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# Outbound (CX Contact) CX Contact Help

Advanced Input - Preprocessing

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  - 11.1 # **Use regular expression to include additional devices**



- Administrator

Learn how to use various advanced input techniques to modify data when creating data mapping schemas.

### Related documentation:

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Periodically, to achieve your goals when creating data mapping schemas for input files, data must be modified when it is loaded. The technique used to alter data during import is called **preprocessing**.

This section explains the tips and techniques used to achieve some of the more common preprocessing requests.

When using an input specification file, the pre-process lines in the input spec must appear before everything else that is grabbed.

Also, you can use several preprocessing statements in one input spec. The statements must be added in the order you want them to run. Preprocessing can be added to Data Mapping Schema using the Advance tab (see the image below) when creating or editing a Data Mapping Schema.

### Important

One preprocessing statement can create a result that may be unintentionally manipulated by a second preprocessing statement. For this reason, you must check the results when using preprocessing.

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All fields marked with an asterisk (\*) are required

**\* Name**

mapping-schema-6ef11d87

Description

For Import

For Export

General **\* Advanced**

Preprocessing

**\* Find:** Find

Replace with: Replace with

Flags: Flags

Cancel Save

## Replace Abbreviations With Full Words For Proper TTS

The following statement should be used when searching for occurrences of case insensitive data, and it can significantly reduce the number of required preprocessing statements.

For example, the statement below will find and replace instances of dr, Dr, DR, and dR.

Find	Replace
<code>^([\^,]*,[\^,]*,[\^,]*,[\^,]*["*\^",]*)((?) dr)(.*)\$</code>	<code>\$1 Drive,\$3</code>

### # Pull out Dr from address and replace with Drive

Find	Replace
<code>^([\^,]*,[\^,]*,[\^,]*,[\^,]*,[\^,]*["*\^",]*) (Dr)(.*)\$</code>	<code>\$1 Drive\$3</code>

---



Find	Replace
^(.*) PL (.*)\$	\$1 \$2Place
^(.*) CT (.*)\$	\$1 \$2Court
^(.*) WY (.*)\$	\$1 \$2Way
^(.*) CIR (.*)\$	\$1 \$2Circle
^(.*) NE (.*)\$	\$1 \$2Northeast
^(.*) NW (.*)\$	\$1 \$2Northwest
^(.*) SE (.*)\$	\$1 \$2Southeast
^(.*) SW (.*)\$	\$1 \$2Southwest

In the following example, specific abbreviations with specific amounts of space around them are replaced with the a specific amount of space with the addition of words at the end of the record. For example, if you insert an address in a field, you will pull the old street address, skip a bunch of characters that would normally bring you directly to the end of the record, and finally grab the amount of characters that you added at the end. For instance, note that the word replacements in the above example are all 9 characters long.

**# Remove ND only if it is preceded with a number. As a result, SECOND does not become SECO**

Find	Replace
^(.*)([0-9]+)ND (.*)\$	\$1\$2 \$3
^(.*)([0-9]+)Nd (.*)\$	\$1\$2 \$3
^(.*)([0-9]+)nd (.*)\$	\$1\$2 \$3

**# Remove TH only if it is preceded with a number. As a result, NORTH does not become NOR**

In the following table, TH or ND are removed from an address so that 19th street is replaced with 19 street.

Find	Replace
^(.*)([0-9]+)TH (.*)\$	\$1\$2 \$3
^(.*)([0-9])Th (.*)\$	\$1\$2 \$3
^(.*)([0-9]+)th (.*)\$	\$1\$2 \$3

## Replace Text With Something Else

Use pre process to format any part of the data file before the rest of the input spec looks at the data file.

In the first example, an attempt is made to verify if either one of the telephone fields only includes









Find	Replace
^["]*(["^"],)*(["^"],)*["]*.*\$	\$1, , ,

For example:

```
12345,JAY DEE,7818972639
12346,FRANK DEE,7818971234,7818972354
12348,SUSIE DEE,7818975142,7818971092,7818976523
```

Using preprocessing, the solution adds extra fields to all records. In the preprocess statement above, there are 10 spaces between each comma. The length of a record row is not significant as long as the rightmost field the system is trying to grab can be grabbed (For example, in this case the cell phone number in the 5th field).

Therefore, by adding empty fields to all the rows, all possible data situations are satisfied. If there is only 1 phone number, extra fields are added to allow the Work and Cell grabs to work as expected. If there are only have 2 phone numbers, the extra fields are added to allow the Cell grab to work as expected. When all 3 numbers are available there is no significance to appending blank fields at the end of the row since they are already referenced.

## Change Inconsistent Dates To Consistent Dates

The following is an example of when a client sends dates with a single digit month, single digit day, or both (refer to the fourth field of example below). In this example, that data must be changed so that it can be used with the makeDate function.

```
Travis Nelson,7818972639,53214,1/22/1979,$325.45 ,M,50000001
David Durski,7818972640,53211,12/3/1975,$148.45 ,M,T0050000002
Monika Mitchell,7818972641,85954,3/4/1980,$123.45 ,M,500000003
```

When importing into an Other field, the date format for the date format should be MMddyyyy. In this example, the preprocess removes the slashes from the date. Three preprocess lines are required to handle the possible month or day single digit scenarios. The result is that the dates are all the same and do not include slashes. The plus character (+) is added to the preprocess statement to enable slashes within the statement.

Find	Replace
^([\^,]*,[\^,]*,[\^,]*)(\d)/(\d{2})	(.*)\$+\$10\$2\$3\$4+
^([\^,]*,[\^,]*,[\^,]*)(\d{2})/(\d)	(.*)\$+\$1\$20\$3\$4+
^([\^,]*,[\^,]*,[\^,]*)(\d)/(\d)	(.*)\$+\$10\$20\$3\$4+

## Replace More Than One Instance Of Something

In the following example, the client wanted to remove the asterisks from their data and replace it with spaces. Each record could contain one or two stars depending on how many names were in the record. Example data:

```
Joe A*Schmoe Lucy K*Schmoe 6031231234 12345
```

Before performing the replacement, you must remember that preprocess matches and replaces the first instance it finds in a record. If the record contains another instance in the same record, the same preprocess statement will not replace the second instance. To overcome this, repeat the preprocess statement as many times as possible for the data you are trying to replace. The following was performed for the above example. The first statement replaces the first instance and the second statement finds the second instance.

Find	Replace
<code>^(.*)\*(.*)\$</code>	<code>\$1 \$2</code>
<code>^(.*)\*(.*)\$</code>	<code>\$1 \$2</code>

## Secondary Name in Fixed Position Data

In the following example, there is no delimiter, commas in the name field, and the second name fields are predominately empty. The second name field is 40 bytes long and since the system needs to skip 62 bytes, a pipe must be seeded at byte 103 to use as a reference point later on.

**# Seed a pipe at byte 103 in order to grab the secondary name (other2)**

Find	Replace
<code>^(.{102})(.*)\$</code>	<code>\$1 \$2</code>

## Remove Commas From Business Names

Some data includes commas in business names. Typically, the technique is used to remove the commas, but occasionally the data must be preprocessed. The following is an example of removing the commas using preprocessing. In this example, the field in question is the 3rd field. Anytime commas are embedded in a field, double quotes are entered around the field. In this example, the 3 lines will remove instances of 3 commas, 2 commas, or 1 comma respectively in that field. Since ampersands have been entered in the business names and it is important to keep them, the ampersands are included as part of the character classes for the match (word characters, white space characters, and ampersands).

Find	Replace
<code>^([\^,]*,[\^,]*)"([ws&amp;]+),([ws&amp;]+),([ws&amp;]+),([ws&amp;]+)"(\$1)\$2\$3\$4\$5\$6</code>	
<code>^([\^,]*,[\^,]*)"([ws&amp;]+),([ws&amp;]+),([ws&amp;]+)"(.*)\$</code>	<code>\$1\$2\$3\$4\$5</code>
<code>^([\^,]*,[\^,]*)"([ws&amp;]+),([ws&amp;]+)"(.*)\$</code>	<code>\$1\$2\$3\$4</code>

## Remove Leading Zeros in a Currency Field

To remove leading zeros in a fixed position field you will need to replace them with spaces. The first

statement replaces the first zero with a space, the second statement detects the space and then a zero and replaces the zero with a space, and so on.

For example:  
 device other1 clientid  
 781897252000020134 1  
 781897252151781258 2  
 781897252200000134 3

The following solution turns 00000134 to 1.34, or 51781258 to 517812.58, or 00000004 to 0.04.

Find	Replace
<code>^(\d{10})[0]{1}(.*)\$</code>	<code>\$1 \$2</code>
<code>^(\d{10}\s{1})[0]{1}(.*)\$</code>	<code>\$1 \$2</code>
<code>^(\d{10}\s{2})[0]{1}(.*)\$</code>	<code>\$1 \$2</code>
<code>^(\d{10}\s{3})[0]{1}(.*)\$</code>	<code>\$1 \$2</code>
<code>^(\d{10}\s{4})[0]{1}(.*)\$</code>	<code>\$1 \$2</code>

## Add Static Values to Variable Length Records in One Field

In this scenario, the client must add a static value to the end of all records, based on a specific flag. For example purposes, refer to the **Add some fields after an entire record** section above.

When static values are added to variable length records in one field the record appears as follows (for example, Test Camp is added at the end of all records with a colon delimiter ahead of it):  
 TEST,20408,TEST2:Test Camp

Using a unique delimiter with this static value for all records, enables you to locate specific information within the record.

This technique can only be used if the secondary delimiter is not used anywhere else in the original data file.

In the example below, the second field and the added campaign value are merged into a single field.

Find	Replace
<code>^[^,]*,([^\^]*),[^\^]*:(.*)\$</code>	<code>\$1:\$2</code>

## Use Regular Expression to Map Additional Devices

You can use regular expression (RegEx) in your data mapping schema when it includes importing devices greater than 1 to 10. CX Contact uses this functionality to extend the supported maximum of 10 devices.

For example, because there are only 10 supported device fields in the mapping schema, device11



