

# Broadcasting in SFG

## Step By Step Process

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### Author Details

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# Overview

Sterling File Gateway is an application for transferring files between partners using different protocols, file naming conventions, and file formats. Use Sterling File Gateway for movement of large and high-volume file transfers, with end-to-end visibility of file movement in a process-oriented and highly-scalable framework that alleviates file transfer challenges, such as protocol and file brokering, automation, and data security.

Sterling File Gateway supports integration with Sterling Integrator protocol adapters and mailboxing, Sterling Control Center, Connect:Direct and Connect:Enterprise Unix server products. Sterling File Gateway, which is delivered atop the Sterling Integrator platform with a unique application URL, provides single sign on access to the Sterling Integrator admin console through menu selection.

Broadcast / publish type message patterns are quite common. Many customers publish the financial information and they generate information using an opinion or article on some company or topic and they have a set of customers have bought access to such information and their job is to send the article to all those who have subscribed to it. This causes a broadcast like scenario.

Other common scenarios happen in various retail / manufacturing scenarios where a company wants to send a certain job out for "bid". The job is broadcast to many providers and the originator waits for some set of providers to get back to them and they choose one and then move forward. The most common of these is to "tender" a load to trucking companies and have the trucking company respond to the tender offer with a price they would charge to the movement of goods the tender describes.

Messages can be shared with multiple consumers using this feature of broadcasting in SFG. This document will help in simplifying the steps required to achieve this.

- Implementation Steps
- Usage Details

## Implementation Steps

1. Create **Partner groups** in Sterling File Gateway that will contain all **consumers** who should receive the file when broadcast is done. Note these partner groups. In this case it's - ConBroadCastGroup1 and ConBroadCastGroup2. The related Consumer partners in this group are CONS1, CONS2 and CONS3, CONS4 respectively as shown below:

Groups Partners

**Manage Groups**  
Select a group to view its partners.

Sterling File Gateway Groups ^

- All Partners
- ConBroadCastGroup1
- ConBroadCastGroup2
- FileGatewayDemoGroup
- new\_comm\_part
- ProdBroadCastGroup

Partners that belong to the Selected Group ^

CONS1  
CONS2

+ Create   ✖ Delete   ↻ Refresh   Add Partners...

Groups Partners

**Manage Groups**  
Select a group to view its partners.

Sterling File Gateway Groups ^

- All Partners
- ConBroadCastGroup1
- ConBroadCastGroup2
- FileGatewayDemoGroup
- new\_comm\_part
- ProdBroadCastGroup

Partners that belong to the Selected Group ^

CONS3  
CONS4

+ Create   ✖ Delete   ↻ Refresh   Add Partners...

## 2. Broadcast Routing Channel Template

Create a **dynamic routing channel template** with the following configurations:

**2a.** Go to Routes > Templates. Then click on Create. In this case, we have created a template called - "DynamicBroadcastingFromFact". Since we have to create a dynamic template, select Dynamic in Type tab for "Template Type" as shown in the following screenshot.

There are two ways to Broadcast messages in SFG:

- A message can be broadcast to all members of an SFG Partner Group, and the group can be identified by setting the 'ConsumerBroadcastGroup' fact.
- A message can be broadcast to a set of consumers identified dynamically by a business process.

In this test, we have selected "Facts in producer file structure" for "What will determine the consumer?"


as follows:

**Template Name:** DynamicBroadcastingFromFact

Type	Special Characters	Groups	Provisioning Facts	Producer	Consumer
<b>Template Type</b> Select the template type to indicate how consumers are identified.					
<input type="radio"/> Static - consumer is selected when channel created					
<input checked="" type="radio"/> Dynamic - consumer is determined at time of routing					
<b>What will determine the consumer?</b>					
<input checked="" type="radio"/> Facts in producer file structure. - Specify "ConsumerName", "ConsumerCode" or "ConsumerBroadcastGroup" in the producer file structure					
<input type="radio"/> Business Process					

2b. Select your preferences for special character handling. In this case we have selected None.

**Template Name:** DynamicBroadcastingFromFact

Type	Special Characters	Groups	Provisioning Facts	Producer	Consumer
 <b>Special Characters</b> Select how special characters in the producer filename should be handled					
<input checked="" type="radio"/> None					
<input type="radio"/> Substitute characters individually					
<input type="radio"/> Replace characters then omit consecutive replacements					
<input type="radio"/> Remove characters					
<input type="radio"/> Remove Microsoft(R) Windows invalid characters / \ = * ? " < >   ; %					
<input type="radio"/> Remove UNIX(R) invalid characters / ; \ ` ! # \$ & *   ; ' " ? < >					
<input type="radio"/> Remove all characters except alphanumeric dash and period					

2c. Select the respective Producer and Consumer Groups. In this case we are using a Producer Partner Group called - "ProdBroadCastGroup".

**Template Name:** DynamicBroadcastingFromFact

The screenshot shows a configuration window with tabs: Type, Special Characters, Groups, Provisioning Facts, Producer, and Consumer. The 'Groups' tab is active. Below the tabs, there is a header 'Groups' with a sub-header 'Identify groups eligible to use this template'. There are two columns: 'Producer Groups' and 'Consumer Groups'. Under 'Producer Groups', the text 'ProdBroadCastGroup' is visible. Under 'Consumer Groups', the text 'ConBroadCastGroup2' and 'ConBroadCastGroup1' is visible.

2d. Please note that the fact **ConsumerBroadcastGroup** does not have to be set as a provisioning fact here. it can also be set as a producer file structure file name pattern. If the ConsumerBroadcastGroup is set by the file name pattern in the producer file structure, the producer specifies the name of the File Gateway Partner Group in the name of the file they upload.

**Template Name:** DynamicBroadcastingFromFact

The screenshot shows a configuration window with tabs: Type, Special Characters, Groups, Provisioning Facts, Producer, and Consumer. The 'Provisioning Facts' tab is active. Below the tabs, there is a header 'Provisioning Facts (optional)' with a sub-header 'Declare Provisioning facts here. The user will be asked to provide values for these facts at the time of creating a routing channel.' Below this is a table with columns 'Fact Name', 'Display Label', and 'Description'. The table is empty and contains the text 'No items to show.'

2e. In the Producer Tab, select the Pattern for Producer Mailbox Path according to your preference. As explained in the previous step, we can set "ConsumerBroadcastGroup,myFileName" in the file name pattern group fact name as follows in the Producer File Structure Window. We can have the producer file structure as follows so that we populate two facts from the original file name as this will allow the files sent to consumers to have a dynamic name. Under this approach, producers would send files with names following the format - "ConsumerGroupName\_RealFileName". Please note that we will be setting the delivery channel to use the new 'myFileName' fact to name the file sent to consumers.

**Template Name:** DynamicBroadcastingFromFact

**Producer Mailbox and Files**  
Describe the pattern for producer mailbox and the structure of files placed in the producer mailbox

**Pattern for Producer Mailbox Path :**

**Producer File Structure Description**  
Text

**Producer File Structure**

Producer File Type :  
Text

**File name pattern as regular expression :**

File name pattern group fact names, comma delimited :

Save Cancel

2f. In the Consumer tab, you have to add the Delivery Channel Description and set the Pattern for Consumer Mailbox Path according to your preference. Also set the Consumer File Structure with the file name format you prefer. In this case we have set this as - "\${myFileName}" for our testing. We can set the File name to be dynamic as follows to use the 'myFileName' fact collected in the Producer File Structure

**Template Name:** DynamicBroadcastingFromFact

**Consumer Delivery Channels**  
Delivery channels describe the pattern for consumer mailbox and the structure of files placed in the consumer mailbox

**Delivery Channel Description**  
Text

**Consumer File Structure**

## View/Edit Delivery Channel


### Pattern for Consumer Mailbox Path :

/\${ConsumerName}/Inbox

- If checked, mailboxes matching this pattern may be created on demand
- If checked, the delivery channel will attempt to deliver over consumer listening protocol if available

### Consumer File Structures

Create or edit your file structures here

 Edit

Save

Cancel

## Consumer File Structure

Consumer File Type :  
Text

### File name format :

\${myFileName}

Save

Cancel

## 2g. Complete screen shot of the Routing Channel Template

### Routing Channel Template:

**Template Name:** DynamicBroadcastingFromFact

**Consumer Identification:** Dynamic

**Special Character Handling:** No special character handling is specified

#### Provisioning Fact List:

##### Group Permissions:

**Producer Group:** ProdBroadCastGroup

**Consumer Group:** ConBroadCastGroup2

**Consumer Group:** ConBroadCastGroup1

**Producer Mailbox Path:** /\${ProducerName}

##### Producer File Structures:

Producer File Structure: Text{{(.+)\_(.+)}}

Layer: Text

**File name pattern as regular expression:** (.+)\_(.+)

**File name pattern group fact names, comma delimited:** ConsumerBroadcastGroup,myFileName

##### Delivery Channel Templates:

###### Delivery Channel Template:

**Consumer Mailbox Path:** /\${ConsumerName}/Inbox

**Consumer Mailbox:** Not created at runtime

**Consumer Protocol:** protocol or mailbox

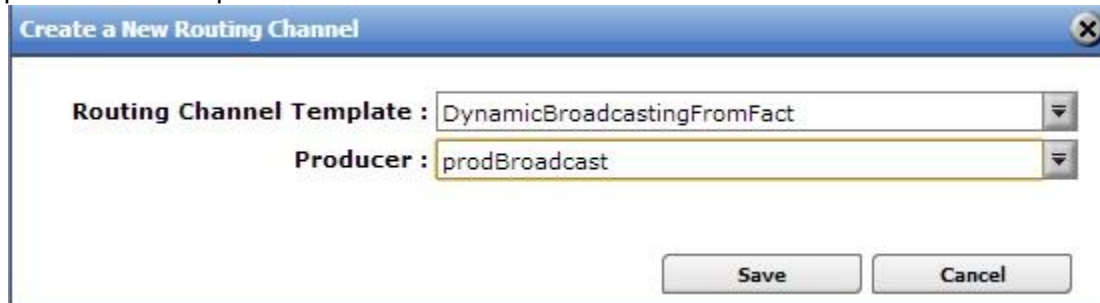
Consumer File Structure: Text{\${myFileName}}

Layer: Text

**File name format:** \${myFileName}

3. As mentioned in step 2c, the Producer Partner Group we are using is ProdBroadCastGroup. The producer from this group used for this test is prodBroadcast. So, the related mailbox for this producer is /prodBroadcast.

4. Create a Routing Channel with this RCT - DynamicBroadcastingFromFact and having partner prodBroadcast as producer which will send the file.



The screenshot shows a dialog box titled "Create a New Routing Channel". It contains two dropdown menus. The first dropdown, labeled "Routing Channel Template", has "DynamicBroadcastingFromFact" selected. The second dropdown, labeled "Producer", has "prodBroadcast" selected. At the bottom of the dialog, there are two buttons: "Save" and "Cancel".



# Usage Details

1. myfilegateway OR a FTP Client can be used to upload the file to the Producer mailbox (prodBroadcast) for broadcasting this file. Please note that the file that has to be routed should match the Producer File Structure we have configured in the Routing Channel Template. So, we have tried uploading the files - "ConBroadCastGroup1\_PerfStats.pdf" and "ConBroadCastGroup2\_AnnualReport.doc" for this test as follows in the producer mailbox in the myfilegateway UI (In Upload Files Tab):

**File Activity** **Upload Files** **Download Files** **Reports**

**Upload a file**  
Specify mailbox file and renaming pattern

**Mailbox Path :** /

**File :**  ConBroadCastGroup1\_PerfStats.pdf

**Rename File As :** \_\_\_\_\_

**File Activity** **Upload Files** **Download Files** **Reports**

**Upload a file**  
Specify mailbox file and renaming pattern

**Mailbox Path :** /

**File :**  ConBroadCastGroup2\_AnnualReport.doc

**Rename File As :** \_\_\_\_\_

2. Once the file is routed, have a look at the last step in the event details from filegateway UI as shown in the following screenshot.

**Search Criteria** **Arrived File** **Route** **Delivery**

The number of search results found: 2

Reviewed	Status	Producer	Original File Name	Discovery Time
<input checked="" type="checkbox"/>	Routed	prodBroadcast	ConBroadCastGroup2_AnnualReport.doc	09/06/2013 20:57:01
<input type="checkbox"/>	Routed	prodBroadcast	ConBroadCastGroup1_PerfStats.pdf	09/06/2013 20:57:01



## Arrived File Events

Event Code	Time ^	Description
FG_0408	09/06/2013 16:32:43	Arrived File has Started.
FG_0404	09/06/2013 16:32:43	Producer partner is 'prodBroadcast'.
FG_0425	09/06/2013 16:32:43	User 'prodbroadcast' sent the Arrived File named [ <a href="#">ConBroadCastGroup2_AnnualReport.doc</a> ] to mailbox '/prodBroadcast' (Details include MessageId=194, FileSize=20 bytes, Dataflow=[ <a href="#">664</a> ], Workflow=[ <a href="#">293381</a> ]).
FG_0409	09/06/2013 16:32:43	Arrived File is now Determining Routes.
FG_0501	09/06/2013 16:32:43	For 'Producer & Mailbox' there are 1 routing channel(s).
FG_0505	09/06/2013 16:32:43	The following 1 route(s) will be run:
FG_0503	09/06/2013 16:32:43	Candidate Route: Send Producer Payload [ <a href="#">ConBroadCastGroup2_AnnualReport.doc</a> ] from ProducerCode 'prodBroadcast' to ConsumerCode '[No Value for ConsumerCode]' using Routing Channel Template [ <a href="#">DynamicBroadcastingFromFact</a> ] which matched Producer File Structure 'Text{(.+)(.+)}'
FG_0502	09/06/2013 16:32:43	For 'Producer Payload [ <a href="#">ConBroadCastGroup2_AnnualReport.doc</a> ]' there are 1 candidate route(s), listed below.
FG_0504	09/06/2013 16:32:43	Route: Send Producer Payload [ <a href="#">ConBroadCastGroup2_AnnualReport.doc</a> ] from ProducerCode 'prodBroadcast' to ConsumerCode '[No Value for ConsumerCode]' using Routing Channel Template [ <a href="#">DynamicBroadcastingFromFact</a> ] which matched Producer File Structure 'Text{(.+)(.+)}'
FG_0410	09/06/2013 16:32:43	Arrived File is now Routing.
FG_0602	09/06/2013 16:32:43	Extracting producer file with 1 layer(s): Text{(.+)(.+)}
FG_0401	09/06/2013 16:32:43	Fact discovered: ConsumerBroadcastGroup = "{ConBroadCastGroup2}".
FG_0401	09/06/2013 16:32:43	Fact discovered: myFileName = "{AnnualReport.doc}".
FG_0605	09/06/2013 16:32:43	Extracted TEXT Layer from file 'ConBroadCastGroup2_AnnualReport.doc'.
FG_0411	09/06/2013 16:32:45	Arrived File is now Routed.

Arrived File Events		
Event Code	Time ^	Description
FG_0408	09/06/2013 16:32:43	Arrived File has Started.
FG_0404	09/06/2013 16:32:43	Producer partner is 'prodBroadcast'.
FG_0425	09/06/2013 16:32:43	User 'prodbroadcast' sent the Arrived File named <a href="#">[ConBroadCastGroup1_PerfStats.pdf]</a> to mailbox '/prodBroadcast' (Details include MessageId=195, FileSize=20 bytes, Dataflow= <a href="#">[665]</a> , Workflow= <a href="#">[293382]</a> ).
FG_0409	09/06/2013 16:32:43	Arrived File is now Determining Routes.
FG_0501	09/06/2013 16:32:43	For 'Producer & Mailbox' there are 1 routing channel(s).
FG_0502	09/06/2013 16:32:43	For 'Producer Payload <a href="#">[ConBroadCastGroup1_PerfStats.pdf]</a> ' there are 1 candidate route(s), listed below.
FG_0503	09/06/2013 16:32:43	Candidate Route: Send Producer Payload <a href="#">[ConBroadCastGroup1_PerfStats.pdf]</a> from ProducerCode 'prodBroadcast' to ConsumerCode '[No Value for ConsumerCode]' using Routing Channel Template <a href="#">[DynamicBroadcastingFromFact]</a> which matched Producer File Structure 'Text{(.+)(.+)}'
FG_0505	09/06/2013 16:32:43	The following 1 route(s) will be run:
FG_0504	09/06/2013 16:32:43	Route: Send Producer Payload <a href="#">[ConBroadCastGroup1_PerfStats.pdf]</a> from ProducerCode 'prodBroadcast' to ConsumerCode '[No Value for ConsumerCode]' using Routing Channel Template <a href="#">[DynamicBroadcastingFromFact]</a> which matched Producer File Structure 'Text{(.+)(.+)}'
FG_0410	09/06/2013 16:32:43	Arrived File is now Routing.
FG_0602	09/06/2013 16:32:43	Extracting producer file with 1 layer(s): Text{(.+)(.+)}
FG_0401	09/06/2013 16:32:43	Fact discovered: ConsumerBroadcastGroup = "{ConBroadCastGroup1}".
FG_0401	09/06/2013 16:32:43	Fact discovered: myFileName = "{PerfStats.pdf}".
FG_0605	09/06/2013 16:32:43	Extracted TEXT Layer from file 'ConBroadCastGroup1_PerfStats.pdf'.
FG_0411	09/06/2013 16:32:45	Arrived File is now Routed.

3. For reference, you can also have a look at the related Process IDs (293384, 293385, 293386 and 293387 - in this case) of the BP - **FileGatewaySendMessage** (which takes care of sending the file to listening consumers) in Sterling B2B Integrator UI. Since our 2 Consumer Partner groups have 2 consumers each in it (CONS1,CONS2 and CONS3,CONS4 respectively as mentioned in step 1), the message will be broadcasted to these 4 consumer mailboxes. So, there will be 4 instances of this BP which gets triggered to add the files to these mailboxes as follows:

Status	ID	Name	State	Started	Ended	Deadline	Parent/Child	Expires
	<a href="#">293387</a>	<a href="#">FileGatewaySendMessage</a>	Completed	09/06/2013 4:32:44 PM	09/06/2013 4:32:45 PM	None	▲	info
	<a href="#">293386</a>	<a href="#">FileGatewaySendMessage</a>	Completed	09/06/2013 4:32:44 PM	09/06/2013 4:32:45 PM	None	▲	info
	<a href="#">293385</a>	<a href="#">FileGatewaySendMessage</a>	Completed	09/06/2013 4:32:44 PM	09/06/2013 4:32:44 PM	None	▲	info
	<a href="#">293384</a>	<a href="#">FileGatewaySendMessage</a>	Completed	09/06/2013 4:32:44 PM	09/06/2013 4:32:44 PM	None	▲	info

4. From the Mailbox Add Service step of these 4 instances of this BP, MessageId can be obtained from ProcessData and Status Report as follows :

<MessageId>196</MessageId>

<MessageId>197</MessageId>

<MessageId>198</MessageId>

<MessageId>199</MessageId>

### Execute Business Process

Name: FileGatewaySendMessage Instance ID: 293385 Service Name: Mailbox Add Service

Status Report:

MailboxAddService: added messageid=196 createDateTime=2013-09-06 16:32:44.62

### Execute Business Process

Name: FileGatewaySendMessage Instance ID: 293384 Service Name: Mailbox Add Service

Status Report:

MailboxAddService: added messageid=197 createDateTime=2013-09-06 16:32:44.622

### Execute Business Process

Name: FileGatewaySendMessage Instance ID: 293386 Service Name: Mailbox Add Service

Status Report:

MailboxAddService: added messageid=198 createDateTime=2013-09-06 16:32:44.723

### Execute Business Process

Name: FileGatewaySendMessage Instance ID: 293387 Service Name: Mailbox Add Service


Status Report:

MailboxAddService: added messageid=199 createDateTime=2013-09-06 16:32:44.723

5. The time (16:32:45 PM) at which the file is routed is almost the same time the file/message got created under the Consumer mailboxes. You can check this in Deployment - Mailboxes - Messages Page. These routed files will be added with the name of **AnnualReport.doc** and **PerfStats.pdf** as configured in the Consumer File Structure in the Routing Channel Template.



## Message Management

Messages 1-2 of 2

Select	Name ▲▼	Id ▲▼	Created ▲▼	Size ▲▼	Mailbox ▲▼
 edit	<a href="#">PerfStats.pdf</a>	197	09/06/2013 4:32:44 PM IST	20	/CONS1/Inbox
 edit	<a href="#">PerfStats.pdf</a>	198	09/06/2013 4:32:44 PM IST	20	/CONS2/Inbox

# Message Management

Messages 1-2 of 2

Select	Name ▲▼	Id ▲▼	Created ▲▼	Size ▲▼	Mailbox ▲▼
 edit	<a href="#">AnnualReport.doc</a>	196	09/06/2013 4:32:44 PM IST	20	/CONS3/Inbox
 edit	<a href="#">AnnualReport.doc</a>	199	09/06/2013 4:32:44 PM IST	20	/CONS4/Inbox