SolutionPak: Customer Credit Data for Microsoft Dynamics CRM 2011

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Introduction

Welcome to Scribe's SolutionPak: Customer Credit Data for Microsoft Dynamics CRM 2011. The SolutionPak allows you to have a one-way integration that synchronizes data typically found in accounting systems to Dynamics CRM using a set of standardized CSV files. The synchronized data includes customer master information, customer credit status and payment terms, addresses, and contacts. This document explains what you need to implement the SolutionPak as well as some tips for how you can extend the SolutionPak to other data sources beyond the standardized CSV files.

Synchronizing customer master data and credit data boosts intelligence about customers giving benefits to Sales teams and Accounting teams:

- **For Sales** — Sales representatives can see up to date information about customers including their credit status and payment terms.
- **For Accounting** — Accounting workers can keep the information up to date in their system and through the SolutionPak keep the Sales team up to date without needing to run special reports or to take one-off calls to research customer information.

Who Should Use This Guide

This guide is written for technical consultants responsible for installing and configuring the SolutionPak. This guide assumes that you have working knowledge of both Scribe Online Synchronization Service and Dynamics CRM. Scribe offers a free introductory training course on Scribe Online Synchronization Service which can be found –at Scribe Online Synchronization Service Training.

SolutionPak Overview

This section provides an overview of the SolutionPak capability and design.

The primary objectives of the SolutionPak design are to:

- Provide the Dynamics CRM user with the most up to date customer master, customer credit status, address, and contact information.
- Eliminate the need for double-data entry to keep the CRM system and the accounting system in sync.
- Keep customer information in Dynamics CRM up to date with data from an accounting system. That data can then be put to use in Dynamics CRM, for example, by creating a workflow that adds a new activity feed post when a customer goes on credit hold.

Integration Touch Points – Dynamics CRM

The SolutionPak synchronizes data into the following objects from a set of standardized CSV files to Dynamics CRM 2011. The integration touch points include the following:

Map Name	Operation	Dynamics CRM Entity	Match Field in Dynamics CRM	Match Formula
Customers	Update then Insert	Account	accountnumber	Customers.CustomerNumber
Addresses	Update then Insert	Customer Address	name	Addresses.CustomerNumber & Addresses.AddressType
Contacts	Update then Insert	Contact	emailaddress1	LOWER(Contacts.FirstName)& "." & LOWER(Contacts.LastName) & "@" & LOWER(REPLACE(REPLACE(REPLACE(Contacts.CustomerName, ".", ""), " ", ""), "'", "")) & ".com"
Credit	Update	Account	accountnumber	Customers.CustomerNumber

Resources

The SolutionPak has the following resources available to help you understand what it does and how to implement it.

- SolutionPak Implementation Guide (this document)
- SolutionPak mappings for Scribe Online
- Scribe Online Help Center. Complete help for Scribe Online.
- Scribe Online Synchronization Service Training

SolutionPak Contents

The SolutionPak files can be downloaded from the Scribe downloads page - https://openmind.scribesoftware.com/html/template_downloads. The files are in a ZIP file called ScribeCustomerCreditToDynamicsCRM.zip, and include:

- **CSV Files** — There are sample CSV files for customers, addresses, and contacts. You will use these CSV files to configure the Text Connector in Scribe Online. You can also use the sample CSV files to do a test run of the integration.
- **CustomerCreditToDynamicsCRM.xml** — The Scribe Online SYS maps (as an XML file) that contain the mappings between the CSV files and Dynamics CRM.

Requirements

In addition to the SolutionPak, you will need:

- A subscription (trial or paid) to Scribe Online Synchronization Service (SYS).
- Exported data from the source system in the standardized CSV format. You can set up and test the SolutionPak using the included sample CSV files. The format of the CSV files is documented in the SolutionPak functional specification.
- A location to save the CSV files that is accessible by Scribe Online. Scribe suggests that you save the CSV files to the "DataExchange" folder that is in the folder where your Scribe Online Agent is installed. The typical location for this folder is ..\Program Files [(x86)]\Scribe Software\Scribe Online Agent\DataExchange\.
- Access to a computer to install a Scribe Online On-Premise Agent.
- A Dynamics CRM 2011 system with:
  - credentials and permissions to create and update account, address, and contact entity records
  - the CRM Dynamics CRM solution for Activity Feeds installed and configured

Expectations about the Source Data

The SolutionPak is designed to use a set of standardized CSV files as the source of data. To use the SolutionPak, the data needs to be exported from the source system into the CSV formats using a native export tool from the source system or by using a separate extract tool. If your site can directly access the source system data through a Scribe Online connector, such as through an ODBC connection, and you want to modify the SolutionPak maps to connect directly to the source data, there is information later in this document about how to do that.

You can set up and test the SolutionPak using the included sample CSV files.

Deployment Check List

These are the major steps needed to deploy the SolutionPak. There are more details on these steps in the following sections of this document.

- ❑ Verify the customer has the supported technology infrastructure for the SolutionPak
- ❑ Setup Dynamics CRM
  - Verify that the Dynamics CRM Activity Feeds solution is installed
  - Add the workflow that creates the activity feed post for the SolutionPak
  - Set up duplicate detection on account number
  - Set up duplicate detection on name, address 1, street 1, and zip
  - Run the Dynamics CRM duplicate detection jobs and merge any duplicate record found
- ❑ Set Up Scribe Online
  - Create a Scribe Online organization for the customer
  - Install the Scribe Online agent on a computer at the customer location
  - Import the Scribe Online maps xml file
  - Add the connections for the CSV files and for Dynamics CRM
  - Connect all the maps
  - Invite customer to their Scribe Online Organization
- ❑ Test and Run Initial Synchronization
  - Test the SolutionPak with a small set of data
  - Determine what initial synchronization model you will use
  - Run the initial synchronization
  - Run the Dynamics CRM duplicate detection job and merge any duplicate accounts

Setting up Dynamics CRM

Dynamics CRM Activity Feed Workflow

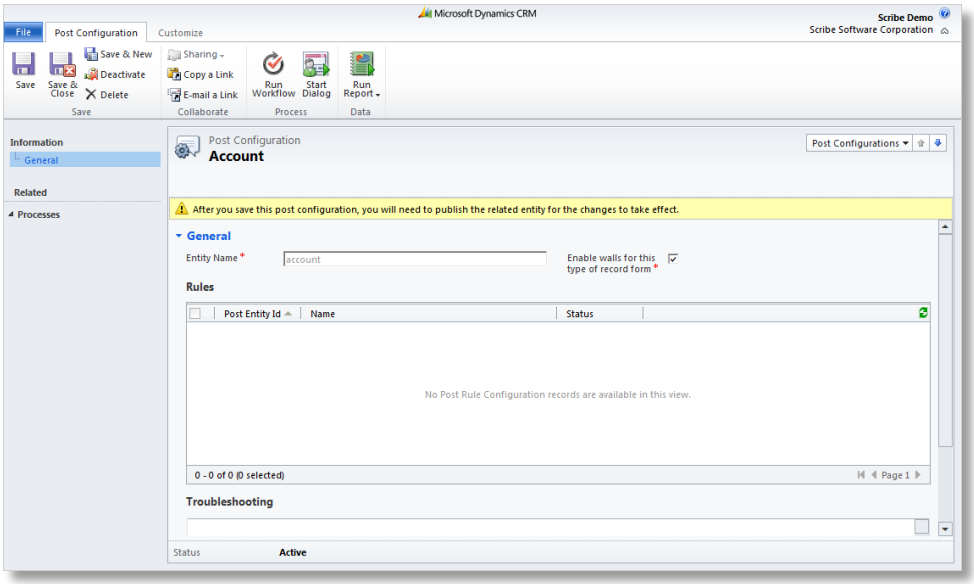
This section includes instructions on how to set up a workflow that will create a post in Dynamics CRM Activity Feeds when a customer goes on credit hold. Setting up this part of the solution is optional, though it is recommended to do so because of the value it will have to the end user. If the end user is following their accounts, they will be alerted about the customer's credit hold situation, by seeing the post in What's New and on the Record Wall in the account detail screen.

Dynamics CRM Online 2011 comes with the Activity Feeds solution already installed. If you are working with Dynamics CRM on-premise, you will need to upgrade to the appropriate rollup and set up the Activity Feeds solution. See Dynamics CRM documentation for information on how to do that.

Set up an Activity Feed for the Account Entity

Once you have the Activity Feeds solution set in your Dynamics CRM system, set up an activity feed for the account entity.

1. In Dynamics CRM go to **Settings | Activity Feeds Configuration**.
2. Click **New**.
3. In **Entity Name**, type **account**.
4. Leave **Enable walls for this type of record form** checked.
5. Click **Save & Close**. Creating that new post configuration is a customization to the account entity.
6. Go to **Settings | Customizations** and publish customizations for the account entity.



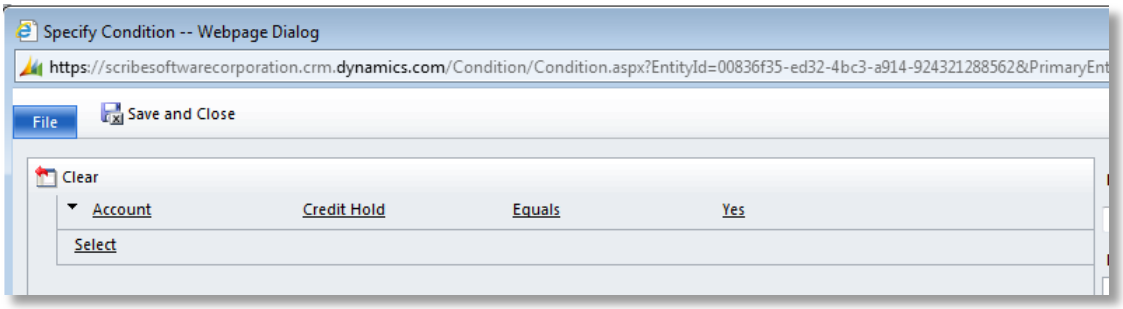
Set up the Workflow to Create the Post

Set up a workflow in Dynamics CRM that will create the post when the customer goes on credit hold.

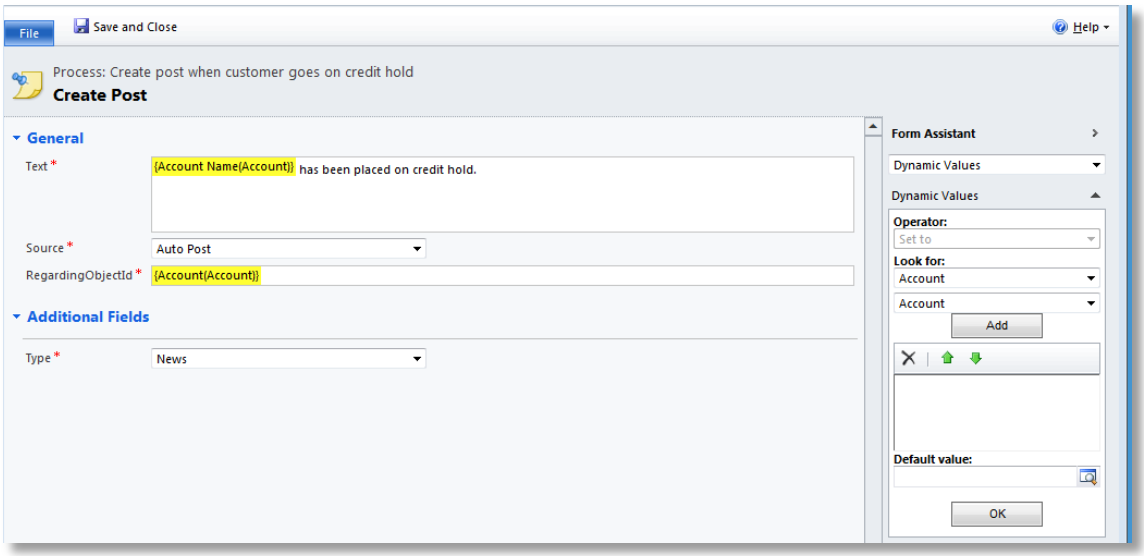
For the workflow, set the following settings:

- Activate As: Process

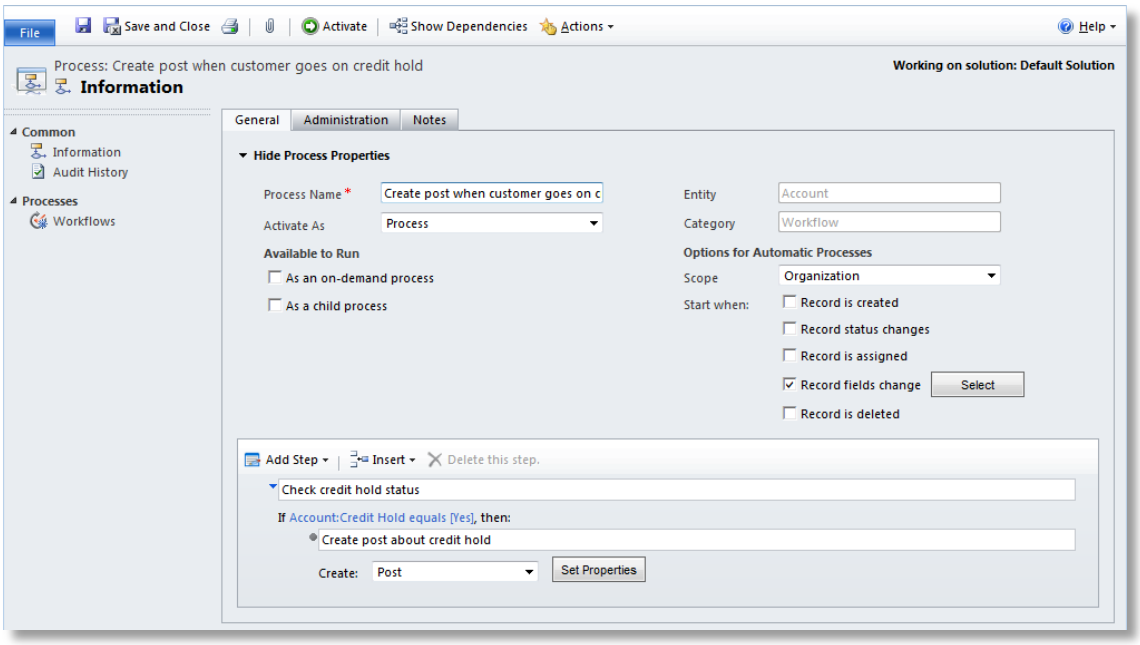
- Scope: Organization
- Start When: Record fields change, select the Credit Hold field.
- For the first step in the workflow, have it check when Account:Credit Hold equals Yes.



- For the second step in the workflow, have it create a post.
- In the settings for the "create post" enter a meaningful message in the Text field. You can use the Dynamics Values to get the account name into the message. This message is what will be in the post that gets created when the workflow runs.
- Set the RegardingOjbectId to the account.



See the picture below for what the workflow should look like before you activate it.



Don't forget to activate the workflow.

You can test your workflow to see if it creates the post by going into a test account in Dynamics CRM and putting them on credit hold. Before running the test, make sure you follow the account you are going to change. If it is working right, you will see post in What's new and in the Record Wall of the account.

If the user wants to see the posts in What's New, they will need to follow their accounts.

Setting Up Duplicate Detection Jobs in Dynamics CRM

There are two Dynamics CRM duplicate detection jobs that are part of the SolutionPak methodology for account data matching and de-duplication. Be sure to set these jobs up properly before you deploy and run the SolutionPak. You can create additional jobs if your site needs more de-duplication rules.

The purpose of these duplicate detection jobs is to help find duplicate accounts and then merge them. Use these jobs as part of the initial synchronization process and on an ongoing basis as you run the SolutionPak.

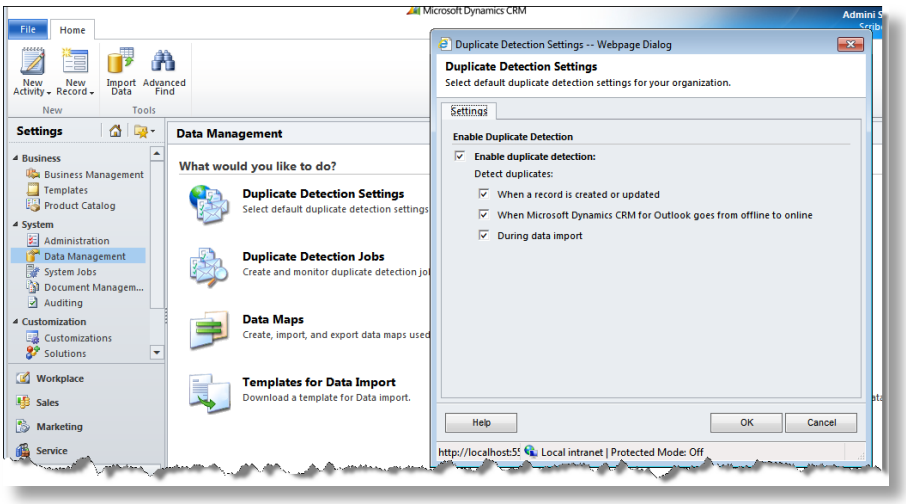
The SolutionPak maps match account records between the two systems based on the value that is in the Account Number field in Dynamics CRM. If you merge duplicate accounts so that the surviving account includes the Account Number field, then the SolutionPak can update that account.

See Initial Synchronization Models for information about how the duplicate detection rules are used.

Set up Duplicate Detection Jobs to Enforce a Unique Account Number

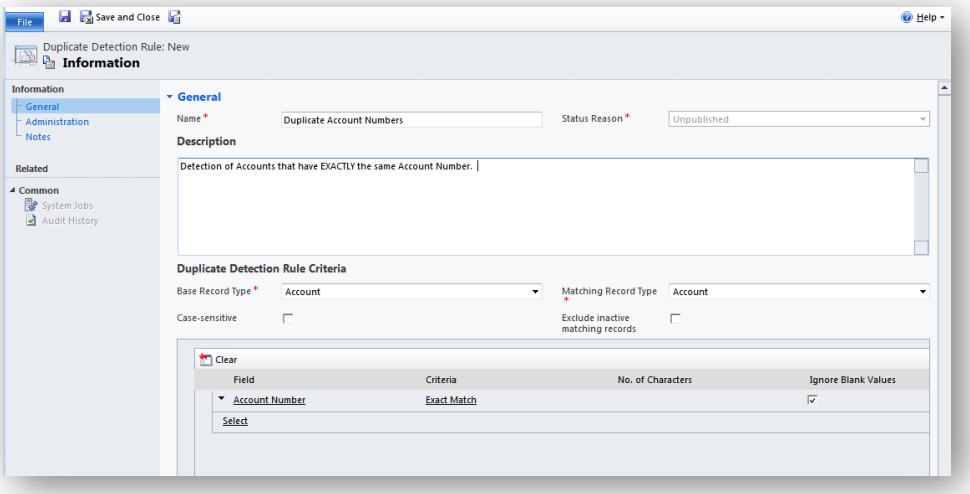
Since the SolutionPak uses the Account Number field for matching to determine when to update or insert an account, it is important to not have duplicate account numbers in Dynamics CRM. This duplicate detection job helps prevent duplicate account numbers.

1. In Dynamics CRM, navigate to **Settings | System | Data Management | Duplicate Detection Settings**.
2. Check **Enable Duplicate Detection** and click **OK**.



3. Set up a rule that alerts on duplicate Account Numbers. Navigate **to Settings | System | Data Management | Duplicate Detection Rules | New**. Complete the rule as follows:

Field	Value
Name	Duplicate Account Number
Base Record Type	Account
Matching Record Type	Account
Field	Account Number
Criteria	Exact Match
Ignore Blank Values	Yes



4. Save and publish the rule. See [Initial Synchronization Models]() for information on how to run and use the duplicate detection rules.

Tip: There is not an option to run this job daily. To run the job daily, create a new job for each day of the week, and set each job to **Run this Job after Every 7 Days**.

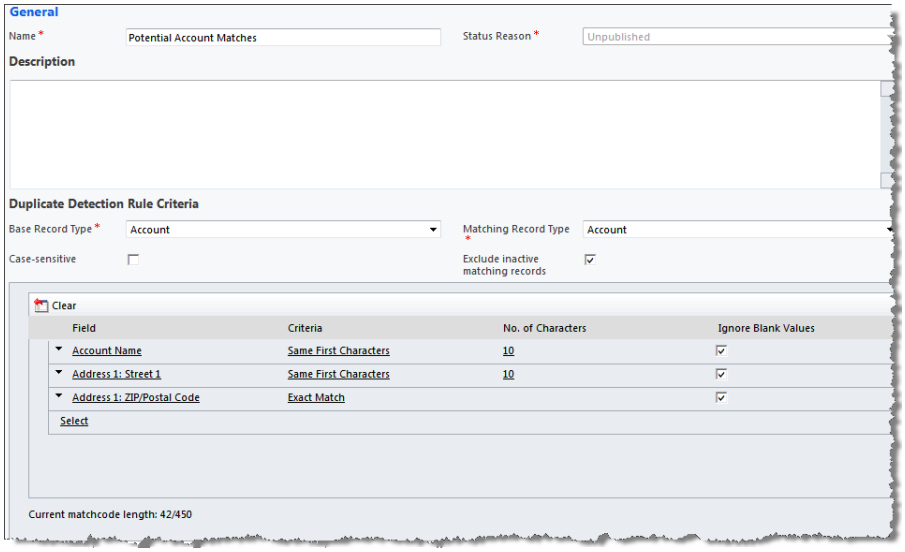
Set up Duplicate Detection Rules for Account Name and Address

Data quality issues can also arise if there are duplicate accounts in Dynamics CRM that were there prior to using the SolutionPak. The best practice is to eliminate the duplicates before running the SolutionPak by setting up a duplicate detection rule that looks at the name, address, and postal code fields to find potential duplicates. This rule will look for similar records and suggest which accounts could be duplicates.

1. Navigate to **Settings | System | Data Management | Duplicate Detection Rules | New**. Complete the rule as follows:

Field	Value
Name	**Potential Account Matches**
Base Record Type	**Account**
Matching Record Type	**Account**
Field	Account Name
Criteria	Same First 10 Characters
Ignore Blank Values	Yes
Field	Address 1: Street 1
Criteria	Same First 10 Characters
Ignore Blank Values	Yes
Field	Address 1: Zip/Postal Code
Criteria	Exact Match
Ignore Blank Values	Yes

Remember that these are general settings. You can add more rules or build additional criteria into existing rules. Depending on your data retention policies, you may need to include inactive records.



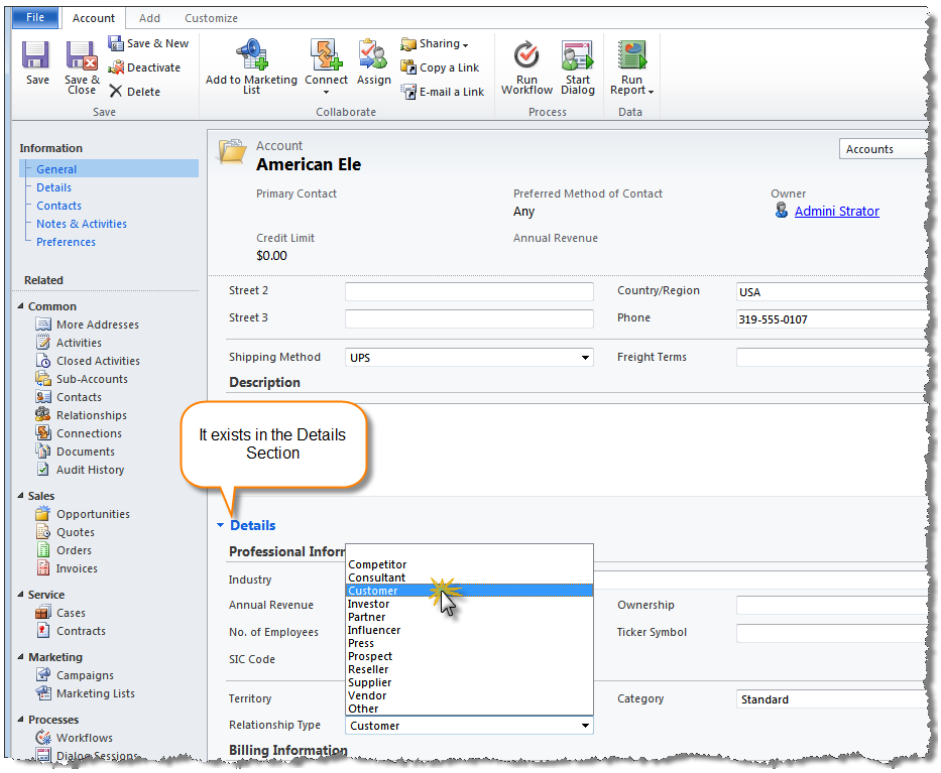
2. Save and publish the rule.

An additional feature of creating a duplicate detection rule is that if a duplicate is detected during the Account save process, a dialog box displays indicating that a potential duplicate is being created.

Setting up a View in Dynamics CRM to assist with Data Quality

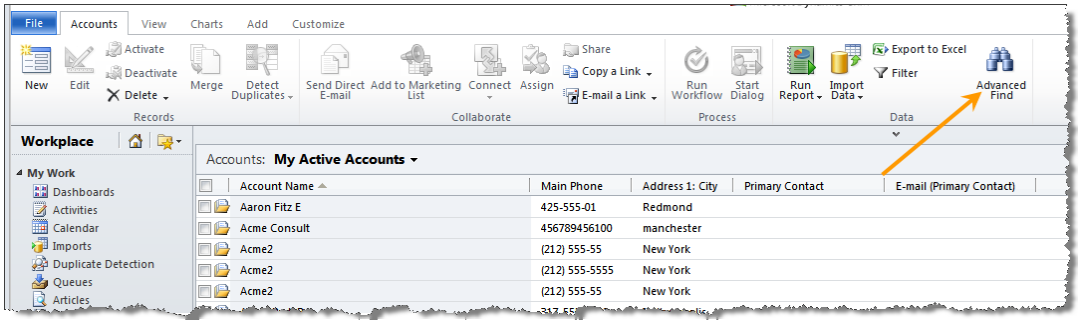
The next step is to set up a View for Accounts that are marked as customers but do not have account numbers. If the system was not initially populated with a source file from the accounting system, then there are often customer records missing the Account number. In this section we will build a view that finds these records.

Before we build a View, understand that there is a field called Relationship Type on the account record that indicates that the record is a Customer.

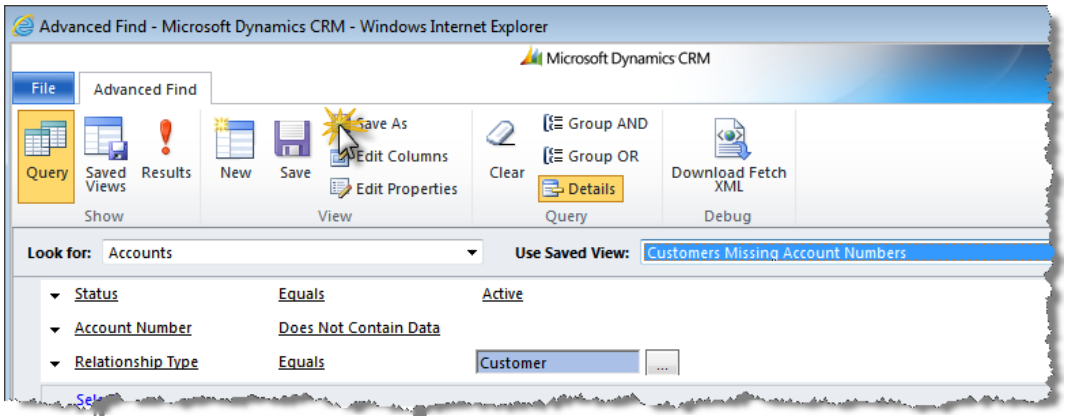


To build the view:

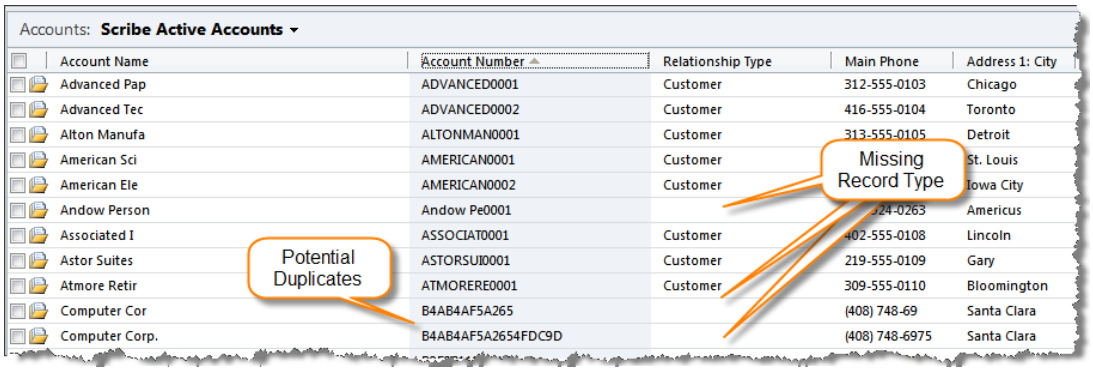
1. Open the **File** ribbon and click on **Advanced Find**.



2. Set **Find** to: **Look for Accounts | Status Equals Active | Account Number Does Not Contain Data | Relationship Type Equals Customer**.
3. Save the Find as **Customers Missing Account Numbers**.



4. Click **Edit Columns** and add Account Number to the View. Best practice is to also modify the system view called Active Accounts to add both the Relationship Type and the Account Number fields. This will improve your ability to spot customer data that needs to be corrected.



Setting up Scribe Online

Setting Up the Scribe Online Organization - For Customers

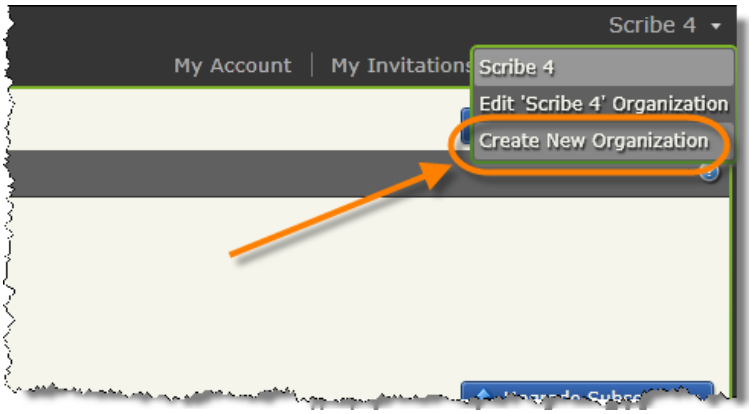
The SolutionPak runs on the Scribe Online platform. You must have an active trial or paid subscription to the Synchronization Service. If you are a customer, you can follow these steps to create your login and set up your Scribe Online system.

1. Start by creating a login at https://online.scribesoft.com/Account/Register.aspx.
2. As part of creating your login, the system will create your Scribe Online Organization.
3. After creating your Scribe Online account, sign in and click the **Start Free Trial** button for **Scribe Online Synchronization Services (SYS)**.

Setting Up the Scribe Online Organization - For Partners

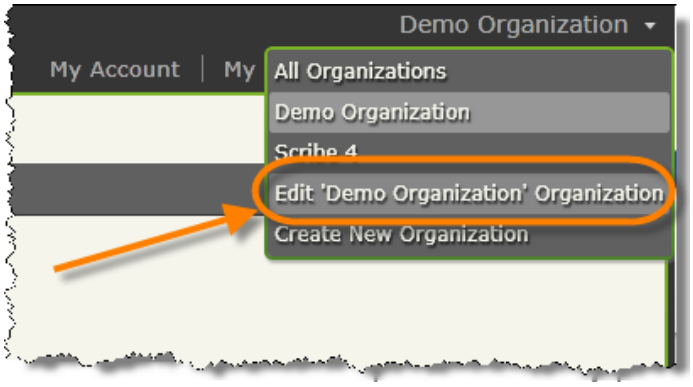
If you are a Scribe partner, and you already have a login for Scribe Online, you can create the customer's Scribe Online Organization for them and then invite them to join that organization.

1. Sign in to Scribe Online.
2. In the upper right, click on the organization name and then click **Create New Organization** from the drop-down list.



3. In the **Organization Information** window, enter the customer's name and other information, then click **Save**.
4. This will create a new Scribe Online organization that will be used by the customer for their Scribe Online solutions. To begin using Scribe Online, click **Start Free Trial** for **Scribe Online Synchronization Services (SYS)**.
5. You can continue to work with a trial and invite the customer to join their organization.
6. To convert the trial subscription to a paid subscription, contact your Scribe account executive with the customer's Organization Id as follows:

a. In the upper right of the Scribe Online screen, click on the name of the new organization you just created and on the drop down list and click **Edit Organization**.



b. Find the Organization Id.

Invite the Customer to Join Their Scribe Online Organization

1. In Scribe Online, on the left side of the screen, click **Users**.
2. From the Users page, click **Invite**.
3. Enter the email address of the person you want to invite.
4. Select the Administrator role for at least one user that works for the customer. A user with the administrator role can invite and un-invite other users.
5. Click **Send Invitation** to invite this user into their Organization.

As the person that added the Organization, you will automatically be a user with the administrator role in this Organization. If the customer later decides that they no longer want you to have access to their Organization, they can remove your user name from their Organization. This does not delete your Scribe Online login user, but just removes it from that specific Organization. If you belong to other Scribe Online Organizations, you will still have access to them using your Scribe Online login.

Installing the Scribe Online On-Premise Agent

In this step you will install the Scribe Online On-Premise Agent on a computer at the customer's site. This computer needs access to internet over HTTPS and to the Dynamics CRM

system. See Installing a Scribe Online On-Premise Agent for information about Agents and how to install them.

Adding Connections for Your Solution

In this step you will add connections that are used by your solution. For the SolutionPak, you will need two connections; one for the CSV text files and one for Dynamics CRM. For information about adding connections, see Adding Scribe Online SYS connections.

Adding the Text Connection

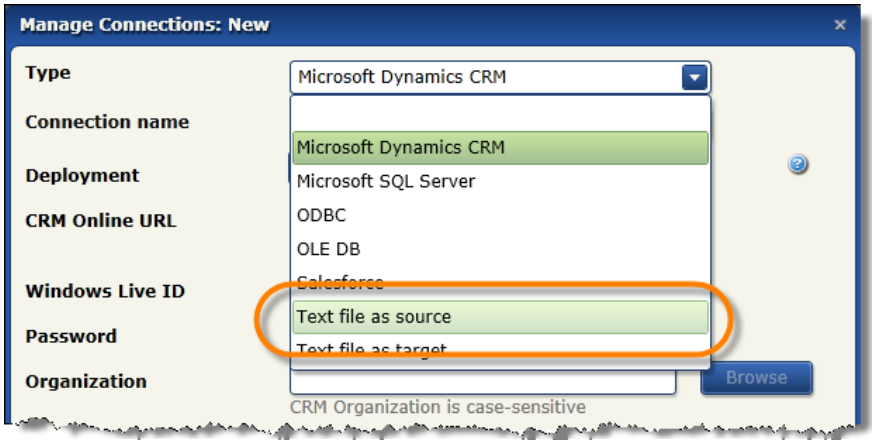
For the SolutionPak, create one text connection and define each of the CSV files as separate entities within that source connection. This allows you to manage multiple source text files within a single Scribe Online connection. For this SolutionPak, create entities with these specific names:

- Addresses
- Contacts
- Customers
- Credit

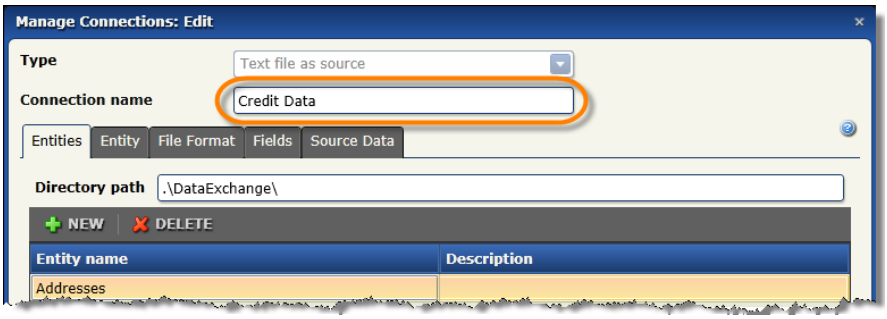
Three of the entities, Addresses, Contacts, and Credit, will use the same setup for the "After processing the file" that setting on the Entity tab. The Customers entity will use a different setup for the "After processing the file" setting. Otherwise, you can follow the same process to set up the four entities. The steps listed below will tell you what to do differently with the Customers entity.

To add the Text Connection:

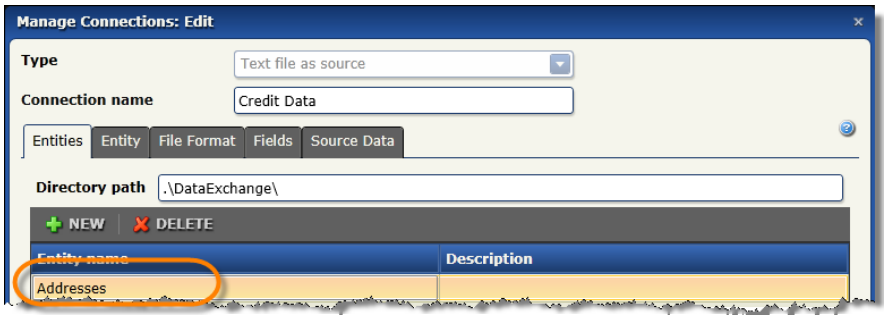
1. Before you sign into Scribe Online, extract the sample CSV files from the SolutionPak zip file and copy them to the **DataExchange** directory that is located where the Scribe Online agent is installed. This directory is typically located in **C:\Program Files (x86)\Scribe Software\Scribe Online Agent\DataExchange**.
2. Sign in to Scribe Online and click **Connections**.
3. Click **New**.
4. In the Connector drop down list, select **Text file as source**.



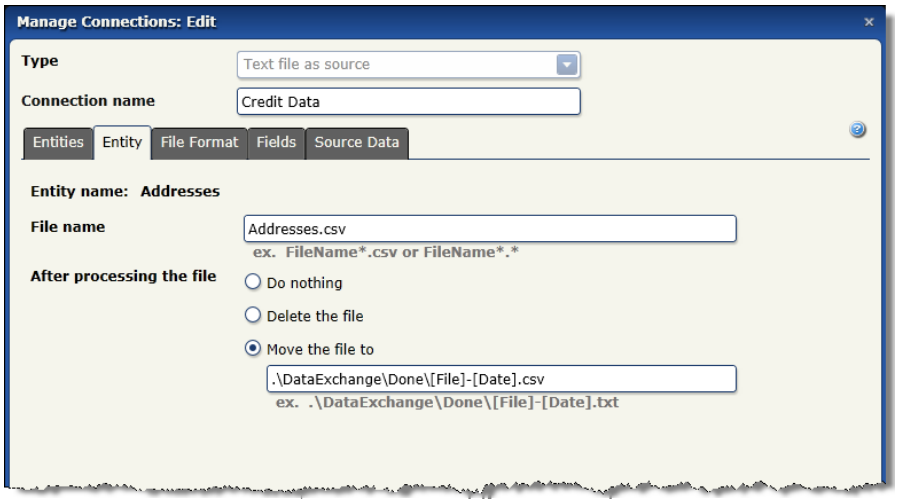
5. Enter a value for the **Connection name**. In this example, we will enter **Credit Data**.



6. On the **Entities** tab, click **New** and replace the default **New_Entity** value with the name of the entity. In this example, we will enter **Addresses**.



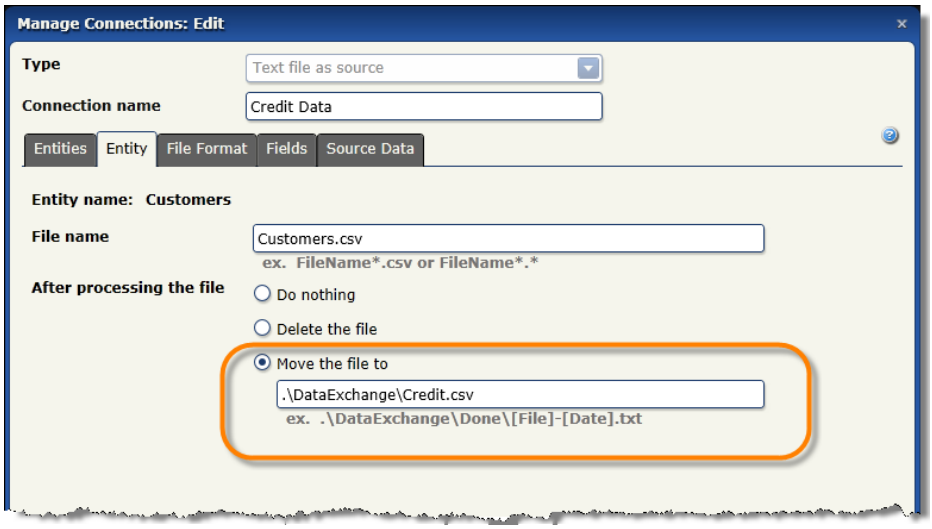
7. On the **Entity** tab, type the name of the CSV file. In this example, we will enter **Addresses.csv**.
8. In the **After processing the file** section, click **Move the file to**. In the edit box, change the default file extension from **.txt** to **.csv**.



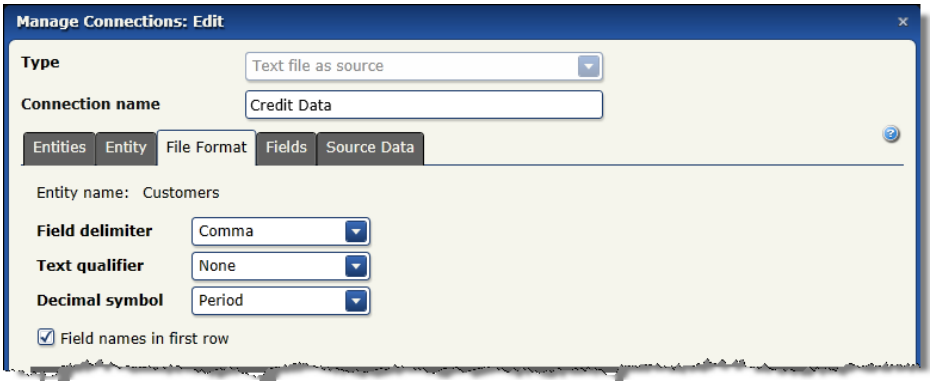
The SolutionPak design uses a pattern where the source files are copied (by another process) to the DataExchange folder. After the files are processed, Scribe Online moves them to the Done folder and renames the files.

When you set up the Customers entity, you will use different settings on the Entity tab.

For the Customers entity, when you get to the Entity tab, set it up to copy the Customers.csv file back into the DataExchange folder with the file name of Credit.csv. See the picture below for an example of how that configuration looks.

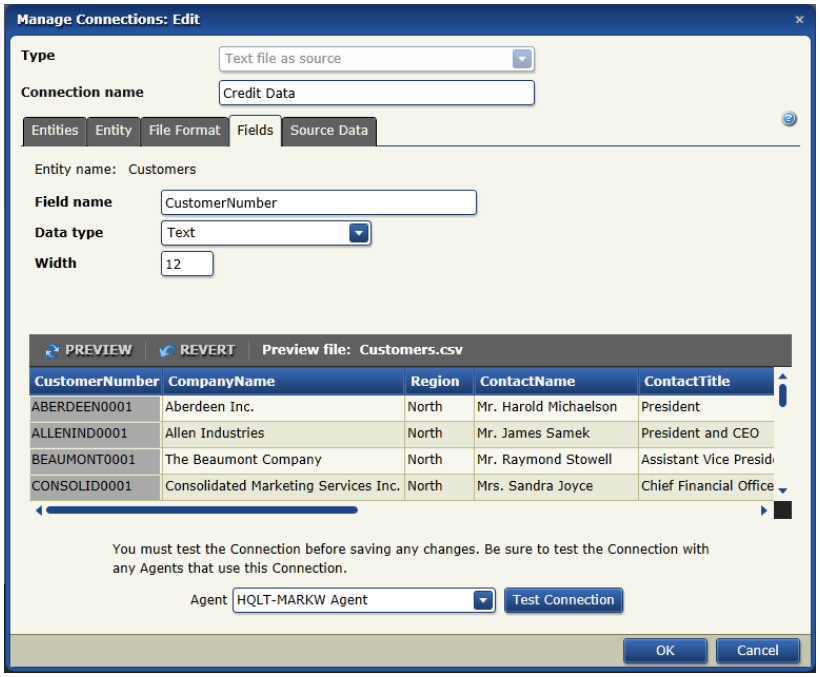


9. On the **File Format** tab, set the following parameters:
   - Field delimiter: Comma
   - Text qualifier: None
   - Decimal symbol: Period



10. Check **Field names in first row**.
11. Click **Preview** to see the source data in the sample files.

12. Scribe Online scans the sample text file and guesses the field definition. Inspect each field definition to make sure that the field length will be long enough for your real data. If you need to make changes, you can make them on the **Fields** tab.



You can view the raw source data from the **Source Data** tab.

13. Repeat steps 6-12 for each of the sample CSV source files.
14. Click **Test Connection**. If the connection test passes, save the connection by clicking **OK**.

Adding the Dynamics CRM Connection

Add a connection for Dynamics CRM. Be sure to pick the right **Deployment** from the drop down list. For example, if you are using Dynamics CRM Online, pick **Online**.

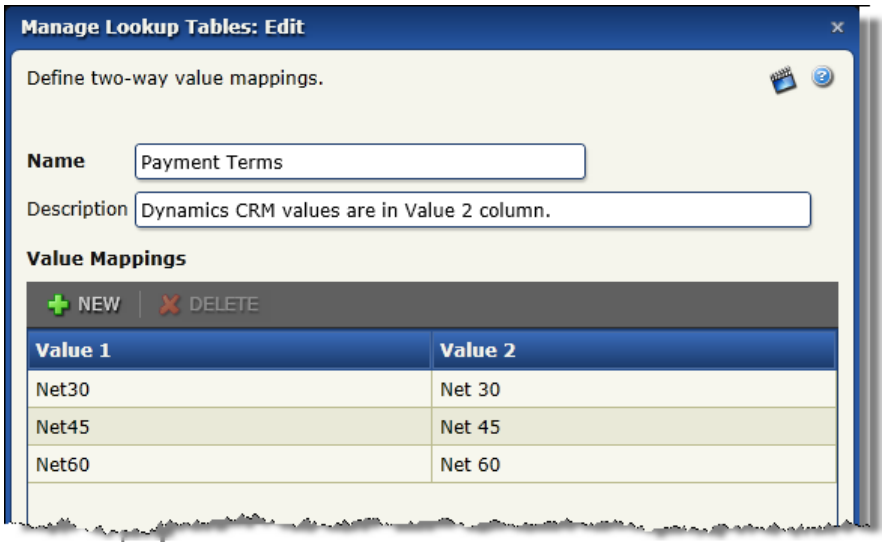
Adding Lookup Tables

The SolutionPak uses two lookup tables to convert the list of values from the source data to a corresponding value in Dynamics CRM. The lookup tables were set up for the sample text data and the Dynamics CRM default configuration. You can modify the lookup tables to meet the requirements of your source and target systems.

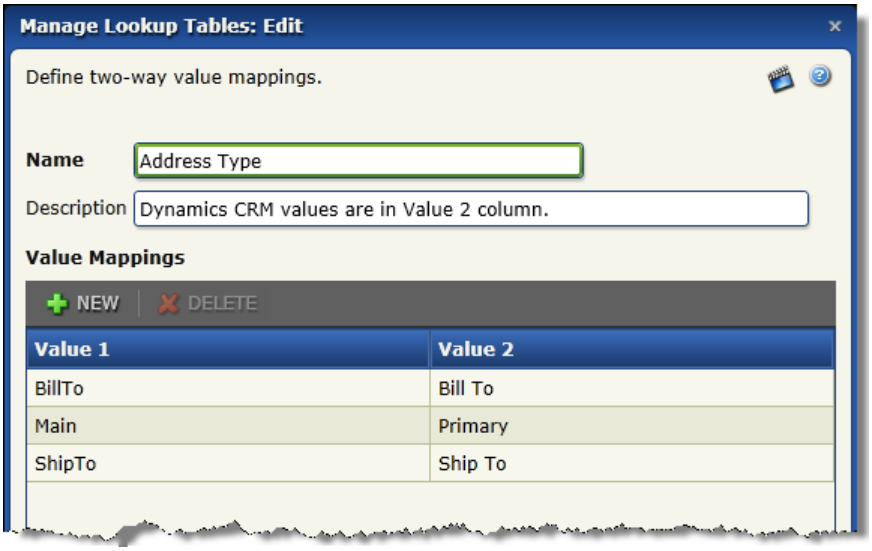
Set up the two lookup tables in Scribe Online so that the finished result looks like the pictures below.

1. To get started, click **Lookup Tables** from the Scribe Online Navigation pane.
2. Click **New**.

3. For the Payment Terms table, set up the following values:



4. For the Address Types table, set up the values as shown below.



Adding Solutions and Importing Maps

In this step you will add a Scribe Online Synchronization Service Solution Instance and import the maps for this Solution Instance.

1. From the Navigation pane, click **Solutions** to open the Solutions page.
2. Click **New** to open the Scribe Online SYS Instance Wizard.
3. On the General tab, enter a name and optional description for this Solution Instance. Click **Next**.
4. Select the on-premise Agent that you previously installed and click **Next**.
5. On the Maps tab, click **Import** to import the maps for this Solution Instance.
6. Browse to **CustomerCreditToDynamicsCRM.xml** and click **Open**. This XML file was extracted from the SolutionPak zip file. The maps will be imported to your Solution Instance.

When you first add the maps, they are labeled as Incomplete because they do not have Connections selected.

7. Edit each map and select the Source and Target Connections. For each map, select the text connection as the Source and the Dynamics CRM connection as the Target.
8. While editing the maps check the **Errors and Warnings** tab for any problems in the map that might need to be fixed.
9. When you are done, select the **Schedule** tab and set the schedule for running the Solution Instance. Scribe recommends that you set the schedule to **On Demand** until you have tested the Solution Instance.

Initial Synchronization Models

Overview

In this section we discuss the ways you can do the initial synchronization of data from your source to Dynamics CRM. We describe two models and provide tools for using them. Choose from the model that best suits the situation to get to the cleanest initial synchronization possible.

The SolutionPak implementation steps consider two possible cases:

A. The Dynamics CRM system does not contain customer data; it contains either prospect data that is not yet in the accounting system or it is empty. In this case, you can run the SolutionPak with the exported data from the accounting system to get the customer records into Dynamics CRM so that your Dynamics CRM users can start using that data.

B. The Dynamics CRM does contain customer records. In this case, you need a way to match up the customer records coming from the accounting system with those customer records that already exist in Dynamics CRM as accounts.

The following methodologies developed for the SolutionPak will be covered in more detail later in this section.

- Export Account records from Dynamics CRM to Microsoft Excel and then manually enter the account number data from the source system to the matching accounts in the spreadsheet. Then import the data from Microsoft Excel to update Dynamics CRM with the account numbers. For some customers with smaller data sets, it is a good choice to have someone (or a team) manually match up the customers and accounts.
- Use the two recommended Dynamics CRM duplicate detection jobs to search for duplicates and facilitate merging, leaving the account that contains the Account Number as the survivor of the merge.
- Use the recommended custom view in Dynamics CRM for Accounts as an aid to find accounts marked as customers but that do not have account numbers.

Background

In many accounting systems, the customer account number is the identifier used to link orders, invoices, and other accounting functions together in the database. Dynamics CRM uses a different method, a hidden record ID called a GUID, to link all of the parent and child records together.

For the SolutionPak to synchronize the accounting data with Dynamics CRM, and to maintain the referential integrity between parent and child records, you need a way to cross reference the customer numbers in the accounting system with the GUIDs that identify the matching accounts in Dynamics CRM.

When the SolutionPak inserts a customer record or updates a customer record in Dynamics CRM, it sets the value of the Account Number field in Dynamics CRM to the customer number from the source system. This value is then used as the match for any future customer/account record updates and as a way to set up referential integrity on other data that is brought into Dynamics CRM from the source system.

It is essential that the Account Number on the account record be unique. The current version of Dynamics CRM Online does not provide a method to enforce users to enter a unique Account Number; so the SolutionPak design relies on using Dynamics CRM duplicate detection jobs to look for duplicates and to find merge candidates.

Data Maintenance after the Initial Synchronization

After the initial synchronization is complete and your site is using the SolutionPak on an ongoing basis, it is important to consider the business processes required to maintain matching customer numbers from the source to Account Numbers in Dynamics CRM.

New customer records that originate in the accounting system will be automatically added to Dynamics CRM as part of the normal course of running the Solution Instance. Those customer records will be inserted as accounts in Dynamics CRM unless a match can be found on the Account Number in Dynamics CRM.

There are a couple ways to handle this situation.

One possibility is to create all new customer records first in the accounting system and let the SolutionPak do the job of creating those records in Dynamics CRM. However, this may not be the desired process as many companies use their Dynamics CRM system to track prospects, so the account records will be created in Dynamics CRM before they are created in the accounting system.

The more likely process is to create the account records in Dynamics CRM before they are created in the accounting system. In this case, there are several options to set up the account matching:

- As new accounts are entered in Dynamics CRM and go through their lifecycle from prospect to customer, manually input data into the Account Number field in Dynamics CRM before the SolutionPak runs.
- Let the SolutionPak run and create a duplicate account in Dynamics CRM. Then use the duplicate detection jobs again to find the duplicate accounts and help you merge them. Again, make sure the surviving account of the merge is the one that has the Account Number field filled in. This will set up a situation where you have a one-to-one match of customer records in the accounting system to account records in Dynamics CRM based on the Account Number field.
- Change the design of the SolutionPak so that the match field is the account Name. We did not choose this option when we designed the SolutionPak because we wanted a match field that was not likely to change. Account names can change (if a company is purchased, for example), which would break the relationship between the account system data and the account records in Dynamics CRM. If you make this change to the Solution Instance, be sure to edit all of the maps to change the field mapping formulas that handle the foreign keys for the child objects.

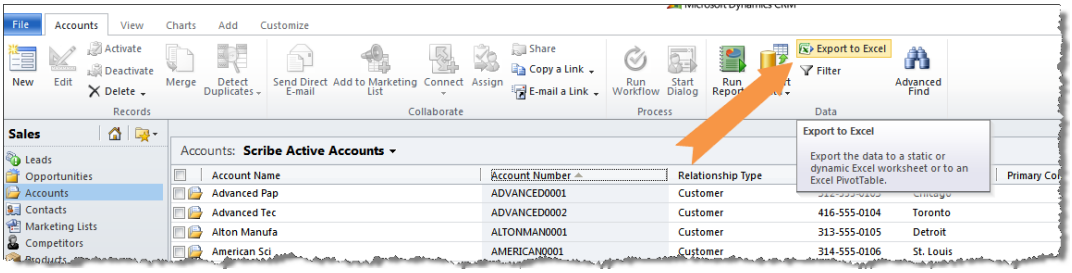
Setting up Account Number Matching Using Export to Microsoft Excel

For smaller data sets where there is already account data in Dynamics CRM, consider the following method to set up the data in Dynamics CRM for the initial synchronization:

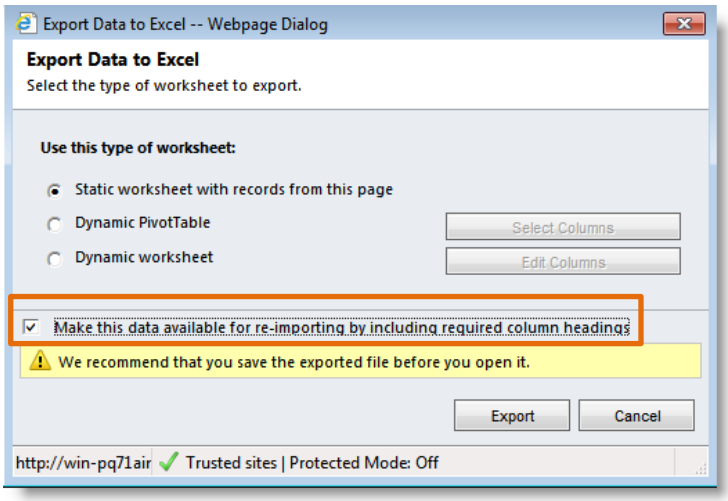
1. Exporting Account records to Microsoft Excel.
2. Manually enter the Account Numbers in Microsoft Excel (correcting other data as desired),
3. Import the Excel sheet back into Dynamics CRM to update the Account records.

To use this method:

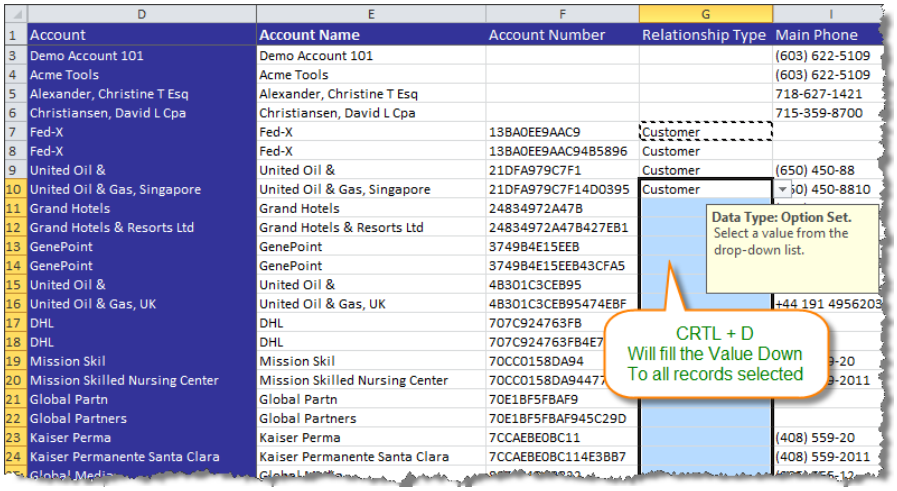
1. In Dynamics CRM, navigate to the account object and open up the [custom view that we created earlier](). Choose **Export to Excel**.



2. The Export Data to Excel wizard opens.
3. Choose Static Worksheet with records from this page. Also be sure to check **Make this data available for re-importing by including the required column headings**.
4. Click **Export**.



5. You will be prompted to save **For Re-Import – Active Accounts.xml from CRM**? Click **Save** or **Save As**, then click **Open**. Excel will open with this file and you will be able to use Excel to correct the data formatting and add missing data such as the Account Number.



6. In Excel you can build formulas to clean up data such as improper telephone formatting or missing zeros from Postal Codes. Here are a few blog articles that have some helpful Excel Formulas addressing common data quality issues.

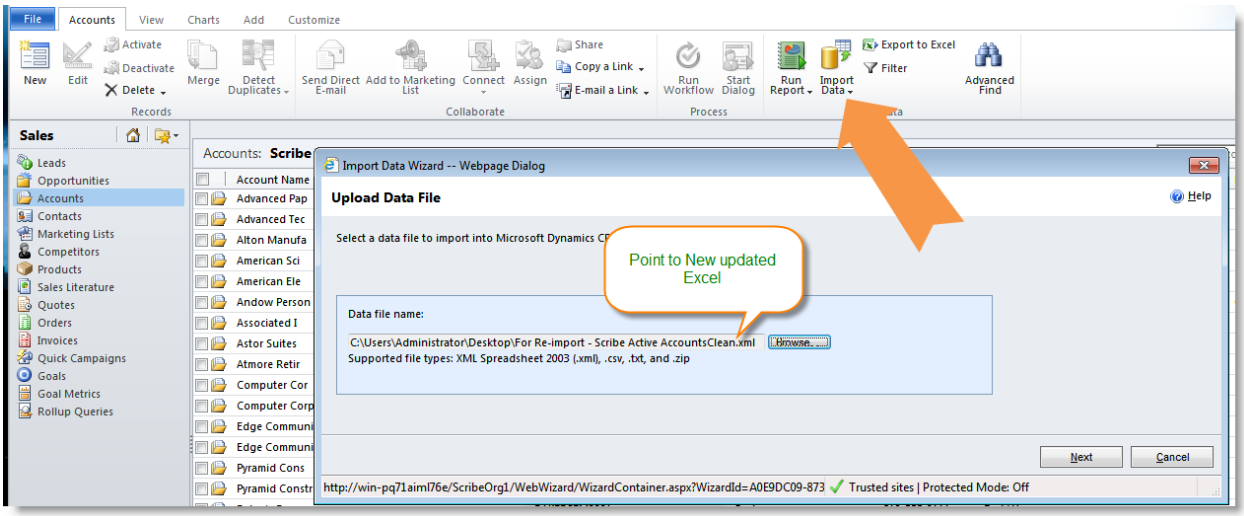
Telephone Formatting - http://goo.gl/Ofxk5

Zip Code Leading Zero Issues - http://goo.gl/LZkor

These types of functions can also be built into the mappings using Scribe Online's function library.

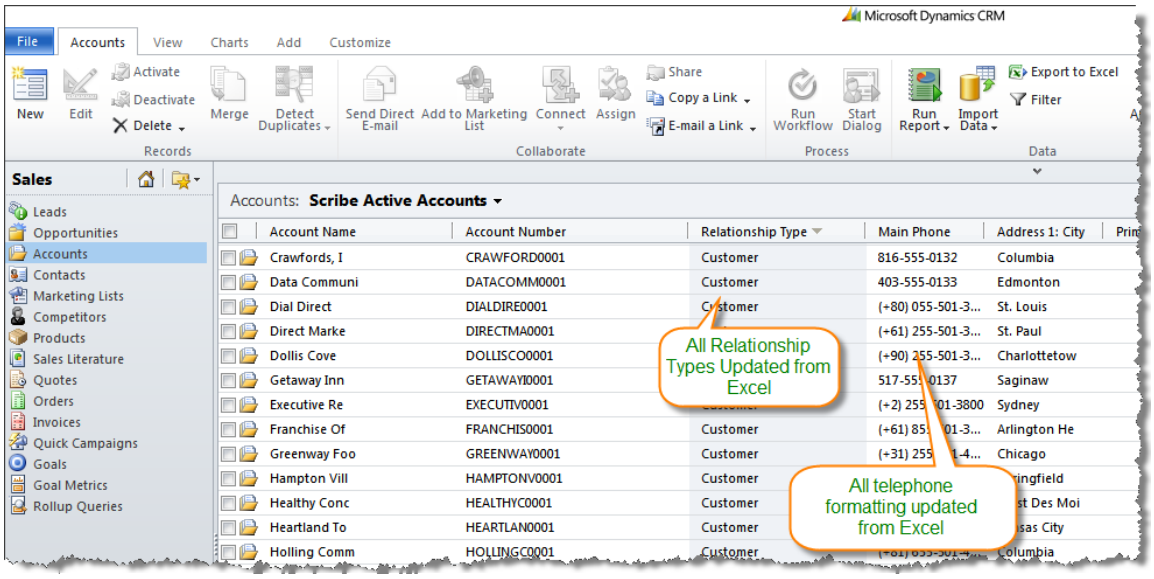
You may have to copy cells and rows into a new spreadsheet to add macros, or custom formulas as .xls format does not support macros.

7. Once data file is "cleaned up" go back to the Dynamics CRM Import Data utility and import the updated spreadsheet. Because we chose the re-import option during the export no additional mappings need to be made.
8. Choose **Next | Next**.

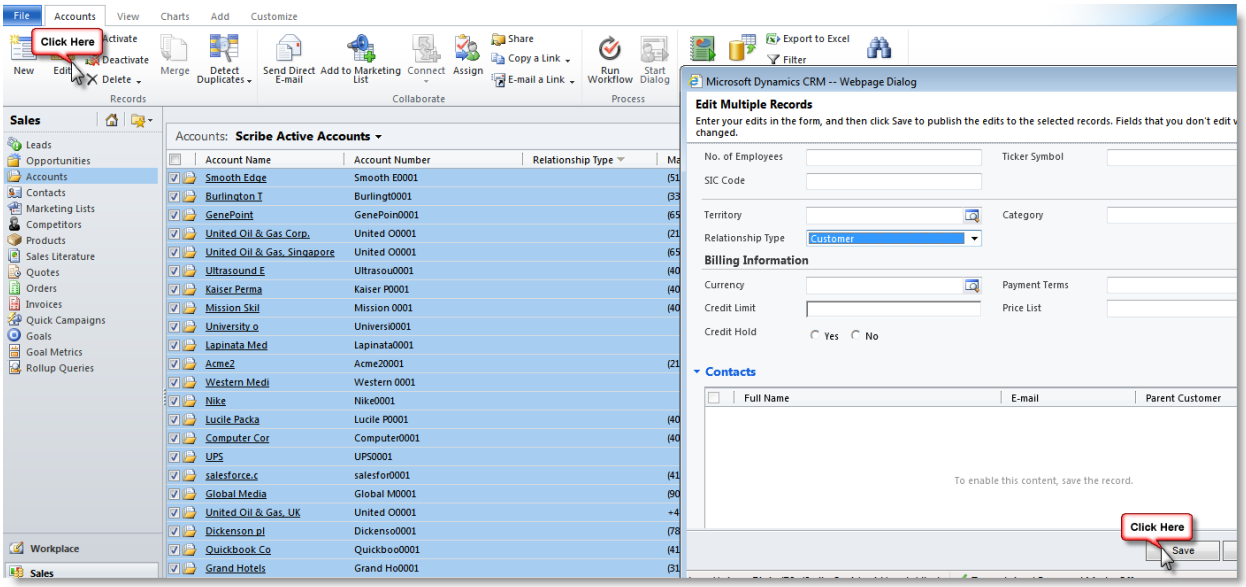


9. After some time, the job will complete the import and update of the Account. You should have correct relationship types, and phone number formats.

Data Import uses the Microsoft Dynamics Asynchronous Service. So if the job is stuck it is typically resolved by starting the Dynamics CRM Async Service on the Dynamics CRM Server.



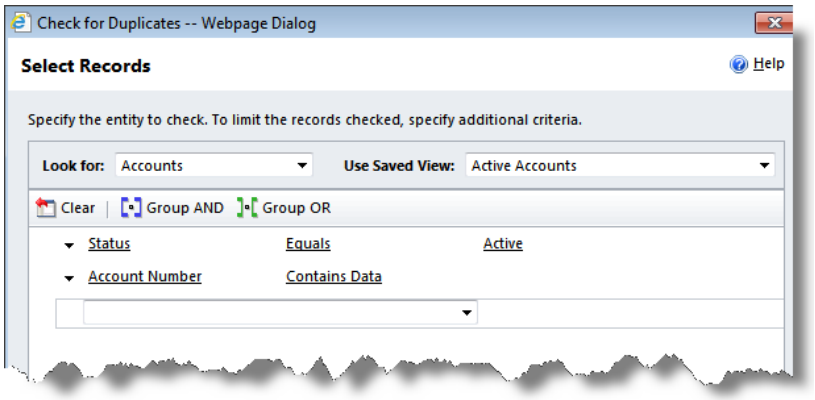
One final tip on data clean up in Dynamics CRM is Group Edit. From the Account View select the records you want to edit. Choose the value you want to change and all the selected records will be updated to the new value.



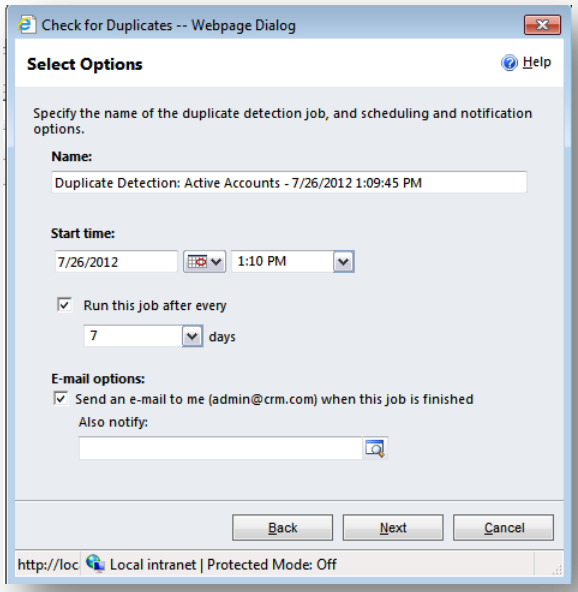
Using the Duplicate Account Number Rule

Before you run the initial synchronization, make sure there are no duplicate account numbers on the account records in Dynamics CRM. Earlier in the implementation process you created a duplicate detection rule to look for duplicate account numbers. Use that rule as follows:

1. Once the Duplicate Account Number Rule is published, you can run a job that finds duplicates. Navigate to **Settings | System | Data Management | Duplicate Detection Jobs | New**. The Check for Duplicates wizard opens.
2. In **Select Records** we suggest that you look for Accounts, Status Equals Active, and Account Number Contains Data. This allows you to only look for duplicate account numbers.



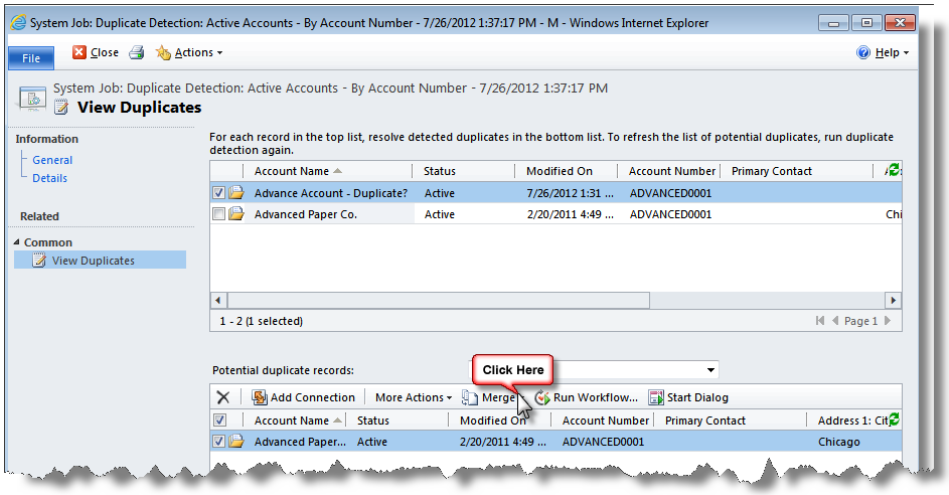
3. Click **Next**.



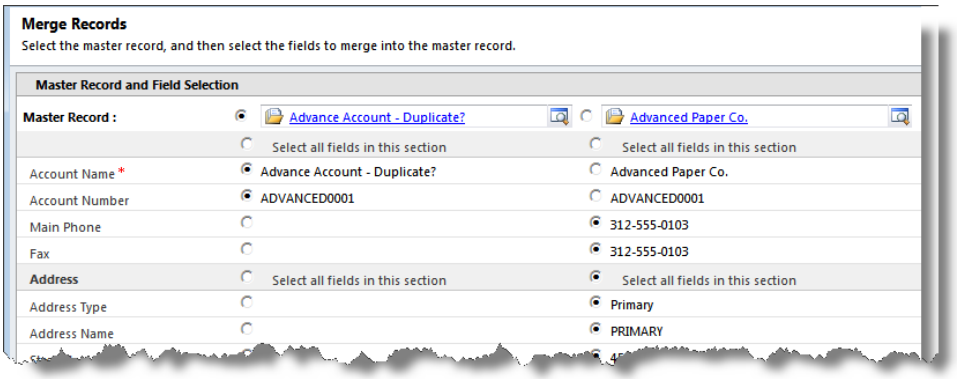
4. Click **Next**, then click **Submit**.
5. Complete the Check for Duplicates Wizard. Within several minutes you should receive an email notification with a link to the Duplicate Job.

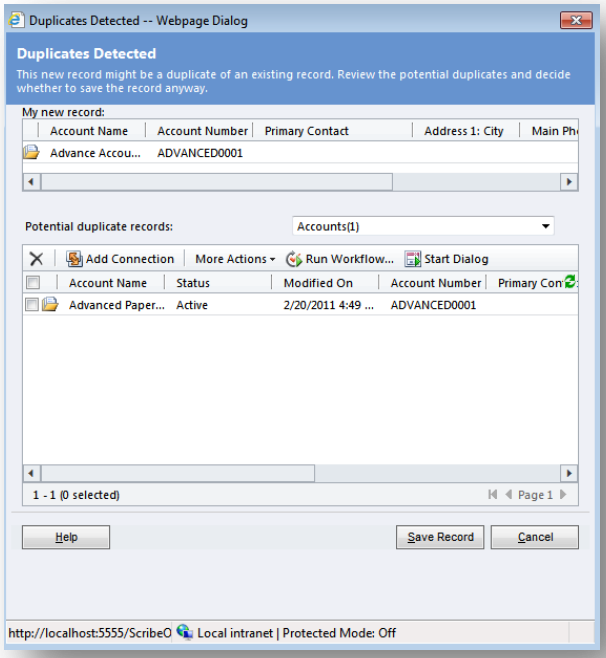
> This assumes that you have configured Dynamics CRM to use your email address for notification.

6. The email will have a link to the System Job. From there you will be able to see any potential duplicates.



7. Choose the **Merge** option to merge the records using the Merge options in Dynamics CRM.





Using the Duplicate Customer Name and Address Rule

We recommend running this rule both before and after you synchronize Account data with the SolutionPak.

Once the Rule is published you can run a Job that finds duplicates. Use a similar process to run this duplicate detection job as you did for the Duplicate Account Number job.

We suggest that you run this rule before running the SolutionPak for the first time. This job now will go through all of active accounts and find any records that match any of the duplicate detection rules that have been activated.

You will receive an email linked to the job that was run. Depending on how many accounts you have this could be a very large list. Someone will need to go through the results to merge the duplicates.

As always, make sure that the surviving account from the merge has the Account Number field filled in. This is key to maintaining the matching between the data in the two systems.

Often, the most qualified person for this task is not an IT person or a consultant, but someone who is familiar with the account names and addresses such as a company administrator or an Accounts Receivable employee.

Summary

In conclusion, the duplicate detection rules provide a powerful tool to manage potential duplicates and to keep the data in good shape for matching on Account Number. You will most likely need to run this process several times before you go live, prior to initial account integration, and after the first few times you run the maps that are part of the SolutionPak. Additionally we recommend that you these jobs on an ongoing basis and review the results on a daily or weekly basis.

In these directions we have added two duplicate rules, and merged duplicate records. We have also worked through how to export the records to Microsoft Excel for clean-up, and then re-import the data to update the record set.

We also reviewed how you can update Dynamics CRM account records using the Edit Multiple Records dialog. Data quality in Dynamics CRM requires a bit of time to get a clean system. It is important that once the clean-up process is complete that ongoing reviews of data quality and duplicate checking be done. Many companies have instituted security policies, workflows, and jscript customizations that limit who can add customer account records and who can input the customer account number into Dynamics CRM.

Record Ownership within Dynamics CRM 2011

When synchronizing data into Dynamics CRM 2011 using Scribe Online SYS, by default the ownership of the source records will be that of the user that was configured in the Scribe Online Dynamics CRM connection logon user. Understanding that there may be times when the user ownership of the data in Dynamics CRM records needs to be assigned in a more flexible way, this section describes how to modify the existing SolutionPak *Customers* map in order to achieve the desired result. This description may be used as a model for non-SolutionPak Scribe Online SYS maps as well.

Setting User Record Ownership in Dynamics CRM 2011

By default, the ownership of records that are input in Dynamics CRM with Scribe Online SYS will be set to the logged in user that Scribe Online is using. To set ownership of records in Dynamics CRM to another user, you need to add field mappings.

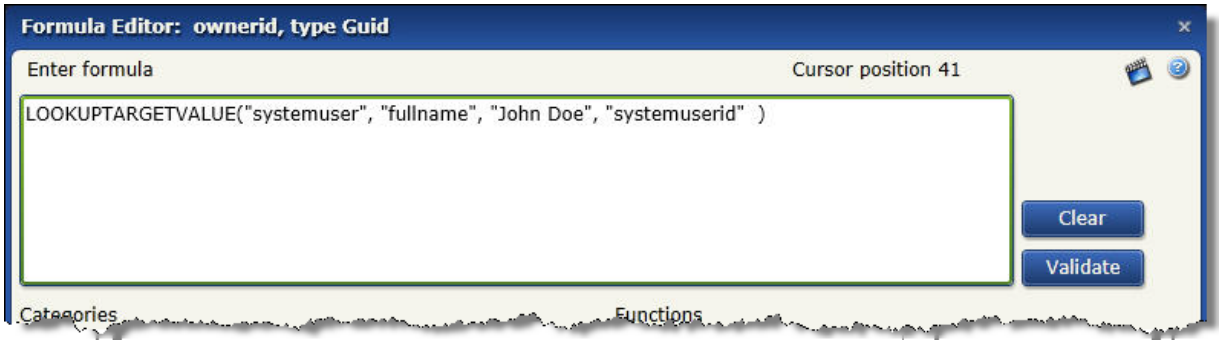
Setting the ownerid will initially require getting the Dynamics CRM generated ownerid GUID value for the user which you would like to assign the records. This ownerid field along with the complimentary owneridtype field are both required field values to successfully set the record ownership in Dynamics CRM. You cannot set the ownerid without setting the ownerid type.

Setting Ownership to a Constant User

Setting ownership may be achieved with the addition of two field mapping formulas (see the picture below) to the pre-configured Scribe Online SYS SolutionPak *Customers* map. The two formulas required include one for "ownerid" and the other for "owneridtype". The "ownerid" will be set with the Dynamics CRM GUID of the user who will own the records, whereas "owneridtype" which will be set to "systemuser".

ownerid	Guid	LOOKUPTARGETVALUE("systemuser", "fullname", "John Doe", "systemuserid")
owneridname	String(4000)	
owneridtype	String(255)	"systemuser"

Here is a detailed view of the formula.

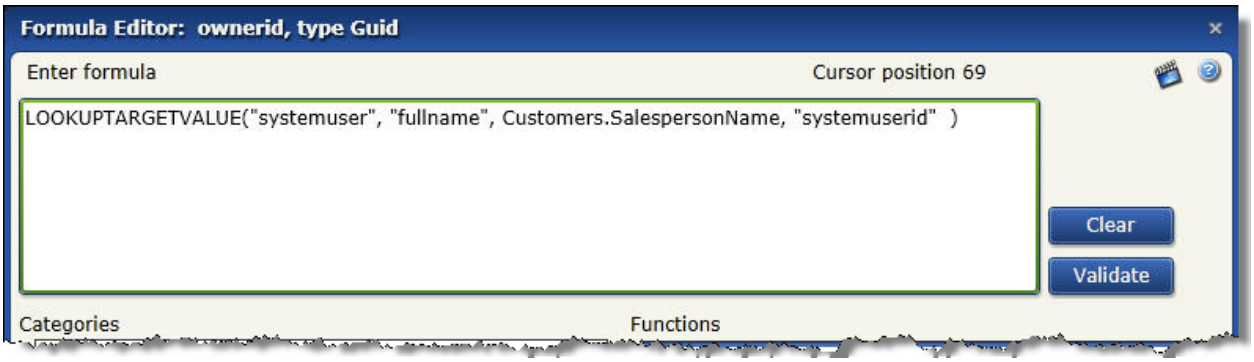


If you wanted to set ownership to a team, you would have to get the GUID for the team and set the ownerid to that GUID, and also set the owneridtype to "team".

In the above picture, please note that the Scribe Online SYS LOOKUPTARGETVALUE formula's 3rd token is displaying the user's literal full-name. Manually entering this user name (e.g. John Doe) within the formula assumes that the user's full-name is not available within the source data.

Setting Ownership to a User Based on Source Data

If the source data has a user's full name field available, you could enter the source field name as the value for the 3rd token in the formula.



By following this procedure, you can easily change record ownership from the default Scribe Online SYS connection logon user to one that may be more suitable for the synchronization at hand.

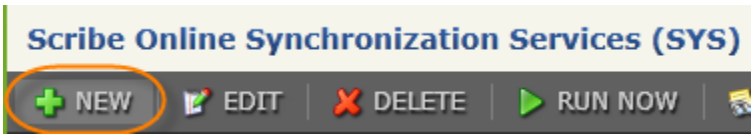
Changing the Source of the SolutionPak

The SolutionPak maps use a set of standardized CSV files that contain data elements commonly found in accounting and ERP systems. To use the maps as they come with the SolutionPak, it is required to export the data from whatever the source system is into the proper format as defined by these CSV files. There may be situations where direct access to the source data is available and it is desired to change the SolutionPak maps to connect directly to the source data rather than going through the additional steps of exporting the data to the standardized CSV format.

This section outlines the steps to change the source in the maps from the CSV files to a direct connection into the source data. The example followed uses a Dynamics GP database connected via ODBC. In general, the process is:

- Export your SolutionPak maps to back them up
- Create a new Solution Instance
- Import your backed up maps to the new Solution Instance
- Create your new source connection
- Change the source on the maps to your new source
- Fix the broken field mappings

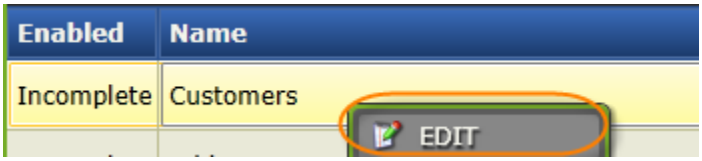
1. **Backup your maps!** Export the maps so you have something to roll back to. Edit the Solution Instance, click **Maps**, and then use the **Export** feature to export the maps.
2. Create a new solution instance as a container for the maps.



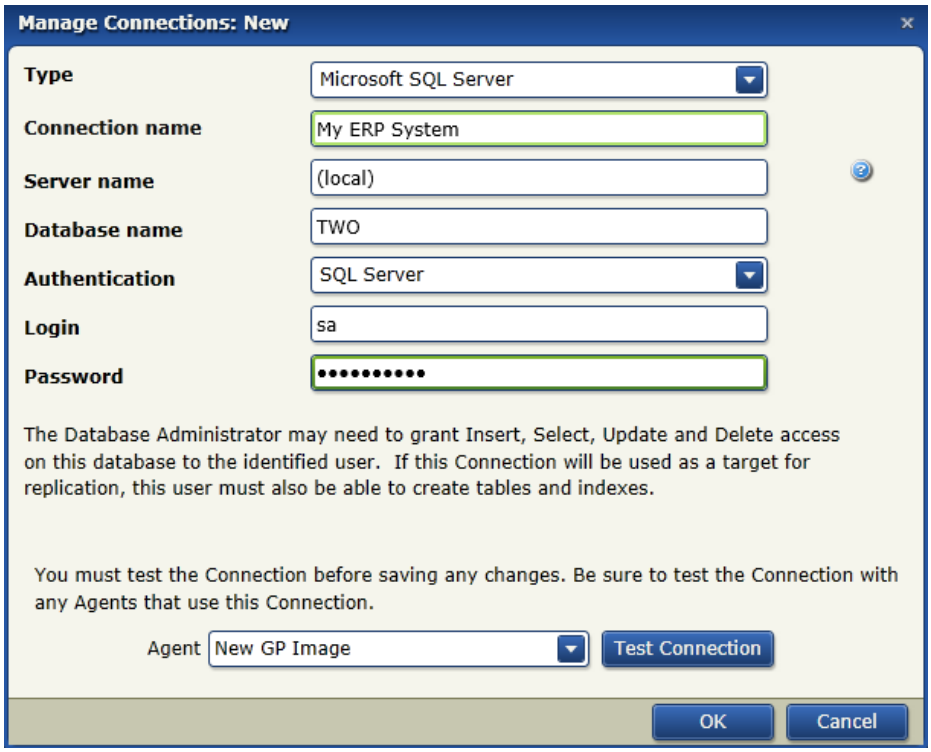
3. In the new Solution Instance, after completing the General and Agent tabs, click Maps, and then click **Import**. After importing the maps, they will show as "Incomplete."

Enabled	Name
Incomplete	Customers
Incomplete	Addresses
Incomplete	Contacts

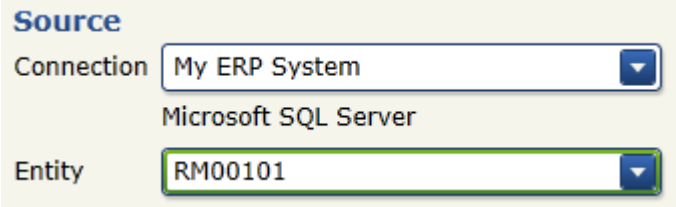
4. Edit the **Customers** map. From here you will create a new connection to your accounting system.



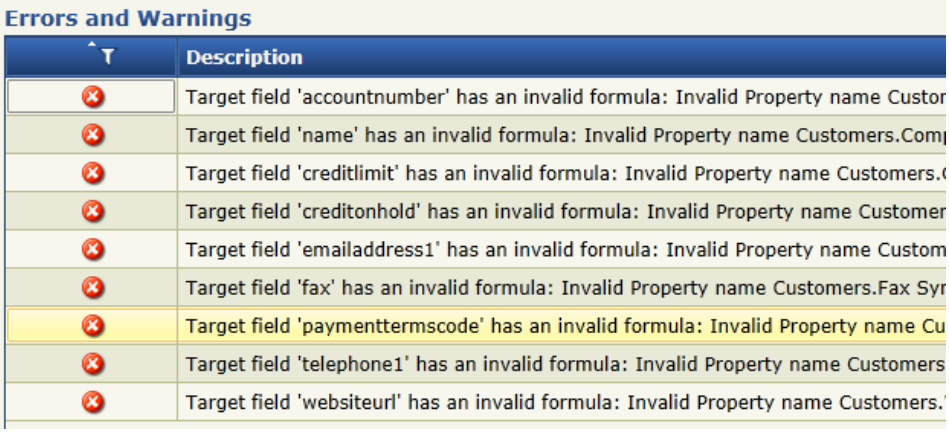
5. On the Connections tab, click **New**. Then type in the connection information for your accounting system. Then click **OK**.



6. In the Entity setting, select the entity from your accounting system that will replace the Customers entity from the CSV files. Remember that we are using Dynamics GP in these examples.

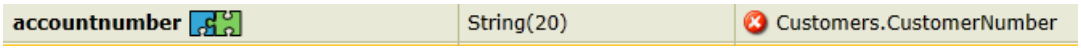


7. Scribe Online will try to match up any existing field mappings and the source fields they used in the text files with the fields from your accounting system. It will not find any matches to automatically replace your field mappings with new ones unless your old source entity name and new source entity name are the same. Even then, expect it to be a manual process to fix the broken field mappings. Following is a picture of what the broken field mappings will look like.

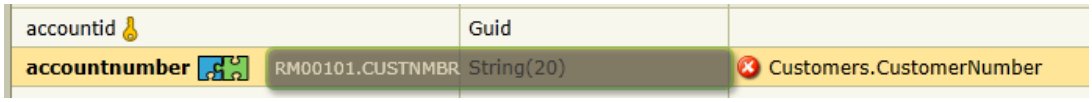


8. If there is no formula on the field map, simply drag and drop the appropriate field from your source to the mapped target field. The invalid field mapping will be overwritten.

   In this first picture, you can see the broken field mapping.

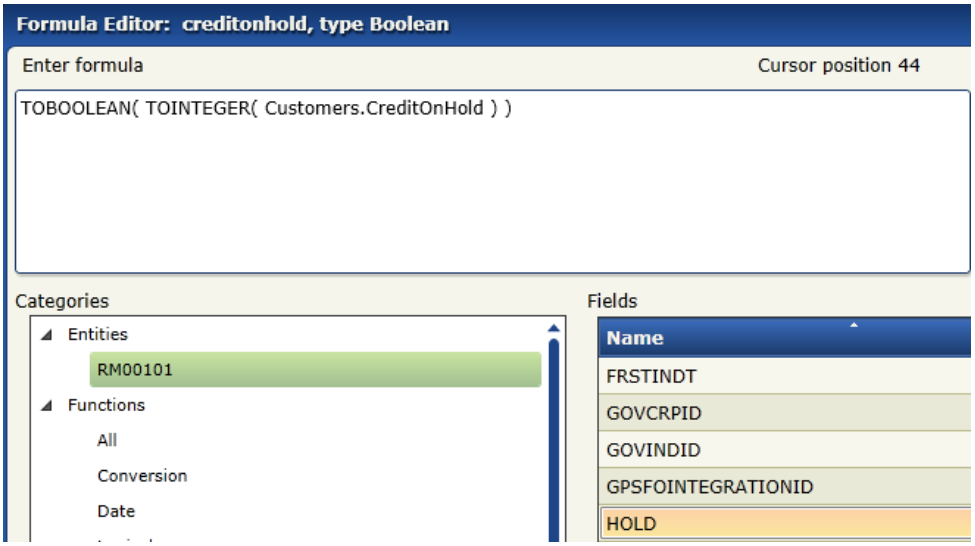


   In this second picture, you can see the source field from your new source being dragged and dropped onto the target field name.



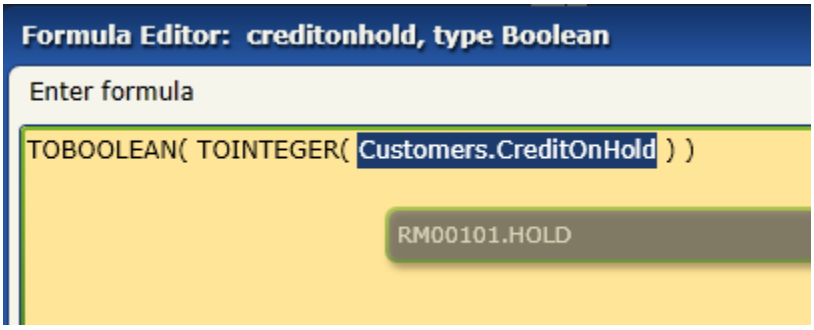
   In this third picture, you can see the field mapping now that it is fixed, with the new source field name as the formula.

9. If there is a formula on the field map, double-click on the invalid formula and it will open the formula editor. The formula editor contains a box called Categories. In that box, click the name of the source entity. That changes the context of the list on the right side of the formula editor to show the source field names from that entity.

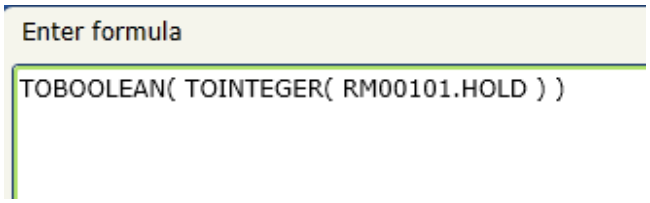


10. You can replace the invalid source field names in the formula with the correct field names by dragging the field name from the field list and dropping into the appropriate place in the formula.

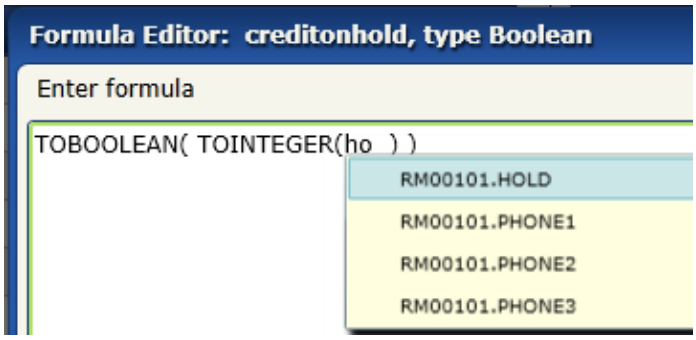
    Here is a picture of dragging and dropping the field name.



Here is a picture of the fixed formula.



If you would like to fix the invalid field name in the formula by typing, you can first delete the invalid field name in the formula, then press CTRL + SPACE on the keyboard. That will enable the intellisense feature. You can then start typing the name of the field you want to map and pick it from the pop-up list.



11. Repeat this process of changing the source connection, changing the source entity, and fixing the broken field maps for each of the maps in the solution.

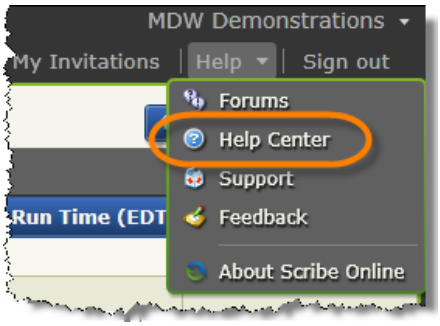
Scribe Online Functions and Formulas

Synchronizing source data often requires the ability to reformat your data as part of the mapping design. This formatting may include tasks such as altering data, referential record identification, or using logical conditions.

In this section we will share some *how-to* knowledge about using Scribe Online functions to do this type of reformatting.

Scribe Online Function Help

Scribe Online provides a library of functions to use with the Solution Instance maps. You can find information about these functions in the Scribe Online Help Center.

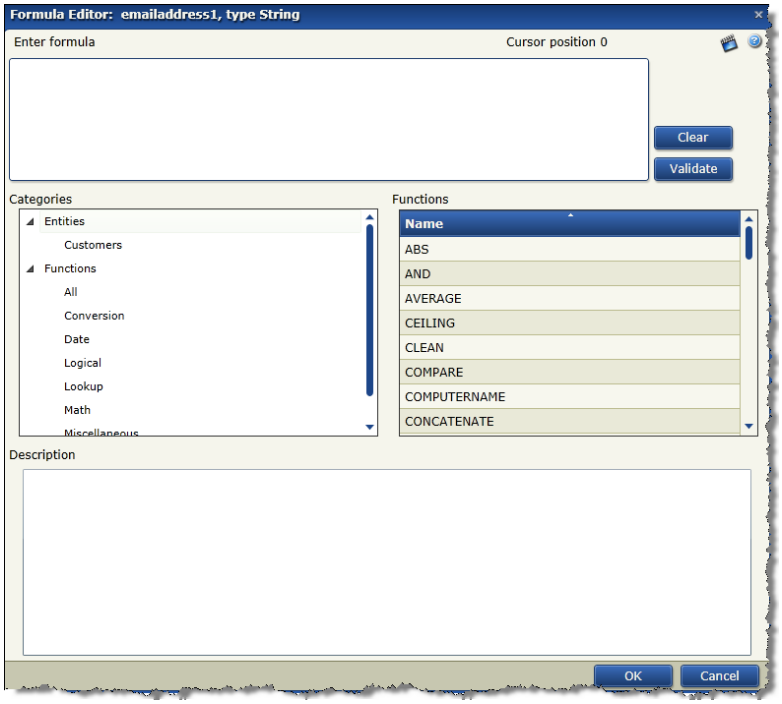


The function library is divided into 7 basic categories of which include:

1. Data Conversion
2. DateTime
3. Logical Expressions
4. Lookup
5. Arithmetics
6. System-types
7. Text

Scribe Online Formula Editor

The Formula Editor window (reference screen shot below) is where you can apply functions and build formulas so as to format your source data during the synchronization process. You can access the formula edit window by selecting a field mapping, right-clicking, and selecting **Edit** from the pop-up menu.



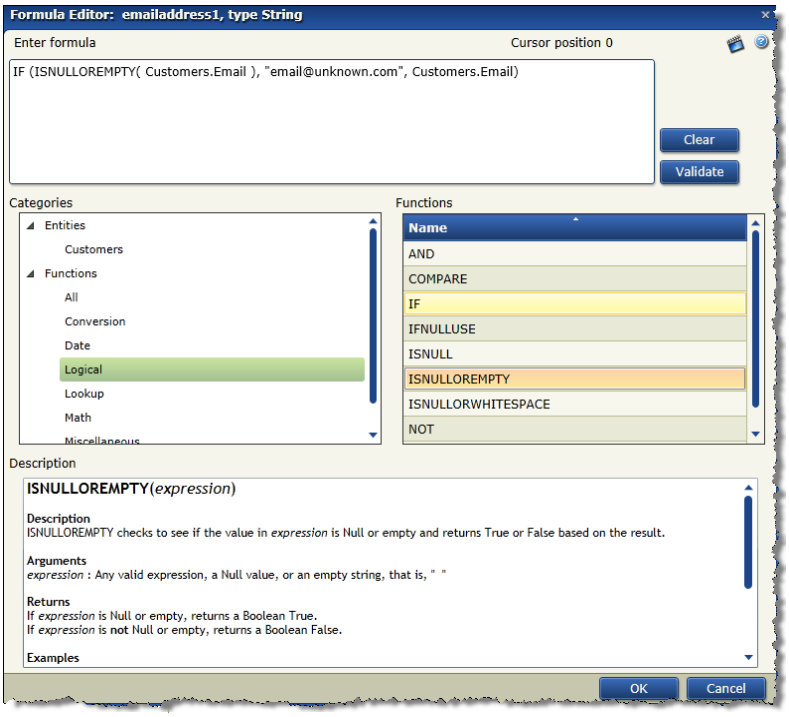
Formulas can be simple or quite complex as required by the use case. Use the Scribe Online function library and the Formula Editor together to design-in the formulas that you may need for your solution maps. For detailed instructions on how to use the Formula Editor, please reference the Scribe Online Help.

Scribe Online Commonly Used Functions

Within the Scribe Online Invoice SolutionPak, the provided maps contain various links with pre-configured functions/formulas. Although these maps were designed with a specific intent in mind, they may be extended if your requirements are different. If modifications will be made to the SolutionPak's existing maps, it is recommended that back up the maps first by exporting them.

Example Formula #1

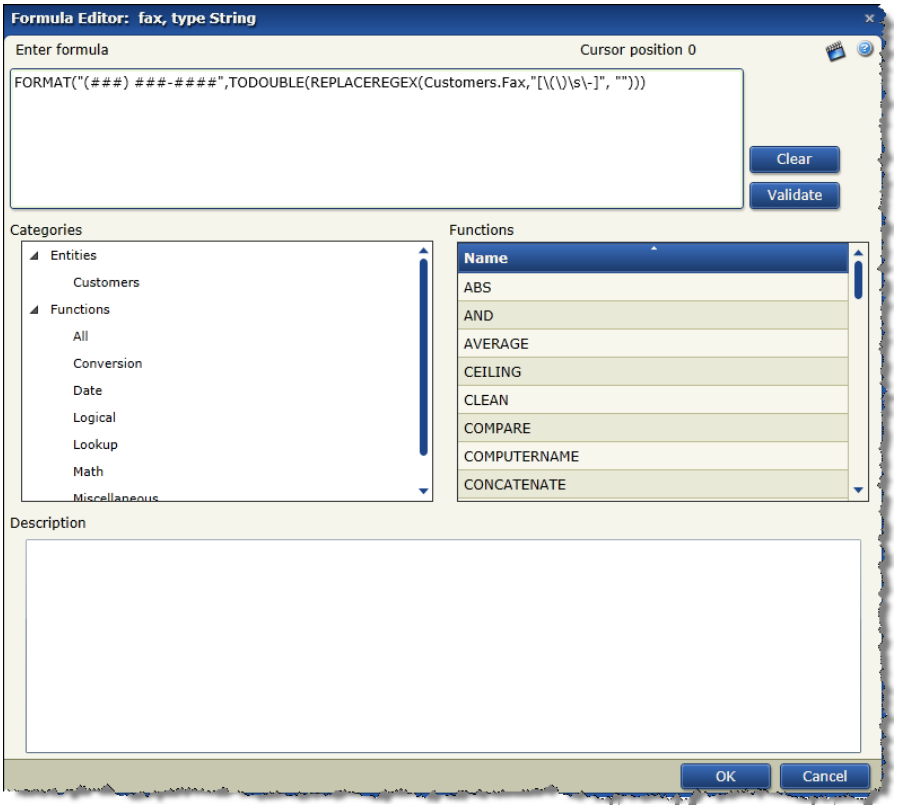
By default, the SolutionPak's *Customers* map "emailaddress1" data-link does not contain any description within the maps Formula column. In the event that source data may not always provide a value for each and every field, this example formula (reference below snapshot) will show how to check for an existing source value for the "emailaddress1" field and **if** it does not exist, **then** add a temporary target value, **else** add the existing source value. The usage of a formula such as this can be the catalyst in assisting to isolate, in conjunction with the Dynamics CRM *Advanced Find* feature, which source records having been synchronized into Dynamics CRM do not contain a source value for the "emailaddress1" field.



Within Dynamics CRM, the results of this formula will substitute the value "email@unknown.com" for every source record that does not contain an email address.

Example Formula #2

This example formula (reference below snapshot) will demonstrate how, by using Regular Expressions, you can maintain format consistency of your source phone numbers and/or fax numbers as they are synchronized into Dynamics CRM. The scenario here is that the source field "Fax" number which in this example will be "617-832-4401", needs to be re-formatted to "(617) 832-4401 as it is synchronized into Dynamics CRM.



Using the functions FORMAT, TODOUBLE, and REPLACEREGEX, you will be able to build-out a formula, as displayed above, to achieve the target results desired. Please note that using Regular Expressions will require a reasonable level of working knowledge regarding its many language elements in addition to the proper assembly within your data-link formula.

Although there can be many variations in the construction of this formula using Regular Expressions, the REPLACEREGEX(Customers.Fax,"[\(\)\s\-]", "")) part of the formula used within this example performs a search for all parentheses \(\), spaces \s, and hyphens \-, and then replaces them with nothing. With a numeric only value remaining, we then convert its data-type with the TODOUBLE function and subsequently re-format the value to how we would like it represented within the target using the FORMAT function.