

SAP Crystal Solutions  
SAP Crystal Reports and SAP Crystal Server

# Step by Step guide: Create a Publication With SAP Crystal Reports 2016 and SAP Crystal Server 2016





## CREATE AN SAP CRYSTAL SERVER PUBLICATION

Crystal Server publications permit one or more reports to be scheduled for distribution to multiple recipients, with each recipient receiving a version of the report customized specifically for them (this capability is sometimes referred to as report bursting). Publications offer almost limitless possibilities, from automating month-end invoicing, to customized marketing documents or newsletters, to eCommerce processing, and on and on.

There is a basic three-step process for publishing customized documents from SAP Crystal Server 2016:

### 1. Create one or more source documents

A source document is the Crystal Report that exports the material (invoice, form letter, and so forth) that the recipient will actually see.

### 2. Create a dynamic recipient document

A dynamic recipient document is a Crystal Report that “drives” the source document, typically returning one record for each recipient that is to receive the source document.

### 3. Create and schedule the publication object

Added to a folder like a report object, a publication object ties the source and dynamic recipient documents together. The publication object can then be scheduled just like a traditional report (including run frequency, export formats, destinations, and so forth).

## FINAL RESULT

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Invoice Source  
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1725 North 54th Street  
Fort Collins, CO 80183  
(800) 555-1234

### CUSTOMER INVOICE

Crank Components  
8001 Oxford Street  
Champaign, IL 61870

Invoice Date: 4/29/2019  
Invoice #: 0022-20190429

| Order #      | Order Date            | Quantity | Product Name              | Unit Price | Extended Price |
|--------------|-----------------------|----------|---------------------------|------------|----------------|
| Order #:1402 | Order Date: 3/5/2019  | 1        | Rapel                     | 479.85     | \$479.85       |
|              |                       | 2        | Guardian XL "U" Lock      | 17.91      | \$35.82        |
| Order #:1408 | Order Date: 3/10/2019 | 2        | Rapel                     | 479.85     | \$959.70       |
| Order #:1458 | Order Date: 3/29/2019 | 2        | Nicros                    | 329.85     | \$659.70       |
| Order #:1468 | Order Date: 3/30/2019 | 2        | Rapel                     | 479.85     | \$959.70       |
|              |                       | 1        | Vesper Comfort ATB Saddle | 23.50      | \$23.50        |

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## CREATING ONE OR MORE SOURCE DOCUMENTS

What your audience ultimately receives will come from one or more source documents (publications can actually include multiple source documents if, for example, you want to include a form letter and an invoice in one customized email). Create these with traditional SAP Crystal Reports design techniques, such as those used to design a custom invoice.

Note: General steps for connecting SAP Crystal Reports to your data source, and how to create a sample invoice, are available in SAP Crystal white papers. The sample invoice described in this white paper will serve as the source document referenced here.

### Parameterizing the Source Document

A publication “connects” the source and dynamic recipient reports together so that each recipient is ensured that the document they receive is customized just for them. SAP Crystal Server permits the dynamic recipient report to customize the source report either via the source report’s record selection formula, or via one or more values passed into source report parameters from the dynamic recipient report. This example will make use of a report parameter added to the source report that prompts for a unique customer ID.

With the existing invoice report open in SAP Crystal Reports:

1. RIGHT-CLICK the Parameters category of the Field Explorer. Choose New from the context menu.
2. Create a parameter named Customer ID that prompts for a numeric value.

| Name:       | Type:  | List of Values: |
|-------------|--------|-----------------|
| Customer ID | Number | Static          |

| Value Field | Description Field |
|-------------|-------------------|
| (None)      | (None)            |

| Value                  | Description |
|------------------------|-------------|
| Click here to add item |             |
|                        |             |
|                        |             |

| Option                       | Setting            |
|------------------------------|--------------------|
| Show on (Viewer) Panel       | Editable           |
| Prompt Text                  | Enter Customer ID: |
| Prompt With Description Only | False              |
| Optional Prompt              | False              |
| Default Value                |                    |

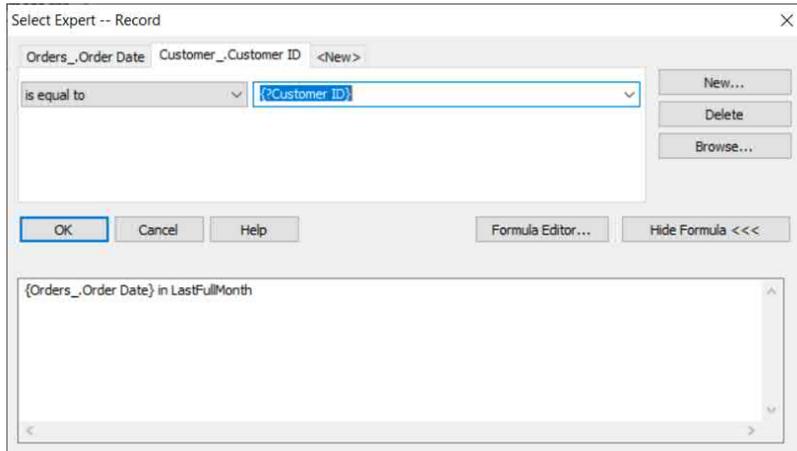
3. Click the Select Expert – Record



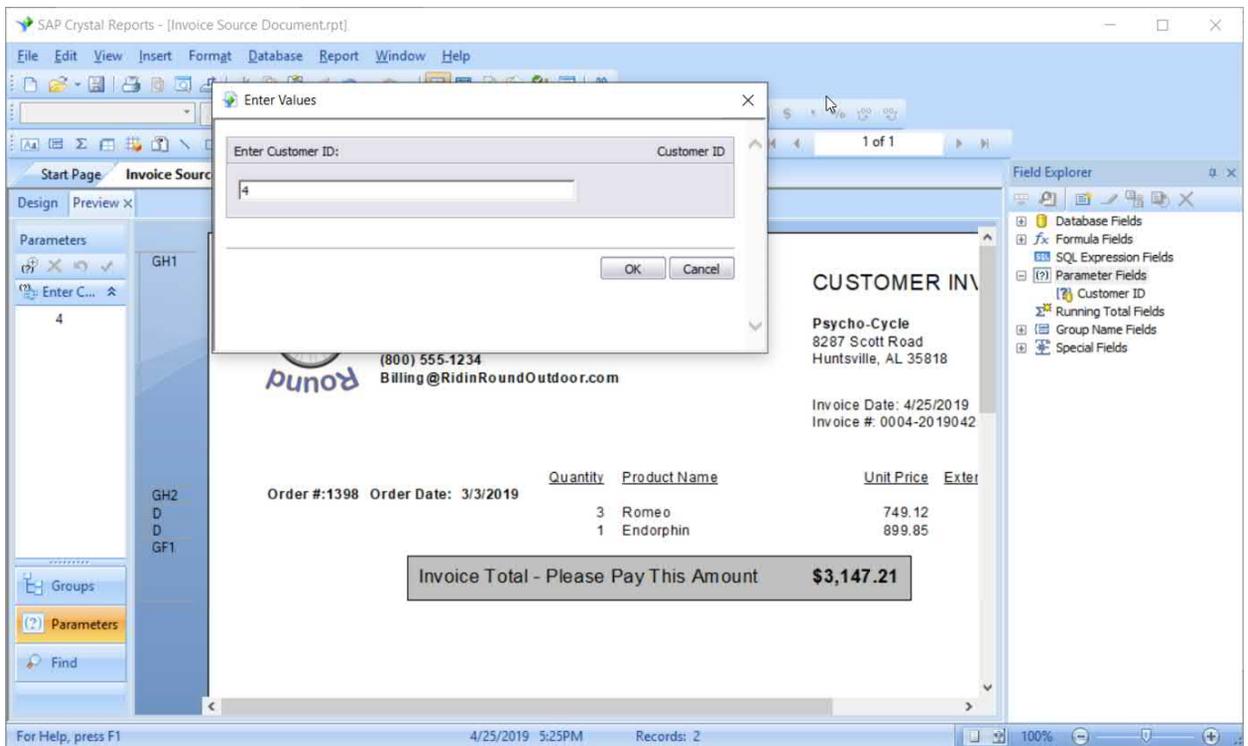
- toolbar button.



- Click the <New> tab to add a select criterion (make sure any existing record selection, such as one that selects orders from the previous full month, is retained).
- Choose the Customer ID field. Assign an is equal to selection operator. Choose the just-created {Customer ID} parameter from the drop-down list.



When the report is refreshed, you'll be prompted to supply a numeric customer ID. Supplying a value for a customer that placed orders within the previous full month will result in an invoice especially for that customer.



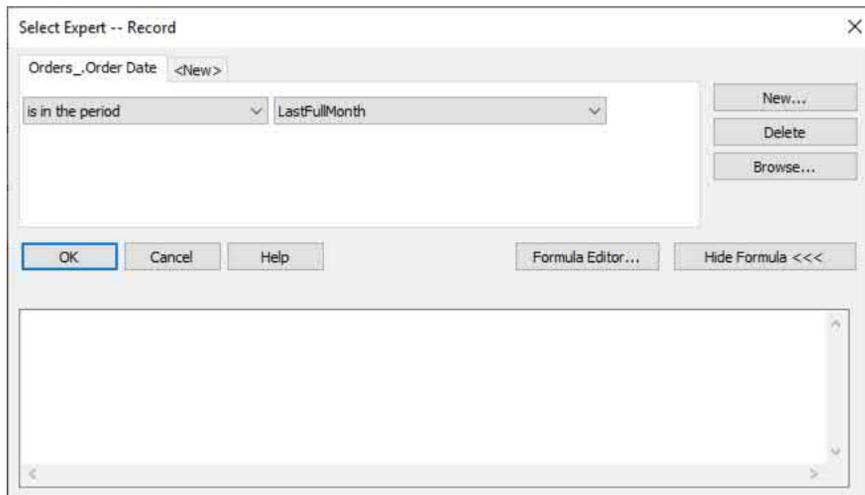
## CREATING A DYNAMIC RECIPIENT DOCUMENT

Determining who receives the source document is the responsibility of the Dynamic Recipient Document. A publication reads each record in the dynamic recipient document and generates a unique copy of the source document based on data in the record. The destination of the recipient (typically, an email address) is also provided by the dynamic recipient document.

Note: SAP Crystal Server allows publication distribution entirely within the SAP Crystal Server environment using individual SAP Crystal Server user accounts as destinations. The remainder of this paper, however, utilizes a dynamic recipient document to distribute to recipients outside of the SAP Crystal Server environment via external email addresses.

Create a new Crystal Report to act as the dynamic recipient document. In general, you'll probably choose to use the same data source you used to create the source document(s). You may, however, not need to use the same complete data set, as the only fields required in the dynamic recipient document are a "unique identifier" (such as a customer number), a full name designator (such as customer name), and the unique contact field (such as email address).

1. Add any necessary record selection to ensure that only desired records are included in the dynamic recipient document. For example, if you only want to include customers who placed orders within the past full month, you might make the following choice in the Select Expert - Record:



2. Add a minimum of three fields to the report details section:
  - a. A unique value for the recipient (for example, Customer ID)
  - b. A descriptive name for the recipient (for example, Customer Name)
  - c. The contact method for the recipient (typically, email address)
3. Because the contents of the dynamic recipient document will not be visible to the recipient, there's no need to perform any special formatting.



4. Preview the report to ensure that only desired recipients are returned (note that duplicate records are acceptable, as a publication uses the unique value field to ensure that only one document is sent to each recipient).

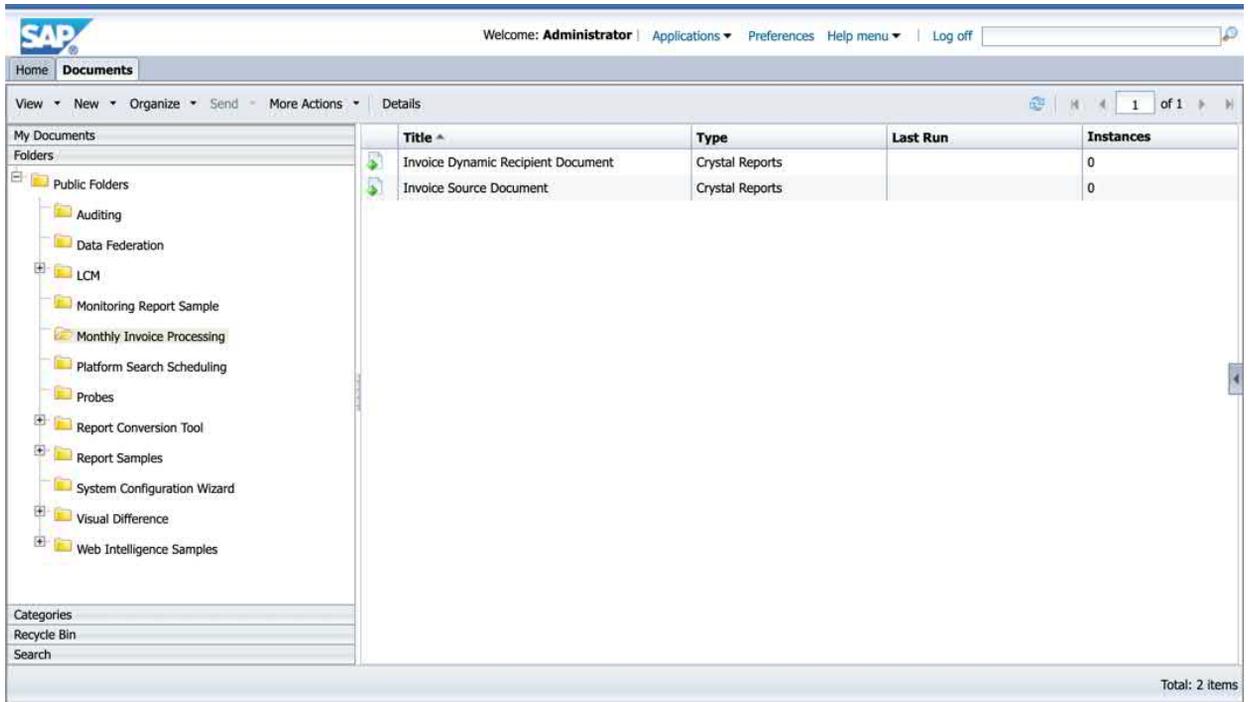
| Customer ID | Customer Name                | E-mail                     |
|-------------|------------------------------|----------------------------|
| 52.00       | Bikes, Bikes, and More Bikes | Pierson@lifecycle.com      |
| 52.00       | Bikes, Bikes, and More Bikes | Pierson@lifecycle.com      |
| 53.00       | Rough Terrain                | Trent@westerly.com         |
| 53.00       | Rough Terrain                | Trent@westerly.com         |
| 55.00       | Tandem Cycle                 | Bell@tomsbikes.com         |
| 55.00       | Tandem Cycle                 | Bell@tomsbikes.com         |
| 55.00       | Tandem Cycle                 | Bell@tomsbikes.com         |
| 56.00       | On The Edge Cyclery          | McDougall@mks.com          |
| 56.00       | On The Edge Cyclery          | McDougall@mks.com          |
| 57.00       | Tek Bikes                    | Kawa@wheel.com             |
| 58.00       | Making Tracks                | Forbes@greatoutdoors.com   |
| 58.00       | Making Tracks                | Forbes@greatoutdoors.com   |
| 58.00       | Making Tracks                | Forbes@greatoutdoors.com   |
| 59.00       | The Biker's Path             | Marshall@bbs.com           |
| 60.00       | Bikes for Tykes              | Elkins@picadilly cycle.com |
| 60.00       | Bikes for Tykes              | Elkins@picadilly cycle.com |
| 60.00       | Bikes for Tykes              | Elkins@picadilly cycle.com |
| 61.00       | Benny - The Spokes Person    | Jones@lifecycle.com        |
| 61.00       | Benny - The Spokes Person    | Jones@lifecycle.com        |
| 62.00       | Bike Shop from Mars          | MacCloud@hitdirt.com       |
| 62.00       | Bike Shop from Mars          | MacCloud@hitdirt.com       |
| 64.00       | SAB Mountain                 | Main@sourceone.com         |
| 64.00       | SAB Mountain                 | Main@sourceone.com         |



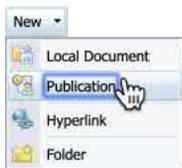
## CREATING AND DISTRIBUTING THE PUBLICATION

Once reports have been designed in SAP Crystal Reports, reports may be added to SAP Crystal Server and used in a publication object.

1. Use standard procedures to add the reports to SAP Crystal Server (either Save to Enterprise Folders in Crystal Reports or Add Local Document in Crystal Server's BI Launchpad or CMC).



2. Open the folder you wish to contain the publication object (source or dynamic recipient documents may be in a different folder). Select New – Publication from the toolbar.

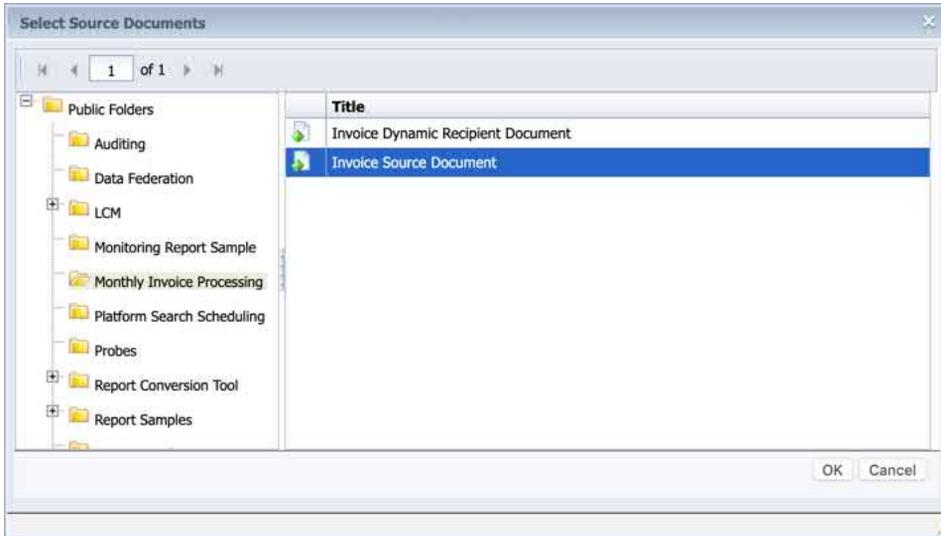


3. In the General Properties screen, specify a meaningful name for the publication. Optionally, provide a description or keywords.

4. Click Source Documents in the left navigation bar. Click the **Add** button.



5. Navigate to the appropriate folder and select the desired source document.

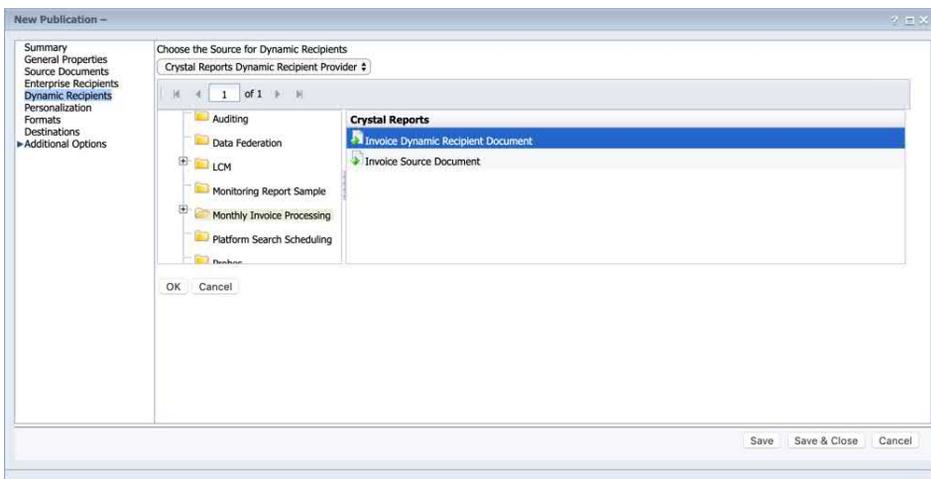


6. If you so desire, you may click **Add** additional times to add more than one source document. Each source document will be customized and distributed to the recipient.

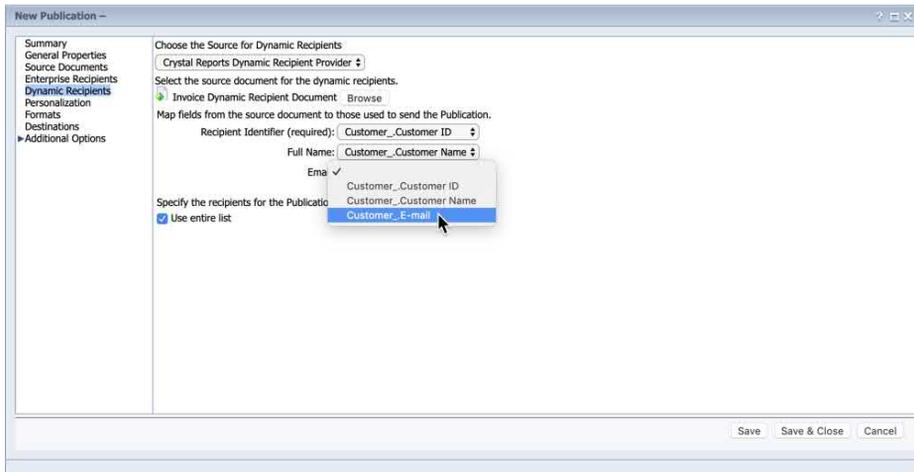
7. Once source documents have been supplied, the navigation bar expands with additional options. Because this publication will be sent to dynamic recipients via email, click Dynamic Recipients.

8. In the Choose the Source for Dynamic Recipients dropdown, select Crystal Reports Dynamic Recipient Provider.

9. Navigate to the appropriate folder and select the desired dynamic recipient document.



10. SAP Crystal Server will scan the dynamic recipient document for available data fields. Once this scan is complete, three drop-down lists will appear where you may select the unique Recipient Identifier, full name, and email address fields. Make the appropriate matches in the corresponding drop-down list.



11. Click Personalization in the navigation bar. This screen permits matching fields from the dynamic recipient document to the source document to customize the source document for each recipient.

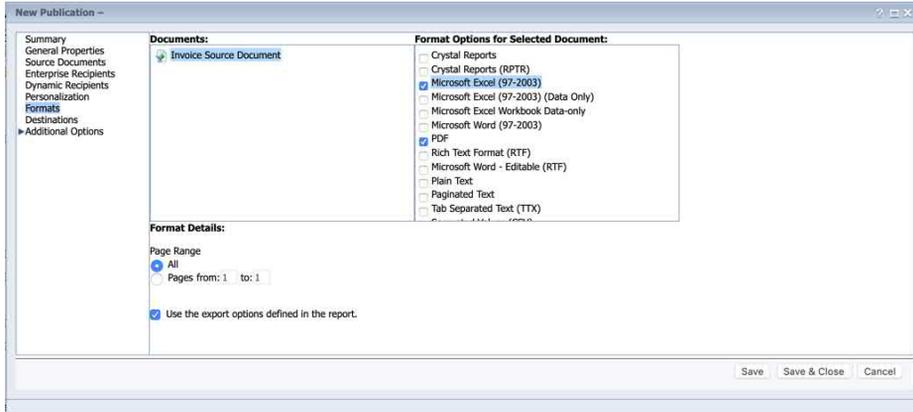
12. In this case, a parameter was created in the source document to limit the invoice to a single customer number. To pass the corresponding customer number from the dynamic recipient document to the source document, select the desired matching field (Customer ID) in the Dynamic Recipient Mapping drop-down list.



13. If you have added more than one parameter to the source document for additional customization, continue to map corresponding fields between the documents.



14. Click Formats in the navigation bar. Each source document (if there is more than one) will appear with a selection of export formats that you may convert the document to. As publications feature the ability to attach multiple occurrences of the same document to an email in different formats, you may select more than one format for each source document.



15. Click Destinations in the navigation bar. Available SAP Crystal Server destinations will appear. As publications permit multiple destinations to be used for a single publication, you may select more than one destination.

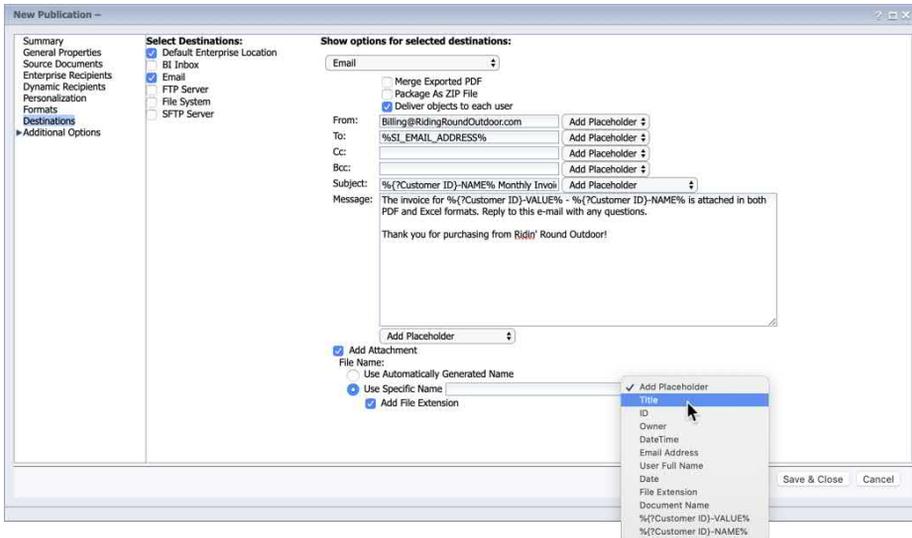
Note: If you include multiple source documents in a publication, you may compress them into a single ZIP file, or merge multiple PDF attachments into a single combined PDF document, with the corresponding check boxes.

- Merge Exported PDF
- Package As ZIP File
- Deliver objects to each user

16. Once you have selected desired destinations, customize each destination by choosing it from the Show options for selected destinations drop-down list. In the case of an Email destination, specify standard email information such as the from address, subject, and email message.

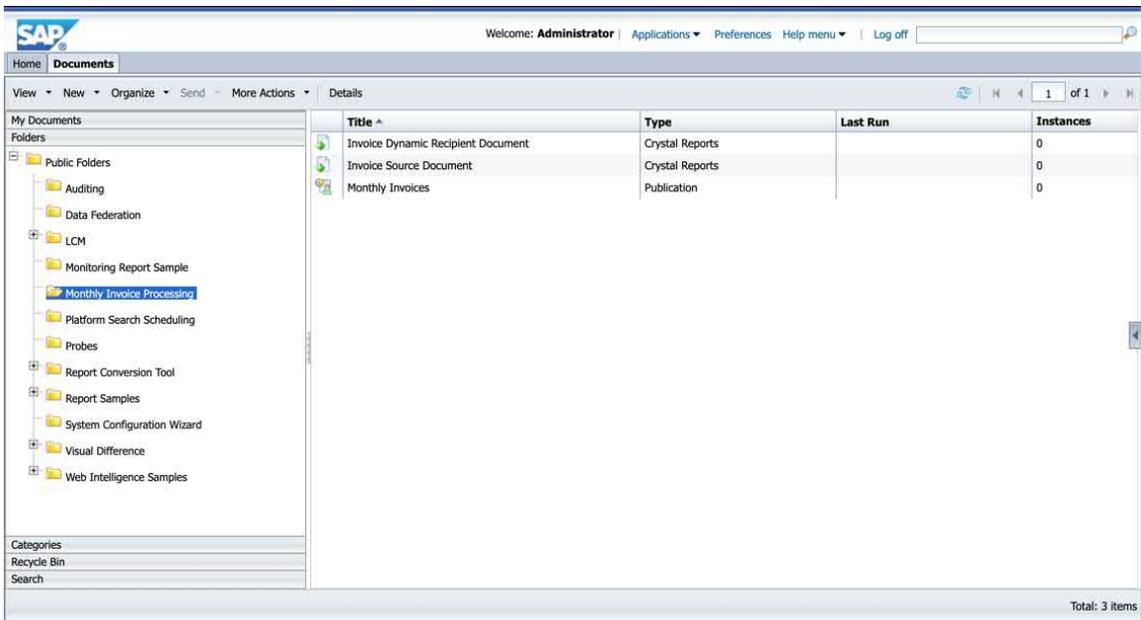


17. You may insert custom fields from SAP Crystal Server, as well as the dynamic recipient document, by choosing options from Add Placeholder drop-down lists next to each email item.



18. Additional optional customizations may be made by expanding Additional Options in the navigation bar.

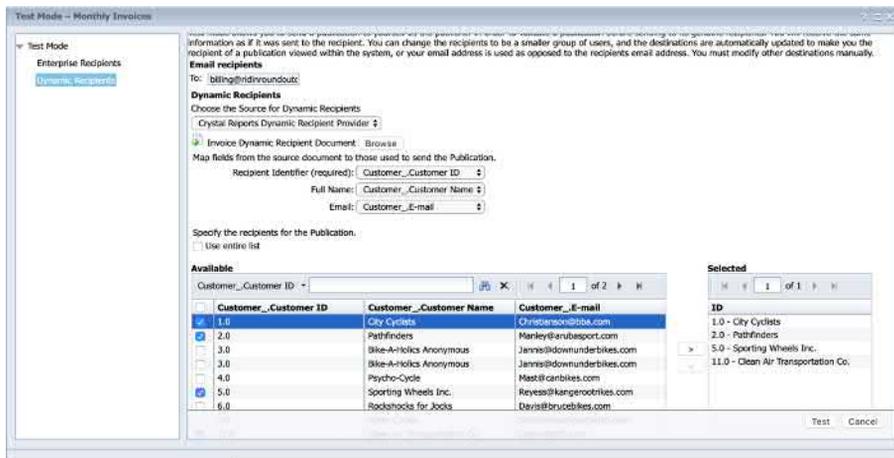
19. Click **Save & Close** to save options and add the publication to the SAP Crystal Server folder.



## TESTING THE PUBLICATION

Before you schedule a publication for distribution to your desired audience, you'll want to test the publication to ensure that the publication is properly matching, addressing, and customizing documents.

1. RIGHT-CLICK the desired publication. Select Test Mode from the context menu.
2. Select Dynamic Recipients in the navigation bar. Add your own email address to receive the series of test emails.
3. Dynamic recipient document field mappings will appear as they were specified when the publication was created. If you desire to change them for the test, you may do so.
4. If you leave Use entire list checked, all recipients from the dynamic recipient document will be processed and sent to your email address. If this may encompass a large number of recipients, you may prefer to uncheck this option and select a sample set of recipients to reduce the number of test emails you receive.



5. When ready, click **Test**. The publication will be scheduled for an immediate "once only" run. The History List will appear showing the running instance.
6. Once the instance finishes running, you will receive incoming test emails identical to those your recipients will receive when the publication is actually scheduled. Check the emails to ensure they appear properly customized.

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**Ridin' Round Outdoor Sports**  
1725 North 54th Street  
Fort Collins, CO 80513  
(800) 555-1234

### CUSTOMER INVOICE

**Crank Components**  
801 Oxford Street  
Champaign, IL 61870

Invoice Date: 4/29/2019  
Invoice #: 0022-20190429

| Order #      | Order Date            | Quantity | Product Name              | Unit Price | Extended Price |
|--------------|-----------------------|----------|---------------------------|------------|----------------|
| Order #:1402 | Order Date: 3/5/2019  | 1        | Rapel                     | 479.85     | \$479.85       |
|              |                       | 2        | Guardian XL "U" Lock      | 17.91      | \$35.82        |
| Order #:1408 | Order Date: 3/10/2019 | 2        | Rapel                     | 479.85     | \$959.70       |
| Order #:1458 | Order Date: 3/29/2019 | 2        | Niros                     | 329.85     | \$659.70       |
| Order #:1468 | Order Date: 3/30/2019 | 2        | Rapel                     | 479.85     | \$959.70       |
|              |                       | 1        | Vesper Comfort ATB Saddle | 23.50      | \$23.50        |

Invoice Total - Please Pay This Amount: **\$3,118.27**



## SCHEDULING THE PUBLICATION

Scheduling a publication is essentially identical to scheduling a regular report in SAP Crystal Server.

1. RIGHT-CLICK on the desired publication and select Schedule from the context menu.
2. Make desired choices from various options in the navigation bar, such as publication recurrence.

Schedule - Monthly Invoices

Instance title: Monthly Invoices

**Recurrence**

Run object: Nth Day of Month  
Object will run on the Nth day of each month.

Day(N) = 1

Start Date/Time: 02:00 AM 4/29/2019

End Date/Time: 02:00 AM 4/29/2029

Schedule Cancel

3. Options for Dynamic Recipients, Formats, and Destinations will retain values that were specified when the publication was created. If you desire to change any of these options for this instance only, make changes before clicking **Schedule**.

History - Monthly Invoices

| Instance Time        | Title            | Status    | Created By    | Type        | Subscription   |
|----------------------|------------------|-----------|---------------|-------------|----------------|
| Apr 29, 2019 2:30 PM | Monthly Invoices | Recurring | Administrator | Publication | Not Subscribed |

Total: 1 items



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