
Costpoint	LDMTIME_APPROVAL_GEN	7.0	Data	Out Bound	Xml	Post	/
Costpoint	LDMTIME_GEN	7.0	Data	Out Bound	Xml	Post	/
Costpoint	PCMCOMP	7.0	Data	Out Bound	Xml	Post	/
Costpoint	PCMCOMP_GEN	7.0	Data	Out Bound	Xml	Post	/
Costpoint	PCMINS	7.0	Data	Out Bound	Xml	Post	/
Costpoint	PCMINS_GEN	7.0	Data	Out Bound	Xml	Post	/

- Highlight the **LDMTIME_GEN** line.
- At the bottom of the screen, click the **Element** tab.
- Highlight the record with Element Node **Security.UsernameToken.Password**.

Header Element Action Sort

Find Add Modify Delete Copy Download Move Up Move Down

Transaction Name	Interface Name	Interface Version	Document Type	Record Type	Element Section	Element Node
LDMTIME_GEN	Costpoint	7.0	Data	Out Bound	Header	Security.UsernameToken.Nonce
LDMTIME_GEN	Costpoint	7.0	Data	Out Bound	Header	Security.UsernameToken.Nonce.EncodingType
LDMTIME_GEN	Costpoint	7.0	Data	Out Bound	Header	Security.UsernameToken.Password
LDMTIME_GEN	Costpoint	7.0	Data	Out Bound	Header	Security.UsernameToken.Password.Type
LDMTIME_GEN	Costpoint	7.0	Data	Out Bound	Header	Security.UsernameToken.Username

- Click **Modify**.
- In the **Value Type** field, select **Class** from the drop-down list.
- In the **Value** field, enter "**com.kaba.interfaces.xml.soap.field.value.JWTToken**".

Modify Interface Transaction Element

Transaction Name * LDMTIME_GEN

Element Section * HEADER

Element Node * Security.UsernameToken.Password

Element Name * Password

Element Type * ELEMENT

Prefix wsse

Uri

Value Type Class

Value com.kaba.interfaces.xml.soap.field.value.JWTToken

CData *

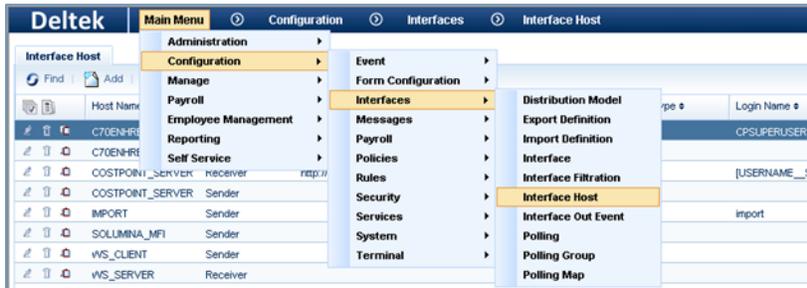
Enabled *

Save Cancel

9. Click **Save**.
10. Repeat steps 3 through 9 for each of the transaction names: **LDMTIME_APPROVAL_GEN**, **PCMCOMP_GEN**, and **PCMINSP_GEN**.

Modify Interface Host Parameters

1. Click **Main Menu » Configuration » Interfaces » Interface Host**.



2. On the Interface Host screen, perform the following steps:

Warning: You will need to repeat this step for each Costpoint system you are configuring to work with Costpoint SFT 2.1.

- a. Highlight the record with Parameter Name **KEYSTORE_NAME**.
- b. Click **Modify**.
- c. In the **Parameter Value** field, enter the JKS Keystore name: keystore.jks
- d. Click **Save**.

Configuring SFE to SFT Rest Integration

You need to set up the SFT Rest configuration within SFT to create the connection between SFT and TIP SFE. You can perform this step from any Windows client workstation that has TCP/IP access to your SFT WebLogic application server.

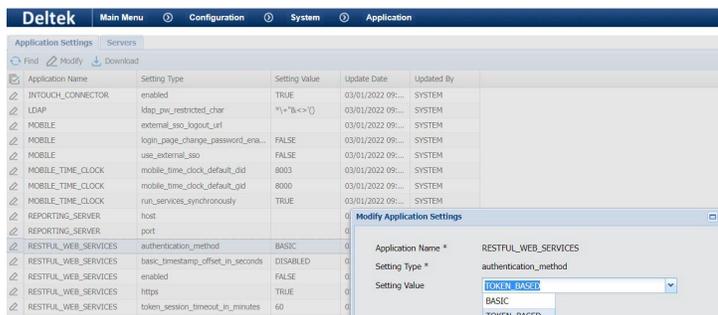
Enable REST Web Services

To enable REST web services:

1. Make sure SFT is installed and your SFT WebLogic server is running.
2. Open your web browser, and enter the following URL: `http://<costpoint>/costpointsf`, in which:
 - **<IPAddress or Computer Name>** identifies your SFT WebLogic application server.
 - **<Port>** is the unique port number that your SFT WebLogic application server uses to listen for connections. You specified this port value when you installed the SFT software. The default is 7001.

For example, `http://CostpointSFTAppServer:7001/costpointsf`

3. On the Deltek Welcome to Shop Floor Time screen, enter the following:
 - **Username:** Enter ADMIN.
 - **Password:** Enter 5679.
 - **Dictionary:** Accept the Default English Dictionary (DEFAULT_EN_US).
4. Click **Login**.
5. From the main menu screen, click **Main Menu » Configuration » System » Application**.
6. Click the Application Settings tab
7. Click filter and find RESTFUL_WEB_SERVICES in the drop down.
8. Highlight the **Authentication_Method** record and click **Modify**.
9. Set the drop-down list value to **TOKEN_BASED**.



10. Highlight the **enabled** record and click **Modify**.
11. Set the value to **TRUE**

12. You can also modify the `token_session_timeout_in_minutes` to a value other than 60 minutes.

RESTFUL_WEB_SERVICES	authentication_method	TOKEN_BASED
RESTFUL_WEB_SERVICES	basic_timestamp_offset_in_seconds	DISABLED
RESTFUL_WEB_SERVICES	enabled	TRUE
RESTFUL_WEB_SERVICES	https	TRUE
RESTFUL_WEB_SERVICES	token_session_timeout_in_minutes	60

Create an Interface Host Record

To interface with the TIP application, you need to define an Interface Host record for the TIP integration.

To create an interface host record:

1. From the main menu screen, click **Main Menu » Configuration » Interfaces » Interface Host**.
2. Locate the **RWS_SERVER** host record and click **Copy**.
3. Name the new record **TIP_SFE_SERVER**.

Note: This must be the name of the record for the integration to work properly.

4. Complete the following host parameters:

- **Connection Type:** Select **Rest**.
- **Login Name:** Enter TIPSFEACTIONAPI. (This must be the login name)
- **Password:** Create a password to use for the integration.

Note: The Login Name and Password set on this screen will be required for the TIP to SFT connection within the TIP application.

- **Host System Name:** Set this to your Company Name and SFT (that is, Applied Tech TEST SFT).
 - **Host Company Name:** Set this to your Company Name and SFT (that is, Applied Tech SFT).
 - **Timezone:** Set this to the SFT server time zone.
5. Click **Save**.

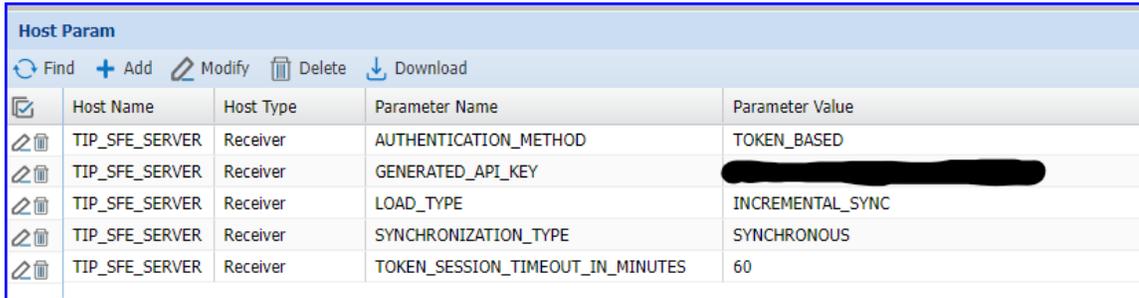
The screenshot shows a 'Modify Interface Host' dialog box with the following fields and values:

Field	Value
Host Name *	TIP_SFE_SERVER
Host Type	Receiver
Host URL	
Host Data Source	
Host DB Type	
Connection Type	Rest
Login Name	TIPSFEACTIONAPI
Password
Host System Name	UKG AutoTime Demo
Host Company	UKG ASG
Host Timezone	Eastern Standard Time

Buttons: Save, Cancel

Configure the TIP_SFE_SERVER

1. From the main menu screen, click **Main Menu » Configuration » Interfaces » Interface Host**.
2. Select the TIP_SFE_SERVER record.
3. On the bottom-half of the screen, add the following parameters:



The screenshot shows a table titled "Host Param" with the following columns: Host Name, Host Type, Parameter Name, and Parameter Value. The table contains five rows of data for the TIP_SFE_SERVER host type. The second row has a redacted value for the Parameter Value.

Host Name	Host Type	Parameter Name	Parameter Value
TIP_SFE_SERVER	Receiver	AUTHENTICATION_METHOD	TOKEN_BASED
TIP_SFE_SERVER	Receiver	GENERATED_API_KEY	[REDACTED]
TIP_SFE_SERVER	Receiver	LOAD_TYPE	INCREMENTAL_SYNC
TIP_SFE_SERVER	Receiver	SYNCHRONIZATION_TYPE	SYNCHRONOUS
TIP_SFE_SERVER	Receiver	TOKEN_SESSION_TIMEOUT_IN_MINUTES	60

- a. Click **Add**
- b. From the drop-down lists, select **AUTHENTICATION_METHOD** as the **Parameter Name** and **TOKEN_BASED** as the **Parameter Value** , and then click **Save**.
- c. Click **Add**.
- d. From the drop-dow list, select **GENERATED_API_KEY** as the **Parameter Name**, and then click **Save**.

Note: You will need this API key in the TIP application to complete the TIP to SFT configuration.

The API Key is in essence a complex password value. This value must be known by SFE to use the integration. The API key may be generated by SFT when the Parameter Name "GENERATE_API_KEY" is selected and saved. This key may also be generated using other tools or manually created.

- e. Click **Add**, select the following values from the drop-down lists - **LOAD_TYPE** as the **Parameter Name** and **INCREMENTAL_SYNC** as the **Parameter Value**, and then click **Save**.
- f. Click **Add**, select the following values from the drop-down lists - **SYNCHRONIZATION_TYPE** as the **Parameter Name** and **SYNCHRONOUS** as the **Parameter Value**, and then click **Save**.
- g. Click **Add**, select the following values from the drop-down lists - **TOKEN_SESSION_TIMEOUT_IN_MINUTES** as the **Parameter Name** and **60** as the **Parameter Value**, and then click **Save**.

Note: This value will override the Token_Session_timeout value on the RESTFUL_Web_services screen. It can be set higher or lower based on business requirements.

Create the Import Definition

Now that the integration points are established, you need to define the import definition for the data that will update between SFT and TIP.

To create the import definition:

1. From the main menu screen, click **Main Menu » Configuration » Interfaces » Import Definition**.
2. Define a new Import Source by setting the Import Type to **JSON**.
3. On the **Import Name** field, click the pencil icon, and then click **Add**.



4. Set the import name to **TIPSFEjson**.
This must be set to this name for the integration import to work properly.
5. Set the Import Type to **JSON**.
6. Click **Add**.
7. Set the Source IND to **In Queue**.
8. Set the XML Selector to **action**.
9. Ensure that the **Enabled** check box is selected.
10. Click **Save**.

Modify Import Source

Import Name *	TIPSFEjson
Import Type *	JSON
Source Ind *	In Queue
Source Folder ([APPLICATION_HOME]\import\)	
Source Wildcard	
Backup Type *	Backup
Backup Folder ([APPLICATION_HOME]\import\)	backup
Backup Wildcard	
Backup Time Stamp	Append
Skip Line Count *	0
Field Separator	
XML Selector	action
Script Header	
Import Lookup	
Enabled *	<input checked="" type="checkbox"/>

Save Cancel

Define the Destination Records

To define destination records:

1. Find the TIPSFEjson record. You can filter using Import Type of JSON and Import Name TIPSFEjson
2. On the Destination Records tab, click **Add**.
If you get an error window when you click **Add**, use the **Find** button on the Destination Records tab, and then click the **Add** button again.
3. Set the **Context Name** to **ACTION**.
4. Set the **XML Source Selector** to **action**.
5. Click **Save**.

Import Name *	TIPSFEjson
Context Name *	ACTION
Record Name *	ACTION
Sequence Num	0
XML Source Selector	action
Skip Record *	<input type="checkbox"/>
Skip Empty Value *	<input type="checkbox"/>

Define the Value Map

1. With the TIPSFEjson record highlighted, go to the Record Value Map and click **Add**.
2. Set the **Field Name** to **DID – F Did**.
3. The **Field Value Type** remains as **STATIC**.
4. Set the **Field Value** to **8000**.
5. Save the record.
6. Click **Add**.
7. Set the **Field Name** to **GID – F Gid**. (Scroll down the list to find it. Ensure that the **Field Name** is **F GID** after you save.)
8. The **Field Value Type** remains **STATIC**.
9. Set the **Field Value** to **8000**.
10. Save the record.
11. Click **Add**.

Your screen should look like this:

Configure Source Fields for the Import Definition

These are the basic Import Definitions, depending upon the customer's needs, there may be additional definitions required. Click the Source Fields tab on the lower portion of the screen while the TIPSFEjson record is highlighted.

The following are the required Source Fields:

1. Mapped Field – ACTION. Person Num
 - a. Record Name is **Action**
 - b. Field Name is **Person Num – FI_PERSON_NUM**
 - c. Source Alias – **personNum**
 - d. **Click the use Source Alias box** and it puts this into the Source Rule - `<#if (action.personNum)?has_content >${action.personNum}<elseif (action.*.personNum)?has_content >${action.*.personNum}<#else></#if>`
2. Mapped Field – ACTION.Stage
 - a. Field Name – **Stage-FI_STAGE**
 - b. Source Alias – **eventStage**
 - c. [Click the Source Alias box](#)
3. Mapped Field – ACTION.Post Event Name
 - a. Field Name – **Post Event Name – FI_POST_EVENT_NAME**
 - b. Source Alias – **eventName**
 - c. [Click the Source Alias box](#)
4. Mapped Field - Is Offline Transaction
 - a. Field Name – **Interface Offline**
 - b. Source Alias – **isOffline**
 - c. [Click the Source Alias box](#)
5. Mapped Field – F Work Center

- a. Field Name – **WorkCenter F_WORK_CENTER**
 - b. Source Alias – **workCenter**
 - c. Click the Source Alias box
- 6. Mapped Field – F Project
 - a. Field Name – **Project – F_PROJECT**
 - b. Source Alias – **projectNum**
 - c. Click the Source Alias box
- 7. Mapped Field – F task
 - a. Field Name **Task – F Task**
 - b. Source Alias – **taskNum**
 - c. Click the Source Alias box
- 8. Mapped Field – Timestamp
 - a. Field name – **Timestamp – FI_TIMESTAMP**
 - b. Formats – **format_datetime**
 - c. Source Alias – **timestamp**
 - d. Click the Source Alias box
- 9. Mapped Field – blank Source Alias timezone
 - a. Field Name – **Timezone – FI_TIMEZONE**
 - b. Source Alias – **timezone**
 - c. Click the Source Alias box
- 10. Mapped Field - F Account
 - a. Field Name – **Account – F_ACCOUNT**
 - b. Source Alias – **account**
 - c. Click the Source Alias box
- 11. Mapped Field – F Event Location
 - a. Field Name – **Event Location F_EVENT_LOCATION**
 - b. Source Alias – **location**
 - c. Click the Source Alias box
- 12. Mapped Field – F Organization
 - a. Field Name – **Organization – F_ORGANIZATION**
 - b. Source Alias – **organization**
 - c. Click the Source Alias box
- 13. Mapped Field – F Labor Type
 - a. Field Name **Labor Type – F_LABOR_TYPE**
 - b. Source Alias – **laborType**
 - c. Click the Source Alias box
- 14. Mapped Field – F Order Num
 - a. **Field Name** – Hold the order number for the workorder – F_ORDER_NUM
 - b. Source Alias – **orderNum**
 - c. Click the Source Alias box
- 15. Mapped Field – F Operation Num
 - a. **Field Name** – Hold the order number for the Operation – F_OPERATION_NUM
 - b. Source Alias – **operationNum**
 - c. Click the Source Alias box

Your screen should be similar to this sample.

Note: Some unused or redundant columns have been hidden for clarity of display.

Import Definition					
Find <input type="checkbox"/> Validate <input checked="" type="checkbox"/> Schedule Immediately <input type="checkbox"/> Import File <input type="button" value="Import File"/>					
Import Type	JSON	Import Name	TIPSFEjson	Instance Name	IMPORT_JSON
Import File Name	<input type="text"/> Browse...				
Destination Records					
Source Fields					
Query Fields					
Lookup Fields					
Find <input type="checkbox"/> Add <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> Download <input type="button" value="Download"/> Move Up <input type="button" value="Move Up"/> Move Down <input type="button" value="Move Down"/>					
Import Name	Mapped Fields	Formats	Source Alias	Source Rule	
TIPSFEjson	ACTION.Person Num		personNum	<#if (action.personNum)?has_content >\${action.personNum}<#else (action."personNum"?has_content >\${action."personNum"}<#else </#if>	
TIPSFEjson	ACTION.Stage		eventStage	<#if (action.eventStage)?has_content >\${action.eventStage}<#else (action."eventStage"?has_content >\${action."eventStage"}<#else </#if>	
TIPSFEjson	ACTION.Post Event Name		eventName	<#if (action.eventName)?has_content >\${action.eventName}<#else (action."eventName"?has_content >\${action."eventName"}<#else </#if>	
TIPSFEjson	ACTION.Is Offline Transaction		isOffline	<#if (action.isOffline)?has_content >\${action.isOffline}<#else (action."isOffline"?has_content >\${action."isOffline"}<#else </#if>	
TIPSFEjson	ACTION.F Work Center		workCenter	<#if (action.workCenter)?has_content >\${action.workCenter}<#else (action."workCenter"?has_content >\${action."workCenter"}<#else </#if>	
TIPSFEjson	ACTION.F Project		projectNum	<#if (action.projectNum)?has_content >\${action.projectNum}<#else (action."projectNum"?has_content >\${action."projectNum"}<#else </#if>	
TIPSFEjson	ACTION.F Task		taskNum	<#if (action.taskNum)?has_content >\${action.taskNum}<#else (action."taskNum"?has_content >\${action."taskNum"}<#else </#if>	
TIPSFEjson	ACTION.Timestamp	format_datetime	timestamp	<#if (action.timestamp)?has_content >\${action.timestamp}<#else (action."timestamp"?has_content >\${action."timestamp"}<#else </#if>	
TIPSFEjson			timezone	<#if (action.timezone)?has_content >\${action.timezone}<#else (action."timezone"?has_content >\${action."timezone"}<#else </#if>	
TIPSFEjson	ACTION.F Account		account	<#if (action.account)?has_content >\${action.account}<#else (action."account"?has_content >\${action."account"}<#else </#if>	
TIPSFEjson	ACTION.F Event Location		location	<#if (action.location)?has_content >\${action.location}<#else (action."location"?has_content >\${action."location"}<#else </#if>	
TIPSFEjson	ACTION.F Organization		organization	<#if (action.organization)?has_content >\${action.organization}<#else (action."organization"?has_content >\${action."organization"}<#else </#if>	
TIPSFEjson	ACTION.F Labor Type		laborType	<#if (action.laborType)?has_content >\${action.laborType}<#else (action."laborType"?has_content >\${action."laborType"}<#else </#if>	
TIPSFEjson	ACTION.F Order Num		orderNum	<#if (action.orderNum)?has_content >\${action.orderNum}<#else (action."orderNum"?has_content >\${action."orderNum"}<#else </#if>	
TIPSFEjson	ACTION.F Operation Num		operationNum	<#if (action.operationNum)?has_content >\${action.operationNum}<#else (action."operationNum"?has_content >\${action."operationNum"}<#else </#if>	

Set Up Field Translations

To set up field translations:

1. Click the **Post Event Name Entry** and click **Field Translation**.

Field Map			Field Format			Field Translation		
Find <input type="checkbox"/> Add <input type="checkbox"/> Modify <input type="checkbox"/> Delete <input type="checkbox"/> Download <input type="button" value="Download"/>								
<input type="checkbox"/>	Source Value	Destination Value						
<input type="checkbox"/>	B	BREAK						
<input type="checkbox"/>	L	Work Order with Moves						
<input type="checkbox"/>	M	Filler Time						
<input type="checkbox"/>	U	MEAL						

- a. Click **Add**.
- b. Enter Source of **B**.
- c. Enter Destination of **Break**.
Break is used as an example; however, the Destination Value for this field should be the name of the Break event being used in the Menu Tree.
- d. Click **Add**.
- e. Enter Source of **L**.
- f. Enter Destination of **Work Order with Moves**.
Work Order with Moves is used as an example; however, the Destination Value for this field should be the name of the Work Order event being used in the Menu Tree.
- g. Click **Add**.
- h. Enter Source of **M**.
- i. Enter Destination of **Filler Time**.
Filler time is used as an example; however, the Destination Value for this field should be the name of the Gap Event being used in the Menu Tree.
- j. Click **Add**.

- k. Enter Source of **U**.
 - l. Enter Destination of **Meal**.
2. On the Labor Type – click on Field Translation

Field Map		Field Format		Field Translation	
	Find		Add		Modify
	Delete		Download		
	Source Value	Destination Value			
	REG	Run			
	REW	Rework			
	SET	Setup			

- a. Click **Add**.
 - b. Enter Source of **REG**.
 - c. Enter Destination of **Run**.
 - d. Click **Add**.
 - e. Enter Source of **REW**.
 - f. Enter Destination of **Rework**.
 - g. Click **Add**.
 - h. Enter Source of **SET**.
 - i. Enter Destination of **Setup**.
3. On the Timestamp – click on Field Format
- a. Click **Add**.
 - b. Format Name is format_datetime.
 - c. Set DateTime Format to yyyyMMddHHmmssZ.

Field Map		Field Format		Field Translation	
	Find		Add		Modify
	Delete		Download		Move Up
	Move Down				
	Import Name	Format Name	Parameter 1	Parameter 2	
	TIPSFEjson	format_datetime	yyyyMMddHHmmssZ		

Distribution Model

Create an Interface Distribution Model Record

The Distribution Model allows the traffic to start flowing.

To create the interface distribution model record:

1. From the main menu screen, click **Main Menu » Configuration » Interfaces » Distribution Model**.
2. Click **Add**.
3. Select **Import** from the Interface Name drop down.
4. Select **Action** from the Transaction Name drop down.
5. Set the Interface Name Alias to TIPSFEACTION.
6. Select RWS_CLIENT for the Sender Name.
7. Select TIP_SFE_SERVER for the Receiver Name.
8. Set the Max Batch Transactions to 1000.
9. Set the Import name to TIPSFEjson from the drop-down list (alternatively, you can also type T and you will see the record).
10. Set the Logical Name to TIP_SFE_ACTION_IMPORT.
11. Set the Sequence Num to 0.
12. Make sure that **Enabled** is selected.
13. Click **Save**.

Modify Interface Distribution Model

Interface Name *	Import
Transaction Name *	Action
Interface Name Alias	<input type="text" value="TIPSFEACTION"/>
Trans Name Alias	<input type="text"/>
Sender Name *	RWS_CLIENT
Receiver Name *	TIP_SFE_SERVER
Max Batch Trans *	<input type="text" value="1000"/>
Batch Group By	<input type="text"/>
Import Name	<input type="text" value="TIPSFEjson"/>
Export Context	<input type="text"/>
Export Name	<input type="text"/>
Logical Name	<input type="text" value="TIP_SFE_ACTION_IMPORT"/>
Sequence Num	<input type="text" value="0"/>
Enabled *	<input checked="" type="checkbox"/>

Time Zone Considerations

SFE transmits all action timestamps to SFT as UTC (GMT). SFT maintains all timestamps as GMT. Conversion to the users' working time zone is performed based upon the time zone assigned to the employee. SFE maintains a single time zone for each supported business unit. If more than a single time zone is to be supported by SFE, multiple business units must be configured.

Error Handling

Out of Sequence Punches

SFT is a stateful design and requires that punches be processed in a chronological sequence. Examples include the requirement for a user to be clocked into SFT before they can begin reporting labor, and the requirement that a labor must first be started before it can be stopped. Violation of these sequential requirements will result in SFT generating an error message response back to SFT. For example, if an employee has not clocked in (attendance punch) in SFT, and SFE sends a labor start, SFT will mark the interface record as an error and return a message to SFE indicating that the user must first be clocked in before starting a labor. The labor will not be recorded in SFE. The user must clock into SFT first, and then begin the labor in SFE. The earlier erroneous labor start is marked as an error and is not retransmitted to SFT; only the new labor start will be transmitted.

SFE Cannot Reach SFT

It is possible that SFE is unable to connect with SFT due to network or server technical problems. In this case, when SFE sends a labor start or stop but fails to receive a timely response (success or failure) from SFT, that record will be marked as offline. When SFT becomes available again, the records marked as offline will be processed in an offline fashion. Transmission of the message will result in a success message, but the success or failure of the data record import will not be reported.

Out of Scope for This Inbound SFT Integration

Valid Charge Items

Existing integration between Costpoint and SFT shall continue to be utilized for all validation data (Manufacturing Orders, Routings, Work Centers, Projects, and so on).

Person Data

Existing integration for import of all person data shall continue to be utilized as is.

Appendix: If You Need Assistance

If you need assistance installing, implementing, or using Deltek Costpoint Manufacturing Execution, 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.

About Deltek

Better software means better projects. Deltek delivers software and information solutions that enable superior levels of project intelligence, management, and collaboration. Our industry-focused expertise makes your projects successful and helps you achieve performance that maximizes productivity and revenue. www.deltek.com