

Integrating Visma Global and Microsoft CRM

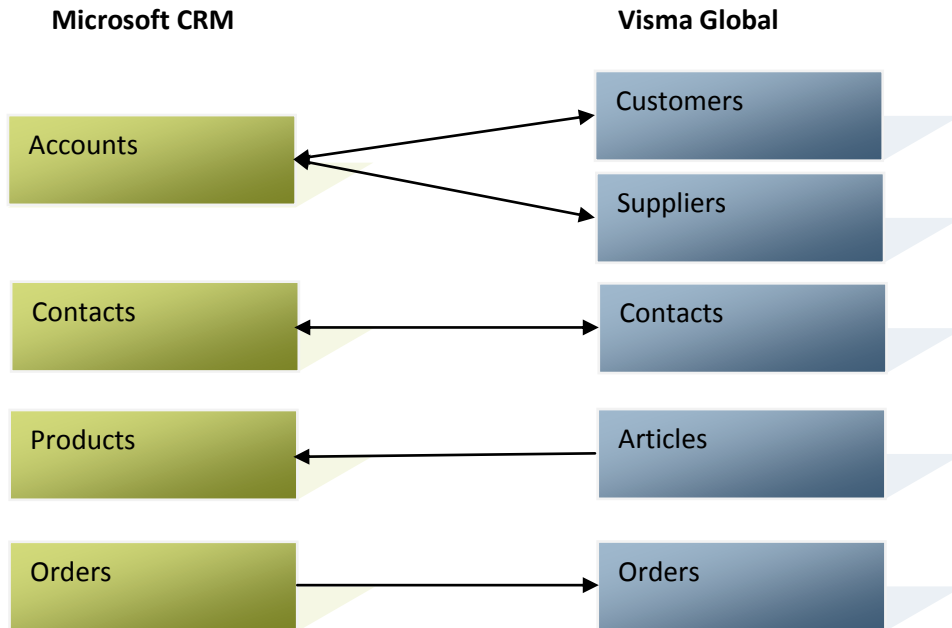
This whitepaper explains how Microsoft CRM 3.0 and 4.0 is integrated with Visma Global 7.x. The integration applies to these two systems only; no other Visma ERP system is currently available for integration with Microsoft CRM.

Contents

Integrated entities.....	2
Integration architecture	2
Integrating the different entities.....	3
Account.....	3
Contact	3
Product	4
Orders.....	4
CRM Customizations	4
Account.....	4
Contact	4
Address.....	5
Product	5
Order	5
Order Product.....	5
Appendix – attribute mappings.....	5
Account (Visma Table 134/181)	5
Contact (Visma Table 128)	5
Address (Visma Table 241)	6
Product (Visma Table 107)	6
Order (Visma Table 203)	6
Order detail (Visma table 205)	7

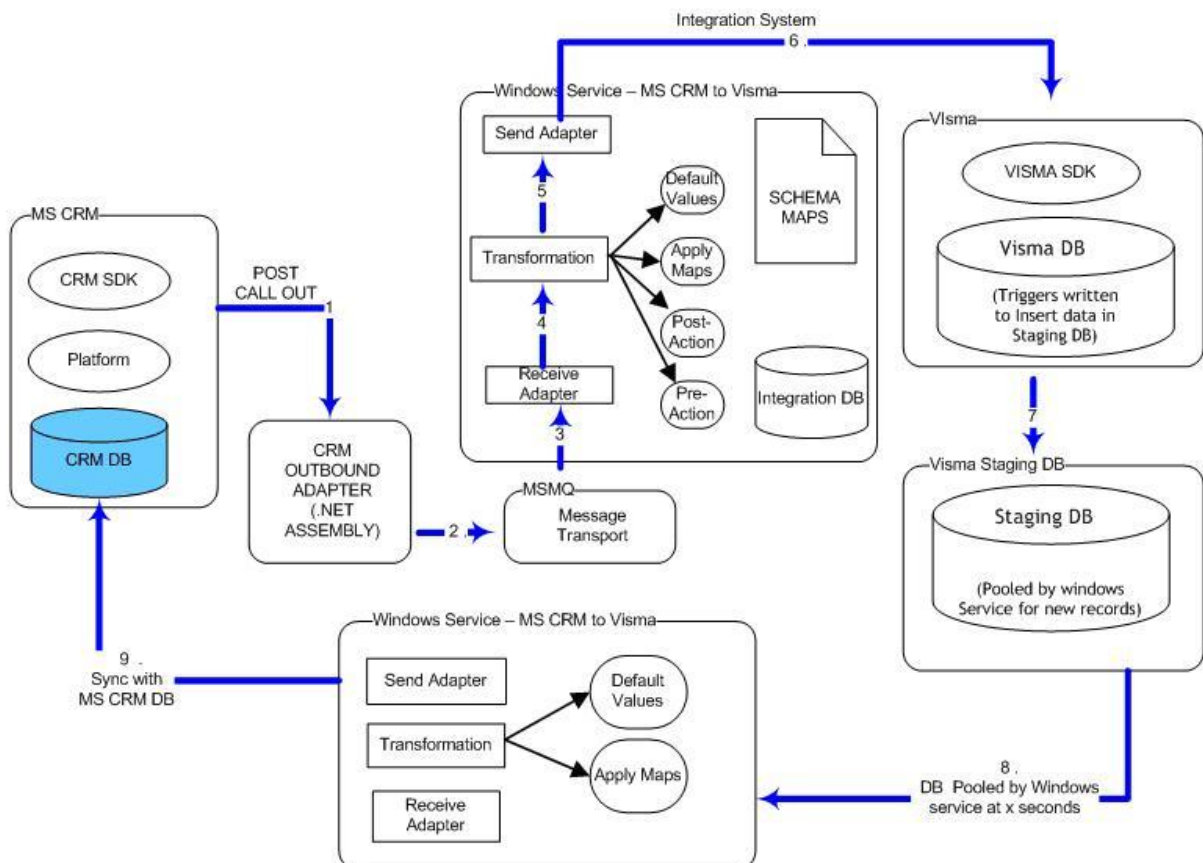
Integrated entities

The following diagram illustrates which entities are integrated, and in which direction:



Integration architecture

The following drawing illustrates how the integration works. It is explained in detail below.



The data flow from Microsoft CRM is as follows:

1. On an insert/update/delete of a record, the post callout functionality in MS CRM invokes the CRM outbound adapter that publishes the customer update XML message to a message queue.
2. MSMQ Queues are used to store XML messages which are processed by the Callout functionality.
3. Integration Server (Windows Service: crmtovismaintegration.exe)
 - a. The Integration Server message queue Receive Adapter collects the XML messages from the message queue and submits them to the transformation module.
 - b. The transformation module (a .NET assembly) formats the XML and determines the message dependencies and default values. It then inserts those dependencies into the integration database.
 - c. The Transformation modules then transforms the messages by applying the necessary data maps.
 - d. Finally using Visma SDK we insert/update/delete record in the Visma DB.

The data flow from Visma Global to Microsoft CRM is as follows:

4. When a record is Create/Update/Delete in the VISMA Application, a trigger on the respective tables inserts a record of respective type into a staging database with the Status as (I=insert, u=update, d=delete).
E.g., if a New Customer is added in VISMA Application, the Customer table trigger inserts a record in Staging Database with the status as 'I' and the created records information.
5. Integration Server (Windows Service: vismatomscrmintegration.exe)
 - a. This windows Service pools the records on regular time interval from the Staging Database.
 - b. When a new record is available in Staging Database the Windows service detects the type of record and status of record (I=insert, u=update, d=delete).
 - c. Accordingly the Service Inserts, Updates, Deletes the record in MS CRM.

Integrating the different entities

This section explains how the different entities are integrated.

Account

All active accounts in Visma Global are integrated with MSCRM. If an inactive record is changed in Visma Global, the record is updated in CRM if it is integrated, but if not it will not be created in CRM.

New records in CRM are not integrated with Visma Global unless they are tagged as Customer or Supplier by the attribute Relationship Type. As soon as the record is integrated, this field becomes read-only.

Contact

All active Contacts in Visma Global are integrated with MSCRM. If an inactive record is changed in Visma Global, the record is updated in CRM if it is integrated, but if not it will not be created in CRM.

In Visma Global, Contacts can be related both to a Customer and to a Supplier at the same time, although Customers and Suppliers are two different entities. For Visma Contacts that have both a parent Customer and a parent Supplier record, two different Contact records will be created in MSCRM.

Contacts in CRM are integrated if their parent Account is integrated. Orphan contacts are not integrated.

Product

Products are integrated one-way from Visma Global (Articles) to MSCRM. When a new product is added in CRM, a Price List Item is added as well, with the following attributes set:

- Price List = Standard Price list as indicated in configuration file
- Product = Current product
- Unit = Standard unit as indicated in configuration file
- Quantity Selling Option = No Control
- Pricing Method = Percent of List
- Percentage = 100
- Rounding Policy = None

Active Articles in Visma Global are migrated to MSCRM. Inactive records are migrated if they exist in MSCRM.

Orders

Orders are migrated one-way from MSCRM to Visma Global. The migration takes place when the CRM Order is *fulfilled*. Fulfilled orders are read-only in CRM. If the order is modified or deleted in Visma Global, nothing happens in CRM.

CRM Customizations

In order to implement the integration, Microsoft CRM needs the following customizations:

Account

- A new Attribute, `new_organizationalno`, which maps to the Organization number in Visma Global.
- A client-side script is run to change the Country attribute from a text field to a pick-list (combo-box). The pick-list is populated with a list of countries from Visma Global. The list is embedded in the client code.
- The attribute Account number is used to hold the Customer or Supplier number in Visma Global. It is updated by the integration and therefore disabled in the user interface.
- New Accounts are updated to Visma Global when they are tagged as Customer or Supplier with the Relationship Type (`customertypecode`) attribute. A client-side script will disable this field as soon as the Account record is integrated with Visma Global.

Contact

- A new attribute, `new_vismacontactid`, is added to hold the Visma Global contact ID. It should not be accessible in the user interface.

Address

A new attribute, new_vismadeliveryaddress, is added to hold the Visma Global Address Id

Product

No customizations are needed.

Order

A new attribute, new_vismaorderno, is added to hold the Visma Global order number.

Order Product

A new attribute, new_PurchasePrice, is added to hold the Purchase Price that will be migrated to the Visma Global order.

Appendix – attribute mappings

Account (Visma Table 134/181)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
Name	name	Name	1449
Account Number	accountnumber	CUS_CustomerNo	1434
E-mail	emailaddress1	CUS_EmailAddress	1472
Payment Terms	paymenttermscode	CUS_TermsOfPayCustNo	1442
Category	accountcategorycode	CUS_CustomerGrpNo	1440
Credit Limit	creditlimit	CUS_CreditLimit	1461
Address 1 : City	address1_city	CUS_PostOffice	1454
Address 1 : ZIP/Postal Code	address1_postalcode	CUS_PostCode	1452
Address 1 : Country	address1_country	CUS_CountryNo	1480
Address 1 : Fax	address1_fax	CUS_Telefax	1479
Address 1 : Freight Terms	address1_freighttermscode	CUS_TermsOfDeliveryNo	1436
Address 1 : Street 1	address1_line1	CUS_Address1	1451
Address 1 : Street 2	address1_line2	CUS_Address2	4032
Address 1 : Street 3	address1_line3	CUS_Address3	4033
Address 1 : Shipping Method	address1_shippingmethodcode	CUS_ShipmentTypeNo	5601
Telephone 1	telephone1	CUS_Telephone	1478
Credit Hold	credithold	CUS_LockedYesNo	2057
Fax	fax	CUS_Telefax	1479
Parent Account	parentaccountid	CUS_ChainNo	1445
Status Reason	statuscode	CUS_InActiveYesNo	2531
Web Site	websiteurl	CUS_WWWAddress	3509
Organization Number	new_organizationno	CUS_CompanyNo	1475

Contact (Visma Table 128)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
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Full Name	fullname	CON_Name	1372
Visma Contact Id	new_vismacontactid	CON_ContactNo	1367
E-mail	emailaddress1	CON_EmailAddress	1381
Address 1 : City	address1_city	CON_PostOffice	1370
Status Reason	Statuscode	CON_InActiveYesNo	2553
Address 1 : Country	address1_country	CON_CountryNo	1480
Address 1 : ZIP/Postal Code	address1_postalcode	CON_PostCode	1396
Address 1 : Fax	address1_fax	CON_Telefax	1378
Address 1 : Street 1	address1_line1	CON_Address1	1373
Address 1 : Street 2	address1_line2	CON_Address2	4030
Address 1 : Street 3	address1_line3	CON_Address3	4031
Home Phone	telephone2	CON_PrivateTelephone	1376
Mobile Phone	mobilephone	CON_MobileTelephone	1377

Address (Visma Table 241)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
Name	Name	CDA_DeliveryName	2929
VismaAddress	new_vismadeliveryaddress	CDA_DeliveryAddressNo	2924
Street 1	line1	CDA_DeliveryAddress1	2926
Street 2	line2	CDA_DeliveryAddress2	4065
Street 3	line3	CDA_DeliveryAddress3	4066
ZIP/Postal Code	postalcode	CDA_DeliveryPostCode	2928
City	city	CDA_DeliveryPostOffice	2927
Country/Region	country	CDA_DeliveryCountryNo	2925

Product (Visma Table 107)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
ID	productnumber	ART_ArticleNo	1979
Product Name	name	ART_Name	1987
Unit Group	defaultuomscheduleid	ART_QuantityPerUnitSale	1989
Default Unit	defaultuomid	ART_QuantityPerUnitSale	1989
List Price	price	ART_Price1	2011
Standard Cost	standardcost	ART_SupplPrice	2010
Current Cost	currentcost	ART_PurchasePrice	2009
Vendor Part Number	vendorpartnumber	ART_SupplArtNo	2020
Stock Item	isstockitem	ART_StockControlYesNo	3576
Supplier Name	suppliername	ART_SuppliersName	1831

Order (Visma Table 203)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
Visma Order No	new_VismaOrderNo	COR_OrderNo	2113
Customer	<i>Account Number of potential customer or Parent Account if</i>	COR_CustomerNo	2137

<i>Customer is a contact</i>			
Requested Delivery Date	requestdeliveryby =GetDate()	COR_DeliveryDate COR_OrderDate	2156 2155
Owner	ownerid owneridname	COR_EmployeeNo COR_OurRef	2131 2132
Name	name	COR_NameContactNoInvoice	2134
Freight Amount	freightamount	COR_Postage	2164
	<i>Account Name of potential customer or Parent Account if Customer is a contact</i>	COR_CustomerName	2140
Bill To Street 1	billto_line1	COR_InvoiceAddress1	2141
Bill To Street 2	billto_line2	COR_InvoiceAddress2	4047
Bill To Zip/Postal Code	billto_postalcode	COR_InvoicePostCode	2138
Bill To City	billto_city	COR_InvoicePostOffice	2142
Ship To Line 1	shipto_line1	COR_DeliveryAddress1	2158
Ship To Line 2	shipto_line2	COR_DeliveryAddress2	4049
Ship To Zip/Postal Code	shipto_postalcode	COR_DeliveryPostCode	2181
Ship To City	shipto_city	COR_DeliveryPostOffice	2139

Order detail (Visma table 205)

CRM Display Name	CRM schema name	Visma Schema Name	Visma field ID
Product	productid	COL_ArticleNo	2269
Product Description	productdescription	COL_Name	2270
Quantity	quantity	COL_Quantity	2281
Purchase Price	new_PurchasePrice	COL_PurchasePrice	2581
Price Per Unit	priceperunit	COL_NetPrice	2278
Salesperson	salesrepid	COL_EmployeeNo	2264
Requested Delivery By	requestdeliveryby	COL_DeliveryDate	2287