

4Thought Marketing

4Bridge Integration Engine End-User Guide

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1. Introduction

4Bridge Integration Engine is designed to easily connect Eloqua with your CRM systems, resulting in more effective marketing and lead nurturing campaigns. Using 4Bridge, you can:

- 1.1 Move leads from your marketing processes to your sales reps so they can begin turning those leads into long-term client relationships; and
- 1.2 Use your CRM data in Eloqua for segmentation, email campaigns and more.

When you first log in to 4Bridge, you will notice it is populated with Integration Jobs, with the settings for these jobs configured for you. These jobs control the main flows of data between your systems. You will probably not want to change or add Integration Jobs unless you want to create a new flow between the systems. You will be able to add/edit tasks, change the field mapping for each task and review the status of the jobs using the Job Scheduler function. This user guide shows you how to use these features to maximize the results of your marketing and lead nurturing campaigns.

2. Quickstart

Most people are reading this manual because they want to accomplish a goal. If that is the case for you, and your goals are one of the following, you can jump directly to the correct section.

- **My Integration is not working and I want to fix it.**
 - ☞ See [Section 7 Most Common Problems](#). Roughly 90% of the integration issues reported to 4Thought are due to log in issues, data issues, or data structure changes. This section directly addresses those issues.
- **I want to add or change some fields that are currently mapped.**
 - ☞ See [Subsection 5.4](#) for tips on how to review, add, or change your field mapping, or go to [Section 5.0](#) first to see how to navigate to the mapping editor.
- **I just want to browse around the system and get familiar with it.**
 - ☞ See the next section, which covers [how to log in](#).

3. Log In

To get started with 4Bridge, enter <http://4bridge.4thoughtmarketing.com/> in your web browser, which will take you to the home page.



Figure 1.1 4Bridge Homepage.

If at any time you need assistance using 4Bridge Integration Engine, there is a ‘Get Support’ link at the top of the page (Figure 1, Item 2).

Click the ‘Log In’ link at the top of the page and enter your 4Bridge username and password as follows:



Log In

Please enter your user name and password. [Register](#) if you don't have an account.

Account Information

User name
 ← 1. Indicate your Username

Password
 ← 2. Indicate your Password

Remember me? ← 3. Check this box if you are NOT in a shared computer

Figure 2 4Bridge Log In Area

Once you are logged into 4Bridge, you will see four options or functions you can choose from the navigation bar: [Integration Jobs](#), [Integration Tasks](#), [Scheduler](#) and [Customers](#).

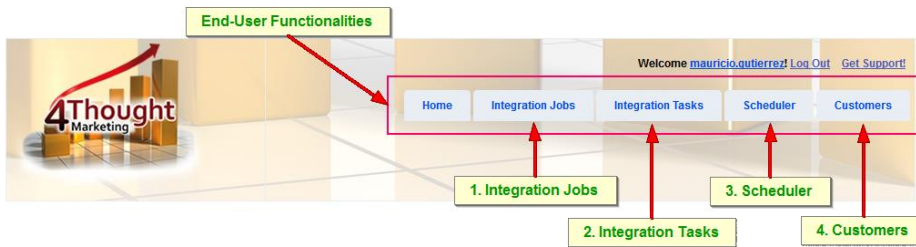


Figure 3 Basic User Functionalities

4. Integration Jobs

Clicking ‘Integration Jobs’ in the navigation bar will bring up a list of all existing jobs, as well as information on the Output Connector (i.e., where the data are coming from), Output Credential (i.e., authentication for the Output Connector), Input Connector (i.e., where the data will be stored) and Input Credential (i.e., authentication for the Input Connector). You will also notice you have the option to create, edit or delete Integration Jobs.

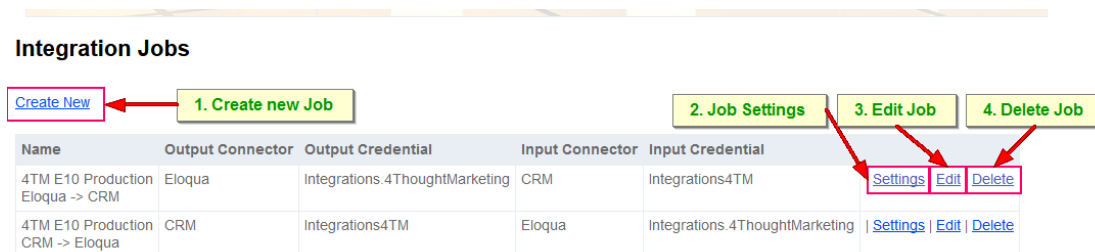


Figure 4 Integration Jobs Actions

4.1 Create new Integration Job

To create a new job, click the ‘Create New’ link (Figure 4, Item 1). This will bring up a series of drop-down menus. Fill in the Input and Output fields (Figure 5) to start your data transfer:

Create Integration Job

4TM E10 Production

Output Connector

Connector
Eloqua

Credentials:
Integrations.4ThoughtMarketing

Input Connector

Connector
CRM

Credentials:
Integrations4TM

Integration Job Name:

4TM E10 Production Eloqua CRM

Create Integration Job
[Back to Integration Job List](#)

Figure 5 Create Integration Job

In the example above, the user has created an integration job called ‘4TM E10 Production Eloqua CRM’ that will pull data from Eloqua and input that data into the CRM.

Once you have filled in the fields, click ‘Create Integration Job.’ Your new job will be added to the existing job list as follows:

Integration Jobs

[Create New](#) New Integration Job

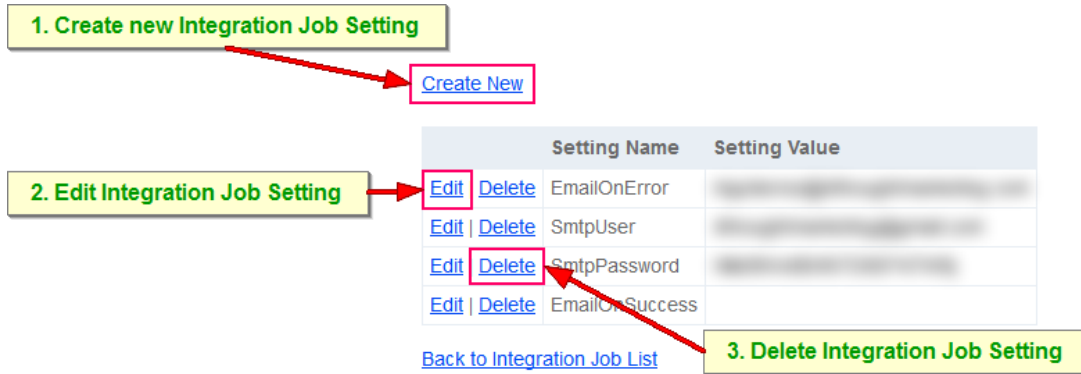
Name	Output Connector	Output Credential	Input Connector	Input Credential	
4TM E10 Production Eloqua -> CRM	Eloqua	Integrations.4ThoughtMarketing	CRM	Integrations4TM	Settings Edit Delete
4TM E10 Production CRM -> Eloqua	CRM	Integrations4TM	Eloqua	Integrations.4ThoughtMarketing	Settings Edit Delete
4TM E10 Production Eloqua CRM	Eloqua	Integrations.4ThoughtMarketing	CRM	Integrations4TM	Settings Edit Delete

Figure 6 Created and Listed Integration Job

4.2 Integration Job Settings

Every Integration Job can have its own settings. For example, it can send an automated email when the job is completed to let you know if there were any errors in the execution. To see a current list of job settings, click ‘Settings’ (Figure 4, Item 2). An example of what

you will see follows:



Setting Name	Setting Value
EmailOnError	
SmtUser	
SmtPassword	
EmailOnSuccess	

Figure 7 Integration Job Settings

It is likely that your settings have been preconfigured, but you have the option to create, edit and delete Job Settings as required.

4.2.1 Create Job Setting

To create a new 'Job Setting', click the 'Create New' link (Figure 7, Item 1), and then enter the 'Setting Name' and 'Setting Value.' Once you have filled in these fields, click 'Create Integration Job Setting.' In the following example, the user is creating a setting to receive an email notification that the job has completed successfully:

Create Integration Job Setting

Setting Name

Setting Value

[Back to List](#)

Figure 7.1 Create Integration Job Setting

The new setting will be saved and listed. See Figure 7 for an example of what this setting will look like.

4.2.2 Edit Job Setting

To edit an Integration Job Setting, click 'Edit' (Figure 7, Item 2). Make the necessary changes to the 'Setting Name' and 'Setting Value' fields, and then click 'Save Integration Job Setting.' In the following example, the user is changing the 'Setting Value' – the user who will receive the automatic notification email.

Setting Name

Setting Value

[Back to List](#)

Figure 7.2 Update Integration Job Setting

The edited setting will be saved and listed. See Figure 7 for an example of what this setting will look like.

4.2.3 Delete Job Setting

To delete an existing Integration Job Setting, click 'Delete' (Figure 7, Item 3). A confirmation message will be displayed along with the setting details. For example:

Are you sure you want to delete this?

IntegrationJobSetting

SettingName
EmailOnSuccess

SettingValue
newUser@4thoughtmarketing.com

IntegrationJob
4TM E10 Production Eloqua CRM

| [Back to List](#)

Figure 7.3 Delete Integration Job Setting

Once you click 'Delete,' the setting will be completely removed from the system.

4.3 Edit existing Integration Job

If you need to edit an existing job, you can do so from the main Integration Job page. To start, click the 'Edit' link to the right of the screen (Figure 4, Item 3) for the job you want to modify. This will bring you to the Edit page (see Figure 5 for an example), where you will see a series of drop-down menus related to the job you have selected. Use the menus to change the configuration of the job and click 'Save.'

4.4 Delete Integration Job

Each Integration job has several tasks associated with it, and these tasks could be linked to logs that may prevent you from deleting the job. For this reason, 4Thought does not recommend deleting Integration Jobs. However, if you absolutely do need to delete an integration job, you can by using the 'Delete' link (Figure 4, Item 4) on the Integration Job landing page. A summary of the Integration Job will be displayed. If you are still sure you

want to remove the job, click 'Delete.' For example.

Delete

Are you sure you want to delete this?

IntegrationJob

Name
4TM E10 Production Eloqua CRM

InputConnector
CRM

OutputConnector
Eloqua

InputCredential
Integrations4TM

OutputCredential
Integrations.4ThoughtMarketing

[Back to List](#)

Figure 8 Delete Integration Job

Once you click 'Delete,' your browser will display a list of current integration jobs, thus confirming whether the one you have deleted was successfully removed from the system.

4.5 Updating your Integrated System Account and Credentials

Occasionally, user passwords will expire for Eloqua-to-CRM integrations and vice versa. This will typically trigger an automated email from 4Bridge Integration Engine informing you to change your password so you can continue running integrations. To update your password, click on ‘Customer’ (Figure 3, Item 4) to display the credentials currently associated with your account. For example:

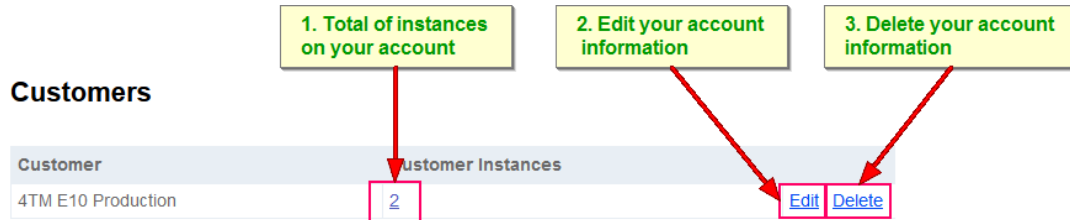


Figure 9 Customer Credentials List

You will note in the above example that the user has two instances on their account. These are the systems involved in moving data for each Integration Job.

If you are not certain as to how to change the password in your integrated system, see the System Administrator or user manual for that system.

To update your customer account name, click ‘Edit’ (Figure 9, Item 2), which will bring up the following screen. Modify the ‘Customer Name’ field and click ‘Save Customer.’ This will redirect you to the index page, where you will see your updated name listed.

Edit Customer

Customer Name

4TM E10 Production

Save Customer

[Back to Customers List](#)

Figure 9.1 Editing a Customer

You also have the option to delete your account, but this is not recommended as it may prevent Integration Jobs from running. If you must delete your account, click 'Delete' (Figure 9, Item 3), which will display a confirmation box. So long as no Integration Jobs are dependent on your credentials, your account information will be deleted from the system.

Delete

Are you sure you want to delete this?

Customer

Customer Name
4TM E10 Production

Delete | [Back to List](#)

Figure 9.2 Deleting a Customer

To review the Instances, or systems, involved in an Integration Job, click the number shown in Figure 9, item 1. An example follows of what you will see:

1. Number of credentials related to this instance

2. Edit Instance

3. Delete Instance

Instances for 4TM E10 Production

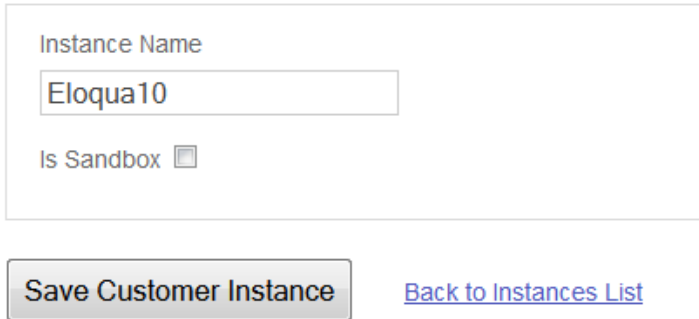
Instance Name	Sandbox	Credentials	
Eloqua10	False	1	Edit Delete
CRM	False	1	Edit Delete

[Back to Customers List](#)

Figure 10 Customer Instances

You can modify the credentials for each Instance, or system, by clicking 'Edit' (Figure 10, Item 2). Once you have updated the credentials, click 'Save Customer Instance' as follows:

Edit Instance for 4TM E10 Production



The screenshot shows a form for editing a customer instance. It includes a text input field for 'Instance Name' containing 'Eloqua10' and a checkbox for 'Is Sandbox' which is currently unchecked. Below the form are two buttons: 'Save Customer Instance' and a blue link 'Back to Instances List'.

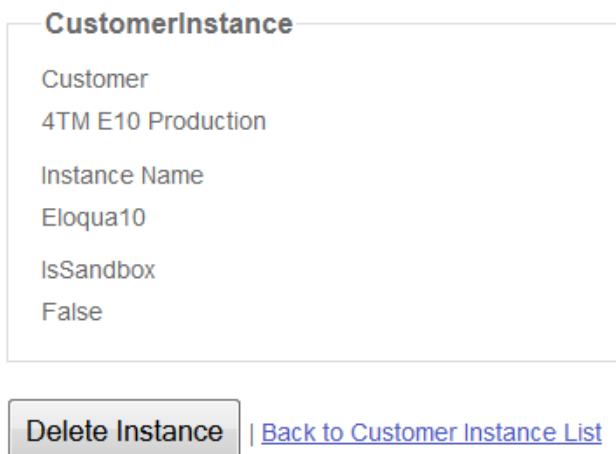
Figure 10.1 Editing a Customer Instance

This will redirect you to the Customer Instances index page (Figure 10), where you will see the updated Instance name.

If you want to delete an Instance, and it will not impact any Integration Jobs, click 'Delete' (Figure 10, Item 3). A confirmation message will be displayed as follows:

Delete

Are you sure you want to delete this?



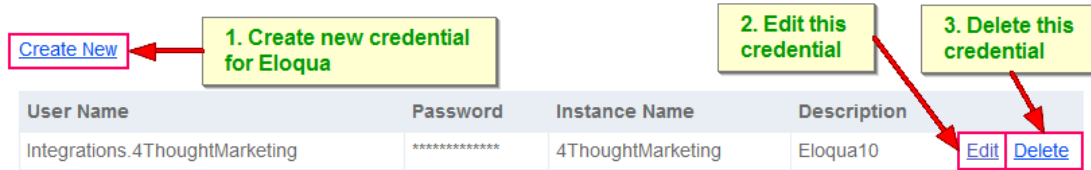
The screenshot shows a confirmation dialog for deleting a customer instance. The title is 'CustomerInstance'. The content lists the following details: Customer: 4TM E10 Production, Instance Name: Eloqua10, IsSandbox: False. At the bottom, there are two buttons: 'Delete Instance' and a blue link 'Back to Customer Instance List'.

Figure 10.2 Deleting a Customer Instance

Click 'Delete' and your Customer Instance will be removed from the system.

If you want to update or edit the user credentials associated with any Instance, or system, click the number related to the Instance you want to change (see Figure 10, item 1). The following offers an example of what you will see:

4TM E10 Production Credentials - Eloqua10 Instance



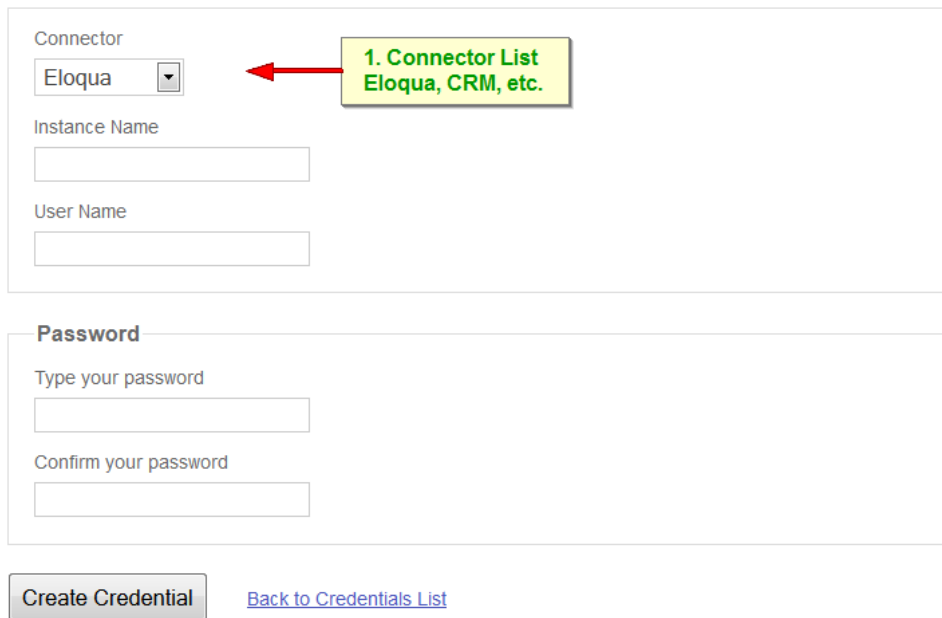
User Name	Password	Instance Name	Description
Integrations.4ThoughtMarketing	*****	4ThoughtMarketing	Eloqua10

[Back to Instances List](#)

Figure 11 Credentials List

To add a new user credential to the system, click 'Create New' (see Figure 11, Item 1), which will display the following form:

Create New Credential for 4TM E10 Production - Eloqua10 Instance



Connector: Eloqua

Instance Name:

User Name:

Password

Type your password:

Confirm your password:

[Back to Credentials List](#)

Figure 11.1 Create Credential

Select the desired connector from the drop-down menu, fill out the rest of the form and click 'Create Credential.' See Figure 11 for an example of how the new user credential will be listed. To update user credential information, such as a password, click 'Edit' (Figure 11, Item 2). Once you have made your edits, click 'Save Credential' as follows:

Edit Credential for 4TM E10 Production - Eloqua10 Instance

Connector
Eloqua 1. Connector List
Eloqua, CRM, etc.

Instance Name

User Name

Password

Type your password

Confirm your password

| [Back to Credentials List](#)

Figure 11.2 Edit Credential

If you need to remove a user’s credential, click ‘Delete’ (Figure 11, Item 3). A confirmation message will be displayed. If there are no Integration Jobs dependent on that credential, it will be removed from the system.

Are you sure you want to delete this?

Credential

User Name
Integrations.4ThoughtMarketing

Password

Instance Name
4ThoughtMarketingE10

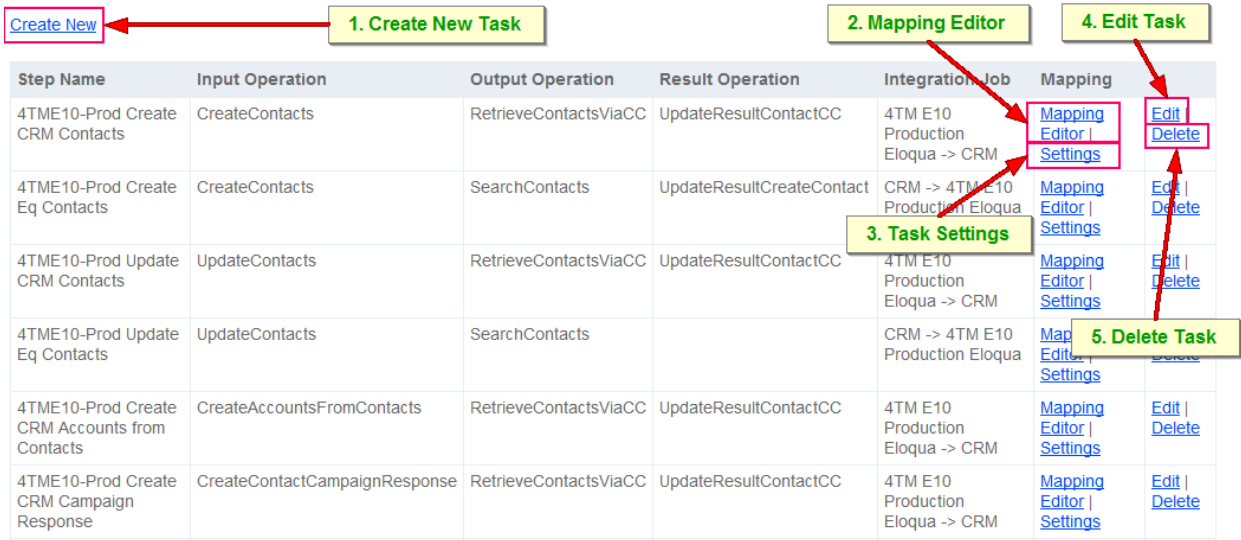
| [Back to Credentials List](#)

Figure 11.3 Delete Credential

5. Integration Tasks (Job Steps)

Every Integration Job you create has a series of associated tasks or steps. For example, one step might involve retrieving contacts from Eloqua and having them set up in your CRM with extensive details. You can see a complete list of these steps by clicking ‘Integration Tasks’ in the navigation bar at the top of the page. Figure 12 offers an example of how such a list will look:

Integration Tasks



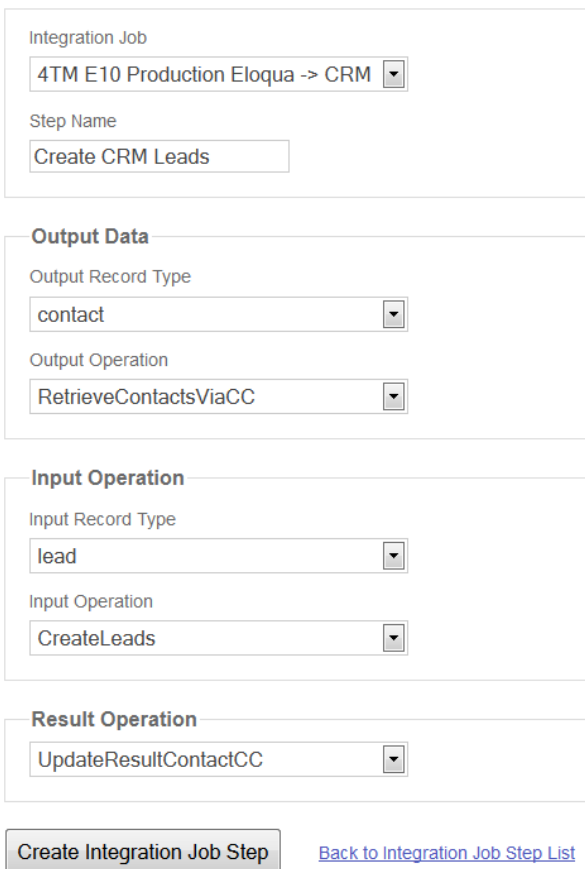
Step Name	Input Operation	Output Operation	Result Operation	Integration Job	Mapping
4TME10-Prod Create CRM Contacts	CreateContacts	RetrieveContactsViaCC	UpdateResultContactCC	4TM E10 Production Eloqua -> CRM	Mapping Editor Settings
4TME10-Prod Create Eq Contacts	CreateContacts	SearchContacts	UpdateResultCreateContact	CRM -> 4TM E10 Production Eloqua	Mapping Editor Settings
4TME10-Prod Update CRM Contacts	UpdateContacts	RetrieveContactsViaCC	UpdateResultContactCC	4TM E10 Production Eloqua -> CRM	Mapping Editor Settings
4TME10-Prod Update Eq Contacts	UpdateContacts	SearchContacts		CRM -> 4TM E10 Production Eloqua	Map Editor Settings
4TME10-Prod Create CRM Accounts from Contacts	CreateAccountsFromContacts	RetrieveContactsViaCC	UpdateResultContactCC	4TM E10 Production Eloqua -> CRM	Mapping Editor Settings
4TME10-Prod Create CRM Campaign Response	CreateContactCampaignResponse	RetrieveContactsViaCC	UpdateResultContactCC	4TM E10 Production Eloqua -> CRM	Mapping Editor Settings

Figure 12 Integration Tasks List

5.1 Create a new Integration Job Step

At the top of the main Integration Job Tasks page, you will see a 'Create New' link (Figure 12, Item 1). Click it and use the drop-down menus that appear to select the configuration you want. Once done, click 'Create Integration Job Step.' Remember that the fields will be empty and you will need to fill them in to create the Integration Task. In the following example, the user has filled in the fields to create a Task that will 'Create CRM Leads.' The source data will be taken from Eloqua's Cloud Connectors.

Create Integration Job Step



The screenshot shows a web form for creating an integration job step. It is divided into several sections:

- Integration Job:** A dropdown menu with the selected value "4TM E10 Production Eloqua -> CRM".
- Step Name:** A text input field containing "Create CRM Leads".
- Output Data:**
 - Output Record Type:** A dropdown menu with "contact" selected.
 - Output Operation:** A dropdown menu with "RetrieveContactsViaCC" selected.
- Input Operation:**
 - Input Record Type:** A dropdown menu with "lead" selected.
 - Input Operation:** A dropdown menu with "CreateLeads" selected.
- Result Operation:** A dropdown menu with "UpdateResultContactCC" selected.

At the bottom of the form, there is a grey button labeled "Create Integration Job Step" and a blue link labeled "Back to Integration Job Step List".

Figure 12.1 Create Integration Task

5.2 Edit Integration Task

To edit an Integration Task, click 'Edit' (Figure 12, Item 4). The Integration Task you have selected will be displayed with the fields prepopulated. Update the information as required and then click 'Save,' which will redirect you to the updated Integration Tasks List (Figure 12).

Edit

Integration Job

4TM E10 Production Eloqua -> CRM ▾

Step Name

Create CRM Leads

Output Data

Output Record Type

contact ▾

Output Operation

RetrieveContactsViaCC ▾

Input Operation

Input Record Type

contact ▾

Input Operation

CreateLeads ▾

Result Operation

UpdateResultContactCC ▾

Save [Back to Integration Job List](#)

Figure 12.2 Edit Integration Task

5.3 Delete Integration Task

To remove an existing Integration Task from the system, click 'Delete' (Figure 12, Item 5). If there are no Integration Jobs or Integration Logs that depend on the task to execute, it will be removed from the system.

Are you sure you want to delete this?

Integration Job Step

Step Name
Create CRM Leads

Integration Job
4TM E10 Production Eloqua -> CRM

| [Back to List](#)

Figure 12.3 Delete Integration Task

5.4 Integration Task Mapping Editor

The Mapping Editor function allows you to determine specific data (e.g., First Name, Country, City, Company, etc.) you want to pull from Eloqua on each Record (e.g., Lead, Contact, Company, etc.) during the execution of the Integration Task. To start, click 'Mapping Editor' (Figure 12, Item 2). 4Bridge will display a list of drag-and-drop Eloqua contact fields to the right, which you can use to populate the corresponding fields to the left. These are the data that you will be pulling into your CRM. For example:

Mapping Editor

CRM Contact Fields	Field Type	Eloqua Contact Fields
accept_status_id	String	<input type="text"/>
accept_status_name	String	<input type="text"/>
account_id	String	CRM AccountID
account_name	String	Company
alt_address_city	String	<input type="text"/>
alt_address_country	String	<input type="text"/>
alt_address_postalcode	String	<input type="text"/>
alt_address_state	String	<input type="text"/>
alt_address_street	String	<input type="text"/>
alt_address_street_2	String	<input type="text"/>
alt_address_street_3	String	<input type="text"/>
area_of_interest_c	multienum	Area of Interest
assigned_user_id	String	<input type="text"/>

Eloqua Contact Fields

- Address 1
- Address 2
- Address 3
- Annual Revenue
- Area of Interest
- Asset
- Asset Downloaded
- Asset URL
- Assigned to
- Bounceback Date
- Browser Name
- Browser Version
- Business Phone
- Call Me
- City
- Company
- Company Revenue
- Company Size
- Contact ID
- Country
- CRM System
- Customer since
- Date Created
- Date Modified

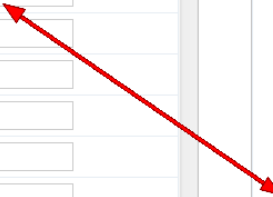


Figure 12.4 Mapping Editor – Drag-and-Drop Functionality

In the above example, the user is pulling Contact information from Eloqua related to the Company, Account ID and Area of Interest to generate a similar record in the CRM (i.e., with the same field values).

Once you have filled in the fields indicating the data you want to extract, click 'Save' to keep this configuration.

When mapping fields between systems, it is essential that the field types match. For example, if you try and route an Eloqua text field to a CRM numeric field, the CRM system will reject the record, and it will stay 'stuck' in your Cloud Connector until you fix the problem.

You should also take care when populating CRM fields that only allow certain values. For example if you have a 'Color' field where your CRM system is set up to allow only Red, Blue and Green to be valid values, sending a different 'Purple' value will cause the record to be rejected. This kind of bad information can be introduced via an import, or via a poorly constructed form. However, these types of issues can also be trapped by a Data Washing Machine, which can correct or eliminate bad data before they are sent to the 4Bridge Cloud Connector ([See Appendix](#)). Make sure the data you send across your integration are the right type for your destination field and system.

Additionally, there may be instances where the fields you want are not listed in the Mapping Editor. This typically happens if you have created those fields recently. To view them, click 'Refresh Fields,' which will update the fields in 4Bridge. Please note it may take up to five minutes for the list to be updated to accurately reflect the existing fields.

Note that when you change data types or delete fields in your CRM or Eloqua systems, you may introduce the same types of errors you would see if you did not set it up properly. When changing your Eloqua or CRM structure or settings, make sure the specifications match in both the integration and the corresponding system. Otherwise, you will be causing a field-mismatch after the fact and integration errors may occur.

5.5 Integration Task Settings

4Bridge Integration Engine requires certain task settings to perform some specific requests. For example, if you have a task such as Create CRM Contacts, you will need a Cloud Connector to move some contacts to your CRM. To add settings to an Integration Task, click the 'Settings' link (Figure 12, Item 3). The following is an example of what you will see:

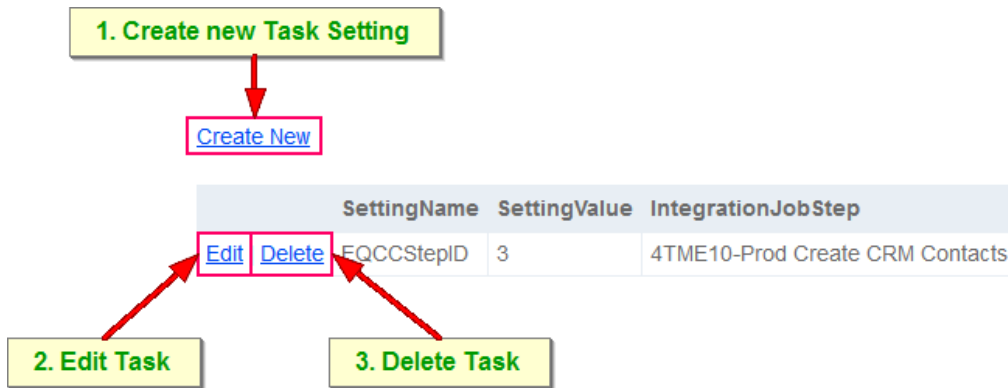
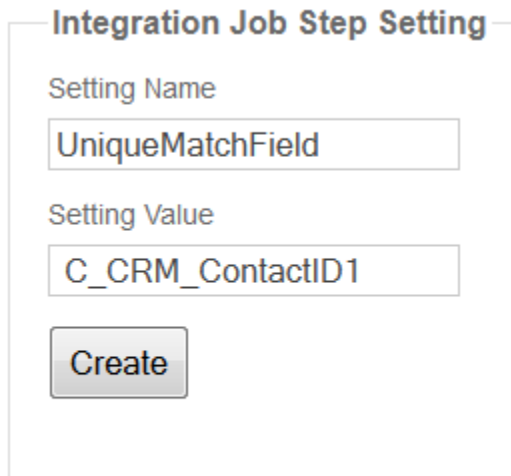


Figure 12.5 Integration Task Settings List

5.5.1 Create Task Setting

If you want to create a custom setting for an Integration Task, click 'Create New' (Figure 12.5, Item 1) to add the setting name and value. For example:



The screenshot shows a form titled "Integration Job Step Setting" with a light blue border. It contains two text input fields and a button. The first field is labeled "Setting Name" and contains the text "UniqueMatchField". The second field is labeled "Setting Value" and contains the text "C_CRM_ContactID1". Below the fields is a grey button with the text "Create".

[Back to List](#)

Figure 12.5.1 Create Task Setting

5.5.2 Edit Task Setting

To edit an existing setting, click 'Edit' (Figure 12.5, Item 2). You will see a form that resembles the one in Figure 12.5.1. Make your modifications and click 'Save.'

5.5.3 Delete Task Setting

To remove a setting from the system, click 'Delete' (Figure 12.5, Item 3). A confirmation message will appear similar to the one below:

Are you sure you want to delete this?

IntegrationJobStepSetting

SettingName
UniqueMatchField
SettingValue
C_CRM_ContactID1
IntegrationJobStep
4TME10-Prod Create CRM Contacts

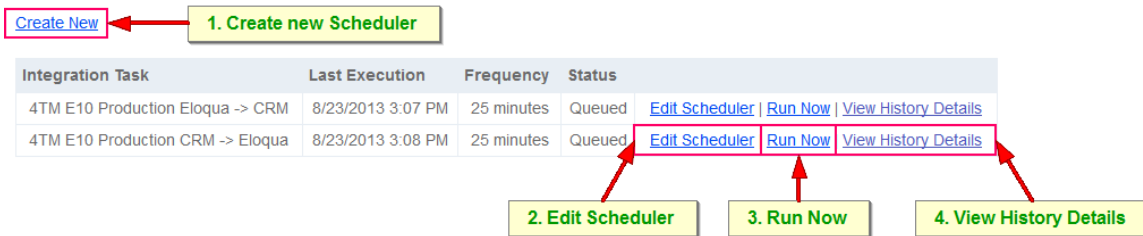
| [Back to List](#)

Figure 12.5.2 Delete Task Setting

6. Scheduler

4Bridge allows you to create 'Job Schedulers' so you can run jobs at pre-determined times. Click 'Scheduler' (Figure 3, Item 3) to bring up a list of current tasks in the system.

Job Scheduler



The screenshot shows a 'Job Scheduler' list with a 'Create New' button and a table of tasks. Callouts are as follows:

- 1. Create new Scheduler:** Points to the 'Create New' button.
- 2. Edit Scheduler:** Points to the 'Edit Scheduler' link in the first row.
- 3. Run Now:** Points to the 'Run Now' link in the first row.
- 4. View History Details:** Points to the 'View History Details' link in the first row.

Integration Task	Last Execution	Frequency	Status	
4TM E10 Production Eloqua -> CRM	8/23/2013 3:07 PM	25 minutes	Queued	Edit Scheduler Run Now View History Details
4TM E10 Production CRM -> Eloqua	8/23/2013 3:08 PM	25 minutes	Queued	Edit Scheduler Run Now View History Details

Figure 13 Scheduler List

To create a new job schedule, click 'Create New' (Figure 13, Item 1). An example of what you will see follows. Fill in the form based on your preferred settings and click 'Save' once you are done.

Job Scheduler

Time of last execution (used to filter records)

Frequency

Status

Integration Job

[Back to List](#)

Figure 13.1 Create Scheduler

Important Notes:

- The 'Frequency' field is measured in minutes. In the previous example, the number 25 means 25 minutes.
- The 'Lock' field is normally set as 'False,' which means 'Queued.' If it is set to 'True,' it means the associated scheduled job is currently running. If the status is 'Not Set,' the Job Scheduler will be disabled until it is manually changed to 'false.'

To edit an existing Job Scheduler, click 'Edit' (Figure 13, Item 2). You will see a form that is similar to the one in Figure 13.1. Make the necessary changes and click 'Save'

If you need to run an existing Scheduler On-Demand, click 'Run Now' (Figure 13, Item 3).

Caution: Be careful to click 'Run Now' once, otherwise you may cause the scheduler to run multiple times, resulting in duplicate records.

To see how many records have been created, updated or deleted on your system, click 'View History Details' (Figure 13, Item 4). A list of previous jobs will appear that you can filter by date as follows:

History

Select a start date Select a Date

1. View Details of this run

Start Time	End Time	Integration Job	Integration Job Status	
8/23/2013 3:34 PM	8/23/2013 3:34 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 3:08 PM	8/23/2013 3:08 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 2:42 PM	8/23/2013 2:42 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 2:16 PM	8/23/2013 2:16 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 1:50 PM	8/23/2013 1:50 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 1:24 PM	8/23/2013 1:24 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 12:58 PM	8/23/2013 12:58 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 12:32 PM	8/23/2013 12:32 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 12:06 PM	8/23/2013 12:06 PM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 11:40 AM	8/23/2013 11:40 AM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 11:14 AM	8/23/2013 11:14 AM	4TM E10 Production CRM -> Eloqua	Success	View Details
8/23/2013 10:48 AM	8/23/2013 10:48 AM	4TM E10 Production CRM -> Eloqua	Success	View Details

Figure 13.2 History Details Scheduler List

To view the details of a specific job, click ‘View Details’ link to the right of that job (Figure 13.2). The following is an example of what you will see:

View History By Integration Step

Date Created	Successful Records	Error Records	Records Output	Records Input	Records Result	Integration Job Step
8/23/2013 3:08 PM	0	0	0	0	0	4TME10-Prod Create Eq Contacts
8/23/2013 3:08 PM	1	0	0	1	0	4TME10-Prod Update Eq Contacts
8/23/2013 3:08 PM	0	0	0	0	0	4TME10-Prod Create Eq Companies
8/23/2013 3:08 PM	1	0	0	1	0	4TME10-Prod Update Eq Companies

Figure 13.3 History Details Scheduler by Integration Task

If there were errors during this run, they will be recorded and accessible via a numeric hyperlink in the ‘Error Records’ column. The following is an example of what you will see when you click the hyperlink:

View error detail

ID	ExtID	EmailAddress	Message
83335	3294	[REDACTED]	Invalid company reference key 76571.
	73277	[REDACTED]	The specified key is invalid.
	48938	[REDACTED]	The specified key is invalid.

Figure 13.4 Error Detail on Task History

7. Most Common Problems

This section describes the errors you may encounter while using 4Bridge Integration Engine, what they mean and how to resolve and avoid them. The four most common reasons for a Job Integration failure are:

7.1 Eloqua or CRM Maintenance

Integrations often cannot occur if one of the systems involved is 'down' for maintenance or an update. When this happens, all queued records will be 'waiting' until the system comes back up, and then transferred via the 4Bridge Job Integration. It will also produce a series of error messages alerting you that the integration cannot be performed. For example:

- Eloqua
 - Eloqua's servers are currently undergoing maintenance. API Access is disabled during this time, please try again later
- NetSuite
 - Error

Typically, you will receive an advance email alerting you to a downtime from your vendor. You can ignore the error messages you receive during this downtime as the system will automatically recover.

7.2 User Expiration

4Bridge requires user/password credentials to connect to a secure system like Eloqua or a CRM. If these credentials are invalid or do not exist, the integration will not work. When this happens, you will receive an email with an error message that looks like this:

- Eloqua
 - Your password is expired
- NetSuite
 - Error

The most common reasons for the integration to fail are changes to or the deletion of credentials (i.e., user/password) or the associated security rights of an administrative user.

Or, it could be the automatic expiry of a system password after a certain time period (e.g., NetSuite).

To avoid this problem, we recommend that:

- Automated user Credentials should never be used by human users;
- Credentials for 4Bridge should be named so they clearly indicate purpose to administrators; and
- Passwords for 4Bridge should be set to never expire.

If you do encounter credential errors, update them to ensure that they work.

7.3 CRM Rejects Data – Required Field

Occasionally, one system will reject incoming data from 4Bridge Integration Engine. If this happens during an integration that has previously worked/been tested, it is usually due to a data structure change in one of the systems, such as a deleted or changed field. If the integration is attempting to read data from, or write data to, that field, it may not work.

This can happen in the CRM system or the Marketing Automation system, resulting in error messages that resemble the following:

- NetSuite
 - Please enter value(s) for: *Product*. The '*Product*' field is required in NetSuite, check the mapping and enter a value to the '*Product*' field in Eloqua

Typically, these messages are caused by an Admin changing the data type of a field. (e.g., from 'text' to 'number'), deleting the field, or creating a dependency (linkage) to a new table.

To prevent this problem from occurring, ensure that all CRM administrators understand the potential of system changes to impact an Integration Job. To resolve errors caused by changes to the CRM, either change the data structure back to its original setup or change 4Bridge and your other system so they are compatible with your new CRM settings.

7.4 CRM Rejects Data – Bad Data

Sometimes the CRM will reject data not because the data structure is wrong, but because the data do not conform to what the database is expecting.

When this happens, every Eloqua contact will have errors in the ‘Last Integration Error’ field. Depending on the CRM you have integrated with 4Bridge Integration Engine, the errors will resemble the following:

- NetSuite:
 - You have entered an Invalid Field Value *531* for the following field: *phone*.
Where ‘*531*’ is the value of the ‘*phone*’ field. This error is coming from NetSuite, and in order to fix the error, you have to check the field mapped to ‘*phone*’ in Eloqua and modify the value so that the next run it will be valid.
 - The field *companyname* contained more than the maximum number (*83*) of characters allowed. Where ‘(*83*)’ is the maximum number of characters for the ‘*companyname*’ field in NetSuite. To fix this, check the field mapped to ‘*companyname*’ in Eloqua, rename the field and make sure it has less than (*83*) characters. The maximum of characters will vary from one field to another.
 - Invalid *salesrep* reference key *96274*. The field ‘*salesrep*’ uses and needs numeric identifiers, for this case, the key (id) *96274* does not match any existing ‘*salesrep*’ in NetSuite. Change the key in Eloqua to match an existing ‘*salesrep*’ in NetSuite.
 - The country and state/province are mismatched, the country is *US* and the state/province is *Virginia*. This seems to be valid, but NetSuite found no match between the country and state, for this case the state should have been *VA*.
 - That record does not exist. 4Bridge is trying to update a record (Contact/Lead/Customer) that might have been deleted in the CRM. If you still want this record to be created in NetSuite, just delete the value in the field ‘NetSuite Contact/Lead/Customer ID’ and put the record again in the first step of the Eloqua (CRM Update) Program.

- A contact record with this name already exists. Every contact record must have a unique name. NetSuite has a validation on the Names depending on the customizations you have implemented in your CRM, change the name and wait for 4Bridge to attempt to move again the record into NetSuite.
- SalesLogix
 - Error List
- SugarCRM
 - Error List
- Leads360
 - Error List

Typically, these errors are caused when:

- An Eloqua user adds a new select list option to a form without adding it to the CRM system.
- An Eloqua user imports contacts, uses a select list, but does not clean the field or process it through a Data Washing Machine.
- A CRM Admin adds a new select list option to the CRM User Interface with no consideration for how it will impact Eloqua.

The solution is to correct the non-conforming data.

You can avoid this error by checking your form setup in, and imports to, Eloqua. Make sure your form select list options exactly match your CRM select list options. Also, when importing, ensure that you either have cleaned any select list fields, or that you will process them through a Data Washing Machine that will clean them prior to integration.

Most data errors caused by your CRM system rejecting data due to incompatibility or incorrect setup can be checked in your Eloqua system. Simply bring up the contact in question and look at the 'Last Integration Error' field. This field contains the error that directly came from your CRM System (API), and depending on the error reporting quality of your CRM system, may quite clearly indicate the cause of the problem, or it could be more general or even cryptic.

4TM CRM Errors					
Contact	Status	Last Update	Last Integration Error	NetSuite Contact ID	NetSuite Customer ID
JohnSmith@test.com	Action in progress or scheduled	9/4/2013 2:58:28 PM	The country and state/province are mismatched, the country is US and the state/province is Kent	12345	67890

Total Records: 860

8. Appendix - Eloqua Integration Specifics

Most 4Bridge Integration Engine setups that connect to Eloqua use 4Bridge Cloud Connectors to send records from Eloqua to the CRM system via 4Bridge. The Cloud Connectors your installation uses will be specified in your Integration Design Document.

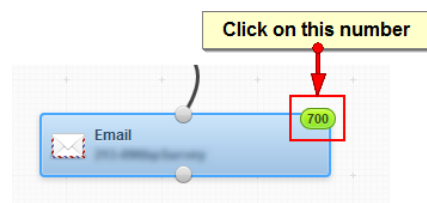
The 4Bridge Cloud Connectors used in your installation will be located either in the Eloqua Campaign Canvas, or in Eloqua Program Builder. Typically, pre-2013 installations tend to use Program Builder, while 2013 and later installations tend to use Campaign Canvas. Even so, there are some exceptions because there are differences between what the two mechanisms can do, and the best approach will be chosen for your integration. In both cases, the blocks that surround the Cloud Connectors are the rules and decisions for the specific integration, which are set according to the business rules.

Sometimes, Eloqua Contacts will get 'stuck' or 'blocked' when your CRM system rejects them, typically because of data or data structure errors. For example, if you try and write 'CFO' to a field that only accepts 'CXO' your CRM system may reject the record.

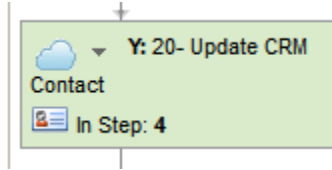
If contacts are 'stuck' you can choose to either:

8.1 Check a contact's error field and fix the problem

To check the error field of an Eloqua contact in Campaign Canvas, click the number as shown in the screenshot below. You will then be able to check the contact and the error field. For the exact name of the error field in your integration, check your design doc, but typically the 4Bridge Integration Engine error field is named 'Last Integration Error.'



In Program Builder, first identify the Cloud Connector step and click on the 'Person' icon.



Then check the integration error field by using a contact view and/or selecting a record as usual in Eloqua.

Note that the errors in the error field come from your CRM system. Some CRM system error messages are quite cryptic and require significant decoding to figure out. Other CRM systems will provide clear error messages such as ‘Error: Trying to write text to the numeric field ‘Revenue.’’

After you have determined the data error in the contact you should:

A: Fix the specific error by going to the problematic field and either blanking it or correcting it; or

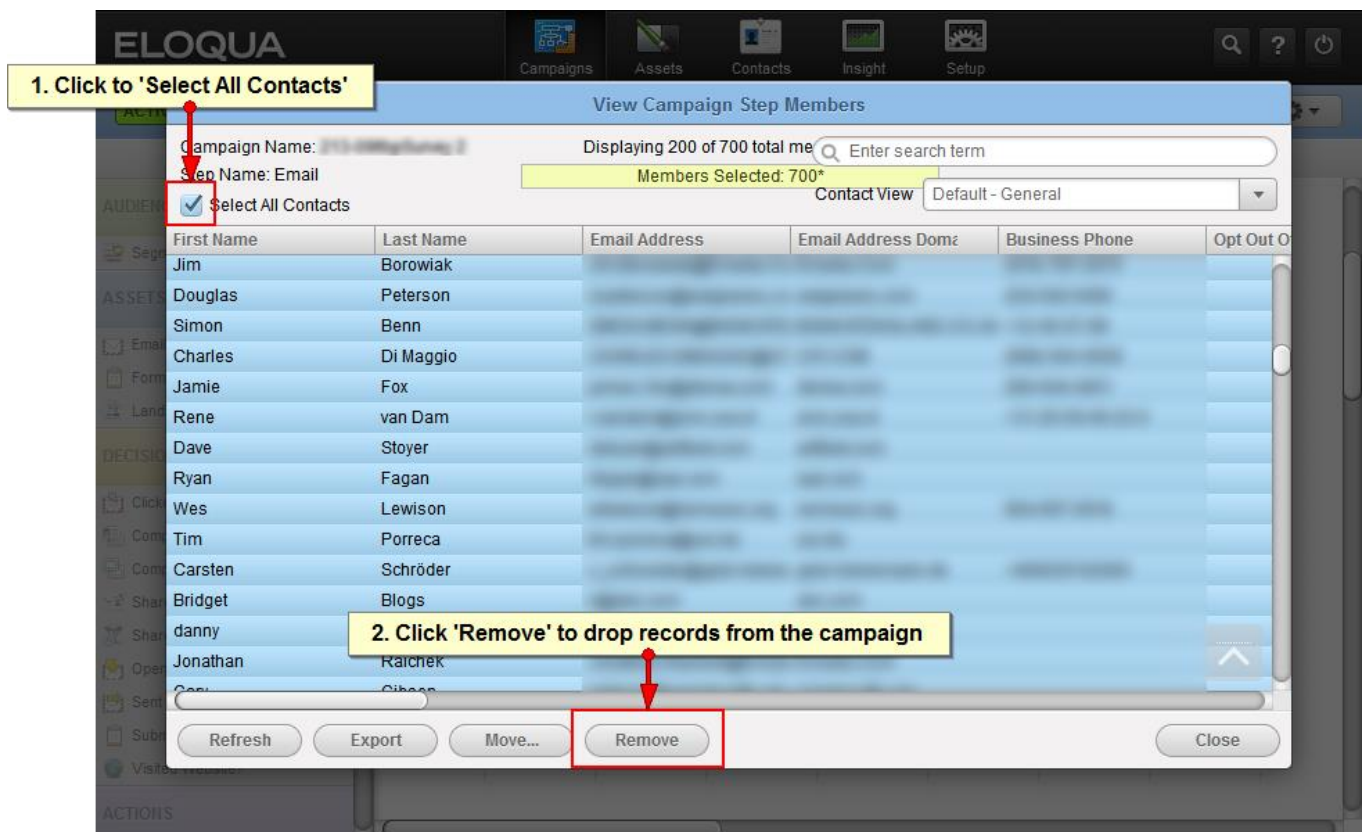
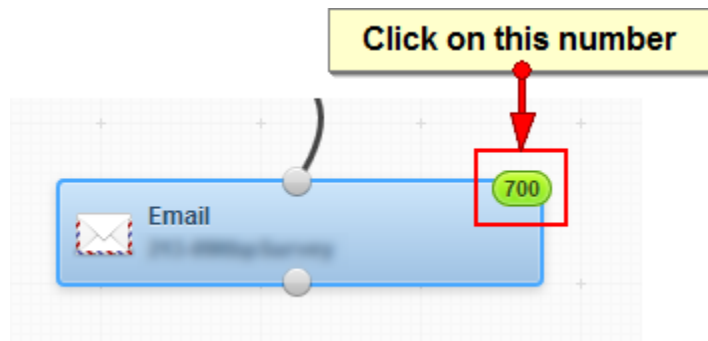
B: Fix the cause of the error so that it does not occur again. For example:

- i. Is there a form that is permitting illegal items to be added?
- ii. Does the person performing the import need to be trained on the process and requirements?
- iii. Does your Data Washing Machine need updating to catch these types of errors?

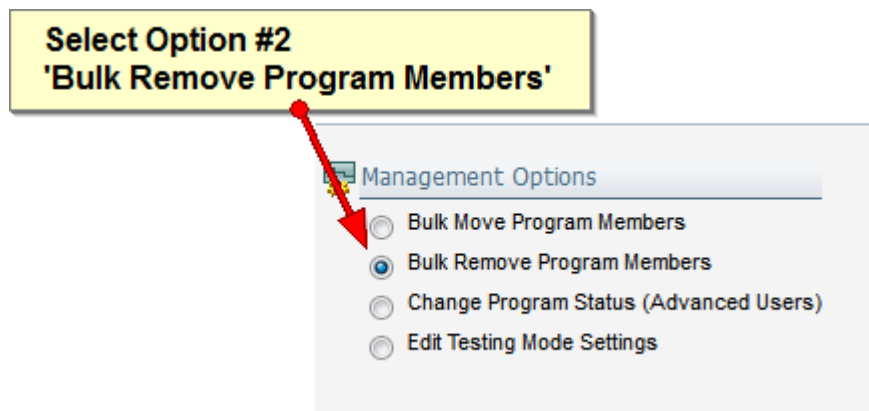
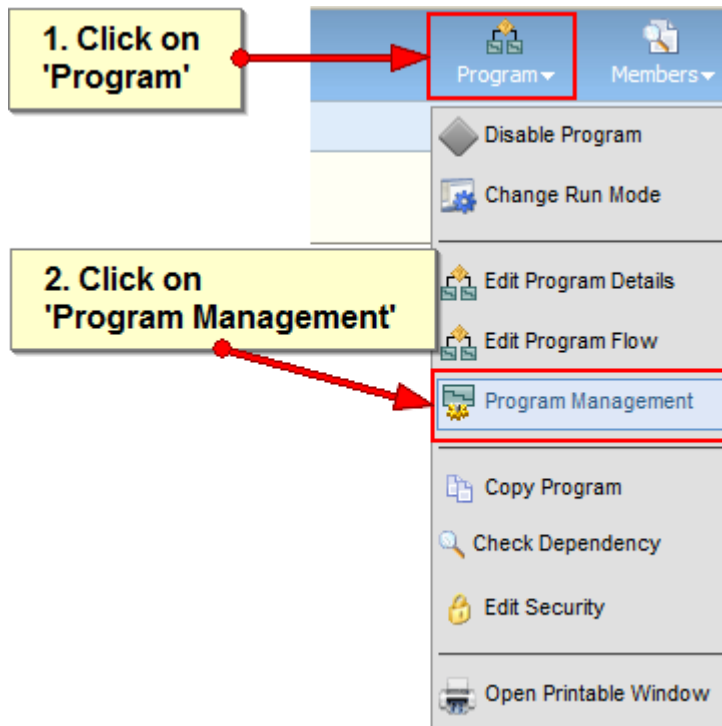
After you have fixed the problem, the contact will flow through the integration automatically, without further effort on your part. This will occur during the next scheduled run, which typically takes place every few minutes. Alternatively, you can log in to 4Bridge to see when the next run is scheduled and run the integration immediately to force immediate processing.

8.2 Delete them from the processing altogether.

To delete contacts that are stuck from going through the integration in Eloqua Campaign Canvas, follow the instructions in the next screenshots:



To delete contacts that are blocked from going through the integration in Eloqua Program Builder:



Bulk Remove Program Members

Select one of these two options, then click on 'Remove' at the bottom

Criteria

Current Step: 00- Start

Member Type: Contacts

Member Status: (none)

1. Contacts in a specific step

Bulk Remove All Program Members

Remove All Program Members from All Steps with Any Status

2. All members from the program

➔ Remove
✖ Cancel

If you remove contacts from Eloqua (Campaign Canvas or Program Builder), those records will not reach the CRM.

However, there is a benefit in that all systems involved will be faster and use fewer resources, because the contacts will not stay in the Cloud Connector attempting to move through the integration indefinitely.

There are different ways that your Eloqua system may be configured to feed records to the Cloud Connector

- Forms may feed the integration program directly;
- Only records with a certain Leads Score (MQL) may be fed to the program; or
- Only records with a specific flag may be loaded in the program.

How your system is configured will be determined by your Design Document (if 4Thought Marketing has recently modified this area), or your internal process documentation.

8.3 Testing Your Integration

The very best way to test your system is by submitting an Eloqua form, just like your website visitors would, or using Eloqua import to bring in a contact via the same processes a marketer should.

However, if you want to test the integration in a more isolated environment, you can enter a contact into the Campaign Canvas or Program Builder, and then add that contact to the first block in your Integration Program. It will then process through until it also passes through the Cloud Connector, then you should see the contact in your CRM system.

Obviously if a flag is set or a lead score is required for your processing, these criteria must be met or set for the test to work.

8.4 Data Washing Machines and Integration

It is possible that your organization might have a Data Washing Machine that cleans new leads, or a Company Matching program that attaches new leads to the appropriate company within your system. If so, that program will be the one that will drop the leads into the integration program, which sends those leads to your CRM system. If this was done at the same time as your integration, you will probably find a notice alerting you to this in your Integration Design document.

If you do not have a Data Washing Machine or Company Matching program in your new leads process, you may wish to insert it. Typically this is done by simply making the last block (i.e., successful and good data) of the Data Washing Machine or Company Matching program send the contact to the first block of the integration program. All forms and imports must send their contacts to that program to properly insert them into the process for the new Data Washing Machine program to work.

End of 4Bridge Manual