

Tungsten APAgility ERP Connector SAP S/4HANA On-Premise Getting Started Guide

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TUNGSTEN
AUTOMATION

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Document revision history

Date	Revision	Description
07 December, 2021	1.0	Initial Version released with Tungsten AP Agility ERP Connector - SAP S/4HANA On-Premise 1.0.0
19 May, 2022	1.1	Added document revision history and updated title page to match the other Tungsten AP Agility documents.
22 April, 2024	1.2	Branding update due to company name change.

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Preface

This guide contains the information about installing the SAP S/4HANA On-Premise ERP Connector. This guide is intended for solution integrators who need a description of the installation and integration procedures.

This guide is written with the assumption that you have a thorough understanding of Tungsten TotalAgility and some knowledge of SAP.

Related documentation

In addition to this guide, see the following documentation for additional installation and configuration information.

The full product document set for Tungsten AP Agility is available here:

<https://docshield.tungstenautomation.com/Portal/Products/APAgility/2025.1-j1u9a8a63z/APAgility.htm>

Tungsten AP Agility Installation Guide

This guide provides instructions for installing Tungsten AP Agility and integrating it with Tungsten TotalAgility.

For more information about installing Tungsten TotalAgility refer to *Tungsten TotalAgility Installation Guide*

Tungsten AP Agility On-Premise Multi-Tenant Installation Guide

This guide provides information about installing the on-premise components you may need to get Tungsten AP Agility to work in a multi-tenant TotalAgility environment or a Tungsten Automation hosted TotalAgility Azure environment.

Tungsten AP Agility Configuration Help

This help provides detailed information on how to configure Tungsten AP Agility for your environment.


Training

Tungsten Automation offers both on-demand and instructor-led training to help you make the most of your product. To learn more about training courses and schedules, visit the [Tungsten Automation Learning Cloud](#).

Getting help with Tungsten Automation products

The [Tungsten Automation Knowledge Portal](#) repository contains articles that are updated on a regular basis to keep you informed about Tungsten Automation products. We encourage you to use the Knowledge Portal to obtain answers to your product questions.

To access the Tungsten Automation Knowledge Portal, go to <https://knowledge.tungstenautomation.com/>.

 The Tungsten Automation Knowledge Portal is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Tungsten Automation Knowledge Portal provides:

- Powerful search capabilities to help you quickly locate the information you need.
Type your search terms or phrase into the **Search** box, and then click the search icon.
- Product information, configuration details and documentation, including release news.
To locate articles, go to the Knowledge Portal home page and select the applicable Solution Family for your product, or click the View All Products button.

From the Knowledge Portal home page, you can:

- Access the Tungsten Automation Community (for all customers).
On the Resources menu, click the **Community** link.
- Access the Tungsten Automation Customer Portal (for eligible customers).
Go to the [Support Portal Information](#) page and click **Log in to the Customer Portal**.
- Access the Tungsten Automation Partner Portal (for eligible partners).
Go to the [Support Portal Information](#) page and click **Log in to the Partner Portal**.
- Access Tungsten Automation support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.
Go to the [Support Details](#) page and select the appropriate article.

Chapter 1

Integrate with Enterprise Resource Planning systems

Tungsten AP Agility exports all validated and approved invoices to the Enterprise Resource Planning system (ERP) through a connector plugin. When you first install Tungsten AP Agility, you installed the ERP Agnostic connector. The ERP Agnostic connector provides an ERP-neutral way of integration by transferring data to and from folders.

In addition to the ERP Agnostic connector Tungsten Automation provides a plugin for the SAP S/4HANA On-Premise ERP system.

For more information on installing ERP connectors, see the *Tungsten AP Agility Installation Guide* or the *Tungsten AP Agility On-Premise Multi-Tenant Installation Guide*.

For more information on configuring ERP connectors in Tungsten AP Agility, see the *Tungsten AP Agility Configuration Help*.

Install SAP S/4HANA On-Premise ERP plugin

The SAP S/4HANA On-Premise ERP connector is hosted by either Tungsten TotalAgility or by [IIS](#). For the best results, deploy the SAP S/4HANA On-Premise ERP plugin in Tungsten TotalAgility as this performs better and provides Live Access to the ERP data.

You can install the SAP S/4HANA On-Premise ERP plugin so that it is hosted by Tungsten TotalAgility by following these steps:

1. Download and extract the contents of the `TungstenAPAgilityERPConnector-1.0.0_For_SAPS4HANA.ZIP` file.
2. Launch the TotalAgility Designer.
3. On the menu, select **Import**.
The **Import** page is displayed.
4. Click **Browse**, navigate to your extracted files, and then select `\KTA\ERP Connector SAP S4HANA OnPremise.ZIP`.

A list of artifacts for import are displayed for that package.

5. Click **Import**.

When prompted to confirm the import, click **OK**.

When the ERP plugin is imported successfully a message is displayed. It is now possible to configure your Tungsten AP Agility solution to use the SAP S/4HANA On-Premise ERP system.

Deploy the SAP S/4HANA On-Premise ERP plugin on IIS

When you use the Tungsten TotalAgility Integration Server, the SAP S/4HANA On-Premise ERP connector needs to be hosted by IIS on the Tungsten TotalAgility Integration Server side.

For example, use this method when Tungsten TotalAgility is deployed in a Tungsten Automation hosted Azure environment and a direct connection between Tungsten TotalAgility and the SAP OData services is not possible.

You can deploy the SAP S/4HANA On-Premise ERP plugin on IIS by following these steps:

1. In the extracted files, navigate to the `WebService` folder.
2. Copy the `Tungsten Automation.APAgility.ERPConnector.SAPS4Hana.dll` file to the `\bin` folder in the location where the Tungsten AP Agility ERP connector web service was installed.

By default, the installation location is `%ProgramFiles (x86)%\Tungsten Automation\APAgility\Web`.

Look at the `ApAgilityErpConnector` application in IIS to confirm the installation path.

For more information on installing the ERP connector web service refer to the *Tungsten AP Agility On-Premise Multi-Tenant Installation Guide*.

3. Launch the TotalAgility Designer.
4. On the menu, select **System data > Server variables**.
A list of server variables for the default category is displayed.
5. From the **Category** list, select **APAgility**.
A list of server variables for the AP Agility category are displayed.
6. Locate and select the `ERPConnector.Plugin.SAP.S/4HANA On-Premise` variable.
The **Edit server variable** window is displayed so that you can edit this variable.
7. In the **Value** field, edit the following information inside the Json entry:

```
"Execution": "WebService",  
"POLiveAccessEnabled": false
```

8. Click **Save**.
The **Edit server variable** window closes and you are returned to the list of server variables for AP Agility.


Import the SAP transport into Tungsten AP Agility

The SAP transport installs custom OData services that are needed to activate the SAP S/4HANA On-Premise ERP plugin and these services require manual activation.

Your company probably has its own procedures in place to import SAP transports into your SAP system, so use the following steps as a guideline only.

1. Log on to SAP as a user that is authorized to import SAP transports.
2. Use the `CG3Z` transaction code to load the transport into your system.
The transport is located in the `/Transport` folder in the `.ZIP` file.

3. Navigate to the Transport Management System using the `STMS` transaction code.
4. Click the **Import Overview** button in the top-left corner.
The **Import Overview** window is displayed with the import queues for your system.
5. Double-click on the row in the import queue that you are using for the transfer.
Tungsten AP Agility opens the **Import Queue** window.
6. Select the import queue that matches your system.
7. Select **Extras > Other Requests > Add**.
8. In the **Add Transport Request** on the **Import Queue** window, enter the transport request and then press Enter.
9. Select the transport number request and click **Import Request**.
10. Specify the **Target Client** along with any of the other import options that you need.

 When importing the transport, ensure that the **Ignore Invalid Component Version** setting is selected.

11. Click **Continue**.
When prompted to start the import, click **Yes**.
12. Verify that the transport import occurred without errors by performing the following steps:
 - a. Refresh the import queue to check the status of the import. When the status changes to a yellow triangle, the import is completed.
 - b. Select the transport request and view the logs by pressing Ctrl+F4. Ensure that there are no errors in the log.The transport is successfully imported.

Activate custom OData services

Your company probably has its own procedures in place to activate OData services in your SAP system, so use the following steps as a guideline only.

1. Log on to SAP as a user that is authorized to import SAP transports to activate OData services.
2. Use the `/IWFND/MAINT_SERVICE` transaction code to activate and maintain services in your system.
3. Click **Add Service**.
4. Enter a **System Alias** such as *LOCAL* and press Enter.
5. Find and add the following services:
 - ZKOFAX_APA_PTERMS_CDS
 - ZKOFAX_APA_WBS_CDS
 - ZKOFAX_APA_SES_ITEMS_CDS
 - ZKOFAX_APA_SES_ACCASSIGN_CDS
 - ZKOFAX_APA_POITEMS_HIST_CDS
 - ZKOFAX_APA_PLANTS_CDS
 - ZKOFAX_APA_INVOICESTATUS_CDS

- ZKOFAX_APA_INVOICE_SES_CDS
- ZKOFAX_APA_GRMAT_ITEMS_CDS
- ZKOFAX_APA_GLACCOUNTS_CDS

6. Set a **Package Assignment** such as *\$TMP* and press Enter.

Activate standard OData services

Ensure that the following standard OData services are enabled for your SAP system:

- API_SUPPLIERINVOICE_PROCESS_SRV
- API_CV_ATTACHMENT_SRV
- API_COSTCENTER_SRV
- API_BUSINESS_PARTNER
- API_PURCHASEORDER_PROCESS_SRV
- API_MATERIAL_DOCUMENT_SRV
- API_SERVICE_ENTRY_SHEET_SRV

Chapter 2

Configure Tungsten AP Agility

After installing the SAP S/4HANA On-Premise ERP plugin it is necessary to configure AP Agility to use this plugin. You can add an ERP connector manually or edit an on-demand ERP connector that was created when an organization was created.

Register your SAP S/4HANA On-Premise plugin in AP Agility

Before you can work with the SAP S/4HANA On-Premise plugin it is necessary to register and then configure that plugin in Tungsten AP Agility

You can register your SAP S/4HANA On-Premise plugin by following these steps:

1. Log on to Tungsten AP Agility as a user with Administrator permissions.
2. On the menu, select **Settings > ERP Connections**.
The **ERP Connections** page is displayed.
3. Click **Register ERP Plugins**.
Any unregistered ERP plugins that are installed are registered with Tungsten AP Agility. This may take a few minutes.

Add an SAP S/4HANA On-Premise ERP connection

An ERP connection is required for an organization that is created using an ERP-based template or another ERP-based organization. If you are planning on using the SAP S/4HANA On-Premise ERP connection for multiple organizations, it is more efficient to create the SAP S/4HANA On-Premise ERP connection before creating any organizations.

Before you can create an ERP connection the SAP S/4HANA On-Premise must first be [registered](#).


You can create an ERP connection by following these steps:

1. Log on to Tungsten AP Agility as a user with Administrator permissions.
2. On the menu, select **Settings > ERP Connections**.
The **ERP Connections** page is displayed.
3. Click **New**.
The **Create new ERP Connection** page is displayed.
4. From the **Connection Type** list select the SAP S/4HANA On-Premise ERP connection.
The description is updated with read-only information.
5. Click **Next**.

The **ERP Connection: New, Type 'SAP S/4HANA On-Premise'** page is displayed where you can specify details for your ERP connection.

6. Create an ERP connection as follows:

- a. Enter a descriptive name for the **ERP Connection Name**.
- b. Enter a **Description** that explains your ERP connection.
This step is not mandatory, but recommended.
- c. Enter the **Url** to connect to your SAP S/4HANA On-Premise ERP system.
- d. Enter the **User** and **Password** that is used to connect to your SAP S/4HANA On-Premise ERP system.

 This user must have access to the various OData Services needed by the ERP connection.

- e. Optionally, edit the **VAT Tax Types** if needed.

The tax types that identify a tax number within the supplier master data as a VAT registration number. Only tax numbers from this list that are associated with a supplier master data record are added as VAT registration numbers to the vendor master data record in AP Agility. *Default: AE0, AT0, BE0, BG0, BH0, BW1, CH2, CY0, CZ0, DE0, DK0, EC3, EE0, ES0, FI0, FJ3, FR0, GB0, GR0, HR0, HU0, IE0, IL0, IM0, IT0, JP4, KE1, KR2, KW0, LT0, LU0, LV0, MC0, MT0, MX2, NA1, NG4, NL0, NO1, OM0, PL0, PT0, QA0, RO0, SA0, SE0, SI0, SK0, SM0, TZ1, UA3, UG3, ZA1, ZW)*

- f. Optionally, edit the list of **EU Countries** if needed. *(Default: AT, BE, BG, CY, CZ, DE, DK, ES, EE, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SK, SI, SE)*

The list of countries that are members of the EU or that use the same rules for taxes as EU countries.

- g. Enter the **Language**.

The language is used when loading names and descriptions of GL accounts or cost centers. Enter a single language using the 2-character ISO code (ISO 639-1). *(Default: EN)*

- h. Optionally, select **Always Park MM Invoices** if you always want to park MM invoices in SAP S/4HANA On-Premise
- i. Optionally, select **Always Park FI Invoices** if you always want to park FI invoices in SAP S/4HANA On-Premise
- j. Enter a **Page Size**. *(Default: 1000)*
- k. Select a date from the **Start Data Load From** setting.

Each time the AP Data Import process runs, the **Start Data Load From** date and time stamp is updated with the current date and time. This ensures that the entire ERP is not loaded each time, only the changes since the last import.

- l. Optionally, select a date from the **Start Data Load To** setting.
- m. Optionally, clear the **Use Default Null Values for Data Import** setting.

When selected, this setting converts any values that are equal to "NULL," "Null," or "null" into actual null values when the data is imported.

7. Click **Save**.

Your changes are saved.

8. Click **Test** to ensure that the values you entered are correct.
If your test fails, edit your settings and then try the test again.
If the test is successful, click **Close**.

What next:

Add a new organization or update an existing organization to use your new ERP connection.

See the *Tungsten AP Agility Configuration Help* for more information about configuring Tungsten AP Agility.

Enable live access (optional)

If you do not want to use the Tungsten TotalAgility Integration Server and the SAP S/4HANA On-Premise ERP connector is hosted by Tungsten TotalAgility, it is possible to access your ERP system live.

For more information on configuring Tungsten AP Agility see the *Tungsten AP Agility Configuration Help*.

You can enable live access to load PO data on-demand by following these steps:

1. Log on to Tungsten AP Agility as a user with Administrator permissions.
2. On the menu select **Settings > Invoice Processing > Capture Profiles** and then select your profile from the list.
A list of capture profiles is selected for your profile.
3. On the menu, select **Line Pairing Settings**.
4. From the **Get PO Lines From** setting, select the **ERP Connector Live Access** value.
5. Click **Save**.
The **Line Pairing Settings** are saved and your ERP connector now has live access.
6. On the menu, select **PO Number Settings** and then select the **PO Number Validation** tab.
7. From the **Validate From** setting, select the **ERP Connector Live Access** value.
8. Click **Save**.
The **PO Number Validation** settings are saved and validation is now performed live via your ERP connector.