



Overview

The CIS connector uses the ByDesign SOAP web service API to query or update data in ByDesign.

Window Service

Data is imported from ByDesign into CIS using a Windows service application. Each ByDesign tenant CIS connects to requires an instance of the Windows service application. The service is configured to run when Windows starts. When the service starts, it imports data from ByDesign into CIS if it is configured to run the import when the service starts. While the service is running, the data import function is started once a day at the time defined in the configuration file. Future versions might have the option to trigger imports from an external source such as the Quote Builder admin.

The service can be configured to import all data every day or only data that has been updated since the last time the import function was run. The service can be configured to import different business objects depending on the needs of the client. The following ByDesign business objects can be imported into CIS:

ByDesign Object	CIS Object / Field
Account	Customer
Material	Item (Aggregate)
Service Product	Item (Aggregate)
Entitlement Product	Item (Aggregate)
Sales Price List	Product price added to list of values of corresponding Item
Product Category	Category field of Item

Account Import

This function imports Accounts from ByDesign into CIS as Customers.

API Function	API URL
QueryCustomerIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/querycustomerin1
ManageCustomerIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/managecustomerin1

- Call the QueryCustomerIn API to get a chunk of Account records.
- Loop through the returned Account records.
 - Call the CIS API to check for an existing Customer record using the Account ID as the customer number.

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- If a Customer records exists, update it.
- If a Customer record does not exist:
 - Create a new Customer record in CIS using the ByD Account ID as the account number.
 - Call the ManageCustomerIn API to set the CIS Customer ID extension field on the Account record to the CIS Customer ID.*
- If the flag indicating there are more records to fetch is set, call the QueryCustomerIn API again to get the next chunk or records.

* The process to store the CIS record ID in an extension field of a ByDesign business object is most likely going to be removed in the future as the ID hasn't been needed and it adds additional time to the import.

Material Import

This function imports Materials from ByDesign into CIS as Items (Aggregates).

API Function	API URL
QueryProductCategories	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/queryproductcategories
ManageSalesPriceListIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/managesalespricelistin
QueryMaterialIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/querymaterialin
ManageMaterialIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/managematerialin1

- Call the QueryProductCategories API to get the list of ByDesign product categories. The category name is used for the item category in CIS.
- Call the ManageSalesPriceListIn API if a price list name is specified in the configuration. If a price is in the list for a Material the price is added to the CIS item.
- Call the QueryMaterialIn API to get a chunk of Material records.
- Loop through the returned Material records.
 - Call the CIS API to check for an existing Item Aggregate record using the Material ID as the item name.
 - If an Item record exists, update it.
 - If an Item record does not exist:
 - Create a new Item Aggregate record in CIS using the ByDesign Material ID as the item number.
 - Call the ManageMaterialIn API to set the CIS Item ID extension field on the Material record to the CIS Item ID.*
 - If the flag indicating there are more records to fetch is set, call the QueryMaterialIn API again to get the next chunk or records.

* The process to store the CIS record ID in an extension field of a ByDesign business object is most likely going to be removed in the future as the ID hasn't been needed and it adds additional time to the import.

Entitlement Product Import

This function imports Entitlement Products from ByDesign into CIS as Items (Aggregates).

API Function	API URL
QueryEntitlementProductIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/queryentitlementproductin
ManageEntitlementProductIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/manageentitlementproductin

This import functions the same as the Material import. Materials, Entitlement Products, and Service Products all have unique IDs in ByDesign so the ID can be used as the Item Number in CIS.

Service Product Import

This function imports Service Products from ByDesign into CIS as Items (Aggregates).

API Function	API URL
QueryServiceProductIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/queryserviceproductin
ManageServiceProductIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/manageserviceproductin1

This import functions the same as the Material import. Materials, Entitlement Products, and Service Products all have unique IDs in ByDesign so the ID can be used as the Item Number in CIS.

Sales Price List Import

This function gets one price list from ByDesign and updates the CIS Item price if the Item has a price in the list.

API Function	API URL
ManageSalesPriceListIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/managesalespricelistin

- Call the ManageSalesPriceListIn API if a price list name is specified in the configuration a build a list of the prices.
- Call the CIS API to get a list of all of the Item IDs and names in CIS.
- Loop through the list of Items.
 - If the Item name is found in the price list call the CIS API to get the Item record.
 - Remove any existing prices from the item.
 - Add price to item and call CIS API to update Item.

Product Category Import

This function gets the list of Product Categories in ByDesign. This is used by the item import functions to get the category name for an item.

API Function	API URL
QueryProductCategories	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/queryproductcategories

- Call the QueryProductCategories API to get the list of Product Categories.

Connector SOAP Web Service

CIS Quote Builder calls a connector SOAP web service to communicate with ByDesign. Each ByDesign tenant CIS connects to requires an instance of the connector web service.

Place Order Function

CIS Quote Builder calls the Place Order function in the connector web service to create a Sales Order in ByDesign.

API Function	API URL
ManageSalesOrderIn	https://[tenant].sapbydesign.com/sap/bc/srt/scs/sap/managesalesorderin5

- Call the ManageSalesOrderIn API to create a new Sales Order in ByDesign for a CIS quote.
 - Store the customer data in the Sales Order -> Account Party field. Use the customer number for the Party ID.
 - Store the external reference number in the Sales Order -> BuyerID field.
 - If Incoterms are used, store them in the Sales Order -> Delivery Terms -> Incoterms field.
 - If Payment Terms are used, store them in the Sales Order -> Cash Discount Terms field.
 - If Sales Units are used, store them in the Sales Order -> Sales Unit Party field.
 - Store the Ship To data in the Sales Order -> Product Recipient Party field.
 - Store the ByDesign Employee ID / Business Partner ID in the Sales Order -> Employee Responsible Party field.
 - Store the list of quote Items in the Sales Orders -> Item list.
- If ByDesign returns any errors they are returned to Quote Builder to be displayed to the user.