

# Deployment and configuration of Avatax connector for SAPByd

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## Installing Avatax solution in SAP Cloud Application studio.

To install the solution in SAP Byd, it is necessary to have SAP Cloud Application Studio and have access to the below work centers in SAP By Design:

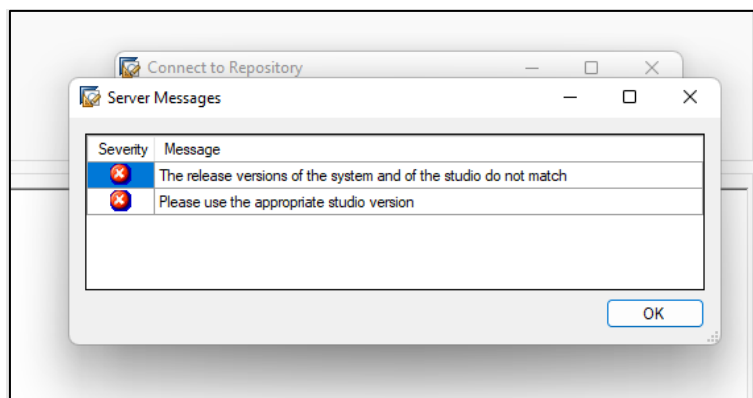
- Customer Invoicing
- Business Analytics
- Application and user management
- Business Configuration
- PDI – Partner Development

SAP Blog resource : <https://blogs.sap.com/2019/05/03/avalara-integration-and-sap-business-bydesign/>

## Downloading and installing SAP cloud studio

To install the solution, you need the current version SAP cloud studio, keep in mind SAP launches a new version of the Studio every quarter.

In the case of having an old version you are going to receive a message to update it, as shown:



What to do in this scenario?

- Download a new version of the SDK from:  
<https://launchpad.support.sap.com/#/softwarecenter>

You need to use the following credentials:

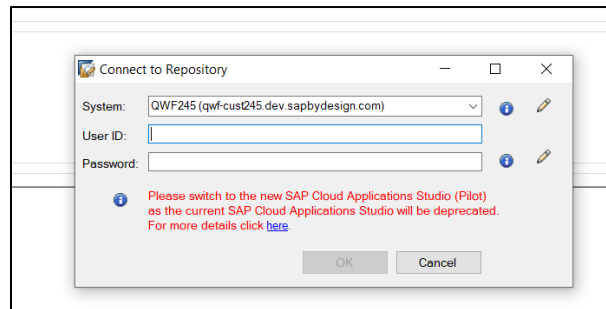
Username: [ncarbonari@argenticonsulting.com](mailto:ncarbonari@argenticonsulting.com)

Password: \$b0Admin3

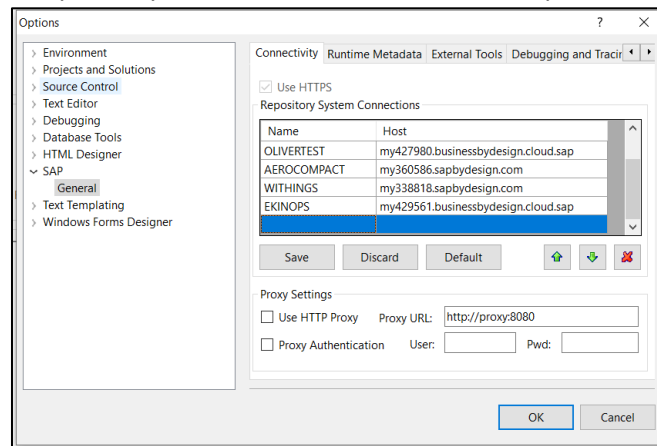
## Adding the solution in SAP Cloud Studio

1. Open your SAP Cloud Application studio installed in your computer. The below screen is going to show up.

- Press on the pencil symbol to add your company (go to step 3). If it already exists, then open the drop down arrow.



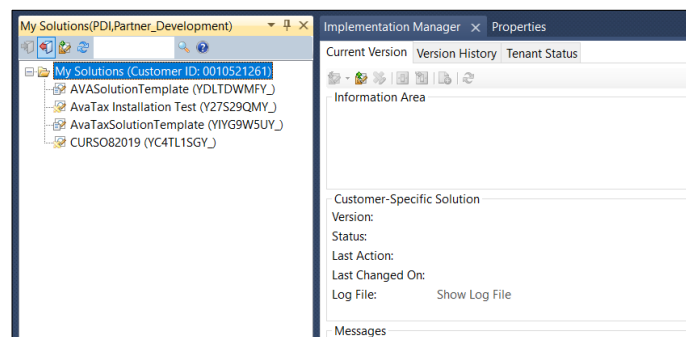
- After you press on the pencil symbol, the below screen shows up:



- In the Repository System Connections box, click in the empty line to add your company name.
- After, add the host for the customer (SAPByD test or production url).
- Click SAVE and Ok.

It takes few minutes until it's ready to use.

Then it appears a folder with the name "My solutions", you might have to open it. It is going to look like this:

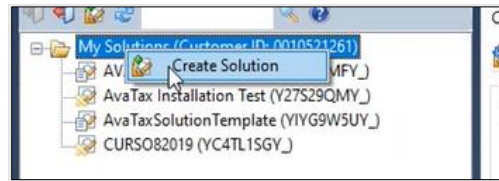


There are two possibilities in relation to the Avalara solution:

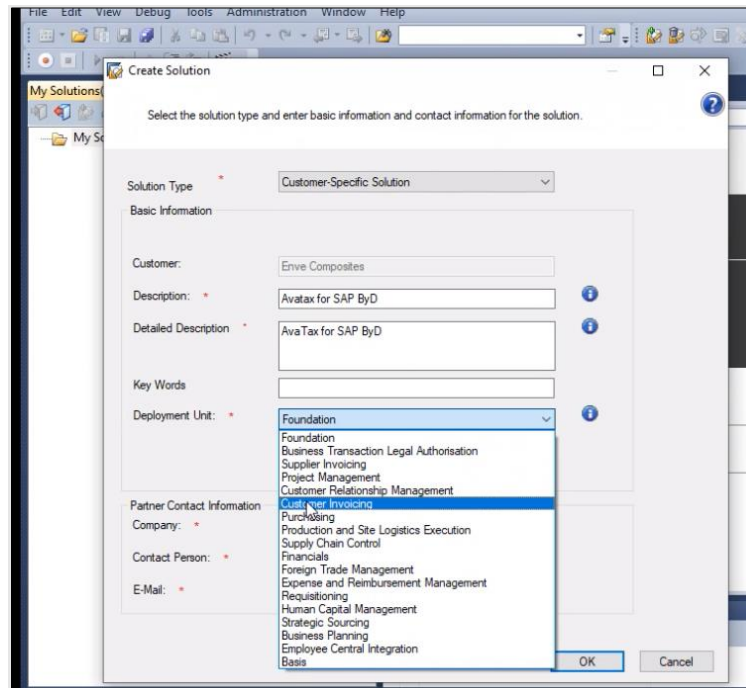
- First Installation
- Update an existing Installation

## A- First Installation

In this case, go to “My Solution” folder, right click and select “Create a solution”.



The next screen shows up, you must add the information shown and described below:



Description: *Avatax for SAPByD*

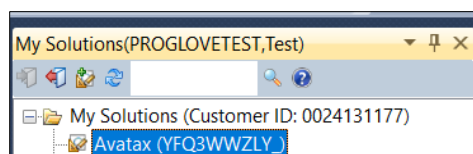
Detailed description: *Avatax for SAPByD*

Deployment unit: *Customer invoicing*

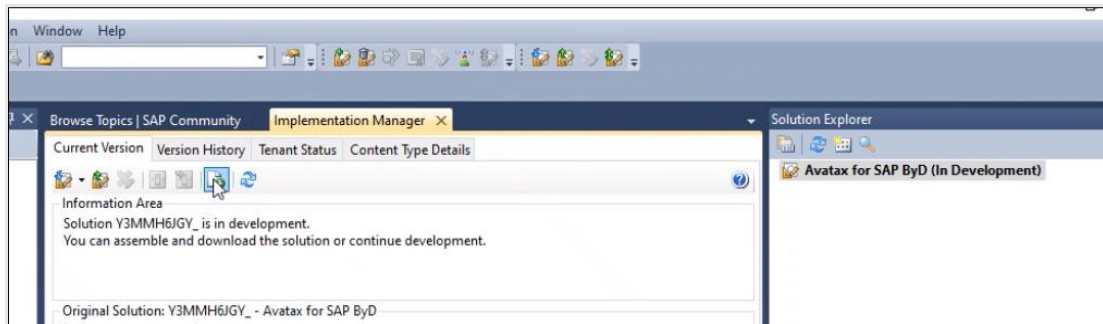
In the Partner Contact information, fill out the fields as below.

Company : **Argentis Consulting**  
Contact person: **Hector Rintondale**  
Email: [hritondale@argentisconsulting.com](mailto:hritondale@argentisconsulting.com)

Then, the “Avatax” folder shows up on the left side of the screen, under “My solutions” folder.

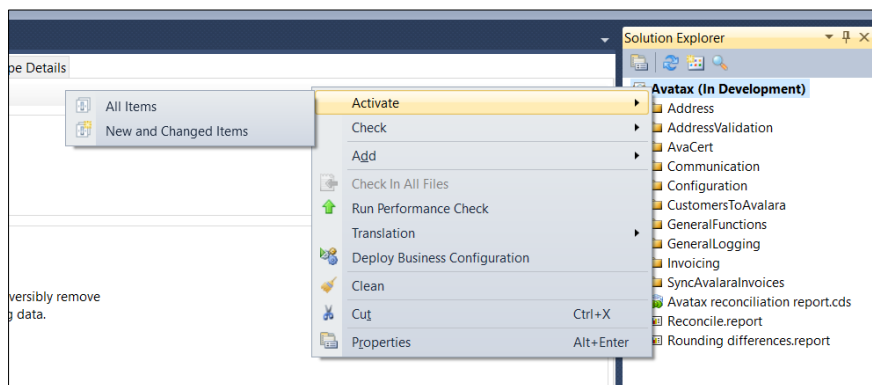


In the “Implementation manager” tab, click on the button “Import solution template” as shown:



Upload the Addon Zip folder, it is going to take some time until the solution is uploaded. Then select the activation button (light key button under the “Current version” bar in the Implementation Manager tab).

Alternatively, go to the “Solution explorer,” right click on the “Avatax for SAPByd (In development)” and press “Activate” all items.

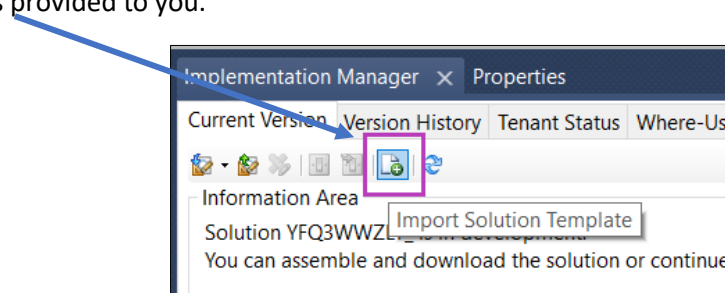


When to use the “Upload Solution” and the “Import Solution Template” buttons?

The development cycle of AvaTax addon includes the generation of new versions every time it is necessary. Although AvaTax is a pretty much stable product, sometimes new bugs are discovered and new features are added. When these situations happen, the developer will send you a link where you can download a new version.

#### “Import Solution Template”

When you are installing AvaTax for the first time or updating a solution that is “in Development” status. In these cases, click on the **“Import Solution Template”** button and upload the solution that the developer has provided to you.



If the solution in the test tenant was already built and installed in the productive environment (Deployed status), you must generate a patch version first. This topic is covered later in this document

**You won't NEVER use the "Import Solution Template" in a Productive Environment.**

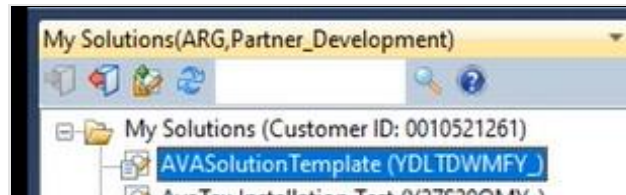
#### *"Upload Solution"*

Only use this button when you are installing the solution in live tenant. Please see section called: [How to move from Test to Productive Environment.](#)

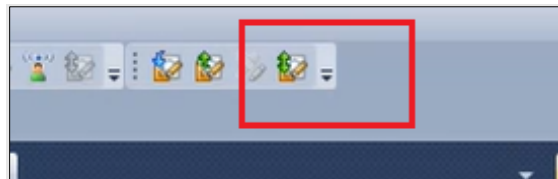
#### B- Updating an existing Installation in Development.

The solution is already in SAP studio, as shown, but you need to do an upgrade.

Select the solution, right click and press "Open solution".

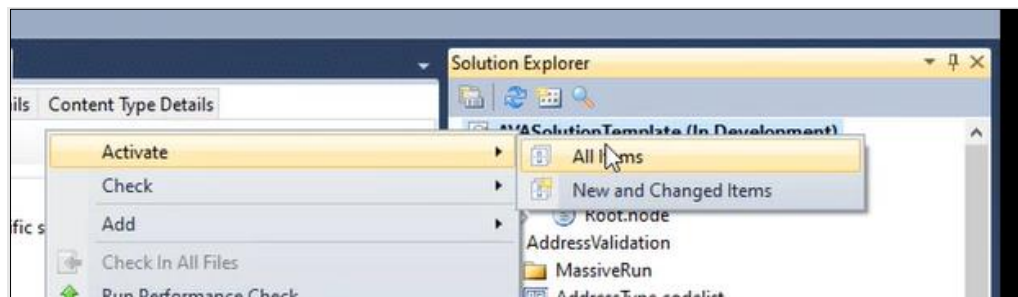


After, click on "Implementation manager" button.



If the solution is still with "Development" status, click "Import Solution Template" button. Then browse and upload the new release.

It might take some minutes to install. Finally go to the Solution Explorer window, click on "Activate" > "All items".

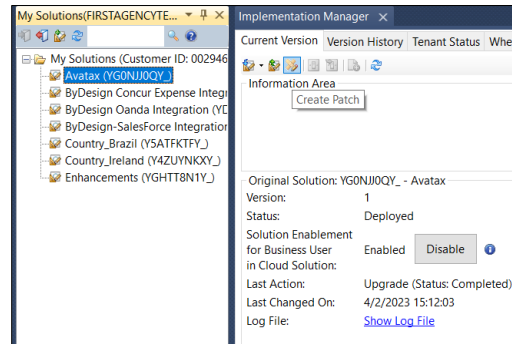


At this stage, Avalara should be installed in SAP Business by design.

## C- Creating a Patch solution

Once a solution is assembly, you cannot make any changes to it without generating a patch solution. So, when some new functionality is added AFTER the solution is already deployed, the consultant must generate a patch solution in the Test Tenant and then upload the new version to production.

To “Create patch” either in test or production tenant, open the current AvaTax folder and in the “Implementation Manager” press on “Create Patch”.

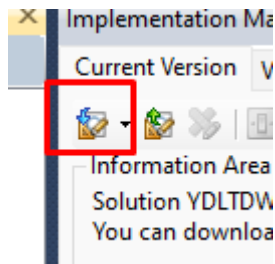


After the solution is installed and activated, go to the SAP portal.

## How to move from Test to Productive Environment

When the client decides to install the solution in production, the AvaTax Consultant will need to download the solution from the Test Tenant and install it in Production.

To do so, the solution must be compiled and downloaded from the test tenant with the button “Assembly and Download”, shown below.



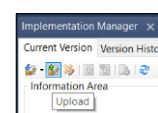
After you need to install the assembled solution in live tenant.

What to do in the PRODUCTION TENANT?

You have two options here:

### A. First installation of AvaTax in the Productive Environment

Click on the icon for “Upload New Solution”, then upload the solution previously downloaded from the test tenant.





NOTE: this ONLY works with the solution that you previously downloaded from the test tenant.  
Never upload a version that the developer sent you.

B. AvaTax solution already exist, so you need to create a Patch

Create a patch following the steps described in [Creating a Patch solution](#).

## Configuring SAP and Avalara in the system.

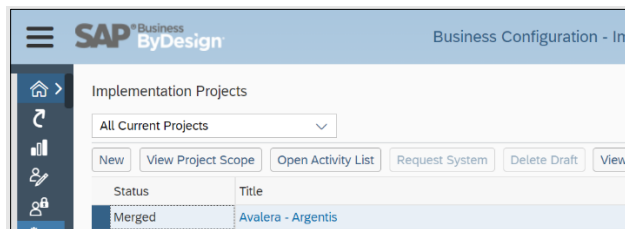
Once the Avalara Addon is installed, it is necessary to set it up with the business application (SAP).

The below configuration steps are required:

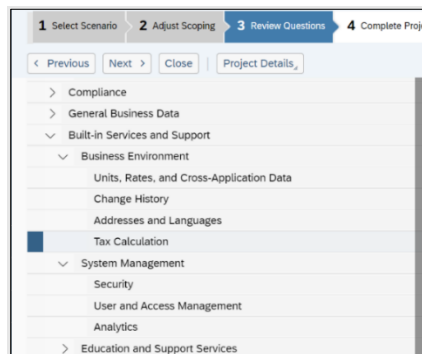
### 1. Business configuration settings

Go to “Business Configuration” work center, click on “Implementation Projects”.

To activate the solution, it is required to **“Edit project scope”**. If the project is closed, you will have to create a new project or request to do it to the customer.



Once the “Edit project Scope” is enable, click on there and advance till the “questions” section. Two configurations must be done here:



- Built-in Services > Business environment > Tax calculation > Check the box for Avalara question:

Questions for Tax Calculation		
<div>Set as Reviewed Set as Not Reviewed Group By Group</div>		
Business Option	Review Status	In Scope ?
Group: Product and Service Tax Calculation (2)		
Tax on Goods and Services	Reviewed	<input checked="" type="checkbox"/>
Tax Settings for Purchasing	Reviewed	<input checked="" type="checkbox"/>
Group: US Tax on Goods and Services Calculation (2)		
Do you want to use the services provided by Vertex to determine tax rates for US?	Reviewed	<input type="checkbox"/>
Do you want to use the services provided by Avalara to determine tax rates for US?	Reviewed	<input checked="" type="checkbox"/>

- Sales > Customer invoicing> Sales and Service invoicing> Check the box for Avatax Argentis

Business Option	Review Status	In Scope
Group: AvaTax By Argentis (1)		
Do you want to use AvaTax By Argentis?	Reviewed	<input checked="" type="checkbox"/>
Group: Credit Memos (1)		
You want to issue credit memos based on customer returns.	Reviewed	<input checked="" type="checkbox"/>
Group: Customer Invoice Integration (5)		
You want to invoice products based on outbound deliveries.	Reviewed	<input checked="" type="checkbox"/>

Then click “Finish” in the main bar to save the changes.

To finish the settings, go to the “Application and user management” and perform the following steps.

## 2. Communication Systems

To access, go to “Application and user Management” > select Communication Systems. The below Systems ID must be created or edit.

Communication System ID	Host Name	SAP Business Suite	Contact	Status	In Use
AVACERTPRODCS-YL4QKMR7Y	api.certcapture.com	<input type="checkbox"/>		Active	<input checked="" type="checkbox"/>
AVALARA	development.avalara.net	<input type="checkbox"/>		Active	<input checked="" type="checkbox"/>
AVALARAAPICS-YL4QKMR7Y	rest.avatax.com	<input type="checkbox"/>		Active	<input type="checkbox"/>
CUSTOMERSODATACS-YL4QKMR7Y	my352466.sapbydesign.com	<input type="checkbox"/>		Active	<input checked="" type="checkbox"/>
ELUM	my352466.sapbydesign.com	<input type="checkbox"/>		Active	<input checked="" type="checkbox"/>
SANDBOXAVALARACS-YL4QKMR7Y	sandbox-rest.avatax.com	<input type="checkbox"/>		Active	<input checked="" type="checkbox"/>

### 2.1 Avalara

Select the “Avalara” communication System ID if it exists, then click “Edit”.

Otherwise select New and add the name “Avalara” in the ID row.

Communication System ID	Host Name	SAP Business Suite	Contact	Status	In Use

Then you need to add the host name and the system access type.

The host name is different depending on the environment.

Host name test system: development.avalara.net

Host name live system: avatax.avalara.net

General System Instances

Communication System

Host Name: \* development.avalara.net

System Access Type: \* Internet

SAP Business Suite: ☐

In the System instances you should check the application protocol is Http as shown:

General System Instances

System Instances

Add Row Remove

System Instance ID	Preferred Application Protocol
AVALARA	16 - Http

Then save and close, in the main menu, select “Actions” button and click on “set to active”.

### 3. Communications Arrangements

Then, go to “Communications Arrangements” in the Application and User management work center. The lines highlighted in the below screenshot must be configured.

Basically each communication arrangement highlighted is link to a communication system.

Communication Arrangements

You can view, create, and edit communication arrangements between your company and customers or suppliers v

All Communication Arrangements

Edit New Delete Check Completeness ? Edit Credentials Reactivate Edit API Key

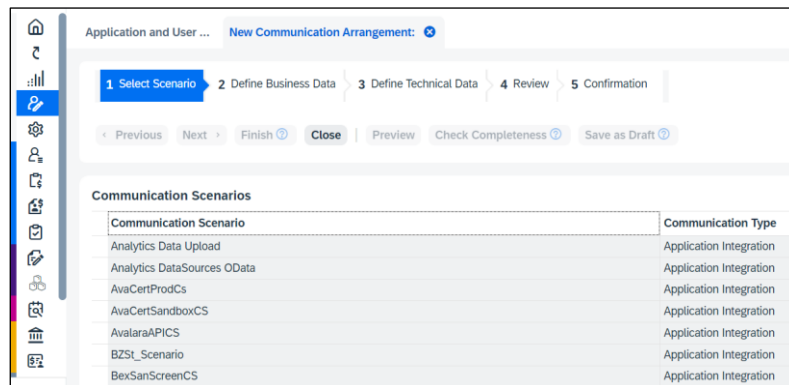
Communication Scenario	Communication Type	Communication Partner
Access documents via WebDAV		
AvaCertProdCS	Application Integration	AVACERTPRODCS-Y41S2G...
AvaCertSandboxCS	Application Integration	AVALARAAPICS-Y41S2G2XY
AvalaraAPICS	Application Integration	AVALARAAPICS-Y41S2G2XY
CustomersODataCS	Application Integration	CUSTOMERSODATACS-Y4...
Journal Entry Voucher Integration		
Request tax rates from Avalara Rest	Application Integration	AVALARA
SandboxAvalaraCS	Application Integration	SANDBOXAVALARACS-Y41...

If the communication scenario already exists, then you need to edit them and check the information is correct.

Otherwise, it will be necessary to create them from scratch.

#### 3.1 Request tax rates from Avalara Rest

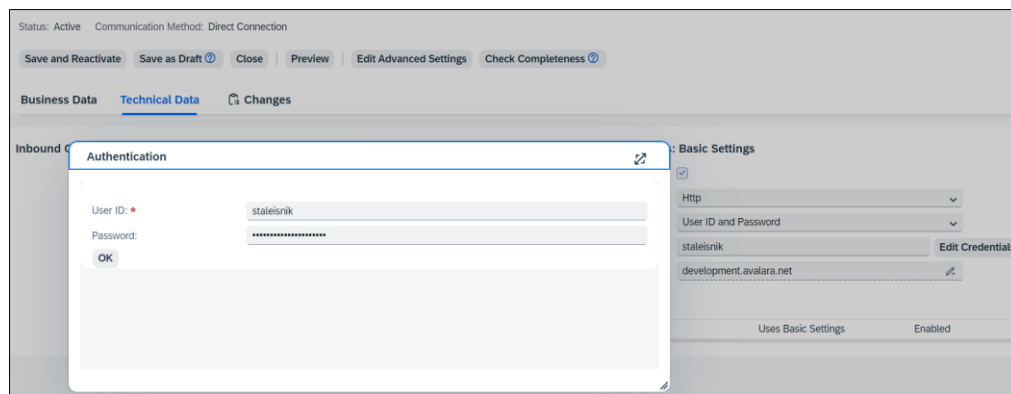
Click on “New,” then from the communication scenario list select “Request tax rates from Avalara Rest” as highlighted, then click on “Next”:



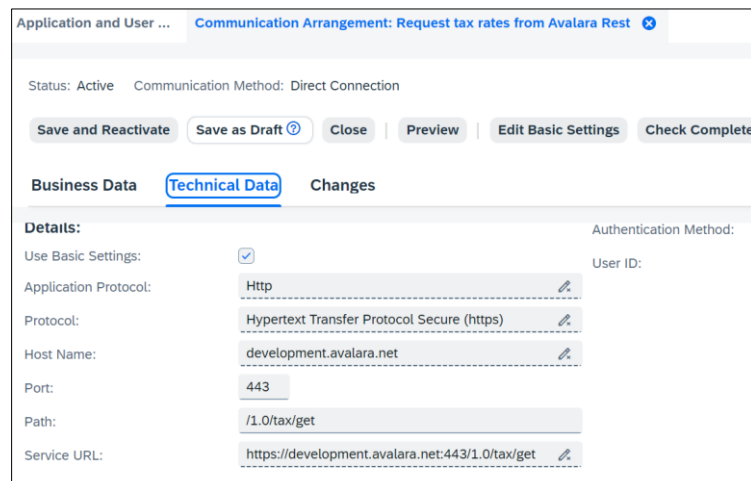
Find out the System Instance ID “AVALARA,” which was created before.



After, go to technical data and edit credentials. Add the Avatax credentials for the correct environment (test or live).



Then click on “Edit Advanced settings”, you need to complete the below fields as shown:



### 3.2 AvaCertProdCS

Click on Edit or new.

If adding a new communication scenario, select from the list “AvaCertProdCS” and click next. Link it to the communication system with the same name.

Then, click on Edit advance details to add your certcapture API credentials with the password.

The screenshot shows the 'Outbound Communications: Basic Settings' form. It includes a table at the bottom with the following data:

Service	Uses Basic Settings	Enabled
AvaCertProd	Uses Basic Settings	Enabled

Go to the tab “Technical Data”, it must look like below:

The screenshot shows the 'Technical Data' tab for the 'AvaCertProd' service. The details are as follows:

- Service: AvaCertProd
- Application Protocol: Http
- Protocol: Hypertext Transfer Protocol Secure (https)
- Host Name: api.certcapture.com
- Port: 443
- Path: /v2
- Service URL: https://api.certcapture.com:443/v2
- Authentication Method: User ID and Password
- User ID: Argentis\_Arias

### 3.3 AvalaraAPICS

Select the communication scenario, click on the “Technical data” tab. Then “Edit advanced settings”, in the next fields you should add the Avatax credentials.

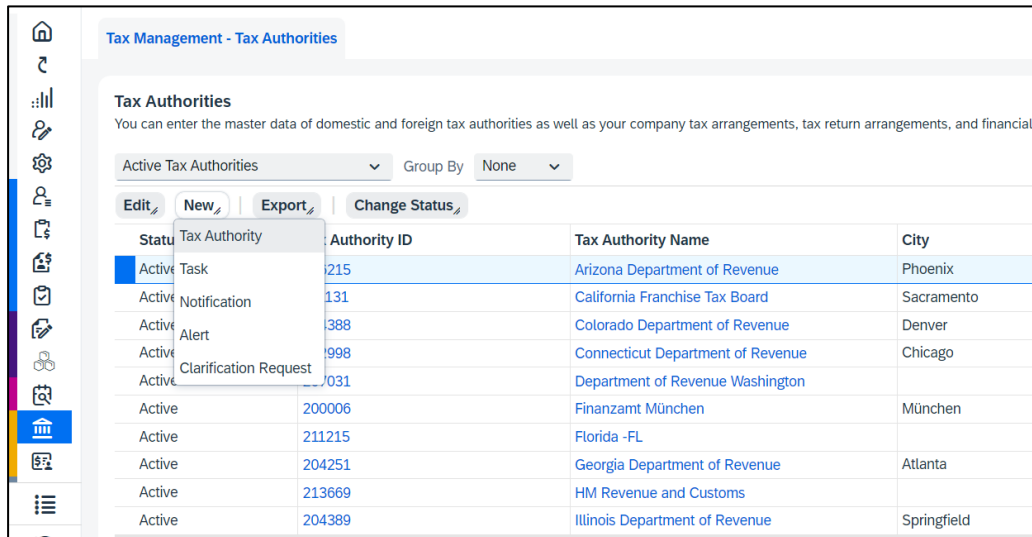
The screenshot shows the 'Outbound Communications: Basic Settings' form for the 'AvalaraAPI' service. It includes a table at the bottom with the following data:

Service	Uses Basic Settings	Enabled
AvalaraAPI	Uses Basic Settings	Enabled

## 4. Tax Management

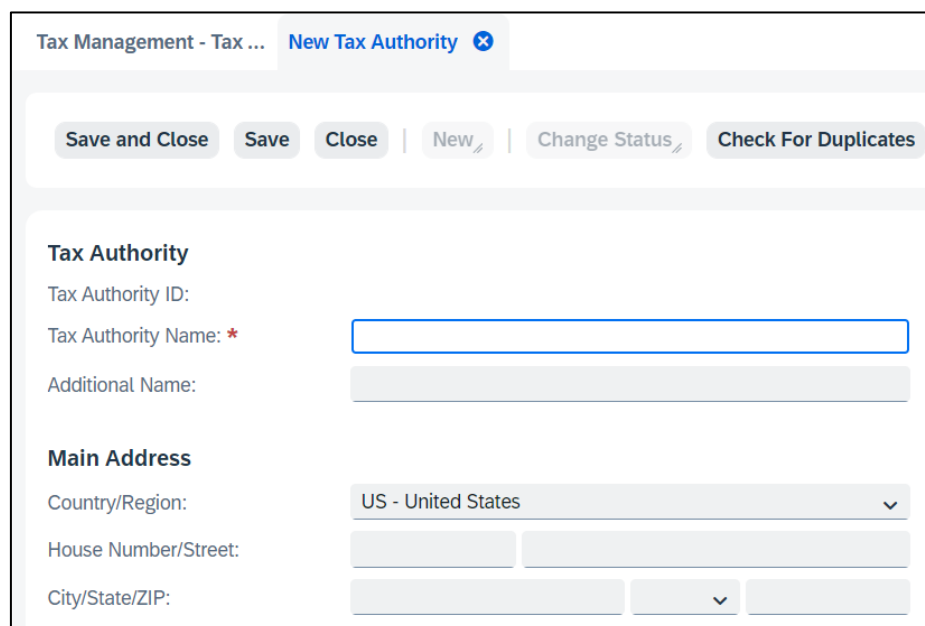
Here it is required to create one tax authority per state where the company files tax returns.

In order to create them, select “New”> Tax Authorities.



Status	Tax Authority	Authority ID	Tax Authority Name	City
Active	Task	215	Arizona Department of Revenue	Phoenix
Active	Notification	131	California Franchise Tax Board	Sacramento
Active	Alert	388	Colorado Department of Revenue	Denver
Active	Clarification Request	998	Connecticut Department of Revenue	Chicago
Active		031	Department of Revenue Washington	
Active		200006	Finanzamt München	München
Active		211215	Florida - FL	
Active		204251	Georgia Department of Revenue	Atlanta
Active		213669	HM Revenue and Customs	
Active		204389	Illinois Department of Revenue	Springfield

Each business location must be created as a tax authority in SAP. Besides, any state where the company files sales tax return must be added. If you don't have the tax number, you can make it up.



**Tax Management - Tax ...** **New Tax Authority** ✕

**Buttons:** Save and Close, Save, Close, New, Change Status, Check For Duplicates

**Tax Authority**

Tax Authority ID:

Tax Authority Name: \*

Additional Name:

**Main Address**

Country/Region:

House Number/Street:

City/State/ZIP:

The minimum fields to complete are:

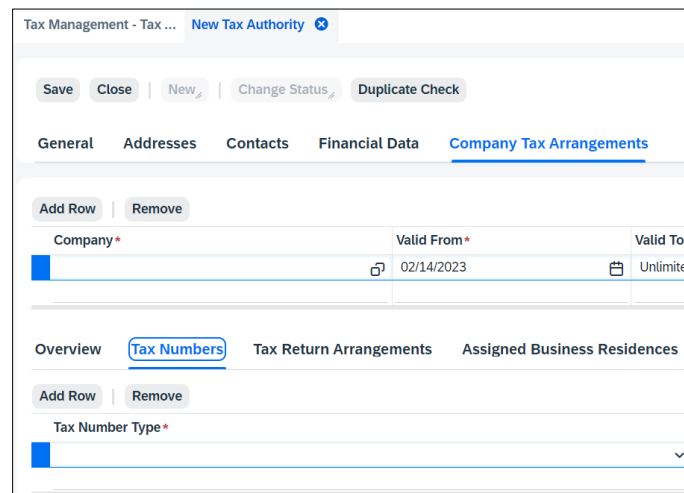
**Tax Authority name:** name of the state where the business is.

**State and city:**

Click save, then click on “View all”.

Finally, complete the “Company Tax arrangements” tab.

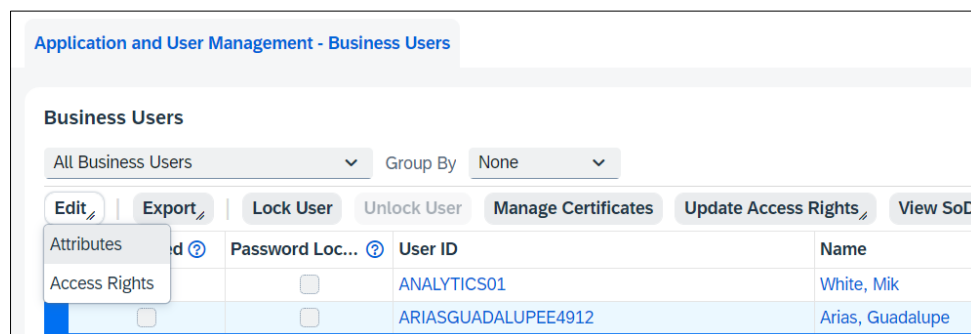
Select the company whose configuration you are doing, then in the “tax number” tab, select option 4 “State sales and use tax RN”; add the Tax number of the company for the state is being configured.



## 5. Avatax work center

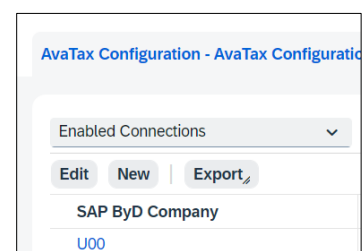
First, grant you access to “Avatax” work center. For this, go to “Application and user management”> Business User.

Look for your user, click edit “Access rights”, go to tab “Work centers”, look for Avatax work center and add it.



Finally configure the Avatax work center

Select new to create the company profile or edit if something needs to be corrected.



Then add the details for your Avatax account according to the environment that is been configured.

AvaTax Configuration - ... AvaTax Configuration

Save Close Test Connection Disable Connection

**Seller Information**

SAP ByD Company: U00

SAP ByD Company Name: ProGlove Inc.

**Connectivity**

Type of Authentication: USERANDPASSWORD - Username and Password

Company Code: SAPBYD

Company Validated: ☒

Environment: PRODUCTION - Production Environment

**Username/Password**

User Name: garias\_Proglove

Password: \*\*\*\*\*

Make sure to set the below settings as shown:

**Documents to be Posted**

Customer Invoices: ☒

Credit Notes: ☒

**Fields to be Sent**

Customer Code: PARTYID - Party Key Id

Item Code: ITEMCODE - Item Code

Item Description: ITEMDESCRIPTION - Item Description

Click on “View all”, select the “General” tab and define the settings for the address validation and the fields.

AvaTax Configuration - ... AvaTax Configuration

Save Close Test Connection Disable Connection Generated Basic Address Validation

Connectivity General Invoices Synchronization

**General Settings**

Send Documents as Committed: ☒

Validate Address on Posting Document: ☒

Validate only ZIP Code and State: ☒

HouseNumber in Street Field: ☐

Not to Validate on Save Business Partner: ☐

Validate All Addresses: ☐

Not to Change the Address when it is not valid: ☒

**Documents to be Posted**

Customer Invoices: ☒

Credit Notes: ☒

Post Documents from All Countries: ☐

**Fields to be Sent**

Customer Code: PARTYID - Party Key Id

Item Code: ITEMCODE - Item Code

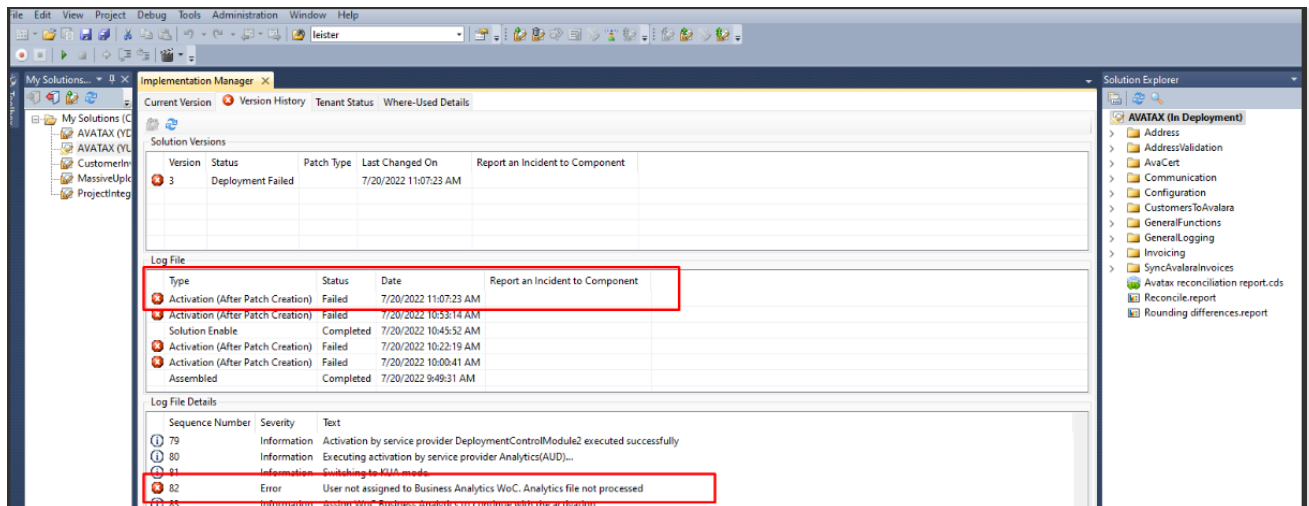
Item Description: ITEMDESCRIPTION - Item Description



## How to check errors in the upgrading / installing process

When you try to upgrade your AvaTax version, you might have some issues.

Please look at the sample below:



1) In the above screen, the consultant can see three lists:

- Solution Versions
- Log file
- Log file details

2) In the Solution Details, the consultant doesn't have too much to see, only the list **Deployment Failed**.

3) In the Log File, there are many records, you need to scroll up until you find the first one with errors. In this case, the **Activation (After Patch Creation)**. You need to select that one.

4) In the Log File Details, you also have many failing records, you also need to scroll up until you reach the first one with errors. After that issue, of course that the rest of the steps will fail because, if one step wasn't completed successfully, the process cannot continue. In the sample above, you can see the **line 82** and there you can see the real error message.

