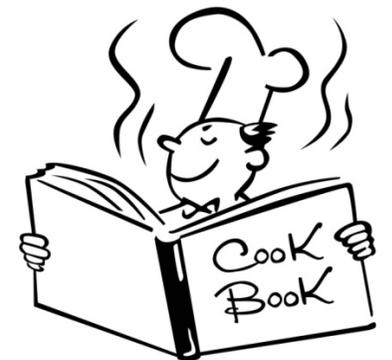


OPENPRISE™

Cookbook Series

# Detect Marketo Emails & Domains That Use Link Scanners / Click Bots



# Introduction

## What is the Problem?

- Link scanners and click bots are network security devices deployed by companies to block links to risky websites. These devices click on every link within an email before the email is delivered to a recipient's email server.
- This pattern is identified by out-of-sequence email activities in Marketo, namely when a Click Email happens before an Open Email or Email Soft Bounce.

## Why Does this Matter?

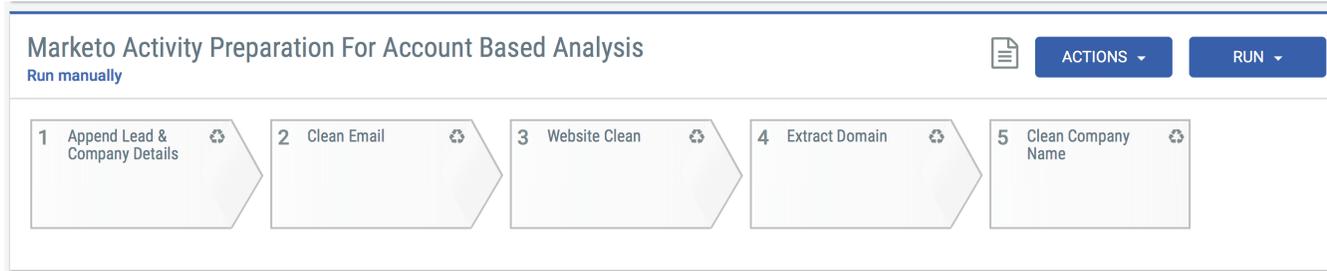
- Inflated lead scoring from email click activities.
- False MQLs result in low quality leads sent to sales.

## How to Solve the Problem?

- Use this cookbook to build a set of pipelines to continuously identify all the emails and domains that exhibit the link scanner behavior.
- Automatically tag the lead records in Marketo that use a scanner.
- Automatically populate this list of leads in Marketo as a static list.
- Adjust scoring and MQL programs for leads that use a scanner.
- Adjust email conversion reports accordingly with a list of emails and domains that use link scanners.

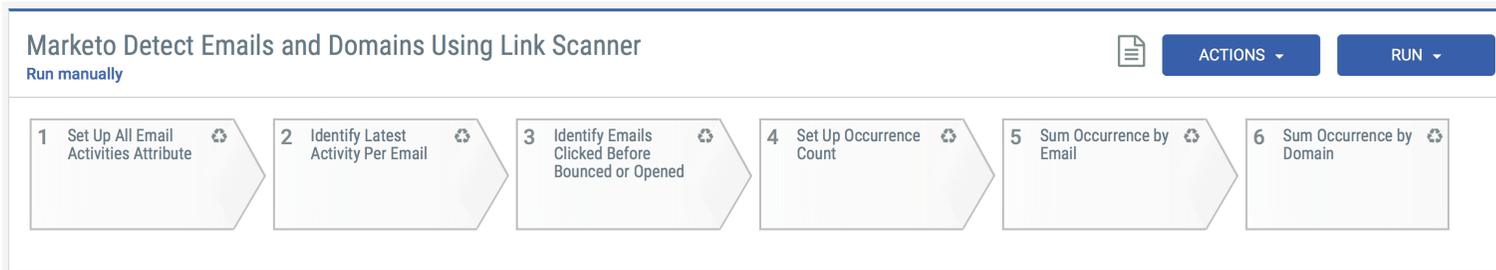
ID	Date/Time (PDT)	Activity Type	Detail
Date: Mar 8, 2018 (7 Items)			
4058575	Mar 8, 2018 3:12 PM	Open Email	Webinar On-Demand: The Austin Marketo User Group Presents: G
4045859	Mar 8, 2018 12:45 ...	Click Email	Webinar On-Demand: The Austin Marketo User Group Presents: G
4045858	Mar 8, 2018 12:45 ...	Click Email	Webinar On-Demand: The Austin Marketo User Group Presents: G
4045857	Mar 8, 2018 12:45 ...	Click Email	Webinar On-Demand: The Austin Marketo User Group Presents: G
4042120	Mar 8, 2018 12:45 ...	Click Email	Webinar On-Demand: The Austin Marketo User Group Presents: G
4042650	Mar 8, 2018 12:45 ...	Email Delivered	Webinar On-Demand: The Austin Marketo User Group Presents: G
4035123	Mar 8, 2018 12:45 ...	Send Email	Webinar On-Demand: The Austin Marketo User Group Presents: G

# Recipe Overview



## Activity Data Preparation Pipeline

- Append Lead ID, Lead Email, Lead Company, and Lead Website to Activity data
- Clean ID, Email, Company Name, and Website data
- Extract Domain from Email and Website



## Detect Link Scanner Pattern Pipeline

- Identify link scanner activity patterns
- Count occurrences by email to help build a list based on minimum occurrence threshold
- Count occurrences by domain to help build a list based on minimum occurrence threshold

# Set Up Marketo Activity Data

## Prerequisites

- A Data Source for your Marketo Lead data
- A Data Source to import your Marketo Activity data
- We recommend importing at least 6 months of data
- These activity types are required:
  - Click Email
  - Email Opened
  - Email Delivered
  - Email Bounce Soft

**MARKETO MARKETING  
ACTIVITIES**



Records  
**103,289**

*Last import: Mar 21, 2018 11:05 AM*

[Auto update](#)

<input type="checkbox"/>	Webhook	Sample Values	Text, single-value (comma is part of text)	Please enter unit
<input type="checkbox"/>	Webhook	Sample Values	Whole number	Please enter unit
<input type="checkbox"/>	Webpage ID	Sample Values	Whole number	Please enter unit
<input type="checkbox"/>	Webpage Name	Sample Values	Text, single-value (comma is part of text)	Please enter unit
<input type="checkbox"/>	Webpage URL	Sample Values	Text, single-value (comma is part of text)	Please enter unit
<input type="checkbox"/>	Winning Values	Sample Values	Text, single-value (comma is part of text)	Please enter unit

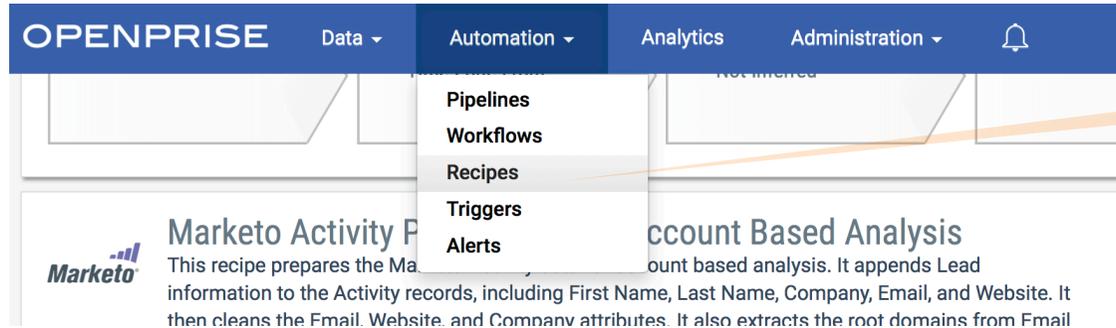
**Starting date**  
12/31/2016 00:00:00

**Activity types to import**

Visit Webpage x Fill Out Form x Click Link x Email Delivered x Email Bounced x Unsubscribe Email x Open Email x Click Email x Email Bounced Soft x Open Sales Email x  
Click Sales Email x Interesting Moment x Sales Email Bounced x Click Shared Link x

[BACK](#) [UPDATE](#)

# Create Activity Preparation Pipeline from Recipe



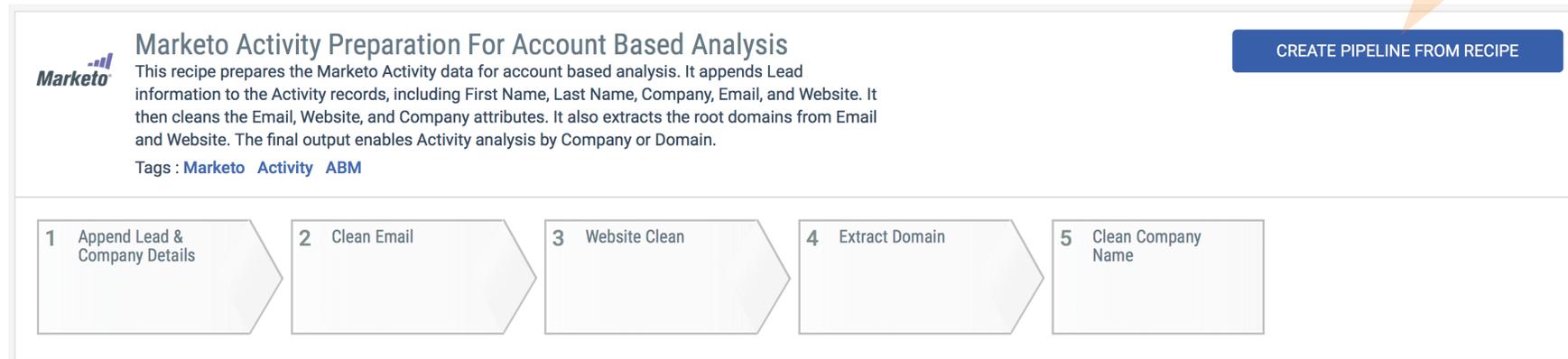
OPENPRISE Data Automation Analytics Administration

- Pipelines
- Workflows
- Recipes
- Triggers
- Alerts

Marketeto Activity Preparation For Account Based Analysis  
This recipe prepares the Marketo Activity data for account based analysis. It appends Lead information to the Activity records, including First Name, Last Name, Company, Email, and Website. It then cleans the Email, Website, and Company attributes. It also extracts the root domains from Email and Website. The final output enables Activity analysis by Company or Domain.

Go to Recipes page

Create a Pipeline using this Recipe. Input is your Marketo Activity Data Source

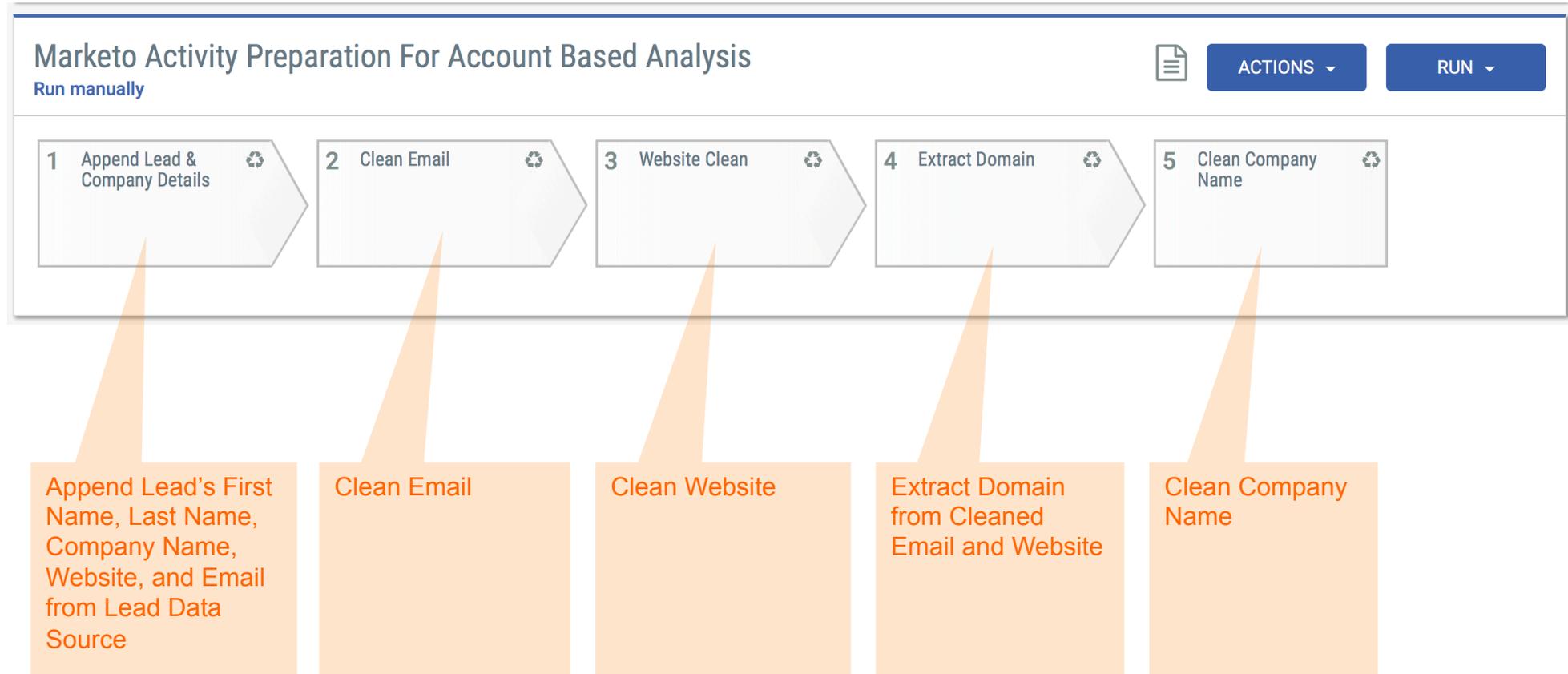


Marketeto Activity Preparation For Account Based Analysis  
This recipe prepares the Marketo Activity data for account based analysis. It appends Lead information to the Activity records, including First Name, Last Name, Company, Email, and Website. It then cleans the Email, Website, and Company attributes. It also extracts the root domains from Email and Website. The final output enables Activity analysis by Company or Domain.  
Tags : Marketo Activity ABM

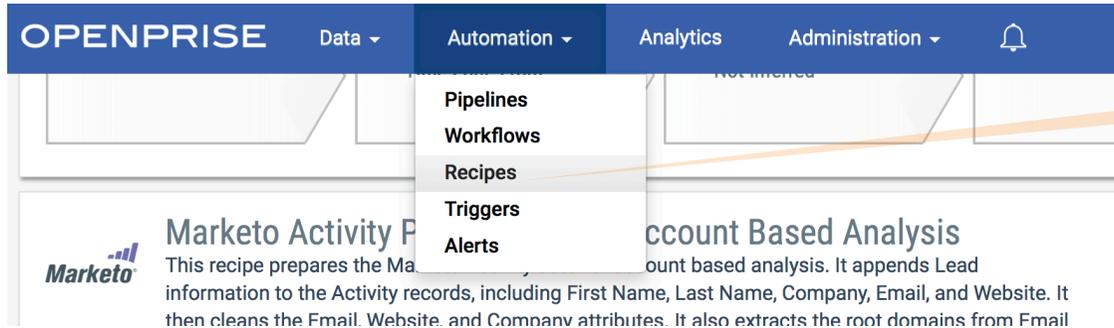
CREATE PIPELINE FROM RECIPE

- 1 Append Lead & Company Details
- 2 Clean Email
- 3 Website Clean
- 4 Extract Domain
- 5 Clean Company Name

# Activity Preparation Pipeline Details



# Create Link Scanner Pipeline From Recipe



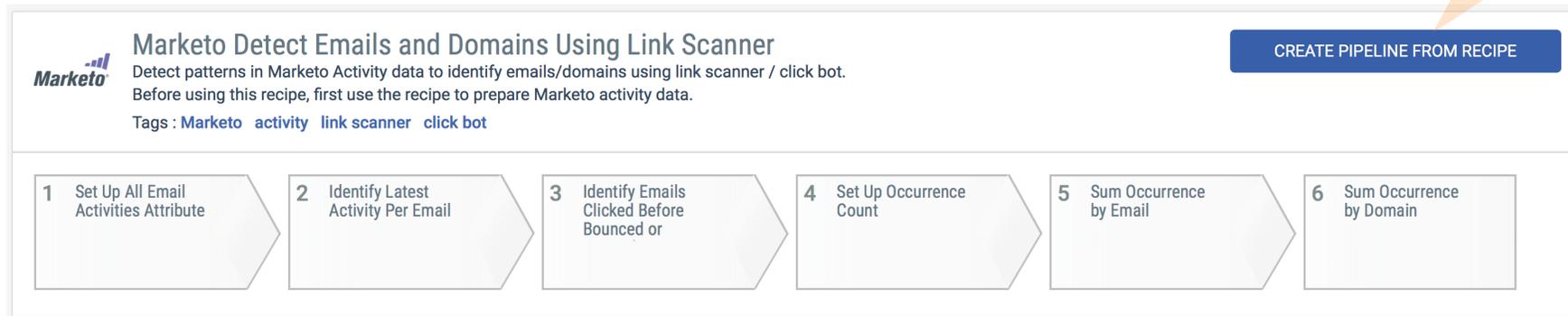
OPENPRISE Data Automation Analytics Administration

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**Marketo Activity Preparation**  
This recipe prepares the Marketo activity data for account based analysis. It appends Lead information to the Activity records, including First Name, Last Name, Company, Email, and Website. It then cleans the Email, Website, and Company attributes. It also extracts the root domains from Email

Go to Recipes page

Create a Pipeline using this Recipe. Input to this pipeline is the last output of the Activity Data Preparation for Account Based Analysis Pipeline.

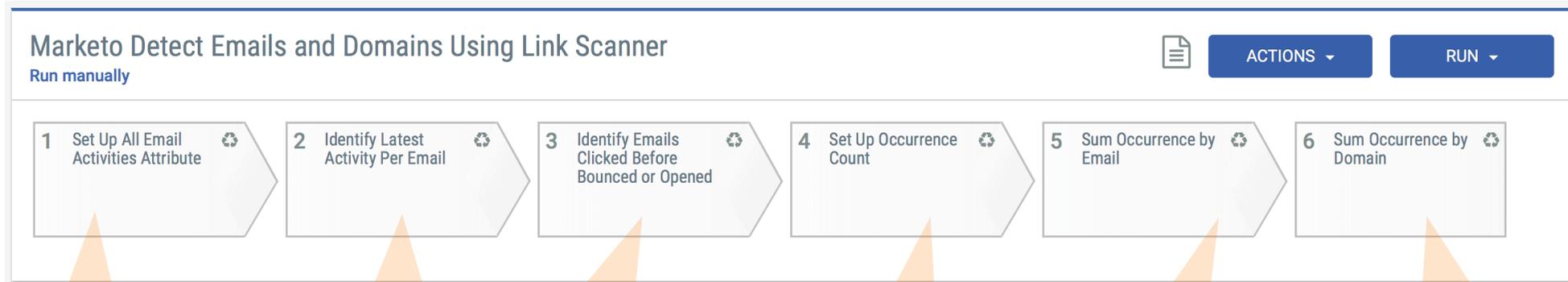


**Marketo Detect Emails and Domains Using Link Scanner**  
Detect patterns in Marketo Activity data to identify emails/domains using link scanner / click bot.  
Before using this recipe, first use the recipe to prepare Marketo activity data.  
Tags : Marketo activity link scanner click bot

CREATE PIPELINE FROM RECIPE

- 1 Set Up All Email Activities Attribute
- 2 Identify Latest Activity Per Email
- 3 Identify Emails Clicked Before Bounced or
- 4 Set Up Occurrence Count
- 5 Sum Occurrence by Email
- 6 Sum Occurrence by Domain

# Link Scanner Pipeline Details



Create a new attribute, "OP All Email Activities," to hold all the email activities from one email to one lead.

Use the deduplication rule to group all the activities from one email for one lead and mark the latest activity from the group as the surviving record.

Isolate surviving records where the group of activities includes "Click Email," but the latest activity in the group is either "Email Opened" or "Email Bounced Soft."

Create a new attribute to count how many times this pattern has been detected.

Sum the occurrence count by email / lead.

Further sum the occurrence count by domain. Only sum records where the email-level occurrence count is above a threshold (default is 3).

This threshold indicates how many occurrences are needed to consider this a repeatable pattern. This threshold is used to remove one-off glitches in the data.

# View List of Emails/Domains that Exhibit this Pattern

Rule 5 Output → List of emails (set filter to Duplicate = Surviving Merged)

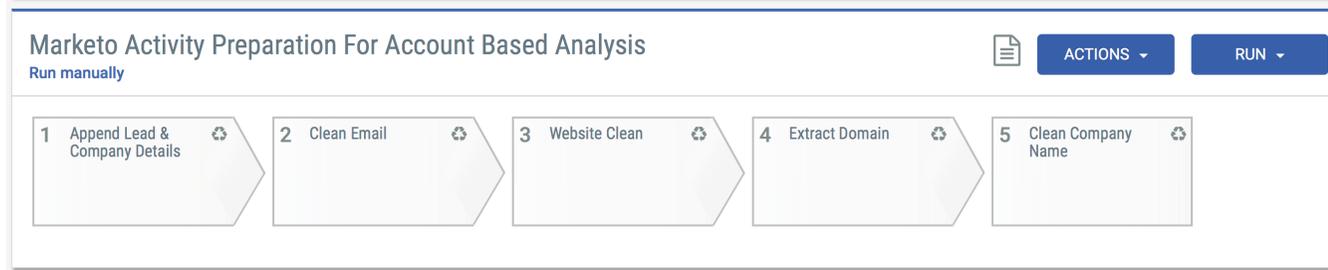
Rule 6 Output → List of unique domains (set filter to Duplicate = Surviving Merged + OP Link Scanner Detection Count > Threshold)

TABLE ROWS ▾		TABLE COLUMNS				
		<input type="checkbox"/> OP Link Scanner Detected <input type="checkbox"/> OP Link Scanner Patterns Detected <input type="checkbox"/> OP Lead Email Clean <input type="checkbox"/> OP Lead Domain <input type="checkbox"/> OP Link Scanner Detection Count <input type="checkbox"/>			<input type="button" value="SAVE TABLE COLUMNS"/>	
	A	B	C	D	E	
	OP Link Scanner Detected <input type="checkbox"/>	OP Link Scanner Patterns Detected <input type="checkbox"/>	OP Lead Email Clean <input type="checkbox"/>	OP Lead Domain <input type="checkbox"/>	OP Link Scanner Detection Count ▾ <input type="text" value="0.12"/>	
1	Yes	Click Before Open or Soft Bounce	omnitrans.org	omnitrans.org	18	
2	Yes	Click Before Open or Soft Bounce		hfma.org	10	
3	Yes	Click Before Open or Soft Bounce	@cblproperties.com	cblproperties.com	9	
4	Yes	Click Before Open or Soft Bounce	metrocommercial.com	metrocommercial.com	9	
5	Yes	Click Before Open or Soft Bounce	framerica.com	framerica.com	9	
6	Yes	Click Before Open or Soft Bounce	@cblproperties.com	cblproperties.com	9	
7	Yes	Click Before Open or Soft Bounce	compaid.com	compaid.com	9	
8	Yes	Click Before Open or Soft Bounce	cblproperties.com	cblproperties.com	9	
9	Yes	Click Before Open or Soft Bounce	readingbody.com	readingbody.com	9	
10	Yes	Click Before Open or Soft Bounce	startek.com	startek.com	9	

« 1 2 3 4 5 ... »    Display: 10 ▾

# Recipe Review

## Activity Data Preparation Pipeline



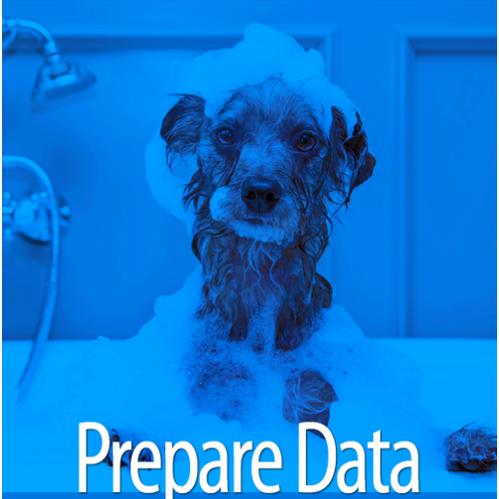
## Detect Link Scanner Pattern Pipeline



## What to Try Next

- Automatically update Marketo lead records with a custom data field, “Link Scanner In Use”
- Automatically populate a static list in Marketo with the list of leads using link scanner
- Adjust scoring and MQL programs in Marketo to compensate for the link scanner

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