

Maintaining GFB Definitions

A GFB definition defines a global format buffer (GFB) stored separately for reference in SFILE definitions. GFB definitions can be used to decompress replicated data from a specific database file for one or more subscriptions.

While a format buffer specification is required in a subscription's SFILE definition, a stored GFB definition does not need to be used. The SFILE definition could simply include the format buffer specifications it needs.

Using Event Replicator Administration you can manually add, modify, and delete GFB definitions. If you have an appropriate version of Predict installed (see *Predict Requirements* in the *Event Replicator for Adabas Installation Guide*), you can also generate a GFB. If the correct version of Predict is not installed, you will not be able to use this feature.

Notes:

1. If you will be using the Event Replicator Target Adapter to replicate data to an RDBMS, you must generate your GFB definitions, as described in *Generating a GFB*.
2. You can also use the Data Mapping Tool, provided with Event Replicator Administration, to generate a GFB and associated field table. For complete information on the Data Mapping Tool, read *Using the Data Mapping Tool*.
3. If you want to use UTF-8 character encoding, you must verify that your GFB field lengths are increased as required to accommodate the character set referenced by the code page you select and the data requested in the GFB. You can increase these field lengths manually by editing the GFB itself or by editing the Predict file or data definition module (DDM) used when the GFB is generated.

This chapter covers the following topics:

- Listing GFB Definitions
- Adding GFB Definitions
- Generating a GFB
- Importing a Data Mapping Tool GFB and Field Table
- Reviewing GFB Generation Information
- Modifying GFB Definitions
- Copying GFB Definitions
- Deleting GFB Definitions

Listing GFB Definitions


 **To use Event Replicator Administration to list the general format buffer (GFB) definitions stored in the Replicator system file:**

1. Select an Event Replicator Server in tree-view as described in *Selecting Event Replicator Databases*.
2. Click and expand **Replication Definitions** in tree-view under the selected database.
3. Click on **Global Format Buffers** in the tree-view under **Replication Definitions**.

A table listing the GFB definitions in the Replicator system file appears in detail-view.

Adding GFB Definitions

You can add global format definitions by typing in the format buffer definition manually or using Predict to generate one for you. This section describes how to add one manually.

 **To use Event Replicator Administration to add a global format definition manually to the Replicator system file:**

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.

The GFB definitions are listed in detail-view.

2. Right-click on **Global Format Buffers** in the tree-view under **Replication Definitions**.

A drop-down menu appears.

3. Click on **Create New Format Buffer** in the drop-down menu.

A blank **Create New Global Format Buffer** panel appears in detail-view.

4. Tab to Value of the **Global Format Buffer Name** field and specify a unique name for the global format buffer definition. The name must be between one and seven alphanumeric characters long.

Note:

If, at this point, you want to generate the GFB and field table, rather than enter it manually, click on **Predict Parameters**. The Predict Parameters table appears in detail-view. For more information about generating a GFB, skip the rest of the documentation in this section and read *Generating a GFB*.

5. If you elect not to generate the GFB, use the box in the **Create New Global Format Buffer** panel to manually specify the format buffer for this definition. The format buffer must conform to the format buffer requirements (for read commands) documented in the Adabas command reference documentation.

Use the scroll bar to scroll backwards and forwards through the format buffer definition.

PE and MU fields cannot use the range notation 1-N in format buffers for a subscription that is sent to a destination that has specified the replication initialization parameter DCLASS=SAGTARG. The SAGTARG application invoked requires that the range of occurrences specified are contained in the record buffer even if they are empty occurrences. 1-N results in a range of 1-191, but unless there are 191 occurrences containing data, space in the record buffer is not allocated for any empty occurrences, resulting in incorrect field positioning when processing the record.

If the destination target for replicated data is an Adabas mainframe database running Adabas 8.1.3 or later, you can specify the symbolic notation "C." alone as the global format buffer. This notation will cause the Event Replicator Server to replicate the entire source record to the target mainframe Adabas database.

Caution:

This "C." option may be used *only* if the destination target file has been defined with the same fields in the same order as the fields in the source file; if there are differences in the definitions of the files, the replication of the data is likely to incur errors. The only exception to this rule is that the definitions of the descriptors and superdescriptors in the target and source files may be different.


6. When all specifications have been made to your satisfaction, click **OK** to save the GFB definition.

Generating a GFB

If you have Predict 4.4.1 with Service Pack 3 (or higher) installed, you can now generate format buffers and corresponding field tables from Predict file definitions using the Event Replicator Administration. If this version of Predict is not installed, you will not be able to use this feature.

Notes:

1. If you will be using the Event Replicator Target Adapter to replicate data to an RDBMS, you must generate your GFB definitions, as described in this section. Alternatively, you can import a GFB that was generated using the Data Mapping Tool. For information on importing a Data Mapping Tool-generated GFB, read *Importing a Data Mapping Tool GFB and Field Table*. For information on using the Data Mapping Tool, read *Using the Data Mapping Tool*.
2. MU and PE fields are supported in the generated format buffers and their corresponding field tables, although MU fields within PE fields are not. This support requires that counters for MU and PE fields be available in the Predict data dictionary definition. Counters for MU and PE fields are available if the Predict data dictionary definition either specifies fields with field types of MC (MU fields with an automatic counter) and PC (PE fields with an automatic counter) *OR* includes explicit CM field (MU counter field) or CP field (PE counter field) definitions. For more information about CM, CP, MC, MU, PC, and PE field types, refer to your Predict documentation.
3. PE and MU fields cannot use the range notation 1-N in format buffers for a subscription that is sent to a destination that has specified the replication initialization parameter DCLASS=SAGTARG. The SAGTARG application invoked requires that the range of occurrences specified are contained in the record buffer even if they are empty occurrences. 1-N results in a range of 1-191, but unless there are 191 occurrences containing data, space in the record buffer is not allocated for any empty occurrences, resulting in incorrect field positioning when processing the record.
4. LA fields are not supported in generated format buffers.

 **To use Event Replicator Administration to generate global format buffer definition using Predict:**

1. Click on **Predict Parameters** while editing a GFB definition.

The following screen appears in detail-view.

Global Format Buffer

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Global Format Buffer Name	newgfb	
File ID	<input type="text"/>	<input type="button" value="Search"/>
Target File ID	<input type="text"/>	<input type="button" value="Search"/>
Current FDIC	(18015,9)	
FDIC Password	<input type="text"/>	
FDIC Cipher	<input type="text"/>	

Generation Information

User	<input type="text"/>	
Date	<input type="text"/>	
Time	<input type="text"/>	
FDIC DBID	<input type="text"/>	
FDIC FNR	<input type="text"/>	
Adabas Version	IBM/Siemens V 7.1 <input type="button" value="v"/>	
Occurrences Used	Use Value Defined in the Dictionary <input type="button" value="v"/>	
Full Format	Yes	

2. Update the following fields in the screen as described in the following table.

Parameter Name	Specify	Default
Global Format Buffer Name	The unique name of the GFB definition you are editing. You cannot change this name here.	---
File ID	The name of a Predict file with a file type or Adabas (A) or Adabas user view (U). Use the Search button to search and select a file from a list.	---

Parameter Name	Specify	Default
Target file ID	<p>The name of a Predict file with a file type of sequential (S). This file may be used to insert space notation (nX) into the format buffer. For fields in the target file with matching definitions in the File ID file (in other words, if a field exists with the same field long name), a short name clause is generated. For fields that do not have a matching definition in the File ID file, an appropriate space notation (nX clause) is generated. The spaces defined by nX clauses can be filled using a user exit.</p> <p>Use the Search button to search and select a file from a list.</p>	---
Current FDIC	The database and file number of the current Predict file.	---
FDIC Password	The password for the current Predict file.	---
FDIC Cipher	The cipher for the current Predict file.	---
Adabas version	<p>The version of Adabas for which the global format buffer was generated.</p> <p>Select a version from the list. If you want special fields and descriptors included in the generated GFB and corresponding field tables, select the version that includes the phrase "Collation DEs are in Record/Format Buffer".</p>	
Occurrences used	How multiple occurrences of PE and MU fields are generated in the GFB and resulting field table. A value of "Use Maximum" indicates that the maximum number of occurrences should be generated (191); a value of "No" indicates that no occurrences will be generated; a value of "Use value defined in the dictionary" indicates that the number of occurrences defined by the Predict OCC attribute should be generated.	"Use value defined in the dictionary"

You cannot modify the following fields on this screen. These display-only fields are described in the following table:

Parameter Name	Displays
User	The user ID of the user who generated the global format buffer.
Date	The date the global format buffer was generated.
Time	The time of day the global format buffer was generated.
FDIC DBID	The current database of the Predict file.
FDIC FNR	The current file number of the Predict file.
Full format	Whether the full format buffer was generated. The full format buffer includes the length and format of Adabas fields. A value of "Yes" indicates that the full format buffer was generated; a value of "No" indicates it was not.

- When you have supplied values for the fields, click **OK** to start generating the global format buffer.

A **Global Format Buffer** table appears in detail-view showing the generated GFB.

The Type column identifies the field type. *SQL Significance Indicator* fields are marked with an "_S"; counter fields are marked with "CM" or "CP" in the Type column.

- Optionally, modify the **Cs**, **Read Only**, and **Key Type** settings for the fields, as described in the following table:

Setting	Valid Values	Description
Cs	"C" or blank	<p>This setting indicates whether or not the field content should be converted to character format in the destination user exit. The Cs setting is only modifiable for non-counter fields in binary format with lengths of 1-8 characters. Valid values are C (convert to the field content to character) or blank (do not convert the field content).</p> <p>Note: This field cannot be modified for counter fields (Ty field set to "CM" or "CP") and SQL Significance Indicator fields (Ty field set to "_S").</p>
Read Only	"Y" or blank	<p>This setting indicates whether or not the field is read-only. Read-only fields are not replicated. When this is checked, it indicates that the field is read-only (not replicated); a blank value indicates that the field is not read-only and is replicated.</p> <p>Note: When you initially generate or regenerate the GFB and field table, the value of the Read Only setting for all fields is blank.</p>

Setting	Valid Values	Description
Key Type	"Descriptor", "Primary Key", "UQ Descriptor", or "no key"	<p>This setting indicates the kind of key field that the field represents. Possible values are:</p> <ul style="list-style-type: none"> • "Descriptor" -- identifies a descriptor key field • "Primary Key" -- identifies a primary key field <p>Note: At this time, multiple-value (MU) and periodic group (PE) fields cannot be specified as primary keys or in composite keys if Event Replicator Target Adapter processing will be invoked by the subscription (if the DCLASS parameter of the destination used by the subscription is set to "SAGTARG").</p> <ul style="list-style-type: none"> • "UQ Descriptor" -- identifies a UQ descriptor key field • "no key"-- identifies a non-key field <p>Note: When you initially generate or regenerate the GFB and field table, the key fields are set to "Descriptor", "UQ Descriptor", or "no key", depending on the Predict definitions for those fields.</p>

5. When all specifications have been made to your satisfaction, click **OK** to save the GFB definition.

Importing a Data Mapping Tool GFB and Field Table

If you have generated a GFB and field table using the Data Mapping Tool, you can import it into Event Replicator Administration and save it on the Replicator system file. Once it is stored on the Replicator system file, it can be used with the Event Replicator Target Adapter to replicate data to an RDBMS. For complete information on using the Data Mapping Tool, read *Using the Data Mapping Tool*.

Data Mapping Tool-generated GFBs and field tables can be imported into new and existing GFB definitions. If you want to import them into an existing GFB definition, the existing GFB definition must not already have an associated field table defined. This section covers the following topics:

- Importing a Data Mapping Tool GFB and Field Table into a New GFB Definition
- Importing a Data Mapping Tool GFB and Field Table into an Existing GFB Definition

Importing a Data Mapping Tool GFB and Field Table into a New GFB Definition

 **To import a Data Mapping Tool-generated GFB and field table into a new GFB definition:**

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.

The GFB definitions are listed in detail-view.

2. Right-click on **Global Format Buffers** in the tree-view under **Replication Definitions** and click on **Create New Format Buffer** in the resulting drop-down menu.

A drop-down menu appears.

3. Click on **Create New Format Buffer** in the drop-down menu.

A blank **Create New Global Format Buffer** panel appears in detail-view.

4. Specify a unique name for the GFB definition in the **Global Format Buffer Name** field and click the **Import** button.

The **Import File** panel appears in detail-view.

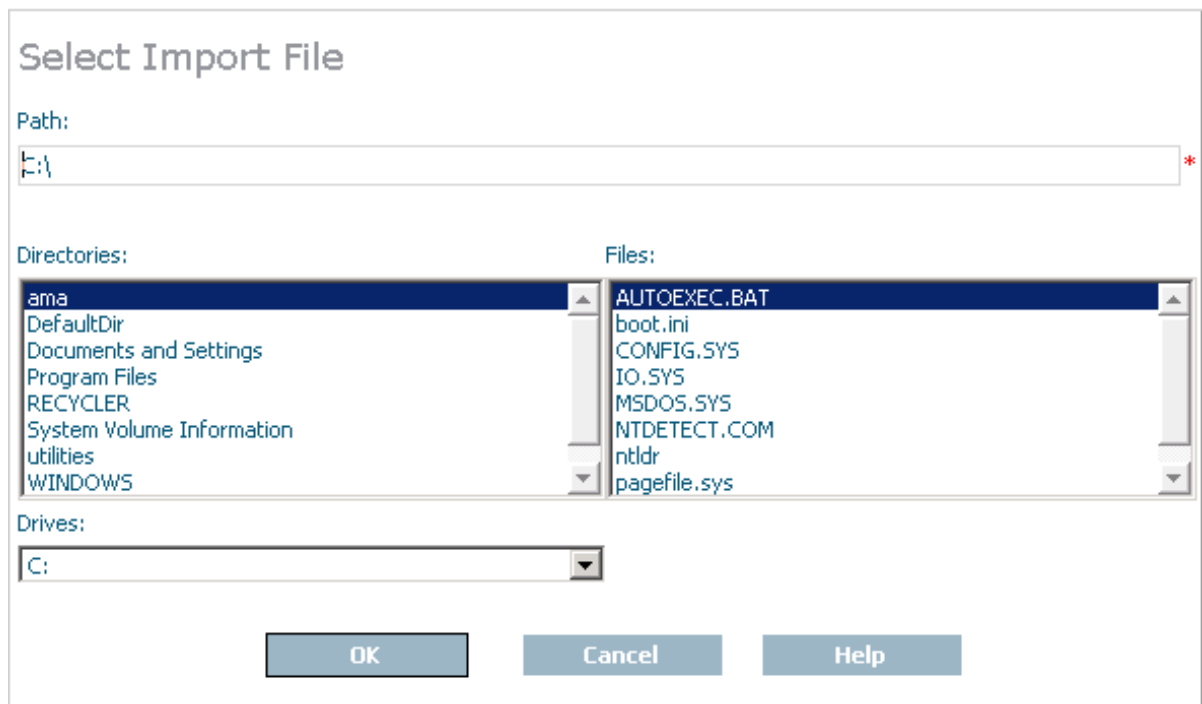
Import File	
Global Format Buffer Name	NEWGFB
Import File	<input type="text"/> * Browse

OK Cancel

5. In the **Import File** field on the **Import File** panel, specify the fully qualified path name of the file containing the Data Mapping Tool-generated GFB and field table.

Or:

Click on the **Browse** button to locate the file. The **Select Import File** panel appears allowing you to locate and select the file.



6. Use the drop-down boxes and other fields on the **Select Import File** panel to select the drive, directory, and file name of the file. When the file has been selected, click **OK** to return to the **Import File** panel.

The **Import File** panel appears with the name of the Data Mapping Tool-generated file specified in the **Import File** field.

7. Click **OK** on the **Import File** panel.

The Data Mapping Tool-generated file is imported into Event Replicator Administration, stored in the Replicator system file, and a **Global Format Buffer** panel appears in detail-view, showing the GFB.

Importing a Data Mapping Tool GFB and Field Table into an Existing GFB Definition

► **To import a Data Mapping Tool-generated GFB and field table into an existing GFB definition:**

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.

The GFB definitions are listed in detail-view.

2. Select an existing GFB definition in the GFB list

The existing GFB definition appears in detail-view.

3. Click on the **Modify** button.

The existing GFB definition still appears in detail-view, but now you have the option of generating a field table using Predict (read *Generating a GFB*) or of importing a GFB file with an associated field table.

4. Click the **Import** button.

The **Import File** panel appears in detail-view.

5. In the **Import File** field on the **Import File** panel, specify the fully qualified path name of the file containing the Data Mapping Tool-generated GFB and field table.

Or:

Click on the **Browse** button to locate the file. The **Select Import File** panel appears allowing you to locate and select the file. Use the drop-down boxes and other fields on this panel to select the drive, directory, and file name of the file. When the file has been selected, click **OK** to return to the **Import File** panel.

The **Import File** panel appears with the name of the Data Mapping Tool-generated file specified in the **Import File** field.

6. Click **OK** on the **Import File** panel.

The Data Mapping Tool-generated file is imported into Event Replicator Administration, stored in the Replicator system file, and a **Global Format Buffer** panel appears in detail-view, showing the GFB.

Reviewing GFB Generation Information

If you have generated a GFB using Predict or if you have imported a GFB and field table that were generated using the Data Mapping Tool, you can review the GFB generation information. This includes, but is not limited to statistics such as the file ID (table name) included in the GFB and the date and time the GFB was generated.


To review the generation information of a GFB:

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.

The GFB definitions are listed in detail-view.

2. Select a generated or imported GFB from the list.

The GFB Definition panel appears in detail-view listing the current settings for the GFB definition you selected.

3. Click on the  icon in the upper left corner of the detail-view display.


The **Generation Information** is listed in detail-view.

Modifying GFB Definitions

To use Event Replicator Administration to modify a global format buffer (GFB) definition in the Replicator system file:

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.
The GFB definitions are listed in detail-view.
2. Locate the definition you want to modify in the table in detail-view and click on it.
The GFB Definition panel appears in detail-view listing the current settings for the GFB definition you selected.
3. Click the **Modify** button.
The GFB parameters you can modify become editable in detail-view. For information on modifying these parameters, read the descriptions of *Adding GFB Definitions* and *Generating a GFB*.
4. When all modifications have been made, click **OK** to save the changes or click **Cancel** to cancel the changes.

Copying GFB Definitions

 **To use Event Replicator Administration to copy a global format buffer (GFB) definition in the Replicator system file:**

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.
The GFB definitions are listed in detail-view.
2. Locate the definition you want to copy in the table in detail-view and click on it.
The GFB Definition panel appears in detail-view listing the current settings for the GFB definition you selected.
3. Click the **Copy** button.
A copy of the GFB definition is created and its parameter values appear in detail-view.
4. Specify a new, unique name for the copy of the GFB definition in the Value column for the **Global Format Buffer Name** parameter.
5. If you wish, modify any other parameters for the new copy in detail-view. For information on modifying the parameters, read the description of *Adding GFB Definitions*.
6. When all modifications have been made, click **OK** to save the changes or click **Cancel** to cancel the copy.

Deleting GFB Definitions

 **To use Event Replicator Administration to delete a global format buffer (GFB) definition in the Replicator system file:**

1. List the GFB definitions in Event Replicator Administration, as described in *Listing GFB Definitions*.

The GFB definitions are listed in detail-view.

2. Locate the definition you want to delete in the table in detail-view and click on it.

The GFB Definition panel appears in detail-view listing the current settings for the GFB definition you selected.

3. Click the **Delete** button.

A confirmation panel appears verifying that you want to delete the definition. If you click **Yes** (indicating that you do want to delete the definition), the definition is deleted. If you click **No** (indicating that you do not want to delete the definition), the definition is not deleted.