How to Set Up Third Party Logistics (3PL)

Integration in SAP Business ByDesign

Third Party Logistics partners are becoming more mainstream in today's world. SAP Business ByDesign's Third Party Logistics (3PL) integration functionality enables SAP to be directly connected to an external warehouse management system of a third-party logistics provider. In this scenario, SAP Business ByDesign handles purchasing, sales, and fulfillment processes including invoicing, but warehouse execution and logistics are outsourced. Communication is done via B2B interfaces (following UN/EDIFACT standard).

The setup for 3PL has been split into a 2-part series. This 'How To' blog will show you how to do the following:

Part 1:

- Scope 3PL in Business Configuration
- Create a Warehouse Provider (Supplier)
- Create a 3PL Site in the Organization Structure
- Setup the 3PL site as a Location

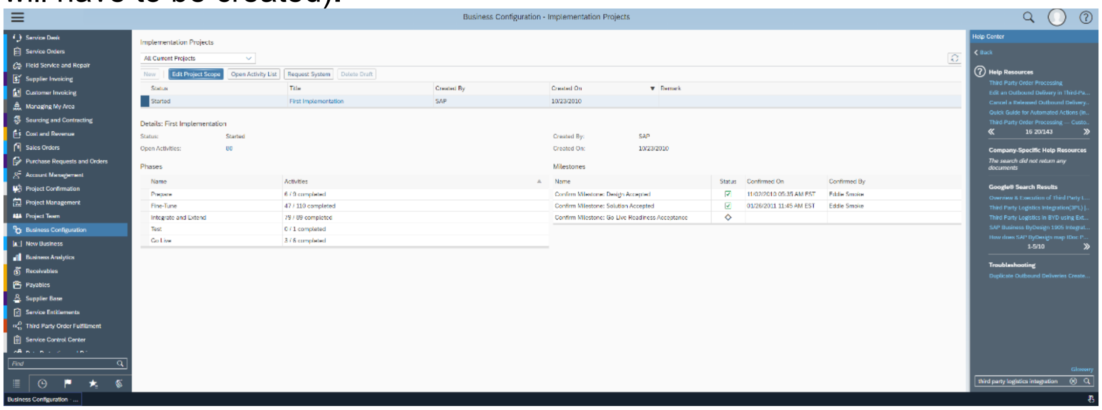
Part 2:

- Create a Transport Lane
- Create Logistics Models
- Create Document Numbering Formats
- Create a Communication Arrangement

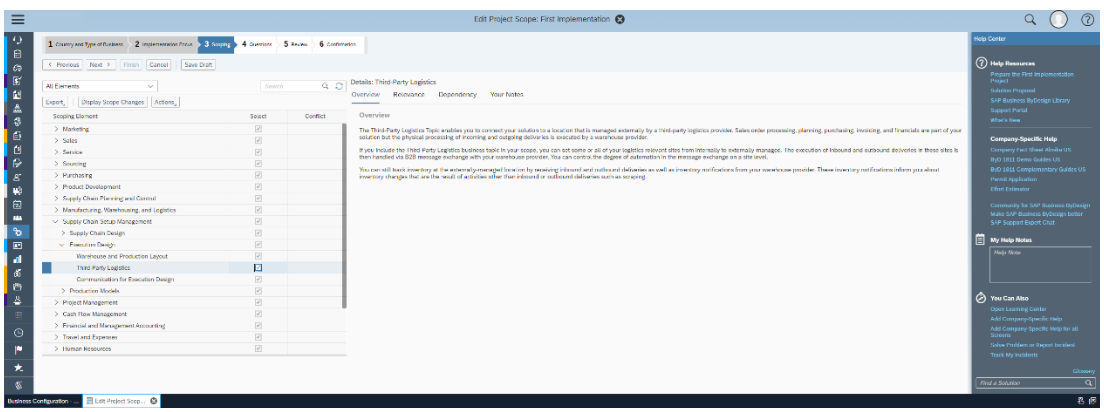
Part One of Two

Step 1: Scope Third-Party Logistics in Business Configuration

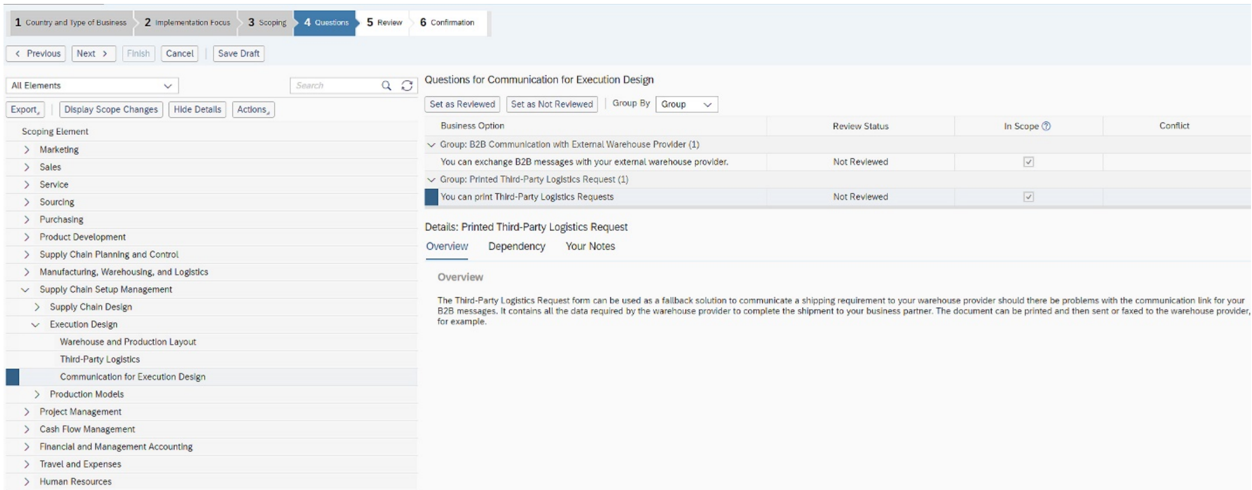
Go to Business Configuration -> Implementation Projects. Click on an existing project and select Edit Project Scope (note: if there isn't an existing open project, a new project will have to be created):



Click Next until you get to Step 3: Scoping. Expand Supply Chain Setup Management, select Execution Design -> Third-Party Logistics, and tick the box to enable this functionality:



Click Next to go to Step 4: Questions. Expand Supply Chain Setup Management, select Execution Design -> Third-Party Logistics and confirm the scope elements for B2B communications with the 3PL (if there will be an automated integration) or print Third-Party Logistics requests (if there will be manual communication between ByD and the 3PL)



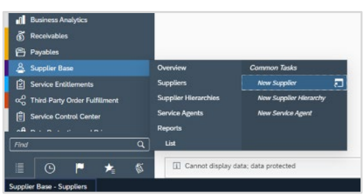
Click Next to go to Step 5: Review and click Finish

Click Finish to save changes

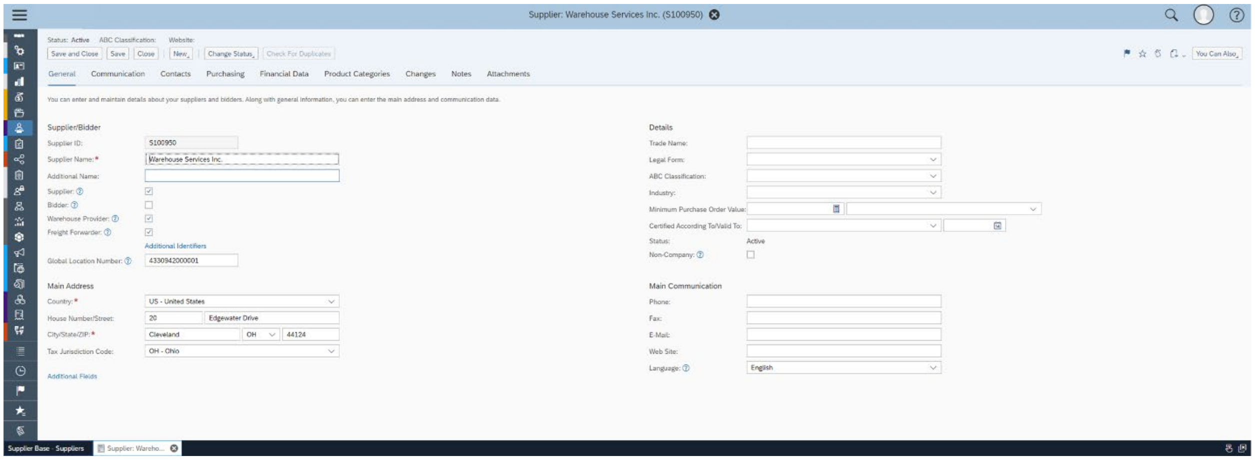
Click Close to exit Scoping

Step 3: Create the Third-Party Logistics Provider as a Supplier

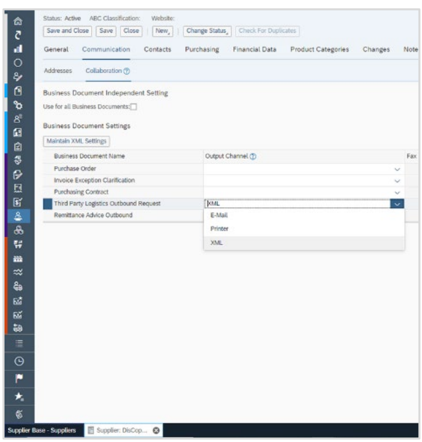
Click on the Supplier Base Work Center -> Common Tasks-> New Supplier:



Enter in all the Warehouse Provider's data on General tab. Tick the box for Warehouse Provider and Freight Forwarder. Ensure the Global Location Number or D-U-N-S is populated (see Additional Identifiers hyperlink for these fields):



Go to the Communication tab, click on the Collaboration sub-tab. Select XML as the Third-Party Logistics Outbound Request:



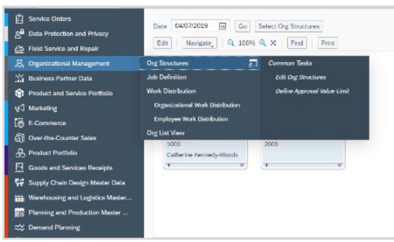
XML Settings for automated communication with the 3PL will be configured in a later step.

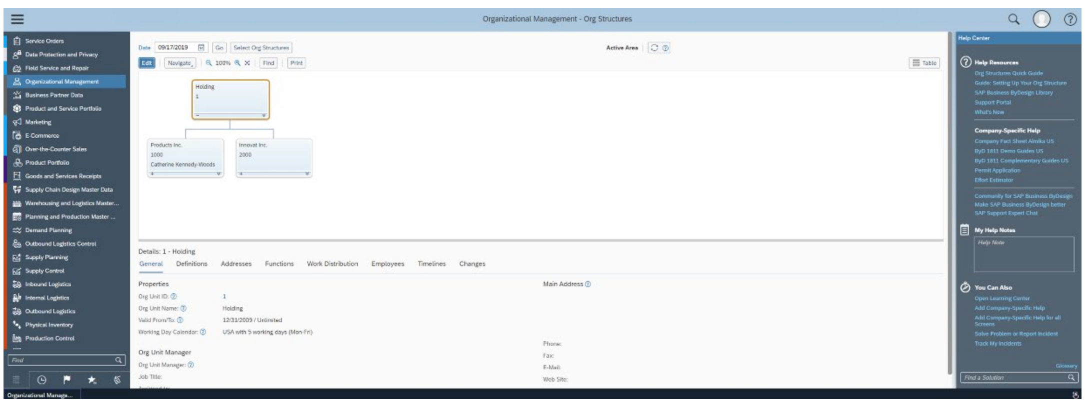
Click Save and Close.

Step 3 Create 3PL Business Residence in the Organization Structure

To be able to manage inventory initiate warehouse tasks for the 3PL, it must be set up as a Business Residence/Site.

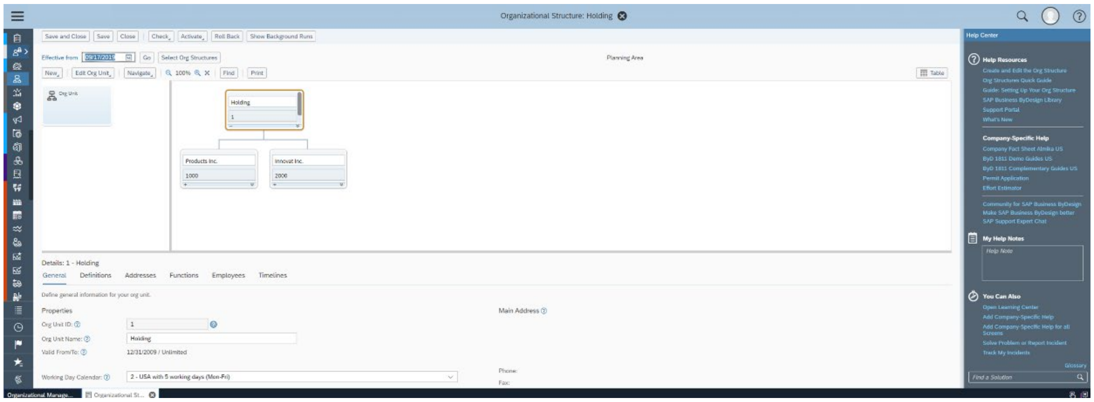
Go to Organizational Management -> Org Structures In the **Org Structures** view, click **Edit**, or click the **Edit Org Structures** common task.



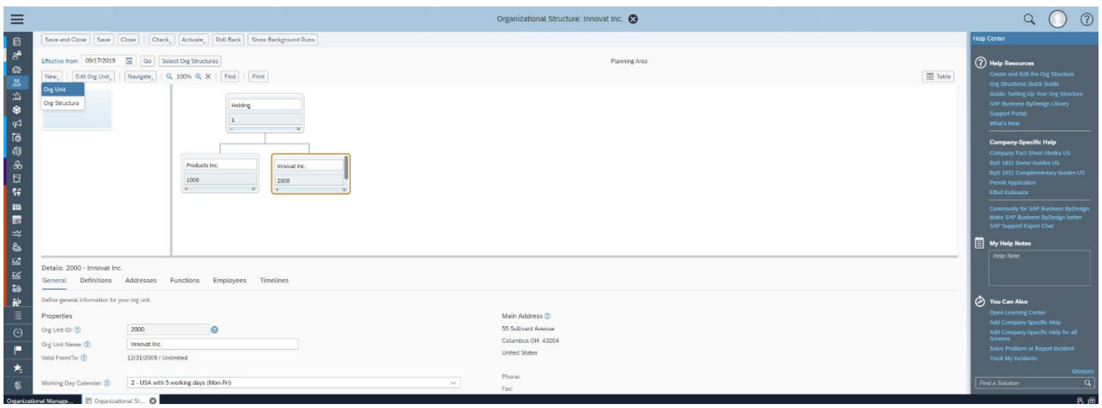


On the dialog box that appears, specify the **effective-from date** for your proposed changes and choose **OK**. Note that all elements in the org structure are time dependent. ***Caution: When editing an active org structure, enter the date from which you want your changes to take effect before you start to edit.***

Modify date and/or ensure default date is acceptable:



Create your new org unit. To add an org unit in your existing org structure, place your cursor on the intended root org unit and click **New**. Then click **Org Unit**:



Complete all relevant tabs for the org unit in the structure.

Note: You can check the consistency of your org structure at any time, as described in step 5 below. Regular checks help you to eliminate inconsistencies on an ongoing basis, rather than being faced with many messages related to inconsistencies when you have finished making your changes.

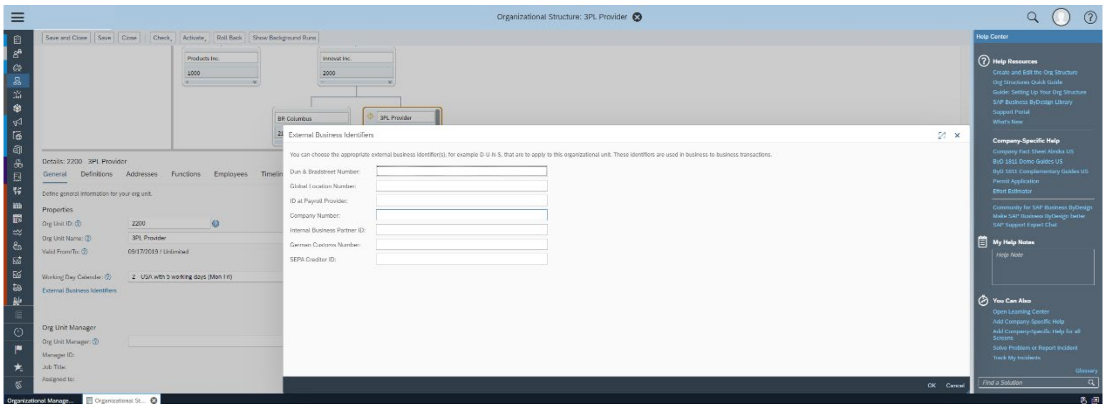
General Tab

Contains general information on the org unit, such as the org unit ID, name, timelines, working day calendar, manager, and address. Assign the **Org Unit ID**. Note: You cannot change the org unit ID after you activate the org structure.

Enter the **Org Unit Name**. The **Valid From/To** field displays the timeline of the org unit. You can change timelines on the **Timelines** tab.

Enter the **Working Day Calendar** to apply to this org unit. Working Day Calendars can be defined in Business Configuration.

Click the **External Business Identifiers** link to apply the correct identifier to an org unit, for example, Dun & Bradstreet Number or Global Location Number. At least one of these is required for B2B transactions, i.e. 3PL integration:



Definitions Tab

Displays all definitions that are assigned to the org unit. The definitions define the types of properties associated with an org unit, for example, the legal property, which is relevant for the definitions **Company** and **Business Residence**.

The definitions are as follows:

Business Residence: A business residence represents a part of your company within a geographic area. The business activity of this business residence is subject to uniform tax processing, its registration with public authorities is unique, and there is only one valuated stock per material for this business residence. A business residence can be, for example, a city or region, even if your company has several locations with different addresses within this city or region.

Cost Center: A cost center represents a defined location of cost incurrence, for which costs are recorded separately. In SAP Business ByDesign, a cost center is used in cost center management accounting to collect and allocate overhead costs. You should set the Cost Center definition for an org unit if it represents either a primary cost center or a support cost center. We recommend that you specify a cost center type when creating the cost center. Once postings have been made, the cost center type cannot be revised. The profit analysis attributes can be adjusted at a later point in time.

Cost Center Attributes

The Cost Center Type classifies all postings of the cost center, including postings to projects assigned to this cost center. Based on this classification, a functional area - such as administration or marketing - can be derived for all postings. By assigning functional areas to lines in financial reporting structures, the costs can then be distinguished in profit analysis (cost center management accounting), and in income statements by function of expense.

The Profit Analysis Attributes of the cost center determine the assignment of its costs to market segments for profit analysis. All postings to the cost center are characterized with the selected attributes, allowing for an analysis of operating income by market segments. You can use the attributes in the reports Profit Overview by Key Figure and Profit Detail by Contribution Margin Scheme.

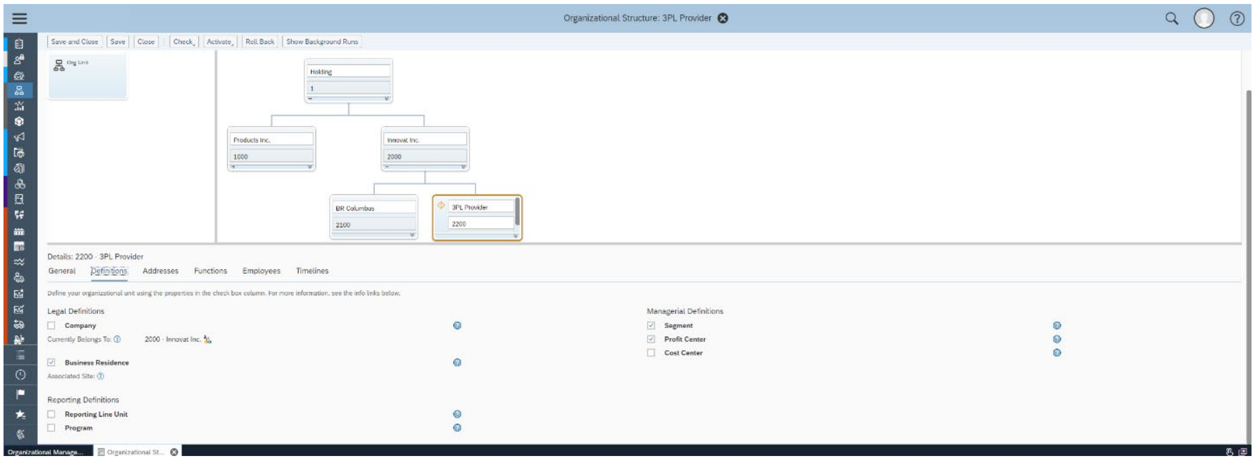
Profit Center: A profit center represents a company area for which a separate period-based profit is determined. It is used for evaluating and regulating the activities of the company area in a profit-oriented manner. In SAP Business ByDesign, the profit center provides visibility on profit and loss with reports that are available in the Managing My Area work center. If profit center accounting is activated, the system requires at least one org unit to be defined as a profit center. You must also define a profit center above every business residence, to collect profit and loss from material changes in the corresponding site, and above every sales organization to collect profit and loss from sales activities.

Program: A program represents a group of related projects managed collectively to achieve a common goal. The assignment of projects to a program is optional. Referencing related projects to a single program enables a higher level of reporting from the program level down to individual project reports. You should assign this definition to an org unit if you require a common reporting on all projects that reference to this org unit.

Reporting Line Unit: A reporting line unit represents an org unit that has personnel responsibility within the reporting line. If a manager is assigned to the reporting line unit, all employees on the org unit and below it report to that manager. You should flag your org unit as a reporting line unit if you want a manager of the org unit to be a personnel manager. A personnel manager is responsible for employees’ work center assignments, personnel-related tasks, and purchasing approvals. If no manager is assigned to a reporting line unit, the manager assigned to the next reporting line unit above it in the org structure takes on the responsibilities of the personnel manager.

Segment: A segment defines the org unit as an operating segment as defined by the 'International Financial Reporting Standard 8.’ A segment represents a company area whose business activities result in revenue and expenditure, and whose operating income is regularly monitored for the purpose of assigning resources and evaluating performance. In SAP Business ByDesign, the segment collects the balances of all lower-level profit centers and offers additional financial reports to those provided at profit center level. If segment reporting is activated, the system requires that at least one org unit be defined as a segment. The segment definition should be set at company or business residence level.

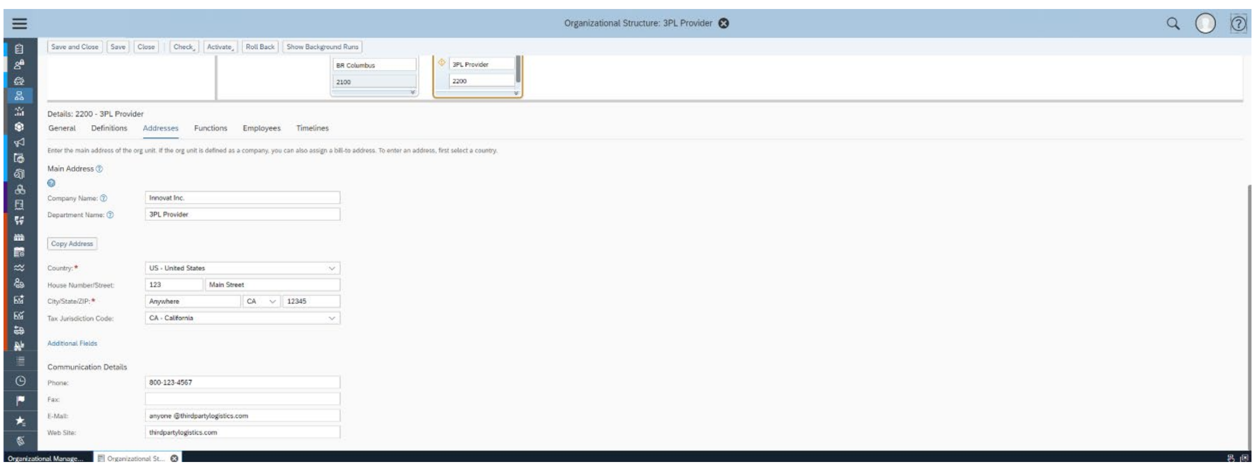
Select the appropriate definition or definitions for your org unit. At a minimum, the org unit should be set as a Business Residence, so that a Site may be created in a later step. It’s also recommended to create this as a cost center, so that any costs associated with maintaining the 3PL can be assigned.



Addresses Tab

Provides all address details for the org unit. Enter the addresses for the org unit. You can enter new addresses or copy existing ones from other org units.

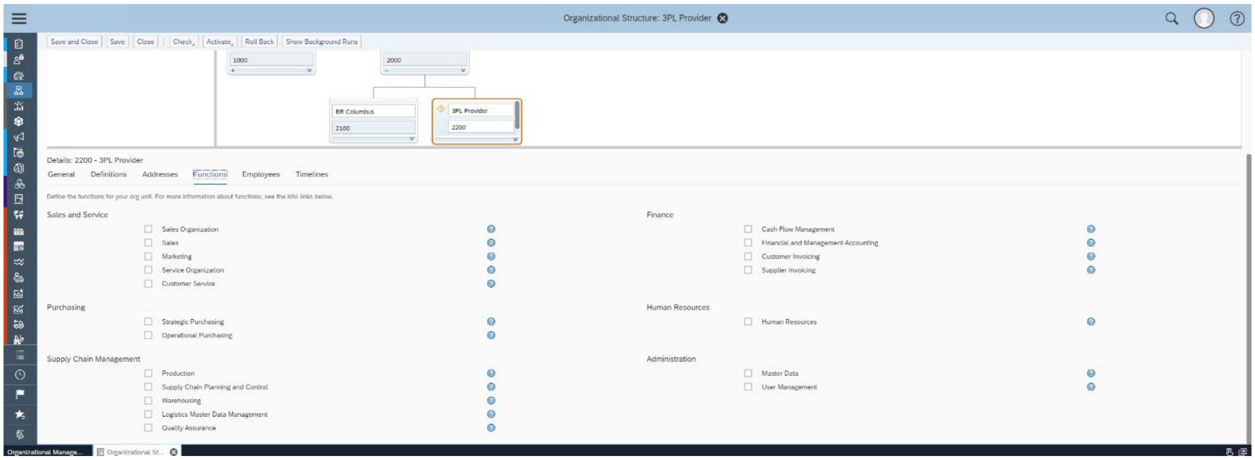
In the **Company Name** and **Department Name** fields enter the names, as required:



Functions Tab

Displays all duties that are assigned to the org unit. On the **Functions** tab, select the appropriate check boxes to activate the relevant functions of the org unit. *The functions you assign propose the work centers for the employees assigned to this org unit.*

Since no employees will be assigned to this org unit, no functions need to be selected:

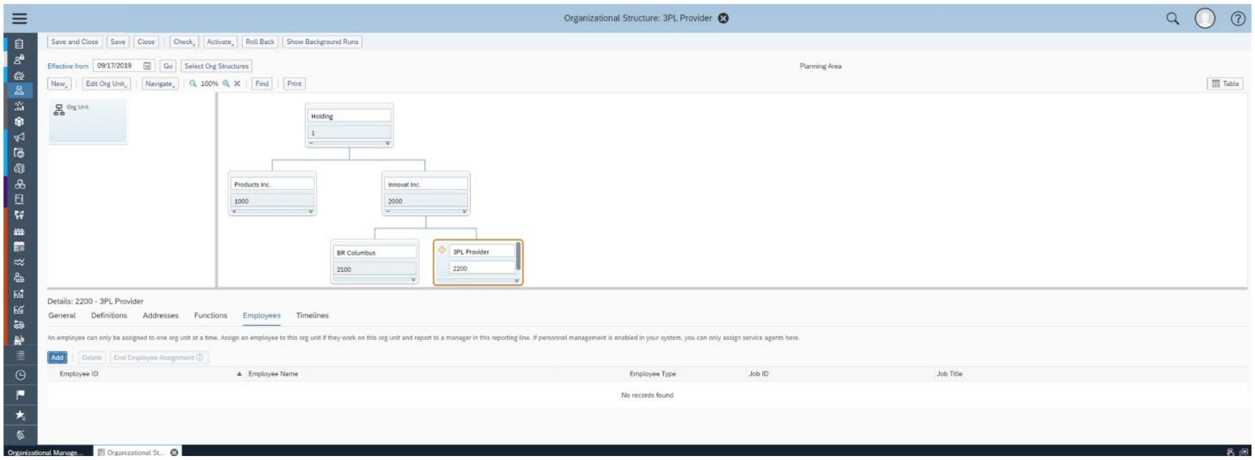


Employees Tab

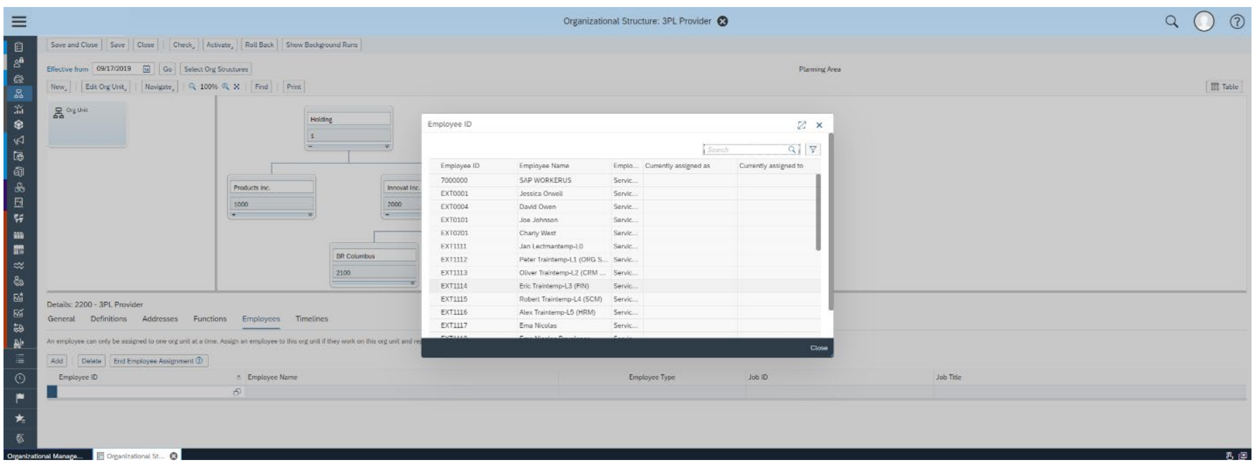
Displays all information regarding both the internal employees and service agents assigned to the org unit, including their employee IDs and jobs. Assign employees or service agents to your org unit.

Note: Employees or service agents assigned to this org unit can only be added to this tab after being created. If Human Resources is active in your system, you can hire employees in the **Regular Tasks** view of the **Personnel Administration** work center. If Human Resources is not active in your system, you can create employees in the **Business Partner Data** work center, in the **Employees** view. New service agents can be created in the **Service Agents** view of the **Business Partner Data** work center or the **Service Agents** view of the **Supplier Base** Work Center. If an org unit is assigned upon employee/service agent creation, they will automatically appear in this list.

Click Add to add an employee:



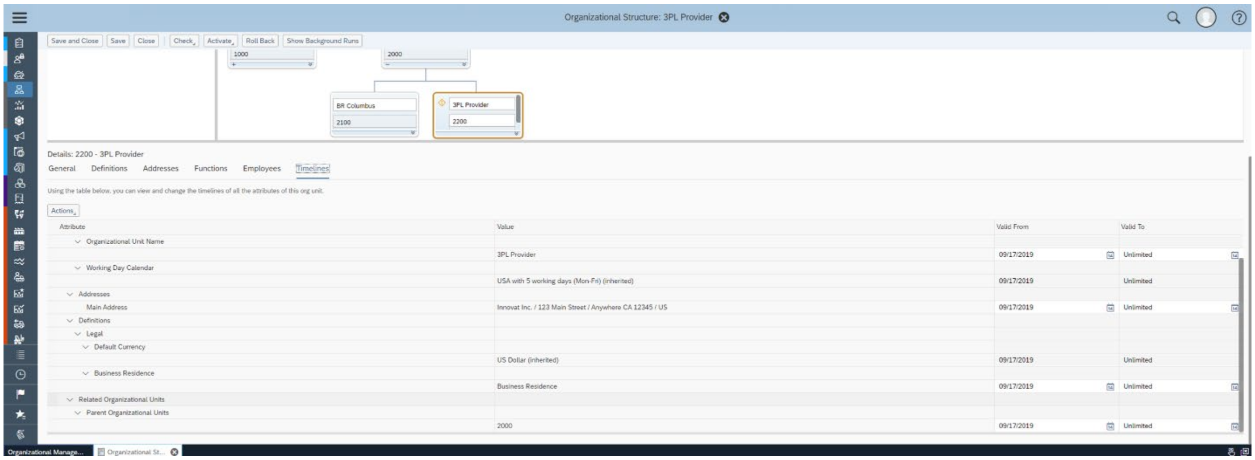
Click on the window icon to display the names and select a name to add it to the org unit.



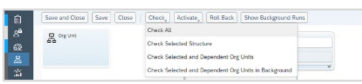
Timelines Tab

Displays all timelines of the properties and attributes of the org unit. On the **Timelines** tab, you can edit the length of time an attribute is to exist in the system. You can do this individually for all attributes associated with the org unit, for example, the definitions and the addresses.

In the **Valid From** or **Valid To** column, either enter the new date or select using the calendar:



Check your org structure. Click **Check** in the main header to check the consistency of the data you have entered:



There are four check options available:

Check All: Checks all org structures that are currently being displayed in the planning area.

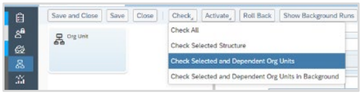
Check Selected Structure: Checks the complete org structure related to the org unit that is currently selected.

Check Selected and Dependent Org Units: Checks the org structure from the org unit that is currently selected downwards.

Check Selected and Dependent Org Units in Background: Allows you to simulate the effects of a background activation of the selected org unit and its child units. You receive a notification from the system when the background check has been completed.

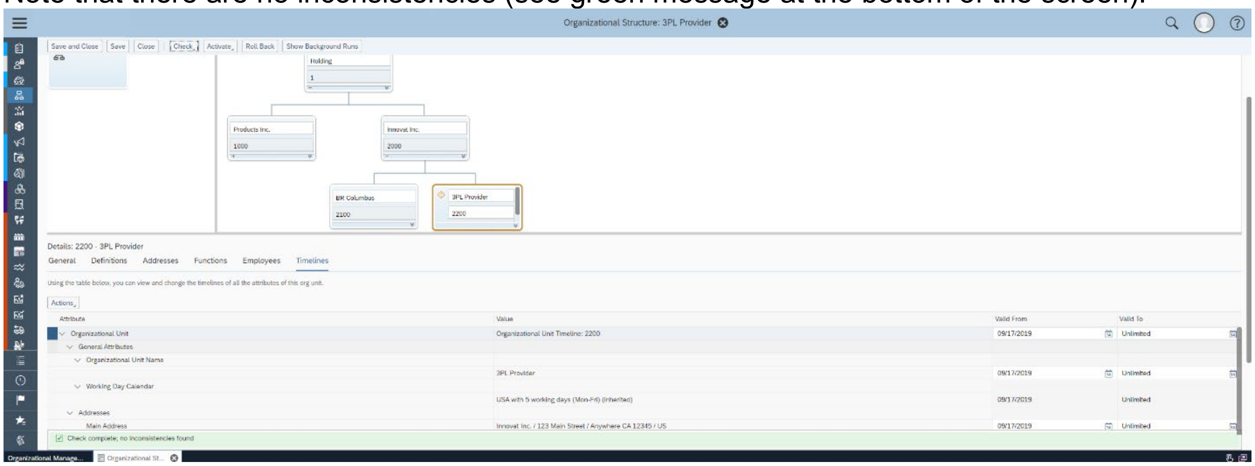
Note: We recommend that you use this option to check medium to large org structures to ensure that you can continue to work in your system while the check is taking place.

Check that the org unit just created is consistent by selecting **Check Selected and Dependent Org Units**:

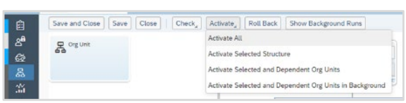


Any inconsistencies in the org structure are displayed as error messages. You must resolve these error messages by changing your org structure until they are resolved. Continue to click **Check** to assess your progress.

Note that there are no inconsistencies (see green message at the bottom of the screen):



Activate your org structure. When you have resolved all error messages, click **Activate** in the main header. Activation also saves your data:



There are three activation options available:

Activate All: Activates all org structures that are currently being displayed in the planning area.

Activate Selected Structure: Activates the complete org structure related to the org unit that is currently selected.

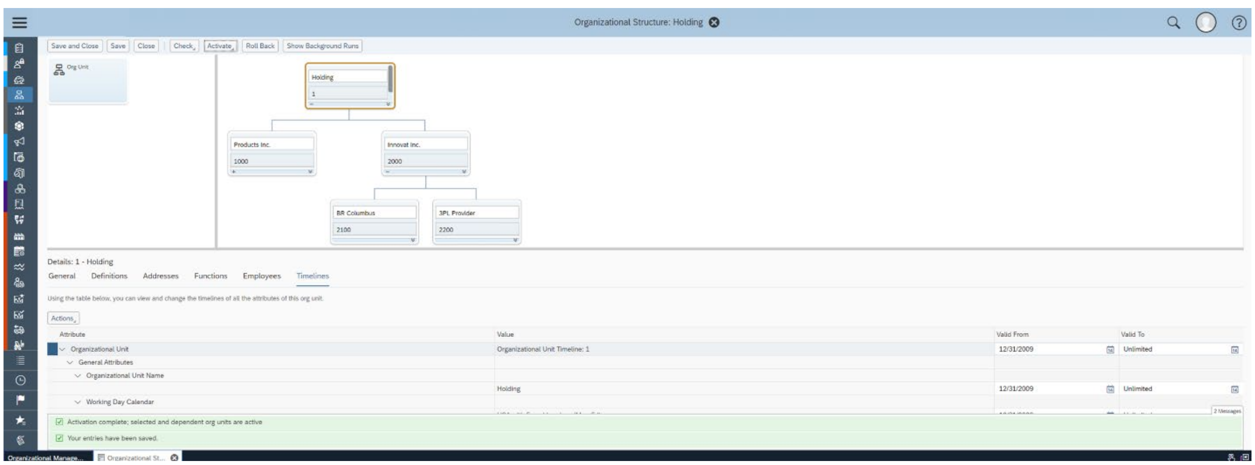
Activate Selected and Dependent Org Units: Activates the org structure from the org unit that is currently selected downwards.

Activate Selected and Dependent Org Units in Background: Activates the selected org structure and its child units in the background. You receive a notification from the system when the background activation has been completed.

Note: We recommend that you use this option to activate medium to large org structures to ensure that you can continue to work in your system while the activation is taking place.

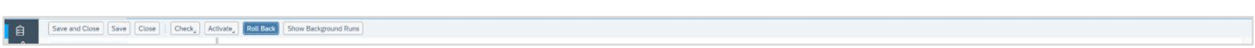
Select Activate Selected and Dependent Org Units:

Note: the new org unit has been successfully activated:



The saving of changes that you did not want to make can only be undone using the **Roll Back** button, which will also undo all other changes you have made in the planning area since the last save or activation. You must then rebuild your org structure. **Roll Back** rolls the planning area back to the last active version. It discards all changes made in the planning area since the last activation and copies the active area into the planning area.

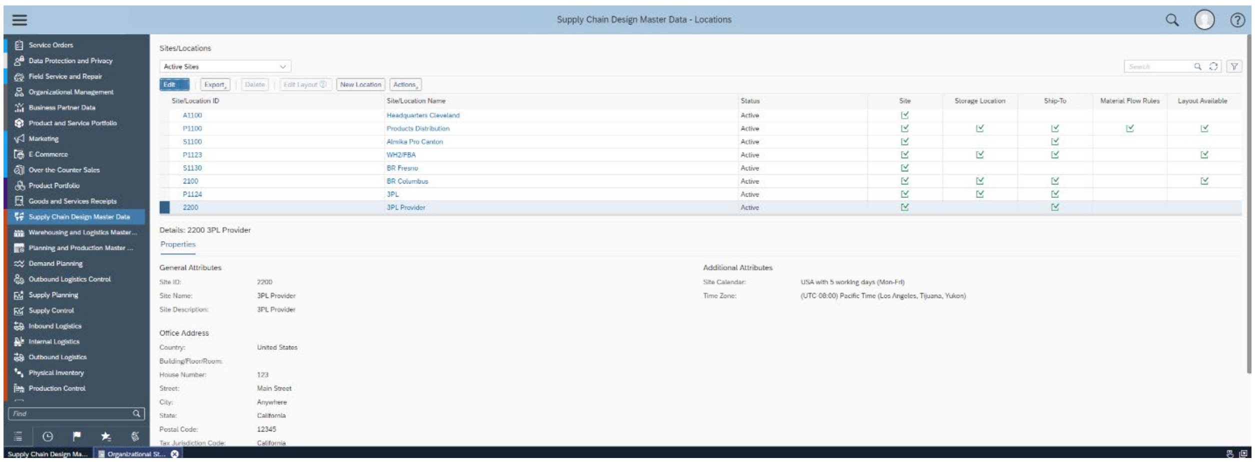
You use this action if you have made changes and saved them and now wish to discard them:



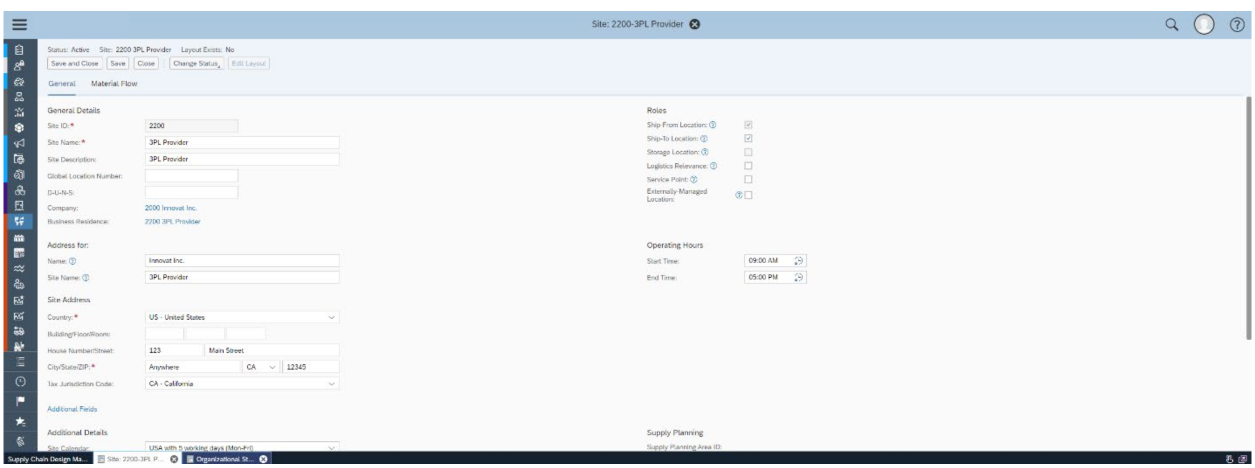
Setup the 3PL site as a Location

Now that this org unit has been created as a business residence and activated, a site is automatically created. We are now able to setup the location. Go to Supply Chain Design Master Data -> Locations:

Find the new location and click Edit:



On the General tab, review and update the general details of the site, including address details, as needed:



Choose the roles for the site. The follow roles should be enabled for the 3PL:

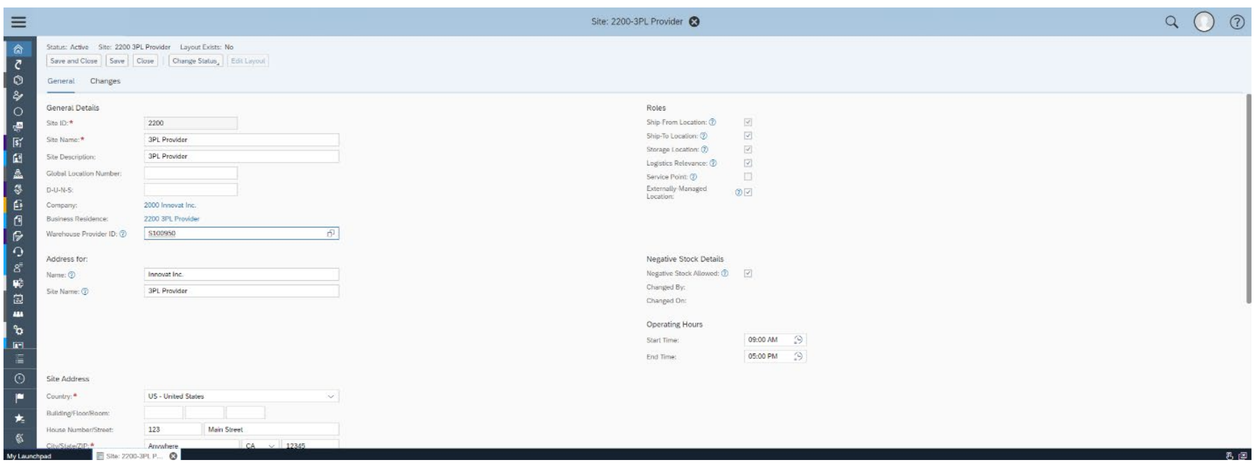
- Ship-From Location

- Ship-To Location
- Storage Relevance
- Logistics Relevance
- Externally Managed Location

Choose the role **Service Point** if you want the site/location to be used for the pickup of items by the service engineer in a field service and repair scenario.

When the **Externally Managed Location** box is checked, the Warehouse Provider ID field will enable. Enter the ID of the warehouse provider who manages the external warehouse. This will be the supplier ID created in the previous step.

Determine if you will allow Negative Stock. When working with an externally managed warehouse, it is recommended that you check the **Negative Stock Allowed** check box.



Click Save

Click Change Status -> Activate

Click Save & Close

The location has now been created. Since the location is an externally managed location, it is not possible to have a location layout.