



Data Synchronization between Magento and VTiger

Between an E-commerce product and a CRM product

Executive Summary

The customer had a CRM application (Vtiger) with inventory tracking and wanted product sales website using an existing e-commerce product (Magento) for quick turnaround. The challenge was to bring the CRM data to the web while keeping the CRM data in sync with the web based e-commerce application for inventory tracking, sales orders and customer management.

Another challenge we faced as we proceeded with development and overcame was the mapping of entity attributes/datatypes in the two separate systems that had their own schemas and ways for storing customer, product and sales order data.

About our Client

Client Custom software development company | Location **Vancouver**, BC, Canada | **Industry** Web Application

Technologies

Linux, Apache, MySQL, PHP, Magento, VTiger, CodeIgniter, SOAP API, XML, curl, Agile

Solution Details

The Magento – vTiger Bridge:

We architected and developed a solution using the codeigniter (PHP) framework to synchronize the information between the two systems; Magento - one of the biggest online shopping solutions and vTiger CRM, a branch from the Sugar CRM code.

The bridge requires some initial configuration in order for it to work. The application requires the user to enter the Magento and VTiger API credentials in order to connect to their API's and access data.



We used PHP SOAP client for accessing Magento APIs and PHP CURL for connecting to vTigers API/database. Once the configuration settings are done the next step is for the user to map the fields in the two systems. The standard fields are auto-mapped and any custom attributes in either system can then be mapped and added as well via an easy to use interface (See Appendix: A with application screenshots for mapping interface).

The User Map Interface allows the user to set the field map for the different data synchronization points and when they hit Run the fields are mapped accordingly.

In the local database we keep track of the mapped fields and the mapped records for both Magento and VTiger. Whenever the mapping changes, we overwrite the mapping and the next synchronization is done reading the new mapping scenario. The UI of the bridge has the sections for all type of synchronizations described above and these synchronizations can be run individually, though there is a back end CRON process that is scheduled to run the entire synchronization process periodically.

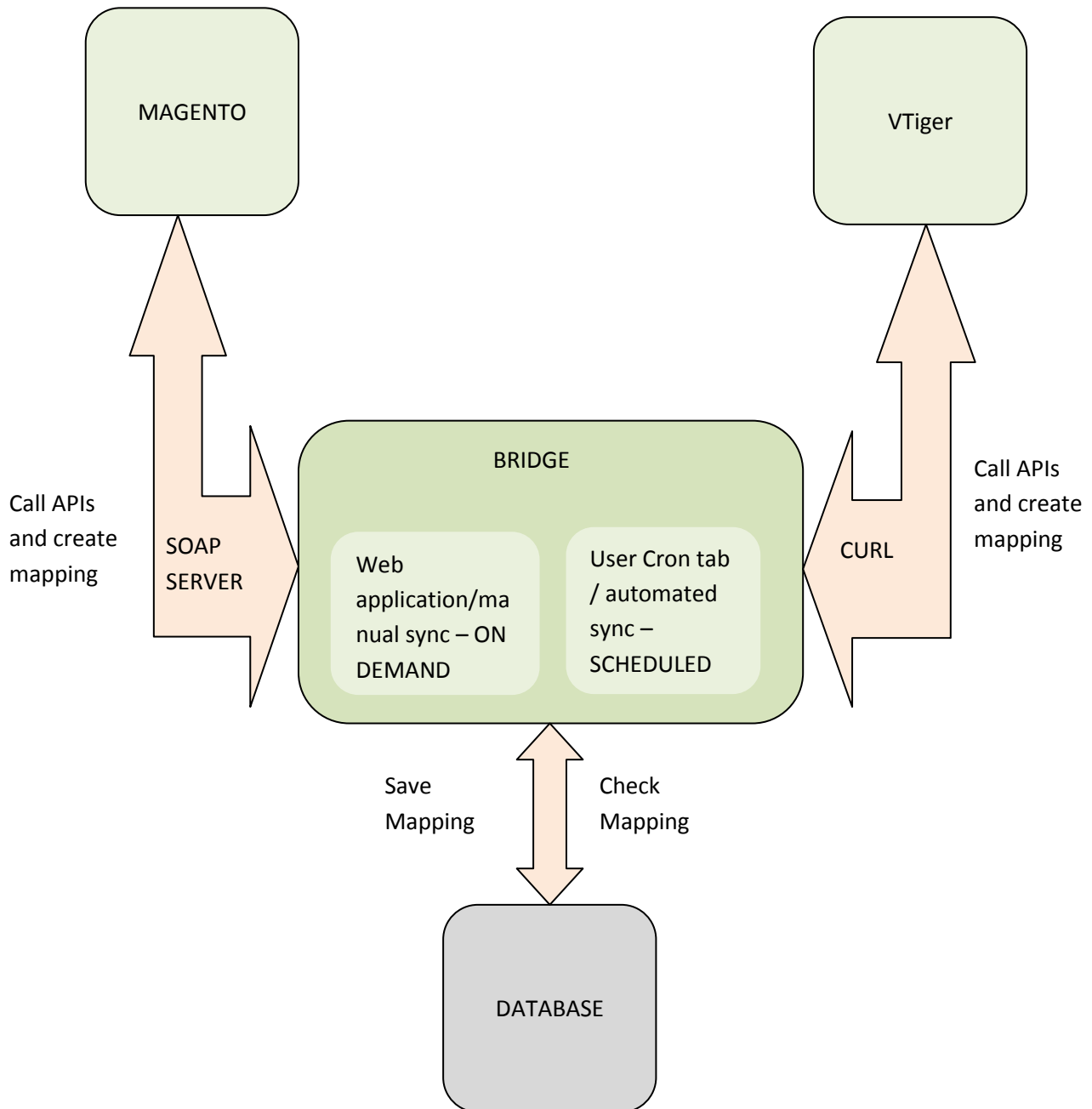
When CRON runs, it calls up the APIs and checks the DB maps for the current mapping pattern and synchronizes the records. We keep track of the entire CRON process and log errors if any occurs. Describing local data base in more detail we have map tables and record map tables for all type of synchronizations. In map table we assign non duplicable ids to all of the records from both of the CRMs and against them we define a map id field that tells which record from one side corresponds to which record of another side. Mapping fields play a very critical and important role in the synchronization as we have to decide dynamically which field of the record from Magento will overwrite which field of the record at vTiger side. Some common mapping pattern is presumed and is set in the background such as product name, sku etc.

The synchronization process is then entirely done on the fly and we never store any data or records from any of the clients in any local server. Yet we keep track of mapping for the different fields and records for the CRMs.



Overall Process Diagram

If we draw an overall process diagram for the Bridge, it will somewhat look like this:





Customer Benefits

Using our solution

- we allowed the customer to Stay with existing CRM system for telephonic orders taken by CSR's/operators/order
- allowed for single system to manage inventory, customers and sales orders data, which in turn results in better management of data

An online web store often stores a large amount of data about products, orders and customers. Sometimes it is difficult to manage data if we have to keep them both in a CRM (VTiger) and e-commerce (Magento). There is a need for double entry and checking sales periodically to keep control over the inventory. Magento VTiger Bridge helps synchronizing records from a Magento store to VTiger which is a powerful system in data management. The synchronization created an easy way to get the orders into vTiger thereby avoiding manual processing which is time consuming.

Give below are screen shots of the different synchronizations done, namely, Customer Synchronization, Product Synchronization and Sales Synchronization.



Customer Synchronization: Screen 1

Magento - vTiger Bridge User: admin → LOG OUT

[Home](#) [Product Sync](#) [Customer Sync](#) [Sales Order Sync](#)

Customer Synchronization

Magento to vTiger Field Mapping

Caution : User needs to be Careful and Logical while mapping fields. Map the Field to the similar available value in the drop-down else leave it to 'NONE'. Irrelevant mapping may arise Sync Problem

Basic Fields Mapping

First Name: mapped to First Name
Last Name: mapped to Last Name
Email: mapped to Email
Phone: mapped to Telephone
Birthdate: mapped to DOB
Address Information: mapped to Address
Department: mapped to Customer_id(Magento)

Fields To Be Mapped By User

Mobile:
Home Phone:
Title:
Fax:
Assistant:
Assigned To:
Support Start Date:
Support End Date:

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Screen 2:

A screenshot of a web application interface. At the top, a dark grey header contains the text 'Magento - vTiger Bridge' on the left and 'User: admin → LOG OUT' on the right. Below the header is a blue navigation bar with four buttons: 'Home', 'Product Sync', 'Customer Sync', and 'Sales Order Sync'. The main content area has a dark grey header with the text 'Customer Synchronization'. Below this, under the heading 'Sync Options', there are two radio button options: 'Magento to vTiger' and 'vTiger to Magento'. At the bottom left of the page, there is a small copyright notice: '© 2010 autobox. All Rights Reserved ©'.



Product Synchronization: Screen 1

Magento - vTiger Bridge User: admin → LOG OUT

Home Product Sync Customer Sync Sales Order Sync

Product Synchronization

Caution : User needs to be Careful and Logical while mapping fields. Map the Field to the similar available value in the drop-down else leave it to 'NONE'. Irrelevant mapping may arise Sync Problem

Product Mapping

Basic Fields Mapping

Description: mapped to description
Product No: mapped to sku

Fields To Be Mapped By User

Product Name:
Product Active:
Sales Start Date:
Sales End Date:
Website:
Created Time:
Unit Price:

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Screen 2

Magento - vTiger Bridge User: admin → LOG OUT

Home Product Sync Customer Sync Sales Order Sync

Product Synchronization

Sync Options

- [Magento to vTiger](#)

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Sales Synchronization: Screen 1

Magento - vTiger Bridge User: admin → LOG OUT

Home Product Sync Customer Sync Sales Order Sync

Sales Order Synchronization

Caution : User needs to be Careful and Logical while mapping fields. Map the Field to the similar available value in the drop-down else leave it to 'NONE'. Irrelevant mapping may arise Sync Problem

Sales and Orders Mapping

Basic Fields, Mapped Already

Contact Name: mapped to Customer Name
Customer No: mapped to Customer Id Of vTiger
Created Time: mapped to createdtime
Modified Time: mapped to modifiedtime
Billing Address: mapped to Billing Address
Shipping Address: mapped to Shipping Address
Pending: mapped to Status of the Magento Order
Discount Amount: mapped to hdnDiscountAmount
Total: mapped to hdnGrandTotal

Fields Mapping

Subject:
Excise Duty:
Sub Total:
Assigned To:
Description:
Terms & Conditions:

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Screen 2

A screenshot of a web application interface titled "Magento - vTiger Bridge". The interface has a dark grey header with the title on the left and "User: admin → LOG OUT" on the right. Below the header is a blue navigation bar with four buttons: "Home", "Product Sync", "Customer Sync", and "Sales Order Sync". The main content area has a dark grey header with the text "Sales Order Synchronization". Below this, there is a section titled "Sync Options" containing a single radio button option labeled "Magento to vTiger". At the bottom left of the page, there is a small copyright notice: "© 2010 autobox. All Rights Reserved ©".

Future relationship

The client was pleased with Mindfire's effort and reckoned that they were happy to have discovered a professional offshore IT unit. We shall continue to be the service provider for the next versions of the client's product. They have not only allocated the support and maintenance work of the current system to Mindfire but have also chosen us for future customization work.