

# Spider

Manual

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# Introduction

This document describes the use of Web Services in Spider. The product contains several Web Service API's used to maintain the systems master data, handle sales and get information about inventory availability through external systems. Examples of external systems are Web Shops, CRM Systems or other software providing relevant information that could be used by the program. By using the web services described below the external system will be allowed to create, update and export master data from the program and thereby avoid extra work. Note that all web services regarding Spider have the prefix Spider in the name.

For general information about Web Services, please check out this information <u>https://docs.microsoft.com/en-us/dynamics365/business-central/dev-itpro/webservices/web-services</u>

Object Type	Service Name	Function	Description
Codeunit	MasterDataAPI	CreateItem Create new Item	
Codeunit	MasterDataAPI	CreateCustomer	Create new Customer
Page	Item	Read	Read Item data
Page	Item	ReadByRecId	
Page	Item	ReadMultiple	Read data from multiple Items
Page	Item	Update	Update Item
Page	Item	UpdateMultiple Update data from multiple Items	
Page	Item	Delete Delete Item	
Page	Item	Delete_ItemCrossReference	Delete Item Cross Reference
Page	Item	Delete_ItemUnitOfMeasure Delete Item Unit Of Measure	
Page	Customer	Read Read Customer data	
Page	Customer	ReadByRecId	
Page	Customer	ReadMultiple Read data from multiple Customer	
Page	Customer	Update Update Customer	
Page	Customer	UpdateMultiple Update data from multiple Customer	
Page	Customer	Delete Delete Customer	

#### Web Services to maintain Master Data

#### Web Services to handle Sales

Object Type	Service Name	Function	Description
Codeunit	SalesDocumentAPI	CreateOrder	Create new Order
Codeunit	SalesDocumentAPI	CreateOrderAndCustomer	Create Order and Customer in the same call
Codeunit	SalesDocumentAPI	CreateReturnOrder	Create new Return Order
Codeunit	SalesDocumentAPI	DeleteOrder	Deletes Order
Codeunit	SalesDocumentAPI	DeleteReturnOrder	Deletes Return order
Codeunit	SalesDocumentAPI	GetOrderConfirmation	Get Order Confirmation in Base64
Codeunit	SalesDocumentAPI	GetReturnOrderConfirmation	Get Return Order Confirmation in Base64
Codeunit	SalesDocumentAPI	ReleaseOrder	Releases Order in Dynamics 365 Business Central
Codeunit	SalesDocumentAPI	ReleaseReturnOrder	Releases Return Order in Dynamics 365 Business
			Central
Page	SalesOrder	Read	Reads data from Order in Dynamics 365 Business
			Central
Page	SalesOrder	ReadMultiple	Reads data from Multiple orders in Dynamics
			365 Business Central
Page	SalesReturnOrder	Read	Reads data from Return Orders in Dynamics 365
			Business Central
Page	SalesReturnOrder	ReadMultiple	Reads data from Multiple Return Orders in
			Dynamics 365 Business Central
Page	SalesShipment	Read	Reads data from Sales Shipment in Dynamics
			365 Business Central
Page	SalesShipment	ReadMultiple	Reads data from Multiple Sales Shipments in
			Dynamics 365 Business Central
Page	SalesReturnReceipt	Read	Reads data from Sales Return Receipt in
			Dynamics 365 Business Central
Page	SalesReturnReceipt	ReadMultiple	Reads data from Multiple Sales Return Receipts
			in Dynamics 365 Business Central

Page	ItemInventory	ReadMultiple	Get Inventory Availability for all Items according
			to given filters.
Page	ItemOnPurchase	ReadMultiple	Get ItemNo. And expected receipt date from
			open Purchase Order Lines.
Page	ItemOnSales	ReadMultiple	Get ItemNo. And expected delivery date from
			open Purchase Order Lines.

#### Web Services to handle External Systems

Object Type	Service Name	Function	Description
Code Unit	ExternalSystemAPI	GetChangesRecords	Get Changes Records

# Getting started

#### Authentication

For information regarding Web Services Authentication, please visit: <u>https://docs.microsoft.com/en-us/dynamics365/business-central/dev-itpro/webservices/web-services-authentication</u>

#### **External Systems**

#### Overview

The external systems feature is used when Dynamics 365 Business Central is integrated with other systems. The main purpose of the module is to keep other systems synchronized with Dynamics 365 Business Central by creating log entries. These log entries are then retrieved by the external system via Web Services. Once the log entries are fetched the external system performs a read call on the appropriate Web Service to refresh the data in the external system. The picture below illustrates an example of the intended work flow.



It is possible to log and retrieve logged records from any table in Dynamics 365 Business Central (3). The Web Services described in this document can be used to read data from specific tables and fields (4). If there is a need to synchronize more data than what is offered by the Web Services included in Spider, additional pages can be

published from the user interface by running the assisted setup "set up reporting data" in Dynamics 365 Business Central.Setup

Before a Web Service can be used you need to set the communicating counterpart as an External System in your system.

To Navigate in the system, you click on the search icon (1) in the right top corner and enter your search word (2) and click on the link below (3) that matches your wishes.

Dynamics 365 Business Central		<b>1</b> a
CRONUS Sverige AB Sales > Purchasing > Inventory > Posted Documents		
Sales Orders Items Customers Item Journals Sales Journals Cash Receipt Journals	nals external system 2	2
imes Thank you for trying out Spider. Evaluation will start when the first licensed user logs on.	Co to Brown and Tatir	~
INSIGHT FROM LAST MONTH	Sternal System Lists     Lists	

To add an external system, navigate to External Systems list (1) and navigate to new and find "New (Wizard) (2) by adding a new system by using a guide or click New (3) to add an external system manually.



#### Adding an External system manually

WEBSHOPWEW

An empty card will be opened. Enter a *Code(1)* and a *Description(2)*. Add tables to synchronize in *Table Setup(3)*, set *Synchronization count(4)* to One at a time and change *Status(5)* to Active.

Ð	TERNAL SYSTEM CARD   WORK DATE	2021-01-28				Ø	+	Û		
$\setminus$	WEBSHOP-ATE	D								
Ę.	Unsynchronized 💿 Synchronizat	tion History 📑 Init Unsynchroni:	zed 👫 Search i	History Show Attached	d More opti	ons				
G	eneral									
Co	ode ·····	IOP-ATP	Status	Inactive		•				
De	escription · · · · · · · · · Wb sho	op - Available to Promise - Locat	Unsynchronized	d Count		-				
0	utward Settings									
Sy	nchronization Count · · · · All	T								
CL	ustom Synchronization C									
Та	able Setup Manage									E7
	TABLE NO.	TABLE CAPTION		DESCRIPTION		LOG INSERTI	LOG MODIFI	LOG DELETI	FIELDS	FIELD FILTER COUNT
	32	Item Ledger Entry				۲	۲	۲	-	-
	37	Sales Line							-	
	39	Purchase Line				•	•		-	-

Field	Function
Code	Enter the code as a System ID in the API-calls from the external system when communicating with the Dynamics 365 Business Central-database.
Description	Enter a description for the Code.
Status	Available options:

Inactive     Active     Under development (used when development is being made to an alr active External System.)  Synchronization count     Available options:		
Synchronization count	<ul> <li>One at a time</li> <li>All</li> </ul>	
Table Setup	Enter which table to be synchronized, there can be more than one	
<b>Table No.</b> Enter the table that is to be synchronized.		
Fields	Add which fields who will trigger log entries.	
Field Filter	Apply one or more filters to control which table records that is creating log entries.	

#### Navigation bar functionality

Field	Function
Init Unsynchronized	Creates Log Entries for all records defined in the tables setup. Use this action to perform a Refresh synchronization. The time this will take is depending of the record count of the affected tables.

# WEBSHOP-ATP

🕞 Unsynchronized	Synchronization History
	• =j::e::e::e::e::e::

📝 Init Unsynchronized...

#### General

Field	Function
Unsynchronized	Lists log entries which have not yet been retrieved by the external system.
Synch. History	List over log entries that has been retrieved by the external system.
Synch. History Lines	Detailed list over log entries that has been retrieved by the external system.

#### Row functionality

To handle specific tables, click on so the row.

Field	Function
Fields	Enter fields to trigger logging.
Field Filter	Use to filter records on specific fields to trigger logging.
Init Synchronized	Fills Unsynchronized List with changes regarding chosen table to synchronize.

## Web Services

To access SOAP-URL:s being used to access the web services, navigate to the Web Service page (1) The column SOAP-URL shows the address to available API:s. (2) Note: All web services used by Spider have names that starts with Spider.

#### ← WEB SERVICES | WORK DATE: 2021-01-28

🔎 Spider	$\times$ + New	🐺 Edit List 🔋 Delete 🛛 😂 Reload	Show Attached 🛛 Open in Excel Actions Few	er options				
OBJECT TYPE	OBJECT ID	OBJECT NAME	SERVICE NAME	ALL TENANTS	PUBLISHED	ODATA V4 URL	ODATA URL	SOAP URL
Codeunit	70314113	QWESR WS External System API	spiderExternalSystemAPI		9			
Codeunit	70314115	QWESR WS Master Data API	spiderMasterDataAPI		×.			
Codeunit	70314107	QWESR WS Sales Document API	spiderSalesDocumentAPI		×.			
Page	70314120	QWESR WS Customer	spiderCustomer		×.			
Page	70314113	QWESR WS Item	spiderItem		×.			
Page	70314117	QWESR WS Item Inventory	spideritemInventory		×.			
Page	70314119	QWESR WS Item On Purchase	spiderItemOnPurchase		×.			
Page	70314118	QWESR WS Item On Sales	spiderItemOnSales		×.			
Page	70314111	QWESR WS S. Return Receipt	spiderPostedSalesReturnReceipt		×.			
Page	70314109	QWESR WS Sales Shipment	spiderPostedSalesShipment		×.			
Page	70314105	QWESR WS Sales Order	spiderSalesOrder		×.			
Page	70314107	QWESR WS Sales Return Order	spiderSalesReturnOrder		×.			

#### Web Services to handle External Systems



- 1) This flow needs to be repeated frequently, perhaps with the help of a scheduler.
- 2) External system calls SpiderExternalSystemAPI.GetChangedRecords with an empty Fetch ID and asks if there is any changed records.
- 3) SpiderExternalSystemAPI.GetChangedRecords checks the Unsynchronized list for changed records.
- 4) If SpiderExternalSystemAPI.GetChangedRecords does not find changes Fetch ID will be returned empty and the External System knows there are no changed records and the call will end.
- 5) If SpiderExternalSystemAPI.GetChangedRecords does find changes Fetch ID will be given a GUID to pack the changes and returns the Fetch ID and key of changed records.
- 6) External system calls relevant Web service to get the changes
- 7) External system calls SpiderExternalSystemAPI.GetChangedRecords with a Fetch ID and asks if there are any changed records. Step 3 to 7 will repeat until there are no changed records.

#### Set Up Customer/Item Templates

When creating a new Customer or Item it is possible to get help with by using templates. Using templates is a way to fill fields that usually are the same within a category. For example, maybe 95% of all domestic customer have the same Payment terms, then it is possible to set up a template for all domestic customer with that Payment Terms Code and other things they have in common. The same thing goes for Items.

To add a new template:

#### 1. Search (ALT+Q) for Configuration Templates

CODE

	TELL ME WHAT YOU WANT TO DO	
	configuration templates	
	Go to Pages and Tasks	
	> Configuration Templates Lists	
2.	Select New (1)	
	CONFIGURATION TEMPLATES   WORK DATE: 2021-01-28	2
	🔎 Search 🕂 New Manage Show Attached 🕼 Open in Excel	$\forall \equiv$

3. An empty card will be opened. Enter a *Code (1)*, a *Description (2)* and *Table ID (3)*.

					Ø +	<sup>®</sup>					√ SAVED	×
С	onfig. Ten	nplate Header										
New	Show Attached P	age More options										
Gen	neral											
Code		EU-CUST		Table ID	3		18 4					
Desc	ription	EU Customers		Table Name	Customer							
Line	s Manage										1	63
	TYPE	FIELD NAME	FIELD CAPTION		TEMPLATE CODE	DEFAULT VALUE		SKIP RELATION CHECK	MANDAT	REFERENCE		
	Field	VAT Bus. Posting Group	VAT Bus. Posting Group			EU			0			
	Field	Customer Posting Group	Customer Posting Grou	p		EU		0	0			
	Field	Gen. Bus. Posting Group	Gen. Bus. Posting Grou	p		EU		Ð	0			

#### General Tab

Field	Function
Code	Enter a code as a unique ID for the template.
Description	Enter a description for the Code
Table ID	Enter the table to witch this template applies. The <i>Table Name</i> field is automatically filled in when the Table ID field is set. Open the Table list by pressing the button(4)

To set up which fields to fill automatically left click on a new row in the filed name column(1) to open the page with all available fields. Scroll the list or search (2) and select a field (3), exit by selecting OK (4). After add a default value (5) repeat above steps to add more fields.

CONFIG. TEMPLATE HEAD	ER   WORK DATE: 2021-01-28	P posting 2 × Show Att	ached 🗱 Open in Excel					√SAVED ,*
EU-CUST		FIELD LIST - CUSTOMER			2			
New Show Attached	Page Actions Fewer options	NAME						
Copy Config. Templa	te	Customer Posting Grou	, 3					
		Gen. Bus. Posting Group						
General		VAT Bus. Posting Group						
Description	FIL Curtomerr							
Lines Manage	Lo custonies	_			4 OK Cancel			ß
Lines Manage	FIELD NAME	FIELD CAPTION	TEMPLATE CODE	DEFAULT VALUE	ok Cancal SKIP RELATION CHECK	MANDAT	REFERENCE	E
Lines Manage TYPE Field	FIELD NAME VAT Bus. Posting Group	FIELD CAPTION VAT Bus. Posting Group	TEMPLATE CODE	DEFAULT VALUE EU	Cancel OK Cancel SKIP RELATION CHECK	MANDAT	REFERENCE	2
Lines Manage TYPE Field Field	FIELD NAME VAT Bus. Posting Group Customer Pasting Group	FIELD CAPTION VAT Bus. Posting Group Custome Posting Group	TEMPLATE CODE	DEFAULT VALUE EU EU	Cancel CK Cancel SKIP RELATION CHECK	MANDAT	REFERENCE	23
Lines Manage TYPE Field Field	FIELD NAME VAT Bus Posting Group Gen. Bus Posting Group	FIELD CAPTION VAT Bus Posting Group Customer Posting Group Gen. Bus Posting Group	TEMPLATE CODE	DEFAULT VALUE EU EU EU 5	Cancel	MANDAT	REFERENCE	El
Lines Manage TYPE Field Field Field Field	FIELD NAME VAT Bus Posting Group Customer Posting Group Gen. Bus Posting Group	FIELD CAPTION VAT Bus Posting Group Customer Posting Group Gen. Bus Posting Group	TEMPLATE CODE	DEFAULTVALUE EU EU EU	Carcel	MANDAT	REFERENCE	8

### Extra Fields Setup

On the Customer card and Item card it is possible to add extra fields. The fields contain no logic but are useful to set filters and store information. Both Customer and Item cards have 28 extra fields spread over 6 different kinds of datatypes, 8 Code, 4 Text, 4 Decimal, 4 Integer, 4 Date and 4 Boolean.

Fields Types

Datatype	Description	Length
Code	This data type stores a special type of string that is converted to uppercase and removes any trailing or leading spaces.	20
Text	This data type stores a text string.	50
Decimal	This data type stores <b>decimal numbers</b> ranging from -999,999,999,999,999.99 to +999,999,999,999,999.99.	
Integer	This data type stores <b>whole numbers</b> with values that range from -2,147,483,647 to 2,147,483,647.	
Date	Stores a date ranging from January 1, 1753 to December 31, 9999.	
Boolean	Indicates <b>true</b> or <b>false</b> .	

#### Set up extra fields

•

1. Search (ALT+Q) for Extra Field Setup and select it (1)

TELL ME WHAT YOU WANT TO DO	∠ ×
extra fields setup	
Go to Pages and Tasks	
> Extra Fields Setup 1	Administration
> Extra Field Setup Guide	Tasks

2. Rename the fields to your own standard (1,2) and sign out/in (3) before opening your Customer or Item card

		+ û		√ SAVED	2
Extra Fields Setu	a				
	.1-				
Setup Wizard Show Attached	More options				_
Customer					
Customer Code 1	gory	Customer Decimal 3			
Customer Code 2 · · · · ·		Customer Decimal 4 · · · ·			
Customer Code 3 · · · · ·		Customer Integer 1 · · · ·			
Customer Code 4 · · · · ·		Customer Integer 2 · · · ·			
Customer Code 5		Customer Integer 3 · · · ·			
Customer Code 6		Customer Integer 4 · · · ·			
Customer Code 6		Customer Date 1 · · · · · [			
Customer Code 8 · · · · ·					
Customer Text 1 · · · · · · · · · · · · · · · · · ·	must sign out and ther effect.	n sign in again to have the char	nges		
Customer Text 2					
Customer Text 3		3	ок		
Customer Text 4					
Customer Decimal 1 · · · ·		Customer Boolean 3 · · · ·			
Customer Decimal 2 · · ·		Customer Boolean 4 · · ·			
Item					
Item Code 1 2 Item Category		Item Decimal 3 · · · · · ·			
Item Code 2		Item Decimal 4 · · · · · ·			
Item Code 3		Item Integer 1 · · · · · ·			
Item Code 4		Item Integer 2 · · · · · ·			
Item Code 5		Item Integer 3 · · · · · · [			]
Item Code 6		Item Integer 4 · · · · · · [			]
Item Code 7 · · · · · ·		Item Date 1 · · · · · · [			]
Item Code 8 · · · · · ·		Item Date 2 · · · · · · [			]

- 3. To sign out and in, reload, press ctrl+F5.
- 4. You will find all Extra fields under the tab Extra fields (1) at the bottom of your Customer or Item card. Select New (2) to add your own values.

CUSTOMER CARD   WORK DATE: 2021-01-28		<ul> <li>+</li> <li>iii</li> </ul>	
01121212 · Spotsm	eyer's Furnishings		
New Document Request Approval Navig	ate Customer Show Attached More options		
General >			Spotsmeyer's Furnishings
Address & Contact >			US-FL 37125 Mr. Mike Nash
Invoicing >			EXPORT UTRIKES
Payments >			1M(8D)
Shipping >			GUL Partial EXW
Extra Fields 🕕			
Customer Category	~		
CODE	DESCRIPTION		
	(There is nothing to show in this view)		
+ New 2	Select from fu	ull list	

#### 5. Type in your own values and descriptions

🔎 Search 🕂 New 📪 Edit List 📋 Delete	Show Attached 🛛 🗱 Open in Excel	
SELECT - EXTRA FIELDS CODES $+ New$		2
CODE	DESCRIPTION	
SMALL	Small Customers	
MEDIUM	Medium Customers	
LARGE	Large Customers	
*		
		OK Cancel

# LicenseProvider

LicenseProvider manages the billing of all apps from SmartApps 4D365. All apps from SmartApps can be found and managed in the "SmartApps overview" page. To get help regarding LicensProvider, please click on the following link:

https://www.smartappsford365.com/wp-content/uploads/LicenseProvider\_Manual.pdf