Maintaining Subscription Definitions

A subscription definition defines a set of rules to be applied to replicated data. Subscription definitions include at least one SFILE definition and at least one destination definition. They may also specify a resend buffer definition to expedite the retransmission of a transaction.

At least one subscription definition, with its associated destination and SFILE definitions, must be created because these definitions are used to determine how replicated data is processed by the Event Replicator Server. If a subscription definition is not specified, data replication will occur, but the data will never be processed by the Event Replicator Server and, therefore, will never be delivered to the target application.

This chapter covers the following topics:

- Listing Subscription Definitions

- Adding Subscription Definitions

- Modifying Subscription Definitions

- Copying Subscription Definitions

- Activating and Deactivating Subscription Definitions

- Deleting Subscription Definitions

Listing Subscription Definitions

▶ **To use Event Replicator Administration to list the subscription 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 **Subscriptions** in the tree-view under **Replication Definitions**.

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

Adding Subscription Definitions

To use the Event Replicator Administration to add a subscription definition in the Replicator system file, complete the following steps:

- Step 1. Access the Subscription Definition Area of the Event Replicator Administration

- Step 2. Supply General Subscription Information

- Step 3. (Optional) Modify the Transaction Logging Values for the Subscription, as Necessary

- Step 4. Specify One or More Destinations for the Subscription

- Step 5. Specify One or More SFILE Definitions for the Subscription

- Step 6. Save the Subscription Definition

Step 1. Access the Subscription Definition Area of the Event Replicator Administration

▶ **To access the subscription definition are of the Event Replicator Administration:**

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

   The subscription definitions are listed in detail-view.

2. Right-click on **Subscriptions** in the tree-view under **Replication Definitions**.

   A drop-down menu appears.

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

   A blank New Subscription panel appears in detail-view.

   Note:
   The list of incomplete items on this screen identifies information (definitions) that must be supplied for the subscription definition before it can be read at Event Replicator Server startup. In the example below, the new subscription definition still needs the following information before it is a valid subscription: at least one destination definition, at least one SFILE definition (File-Related Parms), and format buffer specifications (either as individual format buffers or using global format buffer (GFB) definitions).

General Values	
Name	**Value**
Subscription Name	*
Description	*
User Data Alpha Key	0
Architecture Key	2 - High Order Byte First, EBCDIC Encoding Family, IB ▼
Subscription Version	
User Data Wide Key	0
Resend Buffer Name	None ▼
Subscription Active	Yes ▼
Subscription Deactivate	Yes ▼
Increment Initial State Count	No ▼
Destination Name List	
File-Related Parameters	
Incomplete Item(s)	Destination, File-Related Parameters, Format Buffer

TLOG Values	
Name	**Value**
Input Filter	0 - No Logging ▼
Filter Level	0 - No Logging ▼
Output Filter	0 - No Logging ▼
Filter Matched	0 - No Logging ▼
Filter Not Matched	0 - No Logging ▼
Filter Ignored	0 - No Logging ▼

Step 2. Supply General Subscription Information

▶ **To supply general information for the subscription definition:**

- Supply values for the following general subscription fields on the New Subscription panel:

Parameter Name	Specify	Default
Subscription Name (SUBSCRIPTION NAME)	A unique name for the subscription. Subscription names must be between one and eight characters long.	---
Description	A description of the subscription. This information is for your reference only; it is not used by Event Replicator Server.	----

Parameter Name	Specify	Default
User Data Alpha Key (SACODE)	An appropriate output-alpha code if the Event Replicator Server has been started with Universal Encoding Support (UES) enabled. If UES has not been enabled, leave this field blank or set to zero (0). A value of zero means that no UES translation will be done. XML data sent to Event Replicator Target Adapter is in EBCDIC character encoding. EBCDIC values for alphanumeric characters X'40' thru X'FF' are sent unchanged. EBCDIC values for alphanumeric fields under X'40' are translated to spaces. However, support for UTF-8 encoding is available for internationalization purposes. To send XML messages to Event Replicator Target Adapter using UTF-8 format, make sure that this parameter is set to "4091" in the Event Replicator subscription definition used for Event Replicator Target Adapter processing. **Note:** If you want to use UTF-8 character encoding (i.e. SACODE=4091), you must verify that your field lengths are increased as required to accommodate UTF-8 character encoding. The Adabas UES code pages 37, 424, 813, 912, 915, 920, 922, 923, 1006, 1112, 1140, 1256, and 4091 can be specified in the SACODE parameter for Event Replicator Target Adapter.	0

Parameter Name	Specify	Default
Architecture Key (SARC)	An appropriate architecture key if the Event Replicator Server has been started with Universal Encoding Support (UES) enabled. If UES has not been enabled, leave this field set to "2". The architecture key is an integer that is calculated as the sum of the following numbers (this is the same as is documented in the record buffer section of the OP command in the Adabas Command Reference Guide): • byte order: 0 (high-order byte first) or 1 (low-order byte first) • encoding family: 0 (ASCII) or 2 (EBCDIC) • floating point format: 0 (IBM370), 4 (VAX), or 8 (IEEE). **Note:** If you want to transfer replicated and initial-state data to a relational database using the Event Replicator Target Adapter (the Destination Class, or DCLASS parameter, is set to "SAGTARG"), set the SARC parameter to "2" -- regardless of the location of your relational database.	2 (High-order byte first, EBCDIC encoding family)
Subscription Version (SVERSION)	A subscription version. Up to two characters can be specified. This field has no meaning to the Event Replicator Server -- it is optional. But it may be useful for the target application when handling changes in the subscription definition. It is passed as part of the header information sent to the target.	---

Parameter Name	Specify	Default
User Data Wide Key (SWCODE)	An appropriate output-wide code if the Event Replicator Server has been started with Universal Encoding Support (UES) enabled. If UES has not been enabled, leave this field blank. Wide-character fields sent to Event Replicator Target Adapter are translated to hexadecimal. However, support for UTF-8 encoding is available for internationalization purposes. To send wide-character fields to Event Replicator Target Adapter using UTF-8 format, make sure that this parameter is set to "4091" in the Event Replicator subscription definition used for Event Replicator Target Adapter processing.	---
Resend Buffer Name (SRESENDBUFFER)	The name of the resend buffer to be associated with the subscription, if any. For more information about resend buffer definitions, read *Maintaining Resend Buffer Definitions*.	---
Subscription Active (SACTIVE)	Whether or not this subscription definition should be activated for use once it is loaded by the Event Replicator Server. Valid values are "Yes" (load and activate the definition) or "No" (load, but do not activate the definition).	No
Subscription Deactivate (SDEACTIVATE)	Whether or not this subscription definition should be deactivated if one of its files is deactivated. Valid values are "Yes" (deactivate the subscription) or "No" (do not deactivate the subscription). While this is an optional feature, we recommend that you use the default or specify "Yes" to ensure that the integrity of your replicated data is maintained when a file becomes deactivated. If the subscription is deactivated because one of its files is deactivated, any other files referenced by this subscription are also deactivated unless they are also referenced by another active subscription. If replication for this file in the subscription is unrelated to the replication for other files in the same subscription, the integrity of the replicated data may not be at risk. In this case, a value of "No" might be specified.	Yes

Parameter Name	Specify	Default
Increment Initial State Count (SINCREMENTIS)	Whether or not the transaction sequence number should be incremented if an initial-state request is occurring. Valid values are "Yes" (increment the transaction sequence number) or "No" (do not increment the transaction sequence number).	No

Step 3. (Optional) Modify the Transaction Logging Values for the Subscription, as Necessary

▶ **To modify the TLOG values for the subscription:**

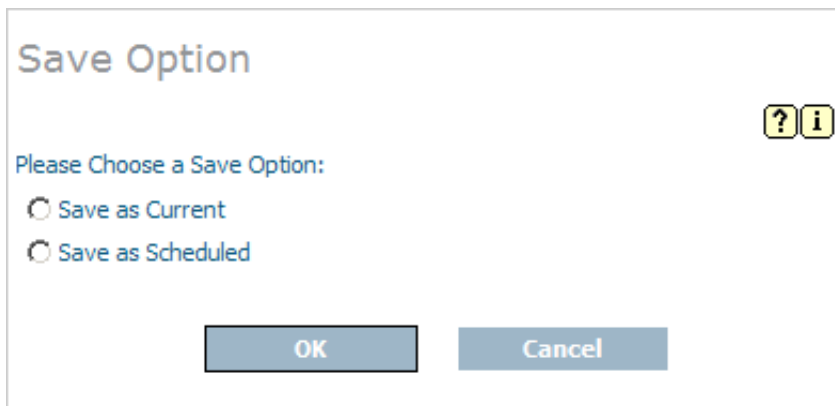- Optionally, modify the following transaction logging (TLOG) fields on the New Subscription panel.

Parameter Name	Specify	Default
Input Filter (STLINPUT)	The transaction logging level when a transaction is selected for subscription processing. Valid values are "0 - no logging", "1- log event and input transaction data", "2- log event, input transaction, and file/record data", or "3- log event and all available input transaction data for the event".	0 - no logging
Filter Level (STLFILTER)	The transaction logging level when a record in a transaction is being excluded from replication due to extended subscription processing or the subscription user exit. Valid values are "0- no logging", "1- log event, filter reason, and transaction information", "2- log event, filter reason, transaction, and file/record information", or "3- log event, filter reason, transaction information, file/record information, and payload data of available images".	0 - no logging
Output Filter (STLOUTPUT)	The transaction logging level when a transaction is to be output on behalf of a subscription. Valid values are "0- no logging", "1- log event and output transaction data", "2- log event, output transaction, and file/record data", or "3- log event and all available output information for the event".	0 - no logging
Filter Matched (STLMATCH parameter)	The transaction logging level when a filter condition is true. Valid values are "0 - no logging", "1 - log event and filter information", or "2 - log event, filter information, and payload data or available field values".	0 - no logging
Filter Not Matched (STLNOMATCH parameter)	The transaction logging level when a filter condition is false. Valid values are "0 - no logging", "1 - log event and filter information", or "2 - log event, filter information, and payload data or available field values".	0 - no logging
Filter Ignored (STLIGNORE parameter)	The transaction logging level when a filter condition cannot be evaluated. Valid values are "0 - no logging", "1 - log event and filter information", or "2 - log event, filter information, and payload data or available field values".	0 - no logging

Step 4. Specify One or More Destinations for the Subscription

▶ **To specify one or more destinations for the subscription:**

1. Click **OK** on the New Subscription panel. (Click **Cancel** if you want to cancel creating the subscription definition.)

A Save Option panel appears in detail-view.

2. Indicate whether you want to save the subscription definition as the current definition or as a scheduled definition on the Save Option panel. Then click **OK** to continue. (Click **Cancel** if you want to cancel creating the subscription definition.)

   The Subscription panel appears again in detail-view.

Subscription 'MYSUBSC (Current)'

General Values

Name	Value
Subscription Name	MYSUBSC (Current)
Description	My description
User Data Alpha Key	0
Architecture Key	2 - High Order Byte First, EBCDIC Encoding Family, IBM370 Floating-Point Format
Subscription Version	
User Data Wide Key	0
Resend Buffer Name	
Subscription Active	Yes
Subscription Deactivate	Yes
Increment Initial State Count	No
Destination Name List	
File-Related Parameters	
Incomplete Item(s)	Destination, File-Related Parameters, Format Buffer

TLOG Values

Name	Value
Input Filter	0 - No Logging
Filter Level	0 - No Logging
Output Filter	0 - No Logging
Filter Matched	0 - No Logging
Filter Not Matched	0 - No Logging
Filter Ignored	0 - No Logging

Subscription Successfully Created

| Modify | Copy | Delete | RPLREFRESH |

| Back |

3. Click the **Modify** button.

   The parameters you can modify become editable again in detail-view.

General Values		
Name	Value	
Subscription Name	MYSUBSC (Current)	
Description	My description	*
User Data Alpha Key	0	
Architecture Key	2 - High Order Byte First, EBCDIC Encoding Family, IB ▼	
Subscription Version		
User Data Wide Key	0	
Resend Buffer Name	None ▼	
Subscription Active	Yes ▼	
Subscription Deactivate	Yes ▼	
Increment Initial State Count	No ▼	
Destination Name List	⊘	
File-Related Parameters	⊘	
Incomplete Item(s)	Destination, File-Related Parameters, Format Buffer	

TLOG Values	
Name	Value
Input Filter	0 - No Logging ▼
Filter Level	0 - No Logging ▼
Output Filter	0 - No Logging ▼
Filter Matched	0 - No Logging ▼
Filter Not Matched	0 - No Logging ▼
Filter Ignored	0 - No Logging ▼

4. Click on the checkmark in the **Value** column of the Destination Name List field.

   The following destination list table appears in detail-view.

Subscription 'MYSUBSC (Current)'

All ☑	Name ⇕	Initial-State Data ⇕	Normal Data ⇕
☐	ADADEST ▾	Yes ▾	Yes ▾

New   Delete

Item 1 of 1

OK   Cancel

5. Specify at least one destination for the subscription in the destination list table. The first time you access this panel, no destinations are listed in the table.

- To add a new destination, click **New**. A new, blank, line appears in the destination list table. Select values in the new line as described later in this step.

- To modify a destination, edit the values for the destination in the table. Each destination value is described later in this step.

- To delete a destination, select the destination you want to delete by clicking the check box for the destination in the **All** column of the **Destination List** table. More than one destination can be selected at a time. To select all destinations at once, click the check box in the **All** column heading. Once all the destinations you want to delete are selected, click **Delete** to delete the selected destinations.

The fields in the **Destination List** table should be specified as follows:

Parameter Name	Use the selection box to select	Default
Name (SDESTINATION)	The name of a predefined destination definition. For more information about destination definitions, read *Maintaining Destination Definitions*. **Note:** An Adabas destination can be referenced by no more than one subscription.	---
Initial-State Data	Whether you want the destination to receive initial-state (I) replicated data. Valid values are "Yes" (receive the data) or "No" (do not receive the data).	Yes
Normal Data	Whether you want the destination to receive normal (N) data replicated data. Valid values are "Yes" (receive the data) or "No" (do not receive the data).	Yes

6. When all destinations have been specified correctly in the destination list table, click **OK** to save the subscription definition.

The destination list table panel closes and you are returned to the Subscription panel.

Step 5. Specify One or More SFILE Definitions for the Subscription

Specify an "S" in the File-Related Parameters field to create the SFILE definitions for the subscription. When you enter an "S", a List of Subscription SFILEs panel appears listing the SFILE definitions currently assigned to the subscription definition. At least one SFILE definition must be specified on the List of Subscription SFILEs screen:

- If the SFILE definition you want included in the subscription is not listed, click **New** to add it. If you want to alter an SFILE definition in this list, simply change the fields associated with that SFILE definition. For more information about maintaining SFILE definitions, read *Maintaining SFILE Definitions*.

- Once all of the SFILE definitions you want included in this subscription are listed on the List of Subscription SFILEs, press **OK** to return to rest of the subscription definition.

Step 6. Save the Subscription Definition

▶ **To save the subscription definition:**

- Click **OK** to save the subscription definition in the Replicator system file.

Modifying Subscription Definitions

▶ **To use Event Replicator Administration to modify a subscription definition in the Replicator system file:**

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

   The subscription definitions are listed in detail-view.

2. Locate the definition you want to modify in the table in detail-view and click the check mark in either the **Current**, **Scheduled**, or **Old** columns, depending on which version of the definition you want to maintain.

   The detail-view lists the current settings for the subscription definition you selected.

3. Make sure that **Modify** is selected in the drop-down box at the bottom of detail-view. Then click **Execute**.

   The subscription parameters you can modify become editable in detail-view. For information on modifying these parameters, read the description of *Adding Subscription Definitions*.

4. When all modifications have been made, click **OK** to save the changes or click **Cancel** to cancel the changes.

Copying Subscription Definitions

▶ **To use Event Replicator Administration to copy a subscription definition in the Replicator system file:**

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

   The subscription definitions are listed in detail-view.

2. Locate the definition you want to copy in the table in detail-view and click the check mark in either the **Current**, **Scheduled**, or **Old** columns, depending on which version of the definition you want to copy.

   The detail-view lists the settings for the version of the subscription definition you selected.

3. Click the **Copy** button.

   A copy of the subscription definition is created and its parameter values appear in detail-view.

4. Specify a new, unique name for the copy of the subscription definition in the Value column for the **Subscription 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 Subscription Definitions*.

6. When all modifications have been made, click **OK** to save the changes or click **Cancel** to cancel the copy.

Activating and Deactivating Subscription Definitions

You can use Event Replicator Administration to activate and deactivate subscription definitions.

⚠ **Warning:**
Be careful when you activate and deactivate replication definitions and databases, especially if replication is ongoing at the time. Whenever you activate or deactivate definitions or databases, you run the risk of altering what data is replicated and how that replication occurs. If the Event Replicator Server receives data from an Adabas database for which it has no active definitions, replication simply does not occur.

This section covers the following topics:

- Activating Subscription Definitions

- Deactivating Subscription Definitions

Activating Subscription Definitions

▶ **To use Event Replicator Administration to activate a subscription definition:**

1. Select an Event Replicator Server in tree-view as described in *Selecting Event Replicator Databases*.

2. Click and expand **Active Parameters** in tree-view under the selected database.

3. Click and expand **Replication** in tree-view under **Active Parameters**.

4. Click on **Subscriptions** in the tree-view under **Replication**.

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

5. In detail-view, click on the name of the definition you want to activate.

   Details about the subscription appear in detail-view.

6. Click the **Activate** button.

   Note:
   This button will not be available if the definition is already activated.

   The subscription definition is activated.

Deactivating Subscription Definitions

▶ **To use Event Replicator Administration to deactivate a subscription definition:**

1. Select an Event Replicator Server in tree-view as described in *Selecting Event Replicator Databases*.

2. Click and expand **Active Parameters** in tree-view under the selected database.

3. Click and expand **Replication** in tree-view under **Active Parameters**.

4. Click on **Subscriptions** in the tree-view under **Replication**.

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

5. In detail-view, click on the name of the definition you want to deactivate.

   Details about the subscription appear in detail-view.

6. Click the **Deactivate** button.

   Note:
   This button will not be available if the definition is already deactivated.

   The subscription definition is deactivated.

Deleting Subscription Definitions

▶ **To use Event Replicator Administration to delete a subscription definition in the Replicator system file:**

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

   The subscription definitions are listed in detail-view.

2. Locate the definition you want to delete in the table in detail-view and click the check mark in either the **Current**, **Scheduled**, or **Old** columns, depending on which version of the definition you want to maintain.

   The detail-view lists the settings for the version of the subscription 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.