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FAQ Brochure

Technical information about the SAP Adapter

Alumio's SAP e-commerce adapter will be installed on the SAP back-end system via a standard transport of an ABAP stack (in the Y-Range in SAP, and is called YBite-3). The data between the webshop and SAP basically is exchanged in XML format. The web shop sends XML requests to the adapter. SAP processes the data using internal business logic and send XML responses back.

Transport / Development SAP

The development and customizing is tracked /monitored very strictly as the whole transport bulk is copied over into a separate SAP systems. All transport and adapter objects begin with: YBITE3_*** (on request we can change the name structure). Each development will start with YBITE3_ so it becomes clear that the development of the templates are related to another. Each development is accompanied with a description so it is easy to understand for new SAP system why this development is created. Since multiple SAP system will re-use the development, source fields certain need to be derived from Z-mapping- tables.

The adapter uses SOAP webservices generated with SAP SOAPMANAGER;

- Using RemoteFunctionCalls and standard BAPI's, SAP transactions will be triggered and data will be delivered;
- Stateless; The connection is stateless, meaning the output will have the same fields from the input. This can be manipulated in the iPAAS interface when wanted.
- Triggers for communication are done in the Webshop (pull strategy);
- The adapter uses 1 connection user for communication to SAP;
- User Management is managed on the e-commerce platform.
- The mapping and configuration of the data in SAP to the e-commerce data can be done by configuration screens, as described in the technical whitepaper.

The adapter is based on SAP Baseline / best practices with the following principles:

- 1 Sales organisation/distribution channel/division per customer;
- 1 Global order type;
- 1 Global set of shipping types, valid for all customers;
- 1 Ordertype valid for all customers/materials/sales organisation combinations;

After an analysis we will identify if the adapter needs to be changed for a specific implementation/configuration.

Updates

In the maintenance phase we will not only deliver the monitoring, reporting tooling, but we will also deliver the updates to the SAP connector when SAP will deliver their updates. This make sure the SAP Connector will remain secure and working when updates are provided.

OTAP- Development, test & production version

We will deliver a SAP Connector for the SAP test & production version. The SAP connector will be installed in the testversion first and can be connected to a development or/and test or/and production version of the iPAAS solution and e-commerce environment. Please check the integration plan for further details.

Security

The connection will be done based on a 1 to 1, so dataconnection is fully secured. We recommend a dedicated Site-to-Site VPN, connecting the adapter to the webserver on which the e-commerce platform is runs. If needed or wanted a VPN connection can be installed, as additional serice. We recommend 'Open VPN'. As a company we are ISO 27001 certified. The hosting of connected iPAAS solutino is done google cloud services, which is also ISO 27001 certfied company. Alumio e-commerce application such as Magento 2 Enterprise can be made PCI Compliance by your Magento partner.

Error messaging

All calls will be logged and has a message and result code field. Both fields are used to indicate whether the call was processed successfully and when an error occurs, the message field is used to specify the problem.

The error messages are only available for debugging purposes. These messages will not be shown to the customers.

A reporting interface for error messages will be delivered in the middleware application.

Monitoring

The ERP connector is essential & should work all the time. To measure and ensure the quality, speed, performance & uptime of the Connector we can use the health monitoring tooling from the iPAAS solution. Here you can see if all services are running fine, but you are also able to add workflows and notifications in case a message is failing.
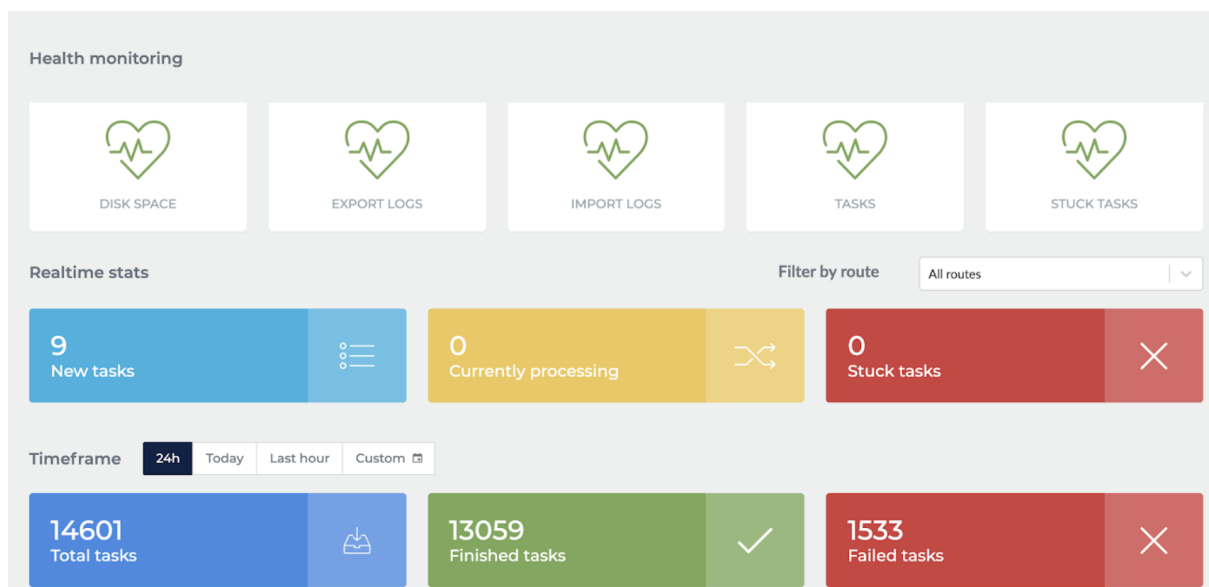
FAQ SAP Connector

Question: Where in the SAP architecture are the web services located?

The SAP Connector is installed as a ABAP stack in the Y-Range in SAP, and is called YBite-3. The web services are located on the ABAP (programming language) proxy of SAP. ABAP is the 'translation machine between SAP's SQL and the SAP connector. These are installed on the application server above SAP / Database. The SAP connector is placed above this. Finally, in SAP architecture, a so-called 'load balancer' can be placed between the application servers. The requests that come from e-commerce are distributed evenly. The connector works when the customer had PI installed, as well as PI is no installed. The connector is sending SOAP API's to the iPAAS integration interface, which is able to send the API's in SOAP, REST or other protocols.

Question: What is the technology you are calling on the SAP side from your Connector.

The connector on the SAP side is ABAP. It transports with all the logic needed to be able to have these features. Basically, reveal webservices on the SAP side and we also have the same range of web-services (SOAP webservices) on the ecommerce side that is used to communicate.

That's ABAP stack running on the SAP side, so that is making use of idocs but that's all translated into SOAP XML APIs. The ABAP stack is using RFC functions, which are send to the SOA manager, which creates the webservices. The only thing we do on a file basis is customers and the products. So, customers and products would talk to API and the rest through SOAP connections.

Question: Does the connector needs PI?

In order to install the SAP Connector or to make customization it is not needed to have knowledge of SAP PI. The connector is working with & without SAP PI. The ABAP stack already have the mapping to PI, so these can be use (or not). If extra data entities are created as additional 'work/ wishes' the SAP developer should have some basic understanding from SAP PI, because he needs to map the PI to the new end point in the SOA Manager.

Question: What kind of knowledge/ capabilities is needed for a SAP developer to make customizations?

ABAP Knowledge and experience.

Question: Could you explain a bit about how the interfaces are working. And what kind of data is sent and retrieved from Magento? And what kind of process is going through to the middleware?

Yes. Basically, you can take customers and products form the SAP system. That can be done through a push file. And that can be done on the databases. Then the other services are real-time, so if you are looking at the my account area in the demo, you can see your recent orders, invoices, quotes and deliveries. And you also have detailed pages to make a selection on a date range or search by article number or reference and then to show the orders that are related to that. So, that combines my offline and online orders. The same goals for invoices and deliveries basically taken directly from SAP relevant to the customer. For a customer, all addresses are taken directly from SAP, so shipping, billing, and ...address, depending on what you are allowed, to add addresses, you can add a new shipping address in shop or request shipping address through the back office. For the B2B checkout a realtime ordersimulate call is available, including realtime call for asking delivery costs and times.

Question: Do I need, or can I do Customisations to the connector

With a customized ERP, the ERP needs to provide these Web services from your ERP environment. If you have SAP R3 ECC or S/4 HANA then we offer a (certified) adapter. If customisations are wanted, needed these can be done by your SAP partner, our expertteam or by yourself. Any guidance and customizations can be done in this additional sprints.

Question: Delivering source code:

We will deliver the source code of the connector, so the current SAP Partner is able to create changes or customisations in the future (see license).

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Question: License for SAP Connector & source code

The SAP Connector is licensed and can & may only be used for SAP application of the signed customer. An NDA should be signed by any partner which work on the SAP Connector. So if you have a SAP Partner, they have to sign a NDA before we can send the source code or let them install the SAP Connector. The NDA format will be delivered by us. If an other NDA needs to be signed, we will invoice extra legal costs of EUR 400,-

Client: Most difficult part is to transport client B2B specific prices to Magento. We are not sure should we do it via API or full load

We normally do this realtime, not a problem. We advise to not duplicate logic!

Client: So, the pricing is retrieved by a synchronized call for each material or is it a database that is stored and refreshed every day or every week?

No, it's taken from SAP in real time.

Client: We should daily transport 10 000 business partner = customer, 200 000 product from SAP to magento, is this ok?

The number of customers and products is ok!

Client: Does customer specific pricing show when viewing product or only at the checkout screen?

No, it's also when viewing a product, when viewing a list of products when we show customer specific pricing when logged in of'course.

Client: And for the address, would the connector detect the mandatory fields based on what we have in SAP or we have to configure it to the connection?

That has to be configured on the shop side and usually most fields are required, but not all, but the validation is done on the shop side before it's being sent to SAP.

Client: Is it possible to have manual access, to have an order that is in pending status and will be confirmed on the ERP side by a user?

There are possibilities. Most are set up, validations completely done in SAP, meaning that they would also set any actions within an SAP. But we also have customers where an action or a discount is translated to either the header rule? or a separate product, separate material number that contains the discount.

Client: I saw your technical documentation, the time to retrieve data from SAP is less than 1.2 sec?

Yeh, basic responses is about 300 milisec and it depends on the size of the system, the load on the system etc. So there is some response on the SAP side that would have to add to 300 milisec but in general it's about 1 sec.

Client: What is the payment flow on the Magento side?

That can be 2 ways, but normally we store the order in SAP before going to a payment service provider and that needs approval from the PSP, webservice in return….But still, if the order is not sent there is no invoice. Let's say, that is financial set up that would be needed. That is possible

to do manual but if you want to automate this, you would need to do something to be able to support that.

Client: If we had 1 of the instance of Magento and multiple backend SAP systems. Is there a capability of pushing the interfaces to install them each SAP instances and then push it all to 1 e-commerce. Is it visible?

You could have multiple SAP instances running the same Connector. They would live on different endpoints. And then on the e-commerce side, the 1 instance we can have multiple store views or websites depending on the setup. And they are all directed towards the end-point. And these store views could talk to different SAP instances. One of the examples that I can show set up for different European countries in Benelux, Italy, Spain – each with their own SAP system connected to 1 e-commerce instance and has separate websites for each of those countries. So that can be done easily. And that is also where all this configuration comes in, the power of the Connector that you can adapt this to each of SAP instances. At the same time, I can also have 1 SAP instance talk to multiple websites and have mapping on sales organization and stuff like that. So, that's real flexibility. Note: we need to have some extra time, mapping the right data in the iPAAS interface.

Client: just for the product, that is no longer orderable. What are the capabilities to say – ok, man, this product can be replaced by another product.

yeh, that's available. We can have a replacing material number, the part. That is set up in SAP. And the product is replaced by another product. Then we can make a reference on the e-commerce side. And it can be replaced automatically, which also when I am doing a placing an order it's going through the shopping cart which is an order simulation. If there would be a replacing order automatically, then it would be already be replaced through the order simulation. So that's one of dealing with it. But also in the catalog itself, I can replace the items and catalog overview. But then you wouldn't be showing all the products. But if I, for instance, would have a specifical list, whish list, favorites list, and a part would have a replacement, then within that list would be a replacement instead of the items. Note: we need to have some extra time, mapping the right data in the iPAAS interface.

Client: how long do you take to implement. I know that it could be different. But what's on average?

Depends on what needs to be done on the e-commerce side and whether it is done either by your e-commerce partner or whether we do that. For instance, the Scotts example, it took us max 2 days to set the configuration and test the connection with sap and being able to get products, customers, pricing and stock into Magento to be able to place orders. And + we needed some time to place the VPN. With a little preparation from your side and on the configuration side which we can help to figure out what needs to be done there, the user should be quite straight-forward. Also see implementation route a + b.

Client: We are looking for integration SAP Configurator with several e-commerce applications,. Which one do you support?

We have default B2B support for Magento and B2C support for Shopware. We can do mappings for all e-commerce applications, but we need 1 or 2 days to do the mapping (per data entity).

Client: How are B2B customers and employees tied to accounts in Magento? What does this process look like to setup and is it automatic or manual?

Basically, what we have in Magento is companies and contacts. And they are simply taken from Magento in XML file and transferred to Magento, so there is where login and credential stuff.

Client: Are the changes originated in SAP?

In sense that you can create a customer on the Magento side that would be a set up in SAP and you can also create contacts within a company, that would be created in SAP second time. But you can also choose not to do that. So you need to create a contact in SAP and then it comes back via the feed into Magento.

Client: What is the logic to see the updated products or customers? how does the conncector see this updated information?

SAP is not able to give the updated products or customers, so we run the scheduled (most of the time a nightly) job to send all the products and customers to the integration interface. The iPAAS is comparing the information to the existing information of the e-commerce in the iPAAS solution, so this will not impact the e-commerce or the SAP applications. The 'hard'-work is done by the iPAAS, and only the updated information is send to the e-commerce by an update push from iPAAS.

Client: Can tiered pricing or incentives be described when ordering product?

Tiered pricing is supported. Incentives that's more like a marketing thing depends on how that is set up. What we've done before is simply request a customer specific tiered pricing. Then we need to specify the tiers or get it as a part of a Product Data. And that way you could show the incentive to increase the number of products they buy. That would require a minor modification but that would be possible.

Client: Can we enter quotes and create orders with reference to a quote from e-Commerce?

Yes, you can. We can create Quotes like you would create an order, so you would have the option to request a quote at the checkout. So, instead of placing an order – request a quote and then there is a service you can look up the list of quotes, get into details of the quote, and then confirm a quote.

Client: What is the process of confirming a quote?

It's simply confirming the whole quote.It will be places into the basket and can be order by line, or in it's whole.

Client: Sometimes there is a workflow, may be either the distributor would refer to the Quote or the Sales rep. with the reference to the same Quote and get that pricing.

We can fix that with the roles that we apply to users. So, when user doesn't never to approve a Quote then he would be able to. So, we can tight that 2 single users.

Client: Once the quote is approved, so you can do that Quote on the Magento system and then you can pend? an order from that Quote?

Yeh, correct.

Client: So, if they want to order from a Quote, but they also would like to have a kind of hardware or accessories that are not part of the Quote. Is that supported in Creation?

If you allowed to modify a Quote, that creates quite some difficulties normally you set up a for a delivery address and send to a number of products etc. to have a way to take products out. So currently that's not supported.

SAP Configuration options

SAP Doc: SAP connector customization tables - Technical specification:
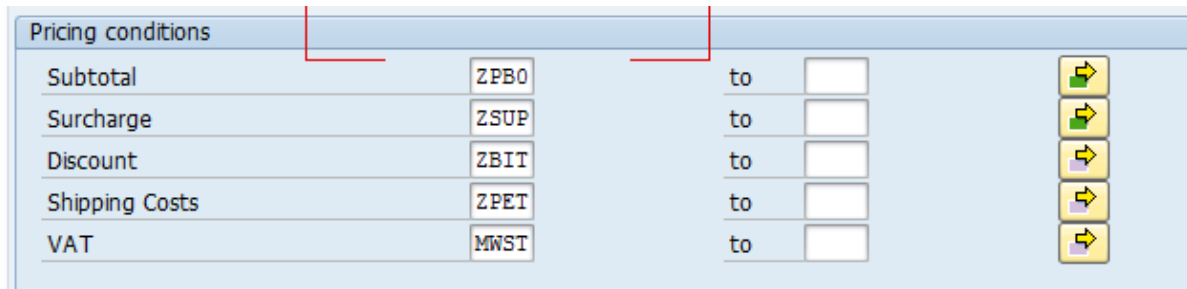
SAP Connector will install custom tables in SAP

The SAP Connector will install custom tables into SAP, which will arrange the mapping between SAP & the e-commerce. Elements which are easy to customize so you can insure a rapid implementation of the adapter without hardcoding any objects.This mapping will take place with several interfaces, which will be explained later.

The following tables/transactions will be created into SAP by the SAP connector. These are only used to save the mappings for example price conditions showing in e-commerce, mapping of shipment, roles of contactpersons etc, as well for saving the configuration 'connection' options.

- YBITE3_DEFAULT
- YBITE3_VCUSTOMER
- YBITE3_VCUSROLT
- YBITE3_VPAYMENT
- YBITE3_VSHIPMETH
- YBITE3_VBLOCK
- YBITE3_DEFRANGES (this is a SAP transaction, not a table)

As you can see in the above list, all transport and adapter objects begin with: YBITE3_*** (on request we can change the name structure). Because of the name structure it becomes clear that the development of the templates are related to another.

An example of the mapping interface been delivered;

Does we guarantee that current SAP modules & features won't be affected by the SAP connector?
All current SAP features will work without any problems. Our SAP Connector will not affect standard SAP objects. The software has been developed in its own YBITE3_*** namespace so no conflicts will arise with existing components in the SAP system.

Transport / Development SAP
The development and customizing is tracked /monitored very strictly as the whole transport bulk is copied over into a separate SAP system.

Each development is accompanied with a description so it is easy to understand for new SAP system why this development is created.

Since multiple SAP system will re-use the development, source fields certain need to be derived from Z-mapping tables

Default values - Maintenance View YBITE3_VDEFAULT

The installed plugin will have this interface with the possibilty to map / adjust the data:

With the introduction of the template to a new SAP environment a set of default or customizing values needs to be maintained to enable the webservices.
.

Website id	

Default values

Field	Value
Price vis.	
CustType	C Contact
Company Code	1000
Fld web	PRAT1
Hide catalog	
Fld web	
Sales Org.	1000
Distr. Channel	10
Division	10
Account group	0002
Customer	100000
Sales Group	001
Plant	1000
Months	12
Maximum records	1.000
Delivery block	01
Checking Rule	A
Stor. Location	1030
HeaderInfo	
Source extnr	MATNR
Del.Day Months	12
TxtIdPayRef	

This table is used in all interfaces as it contains general settings for different interfaces. The fields in this table describe the most important fields which are used for this webshop.

Variable	Technical explanation	Business explanation
Website id (KEY)	unique identifier for a Magento website which is supplied in each webservice request and response	A Magento installation can consist of multiple websites. Each website will have its own ID. Website ID is a key field in the Ybite3_VDefault table. For each website ID, the fields in the Ybite3_VDefault can be configured.
Price vis.	not used; field PRAT9 of table MVKE* determines the price visibility	This field determines if you show prices of individual products on the webshop. • Showing prices is boolean, true or false, in SAP terms checked or not.
Cust Type	value P(artner) or C(ontact) indicating respectively the use of a partner role objects as contact persons or an actual contact person objects as contact persons.	SAP can handle contacts within a company as either 'contacts' or a 'partner'. A customer of a webshop normally has one admin contact who can do everything, but there might be colleagues who should only be able to check invoices / orders, if this is the case you can give them certain roles like assistant buyer, buyer, administrative etc. • Setting up customer roles via partner type is complex, via contacts is easier. • We can also also maintain the contacts and roles in Magento.

Company Code	not used	
Fld web	fieldname from table MARA* used for web enabled indicator of product	Identify a field in MARA which indicates if a product should be displayed at the webshop. Web enabled=1 not web enabled=0. If a product is not web enabled, it won't be available in the backend of Magento after importing the data.
Hide catalog	fieldname from table MVKE* used for product visibility in the webshop catalog	Identify a field in MVKE which indicates if a product should or shouldn't be visible in the default catalog of Magento. Visible =1 not visible =0 For example: certain products should be enable on the webshop, but should not be visible in the default catalog because they only should be available in the my products list (which is generated by SAP)/ should only be available for certain customers.
Fld web	fieldname from table KNA1* used for web enabled indicator of customer	Identify a field in KNA1 which indicates if a customer (or contact when contact is used as a type Cust Type) is web-enabled (can be served/order online via the webshop). Web enabled =1 not web enabled =0.

Sales Org.	default sales organization	If you create a new customer in Magento which is send to SAP, we need to make sure this new customer is assigned the correct sales organisation from your organisation. We need to create a custom logic for this in SAP. A default sales organisation is meant for assigning new customers to this "default" sales organisation if no other sales organisation is set. We can either use the default sales organisation or we can add the sales organisation to the customer data. If the sales organisation is not defined in the call setCustomer, the field 'default sales organisation' will be used. It's possible to have a different sales organisations in the setCustomer call per website. → In Magento this is stored but we do not have specific functions for this
Distr. Channel	default distribution channel	Distribution channel is mainly defined to take care of different types of sales in a sales organization. You can define a distribution channel for direct sales, internet sales, sales through dealers etc. This field indicates which distribution channel is used by default. If a distribution channel is not defined in het call setCustomer, the field 'default distribution channel' will be used.

		→ In Magento this is stored but we do not have specific functions for this
Division	default division	Quite similar as 'Default sales organization' & 'Default distribution channel'

If the division is not defined in het call setCustomer, the field 'default divisionl' will be used.

→ In Magento this is stored but we do not have specific functions for this |
| Account Group | default account group | This field is meant to define to which account group a customer belongs.

→ In Magento this is stored but we do not have specific functions for this |

Customer	default customer	In Magento a new account can be created (New customer). To set this customer as new customer, you can add the value "default customer'; this field is used to assign a template for a customer which is used when you create a new customer. This template is used to fill in default fields from SAP which are necessary when you create a customer. → The webservice 'Get customer' can be triggered on create new account. This is not a default Magento feature in the B2B/ERP Suite. → Default the Magento Suite will create a mail with the new customer, so you can handle this new customer with the normal 'manually checks'
Sales Group	sales group in order creation	Identify one salesgroup which should be used when an order is created.

Plant	default plant	This field will be used in calls like getPriceandStock / getOrdersimulation. The default plant will be used to check whether products are on stock, if no other plant is defined. Please identify one plant for each sales organisation. Note: When you doing B2C business in multiple countries, with multiple plants; In Magento it is possible to setup multiple websites, so a website for europe, which will be using Plant ' Europe " and a website for USA, which will use plant 'USA" If this is the case you will need to extend the integration.
Months	number of months for my product selection	My products is a list of specific SKU's connected to customers. The field "months" is meant to define how much months we should look back in the order history of a customer. Based on this we will check which products are ordered more then once in that period so we can define whether this product needs to be in the list of my products.
Maximum records	maximum number of products in my product selection	My products is a list of specific SKU's connected to customers. The field "maximum records" defines how many products should be included in the my product list.

| Delivery/Credit Block | sales order delivery block when payment is insufficient | Scenario in Magento;

When a payment from PSP/ CC (third party payment provider) is not been approved, the order in SAP will be blocked by the delivery/credit block.

In that case the order is not processed automatically but has to be finalized manually in SAP by backoffice employees.

When you are not using the option in SAP Magento can also ' hold ' de order in Magento till it is approved. A dripcampaign/ mails/ or actions should be taken, starting from Magento. In this case the process handles from the Magento point and only ' paid ' orders will be send to SAP. → In this case the status of an order being send to SAP should be set on Completed. |

Checking Rule	checking rule for availability check	You can define which rules needs to be checked to define the availability of a product. For example: `Let's first give a ready simple example to explain this function in SAP; \\So when stock level = 20, but their are 5 products been ordered in basket, but not yet paid → you can define business logic, to have the stock level =15 (stock on shelf minus orders in basket).` SAP Rules; Which receipts (for example, purchase orders or production orders) should be taken into account in the availability check. Which issues (for example, sales orders or dependent requirements) should be taken into account in the availability check.
Stor. Location	storage location for availability check	Storage locations are the places where stock is physically kept within a plant for salesorganisation. Please use this field to define which storage location needs to be used to determine availability. Identify the storage location per sales organisation.

HeaderInfo	text id of sales order header text for delivery block	Use this field to add a ' default text' in the order from Magento which is being end to SAP. Example: Some users of the SAP connector wants that every web-order goes into a delivery block (so the order is not automatically processed but should processed manually). In this field a standard 'comment' is added, that could be set as a reason to block the order.
Source extnr	fieldname from table MARA for alternative product number !! field 'Source extnr' is mandatory and the specificied field is used to translate the SAP material number to the external/alternative product number (which could also be the SAP material number) and vice versa in ALL web service communication	Field 'Source extnr' is mandatory and the specified field is used to translate the SAP material number to the external/alternative product number (which could also be the SAP material number) and vice versa in ALL web service communication. Example: In Magento SKU is used for unique identifier of the products. Most of the time this field is filled with 'Productnumber' , so SKU = Productnumber and will be send to SAP with the order as SKU. SAP is using the field " Source extnr" for the unique identifier of the products as default, but this can be changed in SAP as well to for example material number. To connect the SKU from Magento to the Unique Identifier in SAP this field can be used to fill in the value of the Unique Identifier in SAP - for example Material Number.

Del.Day Months	number of months to select delivery days	When you want to place an order in the webshop and you are at the checkout, you have a calendar with days when you want your order to be delivered. If you need to have these days filled in from SAP the call getDeliverydays is used. Example: for customer X with ZIP code XXXX YY we only deliver on Wednesday, so in the calendar we are only showing Wednesdays. The field "delivery days months' is used to define how many months in the future we show relevant delivery days in the calendar.
TxtIdPayRef	text id of sales order header text for payment reference	

* Table name descriptions

Table MARA	General Material Data
Table MVKE	Sales Data for Material
Table KNA1	General Data in Customer Master

Contactfunctions - Maintenance View YBITE3_VCONFUNT

This mapping table is intended to determine which contacts should be interfaced to Magento using the contactfunctions

Online purpose:

The indicator marks the contact function which serves as lead buyer. This function has to be available in order to include the customer in the getCustomers response.

Customer roles - View YBITE3_VCUSROLT

This mapping table is intended to map the Magento role against the SAP partner function.

Online purpose

A customer of a webshop normally has one admin contact who has all permissions. However in the Alumio customer module, it's possbie that contacts of companies can be created and have limited permissions. For example who should only be able to check invoices / orders & not create them. If this is the case you can use certain roles like assistant buyer, buyer, administrative etc. with limited permissions in the webshop. If you don't set up any roles, the initial contact in Magento is an admin.

You can decided to synchronize all the contacts from SAP to Contacts in Magento. To make sure you will give the contacts the right permissions you will need to map the SAP function to the roles in Magento. The roles can be configures in the Alumio company eProcurment module, but exists in default of the following roles:

- Lead Buyer
- Buyer
- Assistent Buyer
- Administrative assistent

Table to be searched	YBITE3_CUSROLT	Customer role description
Number of hits	8	
Runtime	0	Maximum no. of hits

	SOrg.	DChl	Lang.	Funct	Role description	Group
	1000	10	EN	ZA	Lead Buyer	Z0CP
	1000	10	EN	ZB	Buyer	Z0ZP
	1000	10	EN	ZX	Assistant Buyer	Z0XP
	1000	10	EN	ZY	Administrative assistant	Z0ZP
	3000	10	EN	ZA	Lead Buyer	Z0CP
	3000	10	EN	ZB	Buyer	Z0ZP
	3000	10	EN	ZX	Assistant Buyer	Z0XP
	3000	10	EN	ZY	Administrative assistant	Z0ZP
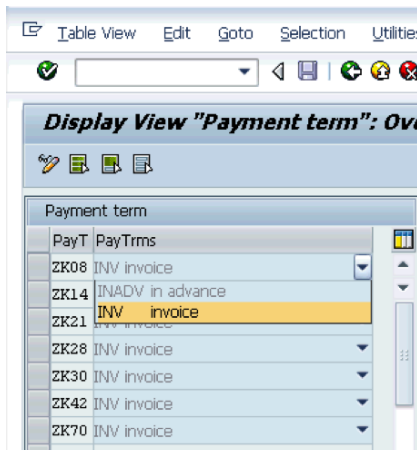
Mapping order payment - Maintenance View YBITE3_VPAYMENT

The table "YBITE3_VPAYMENT" has been made available to map the payment terms from Magento against the payment terms in SAP.

<u>Online purpose:</u>
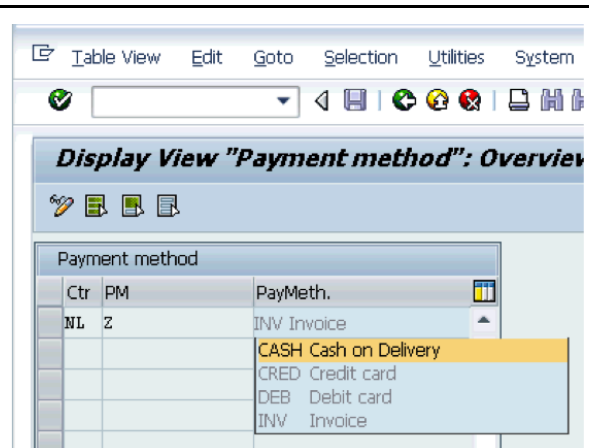
In general, a customer can choose between several statusses: invoice or pay online. If they want to pay online, they will use the payment methods we've set up in Magento: For example:

- Pay in advance = Pay online using a third party payment provider, to use
  - Paypal
  - Creditcard
  - Ideal
- Invoice = Pay later
  - By invoice

These `magento payment statusses " In advance " OR " Invoice " needs to be mapped with SAP to CASH, INVOICE, CREDITCARD or DEBITCARD. If a customer wants to pay via Invoice in Magento. this will be mapped to the SAP status "INVOICE".

Mapping ordershipment - Maintenance View YBITE3_VSHIPMETH

The table "YBITE3_VSHIPMETH" has been made available to map the Shipment method from Magento against the shipment method in SAP.

Shipment methods in Magento

- Pick up: customer picks the product in your warehouse / store
- Next day delivery: the order will be delivered next day
- Express delivery: the order will be delivered via a courier
- PRE-12: the order will be delivered next day before noon.

If you don't have any choice for shipment methods on the webshop, no mapping is needed.

With this mapping interface you are able to map the e-commerce shipping options to the SAP shipping options.

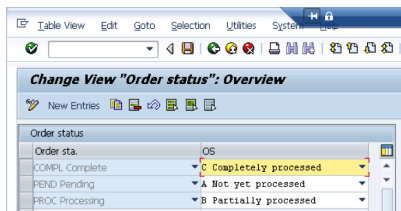# Mapping orderstatusses - Maintenance View YBITE3_VORDSTA

This table needs to be maintained to indicate the SAP order status in the web. In SAP you have many statuses, in Magento you only want to display a small set of order statuses (to be determined by the business).

The SAP status is key and can only be entered once. The following statuses are available in Magento, but only the relevant ones need to be maintained.
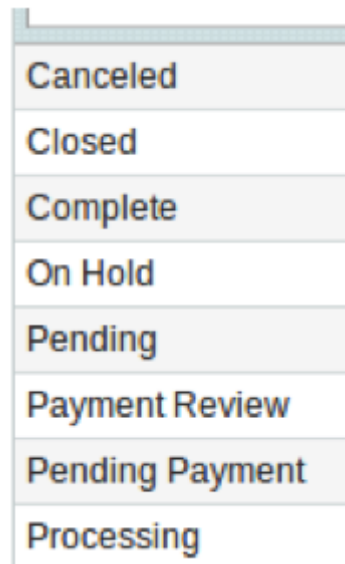
Online purpose:

The orders from SAP are showed to the customer when he is logged in. The customer is showed an overview of the orders, and he can filter based on different order statusses.

Mapping between Magento statusses (left) and SAP statusses (right).

Available statusses in Magento

Blocking deliveries - Maintenance View YBITE3_VBLOCK

This table needs to be maintained to set the criteria for setting a delivery block during sales order creation.

Online purpose

If a customers choose a certain shipment method or payment method (for example express delivery of online payment with Ideal) and you want to process this order differently, you can set up a delivery block so the back office knows to handle this order manually/ different. The order is not automatically processed. For example: a customer can't find a certain product online, they

can add a message to the comment block, for example: "please also add product XXX to my order because i can't find it." This order is blocked by a delivery block so backoffice can process this order manually.

Example:

A customer orders a product online and pays with creditcard (see CRED), shipping method: Express delivery (see: 3) and without any comments filled in by the customer. After placing the order, SAP is checking the order to see if the order matches any of conditions which are filled in the above mapping table. If yes - the specific delivery block is set.

Order in which delivery block checks are processed:

1. Check on payment method of order. If it matches, set corresponding delivery block.
2. Check on shipping method of order. If it matches, set corresponding delivery block.
3. Check on order comment of order. If it matches, set corresponding delivery block.

Values: Use the following values (see also above)

Ordertype - Maintenance View YBITE3_VCUSTORTP

This table contains the order type for each sales organization, which is used in order selection/creation/simulation.

Purpose

Weborders from Magento can be connected to the SAP ordertype (example: weborder), which can be a different ordertype for each sales organisation.

NEW Customers - Maintenance View YBITE3_VDEFCUST

This table contains the default customer number for each sales organization, which is used as a data template for creating new customers.

Online purpose:

If you create a customer online, they will add basic information and details online and this will be pushed to SAP as customer or prospect. To fill out mandatory fields which a customer is not entering online, SAP us using a template customer. This SAP template will be used as a template for the new customer. A different default customer termplate can be set up for each country.

```
Country: for every country and Salesorganisation and Division – a customer
template can be used. In this interface the values can be entered.
```

Default ranges - Transaction YBITE3_DEFRANGES

This is a transaction code and not a customizing view.

Default values

List of delivery types, plants and sales organizations for different selections relevant for the webshop.

'Pricing summary' shown in basket/ checkout

The prices shown in the website are grouped together into 5 sets of prices types. The prices in SAP need to mapped against the price types in Magento.

In the interface we want the calculated value of the conditions; not the individual condition type.

In the section Pricing conditions you maintain the relevant pricing conditions belonging to the relevant pricing segment. You have the option to maintain multiple conditions per segment

Online purpose:

In the online basket & checkout the orderlines are shown. As a summary of the order lines the following information is shown. To connect the SAP logic on a realtime way to these summarized fields we have to map these fields. In this way we show the information from SAP on a realtime way in the basket (by using the call order simulation). Costs of handling from SAP can exists of multiple lines but will be showed as one 'surcharge' row in the basket.

Order types

A list of order types can be maintained for the selection of relevant sales orders in getOrderOverview.

Online purpose:

Customers can see their order overview in the my account section. This mapping table is meant for identifying the order types which should be shown in this overview (web, offline etc).

This data is stored in table YBITE3_RANGES and is overwritten each time this transaction is executed!

FTP location; Maintenance View ZVFTP

In this mapping table you can define the logical file path (that should be accessible through AL11, if maintained there) where you can store the pushed XML files for products, customers and categories.

This path is used when running the push transactions in the background.

SAP setOrder v1.0.2 (e-commerce / SAP S4HANA / Interface Specification)

This web service will create an order in SAP. Order information like customer, address and products will be sent. If all data is validated by SAP, an order ID is returned.

Intended usage

This service is used whenever an order is created in Magento. This is generally done regardless of the payment status.

Request

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
request_id	Uniquely alphanumeric string of length 13		yes	1234567890123		The specified value must be used in the response
version	Web service version		yes	1		
website	Website code as is used in Magento		yes	base		
sales_organization	SAP sales organization		yes	0010		
distribution_channel	SAP distribution channel		yes	10		
division	SAP division		yes	10		
billing_address_id	The billing address identifier		no	1111	Used in Business to Business scenarios	

order_reference_number	Customer purchase order number		no			
order_comment	Comments		no			
language	Language code		no	nl		ISO 639-1
customer_id	SAP customer ID		no	0000049776	When the customer_id is left empty a one time customer sales order is generated	
contact_id	SAP contact id		no	0000026684		
shipping_address_id	Shipping address identifier		yes	3423	Used in Business to Business scenarios	
payment_method	Debit card Credit card Cash on Delivery invoice		yes	invoice		
shipping_method	1 = Pickup 2 = Next day Delivery 3 = Express delivery (Courier)		yes	2		
req_delivery_date	Requested delivery date		no	15-12-2016		Format: dd-mm-yyyy
billing_address	See billing address structure		no		Use only in a one time customer condition	

shipping_address	See shipping address structure		no		Use only in a one time customer condition	
conditions	See conditions structure					
materials	Parent node		yes			
material	See product structure		yes			
set_payment	Parent node					
payment_reference_id	The payment reference ID from the PSP		no	8756123975846351		
paid_amount	The amount paid		no	199		
currency	The currency used for payment		no	EUR		ISO 4217

Billing address

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
first_name	First name		yes	Jane		
last_name1	Last name		yes	Doe		
last_name2	Last name extension		no	Pieterson		
language	Language code		no	nl		ISO 639-1
address_line_1	Address line 1		yes	Somewherestreet		
address_line_2	Address line 2		no	plant district		

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
address_line_3	Address line 3		no			
house_number	House numer		no	12A		
city	City		yes	New York		
zipcode	zipcode		yes	1234aa		
po_box	Post Order box		no			
region	Region		no			
country	Country		yes	US		ISO 3166-1 alpha-2 https://en.wikipedia.org/wiki/List_of_ISO_3166_country_codes
phone_number	Telephone number		no			
email	E-mail address		no	jane@doe.com		

Shipping address

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
first_name	First name		yes	Jane		
last_name1	Last name		yes	Doe		
last_name2	Last name extension		no	Pieterson		
language	Language code		no	nl		ISO 639-1
address_line_1	Address line 1		yes	Somewherestreet		

address_line_2	Address line 2		no	plant district		
address_line_3	Address line 3		no			
house_number	House numer		no	12A		
city	City		yes	New York		
zipcode	zipcode		yes	1234aa		
po_box	Post Order box		no			
region	Region		no			
country	Country		yes	US		ISO 3166-1 alpha-2 https://en.wikipedia.org/wiki/List_of_ISO_3166_country_codes
phone_number	Telephone number		no			
email	E-mail address		no	jane@doe.com		

Condition (NOT IMPLEMENTED)

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
type	Condition type					
value	Value					
currency	The currency		no	EUR		ISO 4217

Material

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
material_number	SAP product material number		yes	130138		
quantity	The quantity of the product in the cart		yes	5		
currency	Currency code		no	EUR	This is generally left empty	ISO 4217
price	Product price		no	129	This is generally left empty as SAP calculates prices	
unit	The unit of the product		no	pcs		

Response

Field name	Description	Data type	Required	Example value	Usage remarks	Other requirements
request_id	Uniquely alphanumeric string of length 13		yes	1234567890123		The value used here is equal to the request_id field in the request message
version	Web service version		yes	1		
website	Website code as is used in Magento		yes	base		
order_id	SAP order ID		yes	0000268974		

message	Error message		no			
result_code	Result code · 0 = success · 1 = error		yes	0		

XSD

Request

```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="http://bite3.nl" targetNamespace="http://bite3.nl">
        <xs:element name="set_order_req">
        <xs:complexType>
            <xs:sequence>
        <xs:element type="xs:string" name="request_id" />
        <xs:element type="xs:string" name="version" />
        <xs:element type="xs:string" name="website" />
        <xs:element type="xs:string" name="sales_organization" />
        <xs:element type="xs:string" name="distribution_channel" />
        <xs:element type="xs:string" name="division" />
        <xs:element type="xs:string" name="billing_address_id" minOccurs="0" />
        <xs:element type="xs:string" name="order_reference_number" minOccurs="0" />
        <xs:element type="xs:string" name="order_comment" minOccurs="0" />
         <xs:element type="xs:string" name="language" minOccurs="0" />
        <xs:element type="xs:string" name="customer_id" />
        <xs:element type="xs:string" name="contact_id" minOccurs="0" />
        <xs:element type="xs:string" name="shipping_address_id" minOccurs="0" />
        <xs:element type="xs:string" name="payment_method" />
        <xs:element type="xs:string" name="shipping_method" />
        <xs:element type="xs:string" name="req_delivery_date" minOccurs="0" />
        <xs:element name="billing_address" minOccurs="0">
                <xs:complexType>
                <xs:sequence>
                <xs:element type="xs:string" name="first_name" />
                <xs:element type="xs:string" name="last_name1" />
                <xs:element type="xs:string" name="last_name2" />
                <xs:element type="xs:string" name="language" />
                <xs:element type="xs:string" name="address_line_1" />
                <xs:element type="xs:string" name="address_line_2" minOccurs="0" />
                <xs:element type="xs:string" name="address_line_3" minOccurs="0" />
                <xs:element type="xs:string" name="house_number" minOccurs="0" />
                <xs:element type="xs:string" name="city" />
                  <xs:element type="xs:string" name="zipcode" />
                <xs:element type="xs:string" name="po_box" minOccurs="0" />
                <xs:element type="xs:string" name="region" />
                <xs:element type="xs:string" name="country" />
                <xs:element type="xs:string" name="phone_number" minOccurs="0" />
                <xs:element type="xs:string" name="email" />
                </xs:sequence>
                </xs:complexType>
        </xs:element>
        <xs:element name="shipping_address" minOccurs="0">
                <xs:complexType>
```

```xml
            <xs:sequence>
        <xs:element type="xs:string" name="first_name" />
            <xs:element type="xs:string" name="last_name1" />
            <xs:element type="xs:string" name="last_name2" />
             <xs:element type="xs:string" name="language" />
            <xs:element type="xs:string" name="address_line_1" />
            <xs:element type="xs:string" name="address_line_2" minOccurs="0" />
        <xs:element type="xs:string" name="address_line_3" minOccurs="0" />
            <xs:element type="xs:string" name="house_number" minOccurs="0" />
            <xs:element type="xs:string" name="city" />
         <xs:element type="xs:string" name="zipcode" />
            <xs:element type="xs:string" name="po_box" minOccurs="0" />
            <xs:element type="xs:string" name="region" />
                <xs:element type="xs:string" name="country" />
            <xs:element type="xs:string" name="phone_number" minOccurs="0" />
            <xs:element type="xs:string" name="email" />
        </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="conditions">
            <xs:complexType>
            <xs:sequence>
            <xs:element name="condition" maxOccurs="unbounded">
            <xs:complexType>
            <xs:sequence>
                    <xs:element type="xs:string" name="type" minOccurs="0" />
                    <xs:element type="xs:string" name="value" minOccurs="0" />
                    <xs:element type="xs:string" name="currency" minOccurs="0" />
            </xs:sequence>
            </xs:complexType>
            </xs:element>
            </xs:sequence>
            </xs:complexType>
        </xs:element>
    <xs:element name="materials">
            <xs:complexType>
            <xs:sequence>
            <xs:element name="material" maxOccurs="unbounded">
                <xs:complexType>
            <xs:sequence>
                    <xs:element type="xs:string" name="material_number" />
                    <xs:element type="xs:string" name="quantity" />
                    <xs:element type="xs:string" name="currency" minOccurs="0" />
                    <xs:element type="xs:string" name="price" minOccurs="0" />
                <xs:element type="xs:string" name="unit" minOccurs="0" />
            </xs:sequence>
            </xs:complexType>
            </xs:element>
        </xs:sequence>
            </xs:complexType>
    </xs:element>
    <xs:element name="set_payment">
            <xs:complexType>
            <xs:element type="xs:string" name="payment_reference_id" minOccurs="0" />
            <xs:element type="xs:string" name="paid_amount" minOccurs="0" />
            <xs:element type="xs:string" name="currency" minOccurs="0" />
            </xs:complexType>
    </xs:element>
    </xs:sequence>
    </xs:complexType>
    </xs:element>
    </xs:schema>
```

Response

```xml
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="http://bite3.nl" targetNamespace="http://bite3.nl">
        <xs:import namespace="http://schemas.xmlsoap.org/soap/envelope/"
schemaLocation="http://schemas.xmlsoap.org/soap/envelope/"/>
        <xs:element name="set_order_rsp">
        <xs:complexType>
        <xs:sequence>
        <xs:element type="xs:string" name="request_id"/>
        <xs:element type="xs:string" name="version"/>
        <xs:element type="xs:string" name="website"/>
        <xs:element type="xs:string" name="order_id"/>
        <xs:element type="xs:string" name="message" minOccurs="0"/>
        <xs:element type="xs:string" name="result_code"/>
        </xs:sequence>
        </xs:complexType>
        </xs:element>
</xs:schema>
```