



System i

Programming

DB2 DataPropagator for iSeries, V8.1 commands

Version 6 Release 1





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Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 99.

This edition applies to version 6, release 1, modification 0 of IBM DB2 DataPropagator for iSeries, V8.1 (product number 5761-DP4) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CICS models.

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Add DPR Registration (ADDDPRREG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Add DPR Registration command (ADDDPRREG) allows the user to register a source table for use with DataPropagator. The source table can be located on this system or on a remote system. If it is on a remote system, you must set up the registration to use remote journaling. You do this by using the SRCTBLRDB parameter to identify the remote relational database where the source table resides.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ADDDPRREG

*ESCAPE Messages

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN3020

Registration for source table completed.

ASN3027

Table not journaled with *BOTH images.

ASN3036

Column not found.

ASN3055

Cannot capture changes for table .

ASN3069

Relative record numbers cannot be captured.

ASN3075

Relative record numbers cannot be captured for an aggregate source table.

ASN3115

Relational database is not i5/OS V4R2 or greater.

ASN3116

Remote journal in library is not found.

ASN3121

The source table journal does not match the data from the RMTJRN parameter.

ASN3122

The SRCTBLRDB parameter cannot specify a remote source table that is a logical file.

ASN3125

Local relational database is not i5/OS V4R2 or greater.

ASN3213

Base attributes not valid for base type.

ASN3217

CAPRRN(*YES) not valid with aggregate base type. A value of *YES on the CAPRRN parameter is not valid

ASN3219

You must specify *NO on the CAPRRN parameter when the CAPCOL parameter has a value of *NONE.

ASN3230

A Remote Journal Name cannot be specified if the Source Table RDB is *LOCAL.

ASN3238

The source table does not contain the correct columns for a source type.

ASN3249

Relative record number column IBMQSQ_RRN is not available.

ASN3254

Registration already exists for table .

ASN3279

View table has more columns than subselect string.

ASN3280

View subselect string missing correlation name.

ASN3281

View subselect string missing file name.

ASN3284

SQLFILE must not be *NONE when FROMGUI is *YES.

ASN3285

MSGFILE must not be *NONE when FROMGUI is *YES.

ASN3286

SQLFILE and MSGFILE names are the same.

ASN3292

Register table not found.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|---------------------------|---|---------------------------|
| SRCTBL | Source table | <i>Qualified object name</i> | Required, Positional 1 |
| | Qualifier 1: Source table | <i>Name</i> | |
| | Qualifier 2: Library | <i>Name</i> | |
| CAPCTLLIB | Capture control library | <i>Name, <u>ASN</u></i> | Optional |
| CDLIB | Library for CD table | <i>Name, <u>*SRCTBL</u></i> | Optional |
| CDNAME | Name of CD table | <i>Name, <u>*DEFAULT</u></i> | Optional |
| SRCTYPE | Source table type | <i>*USERTABLE, *POINTINTIME, *CCD, *BASEAGR, *CHANGEAGR, *REPLICA, *USERCOPY</i> | Optional |
| REFRESH | Allow full refresh | <i><u>*YES</u>, *NO</i> | Optional |
| TEXT | Text 'description' | <i>Character value, *NONE</i> | Optional |
| CAPCOL | Capture columns | Single values: <i>*ALL, *NONE</i> Other values (up to 300 repetitions): <i>Character value</i> | Optional |

| Keyword | Description | Choices | Notes |
|-----------|--------------------------------|----------------------------------|----------|
| CAPRRN | Capture relative record number | *YES, *NO | Optional |
| IMAGE | Record images | *AFTER, *BOTH | Optional |
| PREFIX | Prefix character | Character value, *DEFAULT, *NULL | Optional |
| CONDENSED | Condensed | *YES, *NO, *AGGREGATE | Optional |
| COMPLETE | Complete | *YES, *NO | Optional |
| FROMGUI | Command from GUI | *NO, *YES | Optional |
| SQLFILE | SQL output file | Character value, *NONE | Optional |
| MSGFILE | Message output file | Character value, *NONE | Optional |
| SRCTBLRDB | Source table RDB | Name, *LOCAL | Optional |
| RMTJRN | Remote journal | Qualified object name | Optional |
| | Qualifier 1: Remote journal | Name, *SRCTBL | |
| | Qualifier 2: Library | Name | |
| CONFLICT | Conflict level | *NONE, *STANDARD, *ENHANCED | Optional |
| UPDDELINS | Update using delete/insert | *NO, *YES | Optional |
| GENCDROW | Generate change data rows | *ALLCHG, *REGCOLCHG | Optional |
| RECAP | Recapture changes | *NO, *YES | Optional |
| STOPONERR | Stop on error | *NO, *YES | Optional |

Top

Source table (SRCTBL)

Identifies the table to register as a source table. This is a required parameter. This table can be any externally defined single format physical file or view in an i5/OS library or collection.

When SRCTYPE(*POINTINTIME) is specified, the table must have a unique key, and the data in the key field cannot be changed.

To capture changes, the table must also have journaling started with both images; that is, you must run the Start Journal Physical File (STRJRNPF) command with IMAGES(*BOTH) specified.

library-name/table-name

The qualified name of the table to be registered. If you are setting this source table up to be journaled using remote journaling, this is the source table's name on the remote system.

Top

Capture control library (CAPCTLLIB)

Specifies the library where the Capture control tables are located.

ASN Specifies the default library of ASN containing the Capture control tables.

library-name

Name of the library containing the Capture control tables. This library should exist and have been created using the CRTDPRTBL command with the library specified in the CAPCTLLIB parameter.

Top

Library for CD table (CDLIB)

Specifies the name of the library in which the Change Data (CD) table is to be created.

*SRCTBL

Create the Change Data table in the library where the source table resides.

library-name

Create the Change Data table in the specified library. An error will be generated if the library does not exist.

Top

Name of CD table (CDNAME)

Specifies the name of the Change Data (CD) table. This table must not already exist. It will be created in the library specified on the CDLIB parameter.

*DEFAULT

Create the Change Data table using the default naming convention. The default name includes the date and time stamp to make it unique.

cd-name

Specifies the name of the Change Data table.

Top

Source table type (SRCTYPE)

Specifies the type of source table being registered. The point-in-time, base aggregate, change aggregate, replica, and CCD types are DataPropagator target tables that are optionally registered for the user when a subscription is created. When registering to a target table that already exists, the registration fails if the target table does not contain the IBMSNAP columns indicated for the specified source type.

*USERTABLE

The table is a user database table. This is the most common type of table that you register. The table can not contain any columns that start with the DataPropagator column identifier, IBMSNAP.

Your source table must be this type if you are using remote journaling.

*POINTINTIME

The table is a point-in-time copy, whose content matches all or part of a source table, with an added system column that identifies the time when the particular row was inserted or updated at the source system. The table must contain the IBMSNAP_LOGMARKER_TIMESTAMP column and can optionally have an INTEGER column called IBMQSQ_RRN.

*BASEAGR

The table is a base aggregate copy, which contains data aggregated from a user table or point-in-time table at intervals. The table must contain the IBMSNAP_HLOGMARKER and IBMSNAP_LLOGMARKER_TIMESTAMP columns.

*CHANGEAGR

The table is a change aggregate copy, which contains data aggregations based on changes recorded for a source table. The table must contain the IBMSNAP_HLOGMARKER and IBMSNAP_LLOGMARKER_TIMESTAMP columns.

***CCD** The table is a consistent copy, which contains transaction consistent data from the source table. The table must contain the following columns:

- IBMSNAP_LOGMARKER CHAR(10) FOR BIT DATA NOT NULL

- IBMSNAP_OPERATION CHAR(1) NOT NULL
- IBMSNAP_COMMITSEQ CHAR(10) FOR BIT DATA NOT NULL
- IBMSNAP_LOGMARKER TIMESTAMP NOT NULL

The table can optionally have an INTEGER column called IBMQSQ_RRN.

***REPLICA**

The table is a target table for a replica subscription and is being registered so changes from the target table can be fed back to the original source table. The table also contains all of the columns from the original source table. The table can not contain any columns that start with the DataPropagator column identifier, IBMSNAP or IBMQSQ.

Top

Allow full refresh (REFRESH)

Determines whether the registration supports the full-refresh capability.

You can use this value to turn off the capability of the Apply process to perform a full refresh from the source table.

***YES** The source table can be used to fully refresh a target table.

***NO** The source table cannot be used to fully refresh a target table.

Top

Text 'description' (TEXT)

The textual description associated with the registration entry.

***NONE**

No description is associated with the entry.

description

Specify up to 50 characters of text, enclosed in apostrophes.

Top

Capture columns (CAPCOL)

Specifies the columns for which changes are captured for this registration.

***ALL** Changes are captured for all columns.

***NONE**

Changes are not captured for this table. Use this value to specify that you do not want change capture activities performed on the registration, and want the table registered for full refresh only. The Change Data (CD) table is not created with this registration, and the Capture process will not capture changes for the table.

column-name

Specifies up to 300 columns for which changes are captured.

Top

Capture relative record number (CAPRRN)

Specifies whether the relative record number of each changed record is captured.

***NO** The relative record number is not captured.

***YES** The relative record number is captured. An additional column called IBMQSQ_RRN is created in the Change Data (CD) table.

If SRCTYPE(*USERTABLE) is specified, the IBMQSQ_RRN column must not exist in the source table. During capture activity, the IBMQSQ_RRN column is updated with the relative record number of each changed source table record.

If SRCTYPE(*USERTABLE) is not specified, the IBMQSQ_RRN column must be present in the source table. During capture activity, the IBMQSQ_RRN column in the CD table is updated using the value from the IBMQSQ_RRN column in the source table.

If SRCTYPE(*REPLICA) is specified, the CAPRRN parameter needs to be set to *NO.

Top

Record images (IMAGE)

Specifies whether the Change Data table contains both before and after images of the changes to the source table. This applies globally to all columns specified on the Capture columns (CAPCOL) parameter. The source table must be journaled with *BOTH images even if you specify *AFTER on this parameter.

This value is not valid when CAPCOL(*NONE) is specified.

***AFTER**
Only after-images of the source table are kept in the Change Data table.

***BOTH**
Both before- and after-images of the source table are kept in the Change Data table.

Top

Prefix character (PREFIX)

Use the prefix character to make the column names in the Change Data table unique when capturing before-images of the source table. This name can be used in the COLUMN parameter of the ADDDPRSUB or ADDDPRSUBM commands.

***DEFAULT**
No prefix is specified. The default prefix (@) is used.

***NULL**
When a null prefix is specified, the before-images from the source table will never be captured.

character
Any alphabetic character that is valid in an object name.

If the prefix character causes a before-image column name to be the same as an existing after-image column name, the command will terminate with an error.

Top

Condensed (CONDENSED)

Specifies whether or not the source table is condensed. This means that the table contains current data and there is no more than one row for each primary key value in the table.

***YES** The source table is condensed and contains only one row for each primary key value.

***NO** The source table is not condensed and contains multiple rows for each primary key value.

***AGGREGATE**

The source table type is either ***BASEAGR** (base aggregate) or ***CHANGEAGR** (change aggregate). If this value is used, the **COMPLETE** parameter must be set to ***NO**.

Top

Complete (COMPLETE)

Specifies whether or not the source table is complete. This means that the table contains a row for every primary key value.

***YES** The source table is complete and contains a row for each primary key value.

***NO** The source table is not complete and does not contain a row for each primary key value.

Top

Command from GUI (FROMGUI)

Parameter used by the Replication Center Graphical User Interface.

Top

SQL output file (SQLFILE)

Parameter used by the Replication Center Graphical User Interface.

Top

Message output file (MSGFILE)

Parameter used by the Replication Center Graphical User Interface.

Top

Source table RDB (SRCTBLRDB)

Specifies the name of the relational database in which the source table resides. By specifying a remote relational database name, you are setting up a registration to a source table that uses remote journaling.

You can use remote journaling in conjunction with the Capture process to limit the system usage on the system where the source table resides. You do this by registering the source table (and running the **ADDDPRREG** command) on the system to which the source table is remote journaled.

In other words, if the source table is on the system from which you run this command, and the changes are journaled to a table on this system as well, you are not using remote journaling. If the source table is on a system other than the system from which you run this command, and the changes are journaled to this local system, you are using remote journaling.

***LOCAL**

The source table is located on this system.

relational-database-name

Specifies the name of the relational database (RDB) where the source table is located. The specified RDB must be for a system running i5/OS Version 4 Release 2 or later.

If you are using remote journaling for this source table, specify the name of the RDB on the system where the source table is located.

If you are not using remote journaling for this registration, specify the name of the local RDB, or leave it at the default value of *LOCAL.

Top

Remote journal (RMTJRN)

If the source table is remote (that is, the source table is set up to be remotely journaled to this system), specify the name of the journal on this system that the changes to the remote source table are directed to.

If you are not using remote journaling, you must specify *SRCTBL.

***SRCTBL**

The name of the journal is the same as the local journal that is associated with the source table. You must use this value if the source table is local (that is, the value of the SRCTBLRDB parameter is *LOCAL).

library-name/journal-name

Specifies the qualified name of the journal on this system that is used for journaling the remote source table. The library name does not need to be the same as the library where the source table journal resides. However, the journal name must be either *SRCTBL or the same as the source table's journal name.

Top

Conflict level (CONFLICT)

Specifies the level of conflict detection that is done during a update anywhere subscription.

***NONE**

No conflict detection is done. This is the value needed for all tables that will not be using update anywhere.

***STANDARD**

Moderate conflict detection in which the Apply program searches rows already captured in the replicas change data tables for conflicts.

***ENHANCED**

Conflict detection that provides the best data integrity among all replicas and source tables

Top

Update using delete/insert (UPDDELINS)

Determines how updated data is handled. Data that is inserted into or deleted from the source table is not affected by this parameter. Specify UPDDELINS(*YES) when the key fields for the target table are being changed by the application.

- *NO** Updates made to the source table are staged to the Change Data table. The changes are applied as updates
- *YES** Updates made to the source table are captured as delete and insert pairs. Apply then deletes the existing row and inserts a new row.

Top

Generate change data rows (GENCDROW)

Specifies what changes from the journals should be copied into the Change Data table.

- *ALLCHG**
All insert, update, and delete records from the source table's journal are copied into the Change Data table.
- *REGCOLCHG**
Copy journal entries where registered columns have changed. If the changes are to columns that are not in the Change Data table, these changes will not be captured.

Top

Recapture changes (RECAP)

Specifies whether or not changes made to a table by Apply are re-captured by Capture.

- *YES** Changes made to the source table by Apply are Captured and appear in the Change Data table.
- *NO** Changes made to the source table by Apply are not Captured and do not appear in the Change Data table.

Top

Stop on error (STOPONERR)

Specifies whether or not Capture will stop when an error is encountered

- *NO** Capture will continue processing after issuing error messages and deactivating the registration which caused the error.
- *YES** Capture will issue an error message and completely stop processing when an error is encountered.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN3020

Registration for source table completed.

ASN3027

Table not journaled with *BOTH images.

ASN3036

Column not found.

ASN3055

Cannot capture changes for table .

ASN3069

Relative record numbers cannot be captured.

ASN3075

Relative record numbers cannot be captured for an aggregate source table.

ASN3115

Relational database is not i5/OS V4R2 or greater.

ASN3116

Remote journal in library is not found.

ASN3121

The source table journal does not match the data from the RMTJRN parameter.

ASN3122

The SRCTBLRDB parameter cannot specify a remote source table that is a logical file.

ASN3125

Local relational database is not i5/OS V4R2 or greater.

ASN3213

Base attributes not valid for base type.

ASN3217

CAPRRN(*YES) not valid with aggregate base type. A value of *YES on the CAPRRN parameter is not valid

ASN3219

You must specify *NO on the CAPRRN parameter when the CAPCOL parameter has a value of *NONE.

ASN3230

A Remote Journal Name cannot be specified if the Source Table RDB is *LOCAL.

ASN3238

The source table does not contain the correct columns for a source type.

ASN3249

Relative record number column IBMQSQ_RRN is not available.

ASN3254

Registration already exists for table .

ASN3279

View table has more columns than subselect string.

ASN3280

View subselect string missing correlation name.

ASN3281

View subselect string missing file name.

ASN3284

SQLFILE must not be *NONE when FROMGUI is *YES.

ASN3285

MSGFILE must not be *NONE when FROMGUI is *YES.

ASN3286

SQLFILE and MSGFILE names are the same.

ASN3292

Register table not found.

Top

Add DPR Subscription (ADDDPRSUB)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Add DPR Subscription (ADDDPRSUB) command creates an empty subscription set. If a source and target table are specified it will also add the specified member to the set. The source table should have been registered with the Add DPR Registration (ADDDPRREG) command.

The ADDDPRSUB command reads the column definitions of the registered source table and uses them to create the target table automatically if the CRTTGTTBL parameter is specified as *YES. If the CRTTGTTBL parameter is specified as *NO, then an existing table will be used.

If the library specified on the TGTTBL parameter does not have a journal or journal receiver, they are created. The journal is called QSQRN. The journal receiver is called QSQRN nnnn , where nnnn is 0001 if no other journal receivers exist, and is incremented by 1 until an available name is found.

If the target table is created during the subscription, the target table is journaled to the QSQRN journal. Otherwise, you must set up journaling for the target table separately.

If the value of the ADDREG parameter is *YES, the ADDDPRSUB command also automatically registers the target table on the target server as a potential source table for another subscription. This is called auto-registration .

This command supports the i5/OS environment only, and not the other databases that support DataPropagator.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ADDDPRSUB

*ESCAPE Messages

ASN1038

No column names or expressions supplied.

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN303A

Row selection expression not valid.

ASN3036

Column not found.

ASN3037

Column already exists.

ASN3039

Column already exists.

ASN3041

Column functions are not allowed.

- ASN3042**
Columns cannot be renamed.
- ASN3047**
Internal error in module .
- ASN3068**
Key columns required for target type .
- ASN3074**
KEYCOL(IBMQSQ_RRN) not valid with target type .
- ASN3078**
The target file does not match the subscription.
- ASN3079**
The target file does not contain the correct columns.
- ASN3115**
Relational database is not i5/OS V4R2 or greater.
- ASN3210**
UNIQUE must be *YES when TGTTYPE is *POINTINTIME.
- ASN3218**
A value of *RRN is not allowed on the KEYCOL parameter for this target type.
- ASN3220**
A value of *NONE on the KEYCOL parameter is not allowed with this target type.
- ASN3231**
UNIQUE must be *YES when TGTTYPE is *REPLICA.
- ASN3232**
UNIQUE must be *YES when TGTTYPE is *USERCOPY.
- ASN3233**
COLUMN must be *ALL when TGTTYPE is *REPLICA.
- ASN3235**
CALCCOL must be *NONE when TGTTYPE is *REPLICA.
- ASN3241**
Target table is registered as the wrong type.
- ASN3251**
Subscription already exists for Apply Qualifier Set Name .
- ASN3253**
Registration not found for table .
- ASN3254**
Registration already exists for table .
- ASN3256**
Not authorized to Subscription Set table.
- ASN3257**
Not authorized to Subscription Member table.
- ASN3258**
Not authorized to Subscription Columns table.
- ASN3259**
Not authorized to Subscription Statement table.

- ASN3262**
Source and target not valid.
- ASN3263**
Not authorized to Prune Control table.
- ASN3265**
Subscription set created for Apply Qualifier Set Name
- ASN3267**
All members of set not from the same journal.
- ASN3274**
Relative record numbers are not being captured.
- ASN3275**
Record number column IBMQSQ_RRN is not available.
- ASN3277**
Source table in contains the column.
- ASN3278**
TGTCOL must be *COLUMN when TGTTYPE is *REPLICA.
- ASN3283**
Source table cannot be a view when TGTTYPE is *REPLICA.
- ASN3288**
SRCTBL and TGTTBL must both be *NONE.
- ASN3290**
Commit Count less than zero.
- ASN3291**
Registration Extension table not found.
- ASN3292**
Register table not found.
- ASN3293**
Pruning control table not found.
- ASN4512**
Set subscription table not found.
- ASN4514**
Subscription statements table not found.
- ASN4518**
Subscription member table not found.
- ASN4520**
Subscription columns table not found.

Top

Parameters

| Keyword | Description | Choices | Notes |
|---------|-----------------|-------------|---------------------------|
| APYQUAL | Apply qualifier | <i>Name</i> | Required, Positional 1 |
| SETNAME | Set name | <i>Name</i> | Required, Positional 2 |

| Keyword | Description | Choices | Notes |
|-----------|--------------------------------|--|---------------------------|
| TGTTBL | Target table | <i>Qualified object name</i> | Optional |
| | Qualifier 1: Target table | <i>Name, *NONE</i> | |
| | Qualifier 2: Library | <i>Name</i> | |
| SRCTBL | Source table | <i>Qualified object name</i> | Optional, Positional 4 |
| | Qualifier 1: Source table | <i>Name, *NONE</i> | |
| | Qualifier 2: Library | <i>Name</i> | |
| CTLSVR | Control server | <i>Name, *LOCAL</i> | Optional, Positional 3 |
| SRCSVR | Source server | <i>Name, *LOCAL</i> | Optional |
| CAPCTLLIB | Capture control library | <i>Name, *ASN</i> | Optional |
| TGTCCLIB | Target capture control library | <i>Name, *CAPCTLLIB</i> | Optional |
| TGTTYPE | Target type | <i>*USERCOPY, *REPLICA, *POINTINTIME, *BASEAGR, *CHANGEAGR, *CCD</i> | Optional |
| TIMING | Refresh timing | <i>*INTERVAL, *EVENT, *BOTH</i> | Optional |
| EVENT | Event name | <i>Name, *NONE</i> | Optional |
| INTERVAL | Interval between iterations | Values (up to 5 repetitions): <i>Element list</i> | Optional |
| | Element 1: Number | 1-60, <u>1</u> | |
| | Element 2: Interval | <i>*WEEK, *DAY, *HOUR, *MIN</i> | |
| KEYCOL | Key columns | Single values: <i>*SRCTBL, *RRN, *NONE</i> Other values (up to 120 repetitions): <i>Character value</i> | Optional |
| ACTIVATE | Activate subscription | <i>*YES, *NO</i> | Optional |
| CRTTGTTBL | Create target table | <i>*YES, *NO</i> | Optional |
| CHKFMT | Check target table format | <i>*YES, *NO</i> | Optional |
| COLUMN | Source columns | Single values: <i>*ALL, *NONE</i> Other values (up to 300 repetitions): <i>Character value</i> | Optional |
| UNIQUE | Unique key | <i>*YES, *NO</i> | Optional |
| TGTCOL | Target columns | Single values: <i>*COLUMN</i> Other values (up to 300 repetitions): <i>Element list</i> | Optional |
| | Element 1: Column | <i>Character value</i> | |
| | Element 2: New column | <i>Character value</i> | |
| CALCCOL | Calculated columns | Single values: <i>*NONE</i> Other values (up to 100 repetitions): <i>Element list</i> | Optional |
| | Element 1: Column | <i>Character value</i> | |
| | Element 2: Expression | <i>Character value</i> | |
| ROWSLT | Row selection expression | <i>Character value, *ALL</i> | Optional |
| SQLBEFORE | SQL to run before | Single values: <i>*NONE</i> Other values (up to 3 repetitions): <i>Element list</i> | Optional |
| | Element 1: SQL statement | <i>Character value</i> | |
| | Element 2: Server to run on | <i>Name, *SRCSVR, *TGTSVR</i> | |
| | Element 3: Allowed SQL states | Single values: <i>*NONE</i> Other values (up to 10 repetitions): 000000-0FFFFFF | |
| SQLAFTER | SQL to run after | Single values: <i>*NONE</i> Other values (up to 3 repetitions): <i>Element list</i> | Optional |
| | Element 1: SQL statement | <i>Character value</i> | |
| | Element 2: Server to run on | <i>Name, *SRCSVR, *TGTSVR</i> | |
| | Element 3: Allowed SQL states | Single values: <i>*NONE</i> Other values (up to 10 repetitions): 000000-0FFFFFF | |

| Keyword | Description | Choices | Notes |
|-----------|------------------------------|---|----------|
| MAXSYNCH | Maximum synchronization time | Values (up to 5 repetitions): <i>Element list</i> | Optional |
| | Element 1: Number | 0-60, <u>0</u> | |
| | Element 2: Interval | *WEEK, *DAY, *HOUR, * <u>MIN</u> | |
| CMTCNT | Commit count | <i>Integer</i> , * <u>DEFAULT</u> , *NULL | Optional |
| TGTKEYCHG | Target key change | <i>Character value</i> , * <u>NO</u> , *YES | Optional |
| ADDREG | Add DPR registration | *YES, * <u>NO</u> | Optional |
| FEDSVR | Federated server | <i>Character value</i> , * <u>NONE</u> | Optional |

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier. The apply qualifier is the name which is used to group the subscriptions that are to be run by the same Apply instance. You can specify a maximum of 18 characters for the apply qualifier name. This name follows the same naming conventions as an RDB name.

Top

Set name (SETNAME)

Specifies the Set Name which identifies a group of target tables (subscription set members) that are processed by the Apply program as a group. This must be unique under the Apply Qualifier. An error results if the set name already exists for the given Apply Qualifier in the ADDDPRSUB command. The Apply program handles the target tables in a set as a group. When one target table fails for any reason, the entire set fails.

Top

Target table (TGTTBL)

Identifies the name of the target table. The target table is automatically created if a value of *YES is specified on the CRTTGTTBL parameter and the target table does not already exist.

*NONE

Creates an empty subscription set. This is a subscription set that does not contain any members. If this value is used, the SRCTBL parameter must also be *NONE. The Add DPR Subscription Member (ADDDPRSUBM) command can be used to added members to the empty set.

library/target-table-name

The qualified name of the target table.

Top

Source table (SRCTBL)

Identifies the source table from which you want to copy. This is a required parameter.

The source table refers to a table that you registered on the system identified by the SRCSVR keyword, although it does not have to physically reside on that system.

*NONE

Creates an empty subscription set. This is a subscription set that does not contain any members. If this value is used, the TGTBL parameter must also be *NONE. The Add DPR Subscription Member (ADDDPRSUBM) command can be used to add members to the empty set.

library/source-table-name

The qualified name of the source table to be copied.

Top

Control server (CTLSVR)

The relational database name where the Apply control tables exist. This is the relational database name for the control server.

*LOCAL

The Apply control tables are located on the local relational database.

rdb-name

The relational database name where the Apply control tables reside. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the Apply control tables are on the system where the ADDDPRSUB command is being executed, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it.

Top

Source server (SRCSVR)

The relational database name where the source table is registered. The source table may or may not physically reside on that system. This is the relational database name for the source server.

*LOCAL

The source table registration is located on the local relational database.

rdb-name

The relational database name where the source table is registered. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the source server and the target server are the same, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it. Otherwise, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it on the source server.

Top

Capture control library (capctlib)

Specifies the library where the Capture control tables are located. This is the library that contains the IBMSNAP_REGISTER table that has a registration for the source table.

ASN Specifies the default library of ASN containing the Capture control tables.

library-name

Name of the library containing the Capture control tables.

Top

Target capture control library (TGTCLIB)

Specifies the target Capture control library where the Capture control tables are located. This is the library that contains the IBMSNAP_REGISTER table where target table will be registered during auto-registration.

If auto-registration is not used, the value specified by this parameter is still entered into the IBMSNAP_SUBS_SET table. So, when the target table is manually registered, the value given here must be used on the CAPCTLLIB parameter of the Add DPR Registration (ADDDPRREG) command.

*CAPCTLLIB

Specifies the target capture control library will be the same as the library specified on the CAPCTLLIB parameter.

library-name

Name of the library containing the Capture control tables.

Top

Target type (TGTTYPE)

Specifies the type of copy used to refresh the target table. These are DataPropagator terms that describe the contents of the target table. After a target table is created as one of these types, you can use this parameter value on the SRCTBL parameter of the Add DPR Registration (ADDDPRREG) command to register this target table as a source table.

*USERCOPY

The target table is a user copy. A user copy is a target table whose content matches all or part of a source table at a given time. A user copy is handled like a point-in-time copy, but it does not contain any of the DataPropagator overhead columns that are present in the point-in-time target table.

This value is not valid when a value of *RRN is specified on the KEYCOL parameter.

*POINTINTIME

The target table is a point-in-time copy. A point-in-time copy is a target table whose content matches all or part of a source table at a given point in time.

When the target table is a point-in-time copy, you should also specify the unique key fields on the KEYCOL parameter and specify a value of *YES on the UNIQUE parameter.

*REPLICA

The target table is a replica. The target table contains only the columns from the source table. Columns that start with the DataPropagator column identifiers, IBMSNAP or IBMQSQ, are not in the table.

This target table is used only for update anywhere. The target table receives changes from the source table and changes to the target table are propagated back to the source table.

This table is automatically registered as a source table. Also, extra rows are entered into the subscription control tables so that data from the target table can be propagated back to the source table.

***CCD** The target table is a consistent copy. A consistent copy is a target table that reflects a transaction-consistent state of the source table.

*BASEAGR

The target table is a base aggregate. A base aggregate is a target table that contains data aggregated from a source table or point-in-time table.

*CHANGEAGR

The target table is a change aggregate. A change aggregate is a target table that contains data aggregations based on changes recorded for a source table.

Top

Refresh timing (TIMING)

Describes the type of timing Apply should use to service the set.

*INTERVAL

Apply will service the set at a specific interval. For example, once a day.

*EVENT

Apply will service the set when a specific named event happens.

*BOTH

Apply will service the set either at a specific interval or when a named event happens.

Top

Event name (EVENT)

A unique character string used to represent an event. This character string should match an event that is described in the IBMSNAP_SUBS_EVENT table.

*NONE

No event is used for timing.

event-name

Unique character string representing an event.

Top

Interval between iterations (INTERVAL)

Specifies the time interval between refreshes of the target table in weeks, days, hours, and minutes. This is a two-part value. The first part, *number*, specifies the time interval from start time to start time; the second value is one of the following:

*MIN The time interval is specified in minutes.

*HOUR

The time interval is specified in hours.

*DAY The time interval is specified in days.

*WEEK

The time interval is specified in weeks.

You can specify combinations of the above values. For example, ((2 *WEEK) (3 *DAY) (35 *MIN)) specifies a time interval of 2 weeks, 3 days, and 35 minutes. If you specify multiple instances of the same value, the last occurrence is used.

Top

Key columns (KEYCOL)

Defines the list of columns that describe the key of the target table. The column names must be unqualified. For point-in-time, replica, and user copy target tables (as specified on the TGTTYPE parameter), you must specify the unique key fields.

*SRCTBL

The key columns in the target table are the same as those in the source table. The ADDDPRSUB command uses the key specified in the source table if the source table is keyed. The following key columns are used:

- Key columns that are defined through DDS when the table is created with the Create Physical File (CRTPF) command
- Primary and unique keys that are defined with CREATE TABLE and ALTER TABLE SQL statements
- Unique keys that are defined with CREATE INDEX SQL statements

If a column is used as a key more than once with different ordering, the target table key is defined with an ascending order.

***RRN** The key column in the target table is the IBMQSQ_RRN column. The target table is created with an IBMQSQ_RRN column and this column is used as the key. When the Apply component runs, if the source table is a user table and the target table is a point-in-time or consistent copy, the IBMQSQ_RRN column in the target table will be updated with the relative record number of the associated record in the source table. Otherwise, the IBMQSQ_RRN column in the target table will be updated with the value of the IBMQSQ_RRN column in the source table.

***NONE**

The target table does not contain a primary key. This value is not allowed if the target table is a point-in-time, replica, or user copy subscription.

column-name

A list of up to 120 column names.

Top

Activate subscription (ACTIVATE)

Determines if the subscription record is active. The copy is not updated from the source value unless the value of this parameter is *YES.

***YES** The subscription is active.

***NO** The subscription is not active. The copy is not updated until the value of this field is *YES.

Top

Create target table (CRTTGTTBL)

Specifies whether the target table is to be created.

***YES** Create the target table if it does not exist. If the table exists already, it is used as the target table and its format is checked if the value of the CHKFMT parameter is *YES. The target table can be a view. No indexes will be created if the target table is a view. An additional index will not be created if the target table exists and an index already exists that matches the values specified with the KEYCOL and UNIQUE parameters. If the target table exists and indexes are created, the command will fail if the target table contains records that violate these indexes.

***NO** Do not create the target table. The table does not need to exist. If it does not exist, you must create the table in the correct format before starting the Apply component.

If the table exists and CHKFMT(*YES) is specified, the ADDDPRSUB command ensures that the format of the existing table matches the subscription. If CHKFMT(*NO) is specified, you must ensure that the format of the existing table matches the subscription.

Top

Check target table format (CHKFMT)

Specifies whether checking should be done to ensure that the columns defined for this subscription match the columns in the target table. This parameter is ignored if the value of the CRTTGTTBL parameter is *YES or if the value of the CRTTGTTBL parameter is *NO and the target table does not exist.

- *YES** Checking is done to ensure that the columns defined for this subscription match the columns in the target table. The command fails if a mismatch is detected.
- *NO** Differences between the subscription and the existing target table are ignored. You must ensure that the target table is compatible with the subscription.

Top

Source columns (COLUMN)

Defines the list of columns to be included in the target table. The column names must be unqualified. Choose the column names from the list of column names that were specified on the CAPCOL parameter of the registered source table.

If *BOTH was specified on the IMAGE parameter of the registered source table, you can specify before column names. The before image column names are the same as the original column names, but they are prefixed with the character specified on the PREFIX parameter of the ADDDPRREG command that created the registration on the source table.

- *ALL** All columns specified on the CAPCOL parameter of the Add DPR Registration (ADDDPRREG) command for the registered source table are included.
- *NONE** No columns are included. This value is required when expressions on the CALCCOL parameter contain summary functions (for example, SUM or AVG). Base aggregate and change aggregate subscriptions frequently require this parameter to be *NONE for this reason.

column-name

A list of up to 300 column names.

Top

Unique key (UNIQUE)

Specifies whether the target table has unique keys as specified on the KEYCOL parameter.

- *YES** The target table supports one net change per key; that is, no matter how many changes are made to the key, only one row exists in the target table for that key. Point-in-time, replica, user copy, and condensed consistent tables should have unique keys.
- *NO** The target table supports multiple changes per key. The changes are appended to the target table. You should specify this value for consistent tables that are not condensed.

Top

Target columns (TGTCOL)

Defines new names for the columns to be updated in the target table. These names override the column names in the source table. The column names must be unqualified. You can use this parameter to give more meaningful names to the target table columns.

If you specified a value of *NONE for the COLUMN parameter, then you should not use this parameter.

*COLUMN

The target columns are the same as those specified on the COLUMN parameter.

column-name

A list of up to 300 column names.

new-name

A list of up to 300 new column names.

Top

Calculated columns (CALCCOL)

Defines the list of user-defined or calculated columns in the target table. The column names must be unqualified. An SQL expression can be specified. A column name is required for each expression. A value of *NONE must be specified on the COLUMN parameter if you want to use an SQL column function on this parameter.

*NONE

No calculated columns are specified.

column-name

A list of up to 100 column names.

expression

A list of up to 100 SQL column expressions.

Top

Row selection expression (ROWSLT)

Defines the predicates to be placed in an SQL WHERE clause to select the rows to be maintained in the target table.

Note: The WHERE clause on this parameter has no relation to any WHERE clauses specified on the SQLBEFORE and SQLAFTER parameters.

*ALL All rows in the source table are selected.

WHERE-clause

An SQL WHERE clause. The WHERE keyword is implied on this parameter, so it should not be specified. You should make sure the WHERE clause is valid on the data server platform on which you are running this clause.

You must use the SQL naming convention instead of the system naming convention. SQL table references must be in the form LIBRARY.TABLE instead of the system naming convention (LIBRARY/TABLE).

Top

SQL to run before (SQLBEFORE)

Specifies SQL statements that run before the Apply process refreshes the target table.

*NONE

No SQL statement is specified.

SQL-statements

You can run up to 3 SQL statements before the Apply process refreshes the target table. This parameter consists of three elements.

Element 1: SQL statement

SQL-statement

The SQL statement that you want to run. You should ensure that the SQL syntax used is correct on the platform on which you will be running this statement. DataPropagator does not check for proper syntax when running this statement. In addition, you must use the SQL naming convention. SQL table references must be in the form LIBRARY.TABLE instead of the system naming convention (LIBRARY/TABLE).

Element 2: Server to run on

*SRCSVR

The SQL statement is run at the source server where the source table is located.

*TGTSVR

The SQL statement is run at the target server where the target table is located.

Element 3: Allowed SQL states

*NONE

No SQL state values other than 00000 are to be considered successful.

SQL-states

A list of between 1 and 10 SQL states. This is a 5 digit hexadecimal number ranging from 00000 to FFFFF.

If the SQL statement completes with an SQLSTATE value of 00000 or any of the values you list on this parameter, it will be considered successful, and the Apply process will continue processing the subscription. Some SQL state values that might be useful are listed below:

- 02000. Row not found for update or delete.
- 01567. The table was created but not journaled.
- 01504. Update or delete does not include a WHERE clause.
- 42710. Table already exists.
- 42704. Table not found.

Top

SQL to run after (SQLAFTER)

Specifies SQL statements that run after the Apply process refreshes the target table.

*NONE

No SQL statement is specified.

SQL-statements

You can run up to 3 SQL statements after the Apply process refreshes the target table. This parameter consists of three elements.

Element 1: SQL statement

SQL-statement

The SQL statement that you want to run. You should ensure that the SQL syntax used is correct on the platform on which you will be running this statement. DataPropagator does not check for proper syntax when running this statement. In addition, you must use the SQL naming convention. SQL table references must be in the form LIBRARY.TABLE instead of the system naming convention (LIBRARY/TABLE).

Element 2: Server to run on

***TGTSVR**

The SQL statement is run at the target server where the target table is located. For SQL After, this is the only server the SQL statements can be run on.

Element 3: Allowed SQL states

***NONE**

No SQL state values other than 00000 are to be considered successful.

SQL-states

A list of between 1 and 10 SQL states. This is a 5 digit hexadecimal number ranging from 00000 to FFFFF.

If the SQL statement completes with an SQLSTATE value of 00000 or any of the values you list on this parameter, it will be considered successful, and the Apply process will continue processing the subscription. Some SQL state values that might be useful are listed below:

- 02000. Row not found for update or delete.
- 01567. The table was created but not journaled.
- 01504. Update or delete does not include a WHERE clause.
- 42710. Table already exists.
- 42704. Table not found.

Top

Maximum synchronization time (MAXSYNCH)

Specifies the maximum synch minutes which is a time-threshold limit to regulate the amount of change data to fetch and apply during a subscription cycle.

This is a two-part value. The first part, *number*, specifies the time interval; the second value is one of the following:

***MIN** The time interval is specified in minutes.

***HOUR**

The time interval is specified in hours.

***DAY** The time interval is specified in days.

***WEEK**

The time interval is specified in weeks.

You can specify combinations of the above values. For example, ((3 *DAY) (35 *MIN)) specifies a time interval of 3 days, and 35 minutes. If you specify multiple instances of the same value, the last occurrence is used.

Commit count (CMTCNT)

Specifies the commitment count which is the number of transactions Apply will process before doing a commit.

*DEFAULT

The command will decide the value to use. If the TGTTYPE is *REPLICA, then the CMTCNT will be set to zero (0). Otherwise, it will be set to NULL.

*NULL

Indicates the set will be read only with no referential integrity. A single COMMIT will be done after all data for the subscription set is processed.

num-transactions

Valid only if the TGTTYPE is *REPLICA. Specifies the number of transactions to apply before Apply issues a COMMIT.

Target key change (TGTKEYCHG)

Specifies the target key change. This is a flag indicating how the Apply program handles updates when the columns for the primary key of a target table are changed in the source table:

*NO Updates to the source table are handled as updates to the target table.

***YES** The Apply program updates the target table based on the before images of the primary key column. When the source table was registered, the USEDELINS parameter should have been set to *NO. Also, the source table needs to have been registered with IMAGE(*BOTH).

Add DPR registration (ADDREG)

Specifies whether or not the target table is to be registered as a source table for DataPropagator. This parameter is ignored when the TGTTYPE is *REPLICA because the target table is automatically registered as a source table.

*NO The target table is not registered.

If the TGTTYPE is *REPLICA, this value is ignored and the target is registered as a source table.

If the target table is already registered, no checking is done to ensure that the target table and the source table are not the same table.

***YES** The target table is registered as a source table. The command fails if the target table is already registered.

If the table does not exist and the value of the CRTTGTTBL parameter is *NO, the target table is not registered. In addition, the target table is not registered if the value of the TGTTYPE parameter is *USERCOPY.

If the target table exists, has a target type other than *USERCOPY, and is already registered, the command checks to ensure the source type of the registration is the same as the target type of the subscription.

Federated server (FEDSVR)

Specifies the name of the DataJoiner remote server that is the source for this subscription.

*NONE

The source server is not a DataJoiner remote server

server-name

Name of the DataJoiner remote server

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN1038

No column names or expressions supplied.

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN303A

Row selection expression not valid.

ASN3036

Column not found.

ASN3037

Column already exists.

ASN3039

Column already exists.

ASN3041

Column functions are not allowed.

ASN3042

Columns cannot be renamed.

ASN3047

Internal error in module .

ASN3068

Key columns required for target type .

ASN3074

KEYCOL(IBMQSQ_RRN) not valid with target type .

ASN3078

The target file does not match the subscription.

ASN3079

The target file does not contain the correct columns.

- ASN3115**
Relational database is not i5/OS V4R2 or greater.
- ASN3210**
UNIQUE must be *YES when TGTTYPE is *POINTINTIME.
- ASN3218**
A value of *RRN is not allowed on the KEYCOL parameter for this target type.
- ASN3220**
A value of *NONE on the KEYCOL parameter is not allowed with this target type.
- ASN3231**
UNIQUE must be *YES when TGTTYPE is *REPLICA.
- ASN3232**
UNIQUE must be *YES when TGTTYPE is *USERCOPY.
- ASN3233**
COLUMN must be *ALL when TGTTYPE is *REPLICA.
- ASN3235**
CALCCOL must be *NONE when TGTTYPE is *REPLICA.
- ASN3241**
Target table is registered as the wrong type.
- ASN3251**
Subscription already exists for Apply Qualifier Set Name .
- ASN3253**
Registration not found for table .
- ASN3254**
Registration already exists for table .
- ASN3256**
Not authorized to Subscription Set table.
- ASN3257**
Not authorized to Subscription Member table.
- ASN3258**
Not authorized to Subscription Columns table.
- ASN3259**
Not authorized to Subscription Statement table.
- ASN3262**
Source and target not valid.
- ASN3263**
Not authorized to Prune Control table.
- ASN3265**
Subscription set created for Apply Qualifier Set Name
- ASN3267**
All members of set not from the same journal.
- ASN3274**
Relative record numbers are not being captured.
- ASN3275**
Record number column IBMQSQ_RRN is not available.

- ASN3277**
Source table in contains the column.
- ASN3278**
TGTCOL must be *COLUMN when TGTTYPE is *REPLICA.
- ASN3283**
Source table cannot be a view when TGTTYPE is *REPLICA.
- ASN3288**
SRCTBL and TGTTBL must both be *NONE.
- ASN3290**
Commit Count less than zero.
- ASN3291**
Registration Extension table not found.
- ASN3292**
Register table not found.
- ASN3293**
Pruning control table not found.
- ASN4512**
Set subscription table not found.
- ASN4514**
Subscription statements table not found.
- ASN4518**
Subscription member table not found.
- ASN4520**
Subscription columns table not found.

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Add DPR Subscription Member (ADDDPRSUBM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Add DPR Subscription Member(ADDDPRSUBM) command adds a member to an existing subscription set, The source table has been registered with the Add DPR Registration (ADDDPRREG) command. The ADDDPRSUBM command reads the column definitions of the registered source table and uses them to create the target table automatically if the CRTTGTTBL parameter is specified as *YES. If the CRTTGTTBL parameter is specified as *NO, then an existing table will be used.

If the library specified on the TGTTBL parameter does not have a journal or journal receiver, they are created. The journal is called QSQRN. The journal receiver is called QSQRN nnnn , where nnnn is 0001 if no other journal receivers exist, and is incremented by 1 until an available name is found.

If the target table is created during the subscription, the target table is journaled to the QSQRN journal. Otherwise, you must set up journaling for the target table separately.

If the value of the ADDREG parameter is *YES, the ADDDPRSUBM command also automatically registers the target table on the target server as a potential source table for another subscription. This is called auto-registration .

This command supports the i5/OS environment only, and not the other databases that support DataPropagator.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ADDDPRSUBM

*ESCAPE Messages

ASN1038

No column names or expressions supplied.

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN303A

Row selection expression not valid.

ASN3036

Column not found.

ASN3037

Column already exists.

ASN3039

Column already exists.

ASN3041

Column functions are not allowed.

- ASN3042**
Columns cannot be renamed.
- ASN3047**
Internal error in module .
- ASN3068**
Key columns required for target type .
- ASN3072**
Relative record numbers are not being captured.
- ASN3073**
Record number column IBMQSQ_RRN is not available.
- ASN3074**
KEYCOL(IBMQSQ_RRN) not valid with target type .
- ASN3078**
The target file does not match the subscription.
- ASN3079**
The target file does not contain the correct columns.
- ASN3115**
Relational database is not i5/OS V4R2 or greater.
- ASN3210**
UNIQUE must be *YES when TGTTYPE is *POINTINTIME.
- ASN3218**
A value of *RRN is not allowed on the KEYCOL parameter for this target type.
- ASN3220**
A value of *NONE on the KEYCOL parameter is not allowed with this target type.
- ASN3231**
UNIQUE must be *YES when TGTTYPE is *REPLICA.
- ASN3232**
UNIQUE must be *YES when TGTTYPE is *USERCOPY.
- ASN3233**
COLUMN must be *ALL when TGTTYPE is *REPLICA.
- ASN3235**
CALCCOL must be *NONE when TGTTYPE is *REPLICA.
- ASN3241**
Target table is registered as the wrong type.
- ASN3253**
Registration not found for table .
- ASN3254**
Registration already exists for table .
- ASN3256**
Not authorized to Subscription Set table.
- ASN3257**
Not authorized to Subscription Member table.
- ASN3258**
Not authorized to Subscription Columns table.

- ASN3262**
Source and target not valid.
- ASN3263**
Not authorized to Prune Control table.
- ASN3266**
Subscription does not exist for Apply Qualifier Set Name .
- ASN3267**
All members of set not from the same journal.
- ASN3268**
Subscription member created for Apply Qualifier Set Name
- ASN3269**
Member already exists.
- ASN3277**
Source table in contains the column.
- ASN3278**
TGTCOL must be *COLUMN when TGTTYPE is *REPLICA.
- ASN3283**
Source table cannot be a view when TGTTYPE is *REPLICA.
- ASN3290**
Commit Count less than zero.
- ASN3291**
Registration Extension table not found.
- ASN3292**
Register table not found.
- ASN3293**
Pruning control table not found.
- ASN4512**
Set subscription table not found.
- ASN4518**
Subscription member table not found.
- ASN4520**
Subscription columns table not found.

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Parameters

| Keyword | Description | Choices | Notes |
|---------|---------------------------|------------------------------|---------------------------|
| APYQUAL | Apply qualifier | <i>Name</i> | Required, Positional 3 |
| SETNAME | Set name | <i>Name</i> | Required, Positional 4 |
| TGTTBL | Target table | <i>Qualified object name</i> | Required, Positional 2 |
| | Qualifier 1: Target table | <i>Name</i> | |
| | Qualifier 2: Library | <i>Name</i> | |

| Keyword | Description | Choices | Notes |
|-----------|---------------------------|--|---------------------------|
| SRCTBL | Source table | <i>Qualified object name</i> | Required, Positional 1 |
| | Qualifier 1: Source table | <i>Name</i> | |
| | Qualifier 2: Library | <i>Name</i> | |
| CTLSVR | Control server | <i>Name, *LOCAL</i> | Optional |
| SRCSVR | Source server | <i>Name, *LOCAL</i> | Optional |
| TGTTYPE | Target type | <i>*USERCOPY, *REPLICA, *POINTINTIME, *BASEAGR, *CHANGEAGR, *CCD</i> | Optional |
| KEYCOL | Key columns | Single values: <i>*SRCTBL, *RRN, *NONE</i> Other values (up to 120 repetitions): <i>Character value</i> | Optional |
| CRITGTTBL | Create target table | <i>*YES, *NO</i> | Optional |
| CHKFMT | Check target table format | <i>*YES, *NO</i> | Optional |
| COLUMN | Source columns | Single values: <i>*ALL, *NONE</i> Other values (up to 300 repetitions): <i>Character value</i> | Optional |
| UNIQUE | Unique key | <i>*YES, *NO</i> | Optional |
| TGTCOL | Target columns | Single values: <i>*COLUMN</i> Other values (up to 300 repetitions): <i>Element list</i> | Optional |
| | Element 1: Column | <i>Character value</i> | |
| | Element 2: New column | <i>Character value</i> | |
| CALCCOL | Calculated columns | Single values: <i>*NONE</i> Other values (up to 100 repetitions): <i>Element list</i> | Optional |
| | Element 1: Column | <i>Character value</i> | |
| | Element 2: Expression | <i>Character value</i> | |
| ROWSLT | Row selection expression | <i>Character value, *ALL</i> | Optional |
| TGTKEYCHG | Target key change | <i>Character value, *NO, *YES</i> | Optional |
| ADDREG | Add DPR registration | <i>*YES, *NO</i> | Optional |

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier. The apply qualifier is the name which is used to group the subscriptions that are to be run by the same Apply instance. You can specify a maximum of 18 characters for the apply qualifier name. This name follows the same naming conventions as an RDB name. This name must already exist in the IBMSNAP_SUBS_SET table.

Top

Set name (SETNAME)

Specifies the Set Name which identifies a group of target tables (subscription set members) that are processed by the Apply program as a group. This must be unique under the Apply Qualifier. An error results if the set name does not already exist in the IBMSNAP_SUBS_SET table. The Apply program handles the target tables in a set as a group. When one target table fails for any reason, the entire set fails.

Top

Target table (TGTTBL)

Identifies the name of the target table. The target table is automatically created if a value of *YES is specified on the CRTTGTTBL parameter and the target table does not already exist.

library/target-table-name

The qualified name of the target table.

Top

Source table (SRCTBL)

Identifies the source table from which you want to copy. This is a required parameter.

The source table refers to a table that you registered on the system identified by the SRCSVR keyword, although it does not have to physically reside on that system.

library/source-table-name

The qualified name of the source table to be copied.

Top

Control server (CTLSVR)

The relational database name where the Apply control tables exist. This is the relational database name for the control server.

*LOCAL

The Apply control tables are located on the local relational database.

rdb-name

The relational database name where the Apply control tables reside. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the Apply control tables are on the system where the ADDDPRSUB command is being executed, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it.

Top

Source server (SRCSVR)

The relational database name where the source table is registered. The source table may or may not physically reside on that system. This is the relational database name for the source server.

*LOCAL

The source table registration is located on the local relational database.

rdb-name

The relational database name where the source table is registered. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the source server and the target server are the same, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it. Otherwise, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it on the source server.

Top

Target type (TGTTYPE)

Specifies the type of copy used to refresh the target table. These are DataPropagator terms that describe the contents of the target table. After a target table is created as one of these types, you can use this parameter value on the SRCTBL parameter of the Add DPR Registration (ADDDPRREG) command to register this target table as a source table.

*USERCOPY

The target table is a user copy. A user copy is a target table whose content matches all or part of a source table at a given time. A user copy is handled like a point-in-time copy, but it does not contain any of the DataPropagator overhead columns that are present in the point-in-time target table.

This value is not valid when a value of *RRN is specified on the KEYCOL parameter.

*POINTINTIME

The target table is a point-in-time copy. A point-in-time copy is a target table whose content matches all or part of a source table at a given point in time.

When the target table is a point-in-time copy, you should also specify the unique key fields on the KEYCOL parameter and specify a value of *YES on the UNIQUE parameter.

*REPLICA

The target table is a replica. The target table contains only the columns from the source table. Columns that start with the DataPropagator column identifiers, IBMSNAP or IBMQSQ, are not in the table.

This target table is used only for update anywhere. The target table receives changes from the source table and changes to the target table are propagated back to the source table.

This table is automatically registered as a source table. Also, extra rows are entered into the subscription control tables so that data from the target table can be propagated back to the source table.

***CCD** The target table is a consistent copy. A consistent copy is a target table that reflects a transaction-consistent state of the source table.

*BASEAGR

The target table is a base aggregate. A base aggregate is a target table that contains data aggregated from a source table or point-in-time table.

*CHANGEAGR

The target table is a change aggregate. A change aggregate is a target table that contains data aggregations based on changes recorded for a source table.

Top

Key columns (KEYCOL)

Defines the list of columns that describe the key of the target table. The column names must be unqualified. For point-in-time, replica, and user copy target tables (as specified on the TGTTYPE parameter), you must specify the unique key fields.

*SRCTBL

The key columns in the target table are the same as those in the source table. The ADDDPRSUBM command uses the key specified in the source table if the source table is keyed. The following key columns are used:

- Key columns that are defined through DDS when the table is created with the Create Physical File (CRTPF) command

- Primary and unique keys that are defined with CREATE TABLE and ALTER TABLE SQL statements
- Unique keys that are defined with CREATE INDEX SQL statements

If a column is used as a key more than once with different ordering, the target table key is defined with an ascending order.

***RRN** The key column in the target table is the IBMQSQ_RRN column. The target table is created with an IBMQSQ_RRN column and this column is used as the key. When the Apply component runs, if the source table is a user table and the target table is a point-in-time or consistent copy, the IBMQSQ_RRN column in the target table will be updated with the relative record number of the associated record in the source table. Otherwise, the IBMQSQ_RRN column in the target table will be updated with the value of the IBMQSQ_RRN column in the source table.

***NONE**

The target table does not contain a primary key. This value is not allowed if the target table is a point-in-time, replica, or user copy subscription.

column-name

A list of up to 120 column names.

Top

Create target table (CRTTGTTBL)

Specifies whether the target table is to be created.

***YES** Create the target table if it does not exist. If the table exists already, it is used as the target table and its format is checked if the value of the CHKFMT parameter is *YES. The target table can be a view. No indexes will be created if the target table is a view. An additional index will not be created if the target table exists and an index already exists that matches the values specified with the KEYCOL and UNIQUE parameters. If the target table exists and indexes are created, the command will fail if the target table contains records that violate these indexes.

***NO** Do not create the target table. The table does not need to exist. If it does not exist, you must create the table in the correct format before starting the Apply component.

If the table exists and CHKFMT(*YES) is specified, the ADDEDPRSUB command ensures that the format of the existing table matches the subscription. If CHKFMT(*NO) is specified, you must ensure that the format of the existing table matches the subscription.

Top

Check target table format (CHKFMT)

Specifies whether checking should be done to ensure that the columns defined for this subscription match the columns in the target table. This parameter is ignored if the value of the CRTTGTTBL parameter is *YES or if the value of the CRTTGTTBL parameter is *NO and the target table does not exist.

***YES** Checking is done to ensure that the columns defined for this subscription match the columns in the target table. The command fails if a mismatch is detected.

***NO** Differences between the subscription and the existing target table are ignored. You must ensure that the target table is compatible with the subscription.

Top

Source columns (COLUMN)

Defines the list of columns to be included in the target table. The column names must be unqualified. Choose the column names from the list of column names that were specified on the CAPCOL parameter of the registered source table.

If *BOTH was specified on the IMAGE parameter of the registered source table, you can specify before column names. The before image column names are the same as the original column names, but they are prefixed with the character specified on the PREFIX parameter of the ADDDPRREG command that created the registration on the source table.

***ALL** All columns specified on the CAPCOL parameter of the Add DPR Registration (ADDDPRREG) command for the registered source table are included.

***NONE**

No columns are included. This value is required when expressions on the CALCCOL parameter contain summary functions (for example, SUM or AVG). Base aggregate and change aggregate subscriptions frequently require this parameter to be *NONE for this reason.

column-name

A list of up to 300 column names.

Top

Unique key (UNIQUE)

Specifies whether the target table has unique keys as specified on the KEYCOL parameter.

***YES** The target table supports one net change per key; that is, no matter how many changes are made to the key, only one row exists in the target table for that key. Point-in-time, replica, user copy, and condensed consistent tables should have unique keys.

***NO** The target table supports multiple changes per key. The changes are appended to the target table. You should specify this value for consistent tables that are not condensed.

Top

Target columns (TGTCOL)

Defines new names for the columns to be updated in the target table. These names override the column names in the source table. The column names must be unqualified. You can use this parameter to give more meaningful names to the target table columns.

If you specified a value of *NONE for the COLUMN parameter, then you should not use this parameter.

***COLUMN**

The target columns are the same as those specified on the COLUMN parameter.

column-name

A list of up to 300 column names.

new-name

A list of up to 300 new column names.

Top

Calculated columns (CALCCOL)

Defines the list of user-defined or calculated columns in the target table. The column names must be unqualified. An SQL expression can be specified. A column name is required for each expression. A value of *NONE must be specified on the COLUMN parameter if you want to use an SQL column function on this parameter.

*NONE

No calculated columns are specified.

column-name

A list of up to 100 column names.

expression

A list of up to 100 SQL column expressions.

Top

Row selection expression (ROWSLT)

Defines the predicates to be placed in an SQL WHERE clause to select the rows to be maintained in the target table.

Note: The WHERE clause on this parameter has no relation to any WHERE clauses specified on the SQLBEFORE and SQLAFTER parameters.

*ALL All rows in the source table are selected.

WHERE-clause

An SQL WHERE clause. The WHERE keyword is implied on this parameter, so it should not be specified. You should make sure the WHERE clause is valid on the data server platform on which you are running this clause.

You must use the SQL naming convention instead of the system naming convention. SQL table references must be in the form LIBRARY.table instead of the system naming convention (LIBRARY/table).

Top

Target key change (TGTKEYCHG)

Specifies the target key change. This is a flag indicating how the Apply program handles updates when the columns for the primary key of a target table are changed in the source table.

*NO Updates to the source table are handled as updates to the target table.

*YES The Apply program updates the target table based on the before images of the primary key column. When the source table was registered, the USEDELINS parameter should have been set to *NO. Also, the source table needs to have been registered with IMAGE(*BOTH).

Top

Add DPR registration (ADDREG)

Specifies whether or not the target table is to be registered as a source table for DataPropagator. This parameter is ignored when the TGTTYPE is *REPLICA because the target table is automatically registered as a source table.

*NO The target table is not registered.

If the TGTTYPE is *REPLICA, this value is ignored and the target is registered as a source table.

If the target table is already registered, no checking is done to ensure that the target table and the source table are not the same table.

***YES** The target table is registered as a source table. The command fails if the target table is already registered.

If the table does not exist and the value of the CRTTGTTBL parameter is *NO, the target table is not registered. In addition, the target table is not registered if the value of the TGTTYPE parameter is *USERCOPY.

If the target table exists, has a target type other than *USERCOPY, and is already registered, the command checks to ensure the source type of the registration is the same as the target type of the subscription.

[Top](#)

Examples

None

[Top](#)

Error messages

*ESCAPE Messages

ASN1038

No column names or expressions supplied.

ASN2051

Not authorized to Registration Extension table.

ASN2501

Not authorized to register table.

ASN303A

Row selection expression not valid.

ASN3036

Column not found.

ASN3037

Column already exists.

ASN3039

Column already exists.

ASN3041

Column functions are not allowed.

ASN3042

Columns cannot be renamed.

ASN3047

Internal error in module .

ASN3068

Key columns required for target type .

ASN3072

Relative record numbers are not being captured.

- ASN3073**
Record number column IBMQSQ_RRN is not available.
- ASN3074**
KEYCOL(IBMQSQ_RRN) not valid with target type .
- ASN3078**
The target file does not match the subscription.
- ASN3079**
The target file does not contain the correct columns.
- ASN3115**
Relational database is not i5/OS V4R2 or greater.
- ASN3210**
UNIQUE must be *YES when TGTTYPE is *POINTINTIME.
- ASN3218**
A value of *RRN is not allowed on the KEYCOL parameter for this target type.
- ASN3220**
A value of *NONE on the KEYCOL parameter is not allowed with this target type.
- ASN3231**
UNIQUE must be *YES when TGTTYPE is *REPLICA.
- ASN3232**
UNIQUE must be *YES when TGTTYPE is *USERCOPY.
- ASN3233**
COLUMN must be *ALL when TGTTYPE is *REPLICA.
- ASN3235**
CALCCOL must be *NONE when TGTTYPE is *REPLICA.
- ASN3241**
Target table is registered as the wrong type.
- ASN3253**
Registration not found for table .
- ASN3254**
Registration already exists for table .
- ASN3256**
Not authorized to Subscription Set table.
- ASN3257**
Not authorized to Subscription Member table.
- ASN3258**
Not authorized to Subscription Columns table.
- ASN3262**
Source and target not valid.
- ASN3263**
Not authorized to Prune Control table.
- ASN3266**
Subscription does not exist for Apply Qualifier Set Name .
- ASN3267**
All members of set not from the same journal.

- ASN3268**
Subscription member created for Apply Qualifier Set Name
- ASN3269**
Member already exists.
- ASN3277**
Source table in contains the column.
- ASN3278**
TGTCOL must be *COLUMN when TGTTYPE is *REPLICA.
- ASN3283**
Source table cannot be a view when TGTTYPE is *REPLICA.
- ASN3290**
Commit Count less than zero.
- ASN3291**
Registration Extension table not found.
- ASN3292**
Register table not found.
- ASN3293**
Pruning control table not found.
- ASN4512**
Set subscription table not found.
- ASN4518**
Subscription member table not found.
- ASN4520**
Subscription columns table not found.

Top

Analyze DPR Journaling (ANZDPRJRN)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Analyze DPR Journals (ANZDPRJRN) command helps you determine which journal receivers are no longer needed by the DataPropagator Capture component, and optionally deletes the journal receivers that are not needed.

Journal receivers are analyzed for the following types of source tables:

- source tables that have been registered under DataPropagator, and
- source tables that have started differential refresh (that is, a base file for which a row exists in its change data table).

The term base file includes SQL tables, SQL views, local and remote physical files, and logical files built on physical file members of multi-member physical files.

You can run this command whether or not the Capture process is running; however, it is recommended that you run it when the Capture process is not running.

For each receiver that is eligible for deletion, the command issues informational message ASN602E (if you do not choose automatic deletion), or informational message ASN602D (if you do choose automatic deletion).

The command creates a file named QZSNSPLF in library QTEMP with four members.

Note: The ANZDPRJRN command decides whether or not a journal receiver can be deleted only on the basis of its usefulness to the Capture component. Some of your journal receivers might be used for other purposes outside of DataPropagator. Unless you have complete knowledge about the journals that the registered files use, use caution when you specify that you want to have the eligible receivers automatically deleted for you.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ANZDPRJRN

*ESCAPE Messages

ASN2023

Error occurred on file in .

ASN6021

Attempt to get member information for base table in library failed with message .

ASN6022

Failed to read the journal list from the PCB.

ASN6024

Could not read any registration records.

ASN6025

Could not open table in library .

ASN6026

Attempt to get file information for base table in library failed with message .

ASN6027

Number of journals used for capturing data for propagation exceeds the limit of .

ASN6028

Could not delete journal receiver in library for journal in library .

ASN6029

Could not open member of file QZSNSPLF in library QTEMP.

ASN602A

Number of receivers for journal in library exceeds the limit of .

ASN602B

Could not delete journal receiver in library because of cancel reply to message CPA7025.

ASN602C

Could not establish starting sequence number or ending sequence number of a journal receiver.

ASN602D

Journal receiver in library for journal in library has been deleted.

ASN602E

Journal receiver in library for journal in library is eligible for deletion.

ASN602F

No journal receivers eligible for deletion were found for journal in library .

ASN604F

WRKJRNA command failed with escape message when working with journal in library .

Top

Parameters

| Keyword | Description | Choices | Notes |
|----------|-------------------------|------------------|----------|
| DLTJRRCV | Delete journal receiver | *YES, <u>*NO</u> | Optional |

Top

Delete journal receiver (DLTJRRCV)

Specifies whether or not you want to have the command delete those receivers that are no longer needed by the Capture component. Messages are issued for each receiver that is eligible for deletion, and the information is displayed in the job log as well.

***NO** Eligible receivers are not automatically deleted.

You might want to run the command using this option first to verify which journal receivers will be deleted.

***YES** Eligible receivers are automatically deleted.

Note: Unless you have complete knowledge about the journals that the registered files use, use caution when you specify that you want to have the eligible receivers automatically deleted for you.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2023

Error occurred on file in .

ASN6021

Attempt to get member information for base table in library failed with message .

ASN6022

Failed to read the journal list from the PCB.

ASN6024

Could not read any registration records.

ASN6025

Could not open table in library .

ASN6026

Attempt to get file information for base table in library failed with message .

ASN6027

Number of journals used for capturing data for propagation exceeds the limit of .

ASN6028

Could not delete journal receiver in library for journal in library .

ASN6029

Could not open member of file QZSNSPLF in library QTEMP.

ASN602A

Number of receivers for journal in library exceeds the limit of .

ASN602B

Could not delete journal receiver in library because of cancel reply to message CPA7025.

ASN602C

Could not establish starting sequence number or ending sequence number of a journal receiver.

ASN602D

Journal receiver in library for journal in library has been deleted.

ASN602E

Journal receiver in library for journal in library is eligible for deletion.

ASN602F

No journal receivers eligible for deletion were found for journal in library .

ASN604F

WRKJRNA command failed with escape message when working with journal in library .

Top

Create DPR Tables (CRTDPRTBL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

You use the Create DPR Tables (CRTDPRTBL) command to create the control tables that are needed by DataPropagator. The command creates all of the control tables for registration and subscription along with the required journals.

You must have *ALLOBJ authority to run this command.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for CRTDPRTBL

*ESCAPE Messages

ASN2002

Capture Parameters table not found.

ASN1015

Unit of work table not found.

ASN4501

Register table not found or failed to open.

ASN4502

Register table index not found or failed to open.

ASN4503

Pruning control table not found or failed to open.

ASN4504

Pruning Control index not found or failed to open.

ASN4505

Capture trace table not found.

ASN4506

Restart table not found or failed to open.

ASN4510

Register extension index not found or failed to open.

ASN4512

Set subscription table not found.

ASN4513

Set subscription index not found.

ASN4514

Subscription statements table not found.

ASN4515

Subscription statements index not found.

ASN4516

Subscription event table not found.

ASN4517

Subscription event index not found.

ASN4518

Subscription member table not found.

ASN4519

Subscription member index not found.

ASN4520

Subscription columns table not found.

ASN4521

Subscription columns index not found.

ASN4522

Apply trail table not found.

ASN424

The apply job table was not found.

ASN4525

Apply-qualifier cross-reference table not found or failed to open.

CPF3C20

Error found by program .

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|-------------------------|------------------|----------|
| CAPCTLLIB | Capture control library | Name, <u>ASN</u> | Optional |

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture control library to be created.

ASN Specifies the default capture control library provided with the DataPropagator product for iSeries.

capture-instance-name

Specifies the name of the capture control library to be created

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2002
Capture Parameters table not found.

ASN1015
Unit of work table not found.

ASN4501
Register table not found or failed to open.

ASN4502
Register table index not found or failed to open.

ASN4503
Pruning control table not found or failed to open.

ASN4504
Pruning Control index not found or failed to open.

ASN4505
Capture trace table not found.

ASN4506
Restart table not found or failed to open.

ASN4510
Register extension index not found or failed to open.

ASN4512
Set subscription table not found.

ASN4513
Set subscription index not found.

ASN4514
Subscription statements table not found.

ASN4515
Subscription statements index not found.

ASN4516
Subscription event table not found.

ASN4517
Subscription event index not found.

ASN4518
Subscription member table not found.

ASN4519
Subscription member index not found.

ASN4520
Subscription columns table not found.

ASN4521
Subscription columns index not found.

ASN4522
Apply trail table not found.

ASN424
The apply job table was not found.

ASN4525
Apply-qualifier cross-reference table not found or failed to open.

CPF3C20

Error found by program .

[Top](#)

End DPR Apply (ENDDPRAPY)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The End DPR Apply (ENDDPRAPY) command ends an instance of the DataPropagator for iSeries Apply process on the local system. You should end the Apply process before any planned system down time. Also, you might want to end the Apply process during periods of peak use on the system.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ENDDPRAPY

*ESCAPE Messages

ASN1502

Unable to find the local relational database name.

ASN1507

The apply job table, IBMSNAP_APPLY_JOB in library ASN, is not available.

ASN1515

The Apply process for apply qualifier "" is not active.

ASN4524

The apply job table was not found.

ASN1512

The ENDDPRAPY command failed.

ASN1513

An Apply job record was not found in the Apply Job table.

Top

Parameters

| Keyword | Description | Choices | Notes |
|---------|-----------------|--------------------------------|---------------------------|
| USER | User | Name, <u>*CURRENT</u> | Optional, Positional 1 |
| OPTION | How to end | <u>*CNTRLD</u> , *IMMED | Optional, Positional 2 |
| APYQUAL | Apply qualifier | Character value, <u>*USER</u> | Optional, Positional 3 |
| CTLSVR | Control server | Character value, <u>*LOCAL</u> | Optional, Positional 4 |

Top

User (USER)

This is the apply qualifier associated with the instance of apply. This parameter is used only if the APYQUAL parameter has a value of *USER.

*CURRENT

The Apply process of the user associated with the current job is ended.

user name

The Apply process of the specified user is ended.

Top

How to end (OPTION)

Specifies how to end the Apply process.

*CNTRL

The Apply process completes all of its tasks and then ends normally. This might take a considerable period of time if the Apply process is completing a subscription.

*IMMED

The Apply process completes all of its tasks with the ENDJOB OPTION(*IMMED) command. The tasks end immediately, without any clean-up. You can use this option safely when the Apply process is sleeping. Use it only after a controlled end has been attempted unsuccessfully.

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier used by an instance of Apply. All subscriptions that are grouped together with this apply qualifier are being run by this apply instance.

*USER

The user name specified on the USER parameter is the apply qualifier.

apply-qualifier

Specifies the name that is used to group the subscriptions that are being run by this Apply instance. You can specify a maximum of 18 characters for the apply qualifier name. This name follows the same naming conventions as an RDB name. The subscriptions being run are identified by the records in the IBMSNAP_SUBS_SET table with this value in the APPLY_QUAL column.

Top

Control server (CTLSVR)

Specifies the database name of the control server where the subscription control tables are located.

*LOCAL

The subscription control tables are located on the local relational database.

rdb-name

A relational database name. You can press F4 (Prompt) on this parameter to choose from the list of RDBs in the RDB directory. You can also use the Work with RDB Directory Entries (WRKRDBDIRE) command to find this name.

Top

Examples

None

Error messages

*ESCAPE Messages

ASN1502

Unable to find the local relational database name.

ASN1507

The apply job table, IBMSNAP_APPLY_JOB in library ASN, is not available.

ASN1515

The Apply process for apply qualifier "" is not active.

ASN4524

The apply job table was not found.

ASN1512

The ENDDPRAPY command failed.

ASN1513

An Apply job record was not found in the Apply Job table.

End DPR Capture (ENDDPRCAP)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The End DPR Capture (ENDDPRCAP) command ends the DataPropagator for iSeries Capture process for registered source tables (both local and remote). The ENDDPRCAP command fails if the Capture process is not active, or if another request for the same ending type (*IMMED, *CNTRLD) is made.

You should run this command to end the Capture process before shutting down the system. Also, you might want to end the process during periods of peak system use to increase the performance of other programs running on the system.

Note: The ENDDPRCAP command may take a longer time to end the Capture process when the *CNTRLD option is specified. This is because the Capture process completes all of its subordinate processes before ending.

Note: If you use the ENDJOB command, temporary objects might be left in the QDP4 library. These objects have the types *DTAQ and are named QDPRnnnnnn where nnnnnn is the job number of the job that used them. You can delete these objects when the job that used them (identified by the job number in the object name) is not active.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ENDDPRCAP

*ESCAPE Messages

ASN2563

Capture instance is not active.

ASN2564

Capture instance is already ending with option .

ASN2565

Capture instance is ending with option .

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|---------------------------|--------------------------|---------------------------|
| OPTION | How to end | <u>*CNTRLD</u> , *IMMED | Optional, Positional 1 |
| CAPCTLLIB | Capture control library | <i>Name</i> , <u>ASN</u> | Optional, Positional 2 |
| RGZCTLBTL | Reorganize control tables | <u>*NO</u> , *YES | Optional, Positional 3 |

Top

How to end (OPTION)

Specifies how to end the Capture process.

*CNTRLD

The Capture process completes all of its tasks and then ends normally.

*IMMED

The Capture process completes all of its tasks with the ENDJOB OPTION(*IMMED) command and ends normally.

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture Instance to end.

ASN Specifies the default capture instance provided with the DataPropagator product for iSeries and defined as a first capture instance.

capture-instance-name

Specifies the library where the capture control tables resides.

Top

Reorganize control tables (REZCTLTLBL)

Specifies whether to do Reorganize Physical File Member (RGZPFM) on the control tables which includes CD and UOW tables when ending Capture. After pruning, disk space is not recovered unless RGZPFM is performed on the table. Provided this will be done only when ENDDPRCAP gets exclusive lock on the CD tables.

*NO (default)

Specifies that RGZPFM is not performed.

*YES Specifies that RGZPFM will be performed. Allowed only for OPTION(*CNTRLD).

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2563

Capture instance is not active.

ASN2564

Capture instance is already ending with option .

ASN2565

Capture instance is ending with option .

Grant DPR Authority (GRTDPRAUT)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Grant DPR Authority (GRTDPRAUT) command authorizes a list of users to the DataPropagator control tables so that the users can be registrars and subscribers. Registrars can make files eligible for copying, and subscribers can create subscriptions to and propagate from a registered base file.

You cannot run the GRTDPRAUT command while the Capture or Apply processes are running, or when applications using the source tables are active. This is because authorizations cannot be changed on files that are in use.

As more tables are registered for capture by authorized registrars, the person who registered the tables must assign subscriber rights to the users who should be authorized to those tables.

The command issues an error message if a user specified on the command does not exist, if the user running the command is not authorized to the user profiles specified, if the DataPropagator control tables do not exist, or if the user running the command does not have permission to grant authorities to the DataPropagator control tables.

The GRTDPRAUT command compensates for these different authority requirements. For example, the authority requirements for the user who is running Capture and Apply may differ from the authority requirements for the user who defines registrations and subscriptions.

You must have *ALLOBJ special authority to grant authorities with the GRTDPRAUT command.

- **Note:** Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for GRTDPRAUT

*ESCAPE Messages

ASN3011

Not allowed to grant registration authority.

ASN3013

Not allowed to grant subscription authority.

ASN3095

Registration authority granted. Not granted to some objects.

ASN3097

Subscription authority granted. Not granted to some objects.

ASN301A

The APYQUAL parameter cannot be used.

ASN301B

Not allowed to grant authority.

ASN301D

authority granted. Not granted to some objects.

ASN301E

in library , type was not found.

ASN301F

*ALLOBJ special authority is required.

ASN302A

Authority cannot be granted to in type .

ASN302B

The USER and APYQUAL parameters are incorrect.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|-------------------------|---|---------------------------|
| CAPCTLLIB | Capture control library | Name, <u>ASN</u> | Optional |
| USER | User | Single values: *PUBLIC Other values (up to 50 repetitions): Name | Required, Positional 1 |
| AUT | Authority | *REGISTRAR, *SUBSCRIBER, *CAPTURE, *APPLY | Required, Positional 2 |
| APYQUAL | Apply qualifier | Character value, * ALL , *USER | Optional |

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture control library to which authority to be granted.

ASN Specifies the default capture instance provided with the DataPropagator product for iSeries.

capture-instance-name

Specifies the name of the capture control library to which authority to be granted.

Top

User (USER)

Identifies the users who should have registrar or subscriber authority.

user-name

Up to 50 specified users are granted the proper authorities to be registrars or subscribers.

***PUBLIC**

Authority is given to all users who have no specific authority, are not on the authorization list associated with the file, and whose group profile does not have any authority.

Top

Authority (AUT)

Identifies the type of DataPropagator authority being granted.

***REGISTRAR**

The users are granted registrar authority.

*REGISTRAR authority will give the user the authorities necessary to define, change, and remove replication sources. The GRTPRAUT command will not grant the authorities needed to run the Capture process. This must be done using the *CAPTURE keyword.

***SUBSCRIBER**

The users are granted subscriber authority.

*SUBSCRIBER authority will give the user the authorities necessary to define, change, and remove replication targets. The GRTPRAUT command will not grant the authorities needed to run the apply process. This must be done using the *APPLY keyword.

***CAPTURE**

The users are granted capture authority.

A user with capture authority has sufficient authority to all the objects necessary to successfully run the Capture process.

***APPLY**

The users are granted apply authority.

A user with apply authority has sufficient authority to all the objects located on this system necessary to run the Apply process. The command does not grant authority to any of the objects that reside on other databases that are accessed by the Apply process.

Top

Apply qualifier (APYQUAL)

Identifies the apply qualifier that will be used. specified and when AUT(*APPLY) or AUT(*SUBSCRIBER) is specified.

***ALL** The user is granted authority to run the Apply process or define and remove subscriptions for all apply qualifiers.

- The user will be granted authority to all CD tables and CCD tables associated with replication sources defined on this system.
- The user will be granted authority to all replication targets listed in IBMSNAP_SUBS_MEMBR that reside on this system.

***USER**

The users specified on the USER parameter will be granted authority to subscriptions with an apply qualifier the same as the user name.

apply-qualifier

The user is granted authority to run the apply process or define and remove subscriptions for the apply qualifiers associated with this apply qualifier.

- The user will be granted authority to all replication sources, CD tables and CCD tables associated with records in IBMSNAP_PRUNCNTL that have a value in the APPLY_QUAL column matching the value input with the APYQUAL parameter.
- The user will be granted authority to all replication targets on this system listed in IBMSNAP_SUBS_MEMBR that have a value in the APPLY_QUAL column matching the value input with the APYQUAL parameter.

Top

Examples

None

Error messages

*ESCAPE Messages

ASN3011

Not allowed to grant registration authority.

ASN3013

Not allowed to grant subscription authority.

ASN3095

Registration authority granted. Not granted to some objects.

ASN3097

Subscription authority granted. Not granted to some objects.

ASN301A

The APYQUAL parameter cannot be used.

ASN301B

Not allowed to grant authority.

ASN301D

authority granted. Not granted to some objects.

ASN301E

in library , type was not found.

ASN301F

*ALLOBJ special authority is required.

ASN302A

Authority cannot be granted to in type .

ASN302B

The USER and APYQUAL parameters are incorrect.

Initialize DPR Capture (INZDPRCAP)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Initialize DPR Capture (INZDPRCAP) command initializes the DataPropagator for iSeries Capture instance by directing the Capture instance to work with an updated list of files (both local and remote) in the register table for the given capture control library. The Capture instance must be running before you run this command.

The initialization function is cumulative. Files being journaled to the journals specified on the JRN parameter are added to those currently being processed by the Capture process.

If files that are currently being processed have been removed from the Change Data Control table, the Capture process stops processing them. If a file is already being processed by the Capture process, it will not be added again.

- **Note:** Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for INZDPRCAP

*ESCAPE Messages

ASN2551

Capture schema not found in the Userspace.

ASN2553

Could not get lock on User Space QZS8CTLBLK.

ASN2555

Attempt to change user space QZS8CTLBLK in ASN failed.

ASN2557

User Space ASN/QZS8CTLBLK not found.

ASN2563

Capture instance is not active.

ASN2564

Capture instance is already ending with option .

ASN2565

Capture instance is ending with option .

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|-------------------------|------------------|---------------------------|
| CAPCTLLIB | Capture control library | Name, <u>ASN</u> | Optional, Positional 1 |

| Keyword | Description | Choices | Notes |
|---------|----------------------|--|---------------------------|
| JRN | Journal | Single values: *ALL Other values (up to 3 repetitions): <i>Qualified object name</i> | Optional, Positional 2 |
| | Qualifier 1: Journal | <i>Name</i> | |
| | Qualifier 2: Library | <i>Name, *LIBL, *CURLIB</i> | |

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture Instance to initialize.

ASN Specifies the default capture instance provided with the DataPropagator product for iSeries and defined as the first capture instance.

capture-instance-name

Specifies the library where the capture control tables resides.

Top

Journal (JRN)

Specify a list of up to 50 journals that you want the Capture instance to work with. Capture will start processing all of the source tables registered in the given capture control library that are currently journaled to the specified journal or journals.

***ALL** Capture will start working with all of the journals that are associated with all of the source tables registered in the given capture control library.

library-name/journal-name

Specify the qualified name of the journal that you want the Capture process to work with.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2551

Capture schema not found in the Userspace.

ASN2553

Could not get lock on User Space QZS8CTLBLK.

ASN2555

Attempt to change user space QZS8CTLBLK in ASN failed.

ASN2557

User Space ASN/QZS8CTLBLK not found.

ASN2563

Capture instance is not active.

ASN2564

Capture instance is already ending with option .

ASN2565

Capture instance is ending with option .

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Remove DPR Registration (RMVDPRREG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Remove DPR Registration (RMVDPRREG) command removes an entry from the IBMSNAP_REGISTER table.

The command issues an error message if the requested entry is not found in the table. The command also sends a warning message to the user removing the capture entry if it can determine that subscriptions exist against the registration being removed. It determines this by extracting the records from the Pruning Control table; each record indicates an instance of the Apply process that has run. It is the responsibility of the user removing the capture entry to ensure that subscriptions to the registration are also removed.

This command supports the i5/OS environment only, and not the other databases that support DataPropagator.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for RMVDPRREG

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3253

Registration not found for table .

ASN3260

Cannot remove DPR Registration.

ASN4501

Register table not found or failed to open.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|---------------------------|-----------------------|---------------------------|
| CAPCTLLIB | Capture control library | Name, <u>ASN</u> | Optional |
| SRCTBL | Source table | Qualified object name | Required, Positional 1 |
| | Qualifier 1: Source table | Name | |
| | Qualifier 2: Library | Name | |

Top

Capture control library (CAPCTLLIB)

Specifies the library where the Capture control tables are located.

ASN Specifies the default library of ASN containing the Capture control tables.

library-name

Name of the library containing the Capture control tables. This library should exist and have been created using the CRTDPRTBL command using the CAPCTLLIB parameter.

Top

Source table (SRCTBL)

Identifies the source table registration to be removed. This is a required parameter.

library/table-name

The qualified name of the registered source table.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3253

Registration not found for table .

ASN3260

Cannot remove DPR Registration.

ASN4501

Register table not found or failed to open.

Top

Remove DPR Subscription (RMVDPRSUB)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Remove DPR Subscription (RMVDPRSUB) command removes the associated entries from the subscription control tables for the given Apply Qualifier and Set Name. The command issues an error message if the requested entry is not found in the table.

You can use the DLTTGTTBL parameter to delete the target table associated with this subscription.

You can use the RMVREG parameter to remove the registration to the target table if it was registered as a source table when the subscription was created.

This command supports the i5/OS environment only, and not the other databases that support DataPropagator.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for RMVDPRSUB

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3221

DLTTGTFILE(*YES) is not allowed with RMVCAPE(*NO).

ASN3239

Registration for target table cannot be removed.

ASN3240

Registration for target table cannot be removed.

ASN3242

Registration not found on data server for table .

ASN3243

Registration for target table cannot be removed.

ASN3244

Target table cannot be deleted because it is registered as a source table.

ASN3245

Target table in library could not be deleted.

ASN3246

Source table registration not changed because connection to failed.

ASN3247

Target table registration not removed because connection to failed.

ASN3250

Target table in library has been deleted.

ASN3252

Subscription not found.

ASN3255
Subscription set for Apply Qualifier Set Name removed.

ASN3256
Not authorized to Subscription Set table.

ASN3257
Not authorized to Subscription Member table.

ASN3258
Not authorized to Subscription Columns table.

ASN3259
Not authorized to Subscription Statement table.

ASN3263
Not authorized to Prune Control table.

ASN3264
Subscription set for Apply Qualifier contains members.

ASN3272
Member cannot be removed.

ASN3292
Register table not found.

ASN3293
Pruning control table not found.

ASN4512
Set subscription table not found.

ASN4514
Subscription statements table not found.

ASN4518
Subscription member table not found.

ASN4520
Subscription columns table not found.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|-------------------------|-----------------------------|---------------------------|
| APYQUAL | Apply qualifier | <i>Name</i> | Required, Positional 1 |
| SETNAME | Set name | <i>Name</i> | Required, Positional 2 |
| CTLSVR | Control server | <i>Name</i> , *LOCAL | Optional |
| RMVMBRS | Remove members | *YES , *NO | Optional |
| RMVREG | Remove DPR registration | *YES , *NO | Optional |
| DLTTGTTBL | Delete target table | *YES , *NO | Optional |

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier. The apply qualifier is the name which is used to group the subscriptions that are to be run by the same Apply instance. The apply qualifier must already exist in the IBMSNAP_SUBS_SET table.

Top

Set name (SETNAME)

Specifies the Set Name which identifies a group of target tables (subscription set members) that are processed by the Apply program as a group. The set name must already exist in the IBMSNAP_SUBS_SET table.

Top

Control server (CTLSVR)

The relational database name where the Apply control tables exist. This is the relational database name for the control server.

*LOCAL

The Apply control tables are located on the local relational database.

rdb-name

The relational database name where the Apply control tables reside. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the Apply control tables are on the system where the ADDEDPRSUB command is being executed, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it.

Top

Remove members (RMVMBRS)

Specifies whether to remove all of the members of the set.

*NO The members are not removed, only the set definition is removed. If members exist in the set, the command will fail.

*YES All members of the set are removed.

Top

Remove DPR registration (RMVREG)

Specifies whether or not the target table registration should be removed.

*NO The target table registration is not removed.

*YES The target table registration is removed. If the target table is registered as a source table and the Pruning Control table associated with the registration is empty, an entry will be removed from the ASN/IBMSNAP_REGISTER table.

Top

Delete target table (DLTTGTTBL)

Specifies whether or not the target table is to be deleted after the subscription is removed.

***NO** The target table should not be deleted.

***YES** The target table should be deleted.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3221

DLTTGTFILE(*YES) is not allowed with RMVCAPE(*NO).

ASN3239

Registration for target table cannot be removed.

ASN3240

Registration for target table cannot be removed.

ASN3242

Registration not found on data server for table .

ASN3243

Registration for target table cannot be removed.

ASN3244

Target table cannot be deleted because it is registered as a source table.

ASN3245

Target table in library could not be deleted.

ASN3246

Source table registration not changed because connection to failed.

ASN3247

Target table registration not removed because connection to failed.

ASN3250

Target table in library has been deleted.

ASN3252

Subscription not found.

ASN3255

Subscription set for Apply Qualifier Set Name removed.

ASN3256

Not authorized to Subscription Set table.

- ASN3257**
Not authorized to Subscription Member table.
- ASN3258**
Not authorized to Subscription Columns table.
- ASN3259**
Not authorized to Subscription Statement table.
- ASN3263**
Not authorized to Prune Control table.
- ASN3264**
Subscription set for Apply Qualifier contains members.
- ASN3272**
Member cannot be removed.
- ASN3292**
Register table not found.
- ASN3293**
Pruning control table not found.
- ASN4512**
Set subscription table not found.
- ASN4514**
Subscription statements table not found.
- ASN4518**
Subscription member table not found.
- ASN4520**
Subscription columns table not found.

[Top](#)

Remove DPR Subscription Member (RMVDPRSUBM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Remove DPR Subscription Member (RMVDPRSUBM) command removes a member from the subscription control tables for a specified set. The command issues an error message if the requested entry is not found in the table.

You can use the DLTTGTTBL parameter to delete the target table associated with this subscription. You can use the RMVREG parameter to remove the registration to the target table if it was registered as a source table when the subscription was created.

This command supports the i5/OS environment only, and not the other databases that support DataPropagator.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for ADDDPRSUBM

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3221

DLTTGTFILE(*YES) is not allowed with RMVCAPE(*NO).

ASN3239

Registration for target table cannot be removed.

ASN3240

Registration for target table cannot be removed.

ASN3242

Registration not found on data server for table .

ASN3243

Registration for target table cannot be removed.

ASN3244

Target table cannot be deleted because it is registered as a source table.

ASN3245

Target table in library could not be deleted.

ASN3246

Source table registration not changed because connection to failed.

ASN3247

Target table registration not removed because connection to failed.

ASN3252

Subscription not found.

ASN3256

Not authorized to Subscription Set table.

ASN3257

Not authorized to Subscription Member table.

ASN3258

Not authorized to Subscription Columns table.

ASN3263

Not authorized to Prune Control table.

ASN3270

Member does not exist.

ASN3272

Member cannot be removed.

ASN3292

Register table not found.

ASN3293

Pruning control table not found.

ASN4512

Set subscription table not found.

ASN4518

Subscription member table not found.

ASN4520

Subscription columns table not found.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|---------------------------|------------------------------|------------------------|
| APYQUAL | Apply qualifier | <i>Name</i> | Required, Positional 1 |
| SETNAME | Set name | <i>Name</i> | Required, Positional 2 |
| TGTTBL | Target table | <i>Qualified object name</i> | Required, Positional 3 |
| | Qualifier 1: Target table | <i>Name</i> | |
| | Qualifier 2: Library | <i>Name</i> | |
| CTLSVR | Control server | <i>Name</i> , *LOCAL | Optional |
| RMVREG | Remove DPR registration | *YES , *NO | Optional |
| DLTTGTTBL | Delete target table | *YES , *NO | Optional |

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier. The apply qualifier is the name which is used to group the subscriptions that are to be run by the same Apply instance. The apply qualifier must already exist in the IBMSNAP_SUBS_SET table.

Top

Set name (SETNAME)

Specifies the Set Name which identifies a group of target tables (subscription set members) that are processed by the Apply program as a group. The set name must already exist in the IBMSNAP_SUBS_SET table.

Top

Target table (TGTTBL)

Specifies the target table member to remove from the subscription set.

library/target-table-name

The qualified name of the target table.

Top

Control server (CTLSVR)

The relational database name where the Apply control tables exist. This is the relational database name for the control server.

*LOCAL

The Apply control tables are located on the local relational database.

rdb-name

The relational database name where the Apply control tables reside. You can use the Work with RDB Directory Entries (WRKRDBDIRE) command on the data server to find this name. If the Apply control tables are on the system where the ADDDPRSUB command is being executed, *rdb-name* is the relational database name that has a remote location of *LOCAL associated with it.

Top

Remove DPR registration (RMVREG)

Specifies whether to remove the target table registration.

*NO The target table registration is not removed.

*YES The target table registration is removed. If the target table is registered as a source table and the Pruning Control table associated with the registration is empty, an entry will be removed from the ASN/IBMSNAP_REGISTER table.

Top

Delete target table (DLTTGTTBL)

Specifies whether or not the target table is to be deleted after the subscription is removed.

*NO The target table should not be deleted.

*YES The target table should be deleted.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2501

Not authorized to register table.

ASN3221

DLTTGTFIELD(*YES) is not allowed with RMVCAPE(*NO).

ASN3239

Registration for target table cannot be removed.

ASN3240

Registration for target table cannot be removed.

ASN3242

Registration not found on data server for table .

ASN3243

Registration for target table cannot be removed.

ASN3244

Target table cannot be deleted because it is registered as a source table.

ASN3245

Target table in library could not be deleted.

ASN3246

Source table registration not changed because connection to failed.

ASN3247

Target table registration not removed because connection to failed.

ASN3252

Subscription not found.

ASN3256

Not authorized to Subscription Set table.

ASN3257

Not authorized to Subscription Member table.

ASN3258

Not authorized to Subscription Columns table.

ASN3263

Not authorized to Prune Control table.

ASN3270

Member does not exist.

ASN3272

Member cannot be removed.

ASN3292

Register table not found.

ASN3293

Pruning control table not found.

ASN4512

Set subscription table not found.

ASN4518

Subscription member table not found.

ASN4520

Subscription columns table not found.

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Revoke DPR Authority (RVKDPRAUT)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Revoke DPR Authority (RVKDPRAUT) command revokes *ALL authority to the DataPropagator control tables and removes a specified subscriber's authority to all registered source tables; the user can no longer register or subscribe to files.

You cannot run the RVKDPRAUT command while the Capture or Apply processes are running, or when applications using the source tables are active. This is because authorizations cannot be changed on files that are in use.

The command issues an error message if a user specified on the command does not exist, if the user running the command is not authorized to the user profiles specified, if the DataPropagator control tables do not exist, or if the user running the command does not have permission to grant authorities to the DataPropagator for control tables.

- **Note:** Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for RVKDPRAUT

*ESCAPE Messages

ASN3012

Not allowed to revoke registration authority.

ASN3014

Not allowed to revoke subscription authority.

ASN3096

Authority revoked. Not revoked from some objects.

ASN3098

Subscription authority revoked. Not revoked from some objects.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|-------------------------|--|---------------------------|
| USER | User | Single values: *PUBLIC Other values (up to 50 repetitions): <i>Name</i> | Required, Positional 1 |
| CAPCTLLIB | Capture control library | <i>Name</i> , <u>ASN</u> | Optional |

Top

User (USER)

Identifies the users who should no longer have registrar or subscriber authority.

user-name

The names of up to 50 specified users who should no longer have registrar or subscriber authority.

***PUBLIC**

Authority is revoked from all users who have no specific authority, are not on the authorization list, and whose group profile does not have any authority.

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture control library to which authority to be revoked.

ASN Specifies the default capture instance provided with the DataPropagator product for iSeries.

capture-instance-name

Specifies the name of the capture control library to which authority to be revoked.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN3012

Not allowed to revoke registration authority.

ASN3014

Not allowed to revoke subscription authority.

ASN3096

Authority revoked. Not revoked from some objects.

ASN3098

Subscription authority revoked. Not revoked from some objects.

Top

Start DPR Apply (STRDPRAPY)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Start DPR Apply (STRDPRAPY) command starts an instance of the DataPropagator for iSeries Apply process at the copy server.

- Note: Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for STRDPRAPY

*ESCAPE Messages

ASN1502

Unable to find the local relational database name.

ASN1503

Apply qualifier "" is a restricted value.

ASN1504

No subscriptions are defined for apply qualifier "" at control server .

ASN1505

The subscription set table, ASN.IBMSNAP_SUBS_SET was not found.

ASN1506

Can not create the apply job table, IBMSNAP_APPLY_JOB in library ASN.

ASN1507

The apply job table, IBMSNAP_APPLY_JOB in library ASN, is not available.

ASN1513

An Apply job record was not found in the Apply Job table.

ASN1516

Cannot verify that subscriptions exist for apply qualifier "".

ASN1517

Connection to control server failed.

ASN1518

Cannot read or change the IBMSNAP_APPLY_JOB table.

ASN1519

STRDPRAPY command failed.

ASN4524

The apply job table was not found.

ASN2060

Library is not allowed in the system portion of the library list.

Top

Parameters

| Keyword | Description | Choices | Notes |
|------------|--|--|----------------------------|
| USER | User | Name, *CURRENT , *JOB | Optional, Positional 1 |
| JOB | Job description | Qualified object name | Optional, Positional 2 |
| | Qualifier 1: Job description | Name, QZSNDPR | |
| | Qualifier 2: Library | Name, *LIBL | |
| APYQUAL | Apply qualifier | Character value, *USER | Optional, Positional 3 |
| CTLSVR | Control server | Character value, *LOCAL | Optional, Positional 4 |
| TRACE | Trace | *NONE , *ERROR, *ALL, *PRF, *REWORK | Optional, Positional 5 |
| FULLREFPGM | Full refresh program | Single values: *NONE Other values: Qualified object name | Optional, Positional 6 |
| | Qualifier 1: Full refresh program | Name | |
| | Qualifier 2: Library | Name | |
| SUBNFYPGM | Subscription notify program | Single values: *NONE Other values: Qualified object name | Optional, Positional 7 |
| | Qualifier 1: Subscription notify program | Name | |
| | Qualifier 2: Library | Name | |
| INACTMSG | Inactive message | *YES , *NO | Optional, Positional 8 |
| ALWINACT | Allow inactive state | *YES , *NO | Optional, Positional 9 |
| DELAY | Delay | 0-6, 6 | Optional, Positional 10 |
| RTYWAIT | Retry wait time | 0-35000000, 300 | Optional, Positional 11 |
| COPYONCE | Copy Once | *YES, *NO | Optional, Positional 12 |
| TRLREUSE | Trail Reuse | *YES, *NO | Optional, Positional 13 |
| OPTSNGSET | Optimize single set | *YES, *NO | Optional, Positional 14 |

Top

User (USER)

Specifies the name of the user for which the Apply process is to be started. The user must have *USE rights for the specified user profile.

This is the user profile under which the Apply process runs. The subscription control tables (in ASN) are located on the relational database (RDB) specified with the CTLSVR parameter. The same subscription control tables are used regardless of the value used on the USER parameter.

*CURRENT

The user associated with the current job is the user associated with this instance of the Apply process.

***JOB**

The user specified in the job description is associated with this instance of the Apply process. The job description cannot have USER(*RQD) specified.

user name

The user specified is the user associated with this instance of the Apply process. The following IBM-supplied objects are not valid on this parameter:

- QDBSHR
- QDFTOWN
- QDOC
- QLPAUTO
- QLPINSTALL
- QRJE
- QSECOFR
- QSPL
- QSYS
- QTSTRQS

If any of the above listed users have added subscriptions, the STRDPRAPY command must be run by the user signed on with that *user name*.

Top

Job description (JOB)

Specify the name of the job description to use when submitting the Apply process.

*LIBL/QZSNDPR

The default job description provided with the product.

job-description-name

The name (library-name/job-description-name) of the job description used for the Apply process.

*LIBL/job-description-name

The name of the job description used for the Apply process.

Top

Apply qualifier (APYQUAL)

Specifies the apply qualifier used by Apply. All subscriptions that are grouped together with this apply qualifier are being run by this apply instance.

*USER

The user name specified on the USER parameter is the apply qualifier.

apply-qualifier

Specifies the name which is used to group the subscriptions that are to be run by this Apply instance. You can specify a maximum of 18 characters for the apply qualifier name. This name follows the same naming conventions as an RDB name. The subscriptions to be run are identified by the records in the IBMSNAP_SUBS_SET table with this value in the APPLY_QUAL column.

Top

Control server (CTLSVR)

The relational database name where the subscription control tables are located. This is the relational database name for the control server.

*LOCAL

The subscription control tables are located on the local relational database.

rdb-name

A relational database name. You can press F4 (Prompt) on this parameter to choose from the list of RDBs in the RDB directory. You can also use the Work with RDB Directory Entries (WRKRDBDIRE) command to find this name.

Top

Trace (TRACE)

This parameter specifies whether Apply is to generate a trace. If Apply generates a trace, the trace will be sent to a spool file called QPZSNATRC.

*NONE

No trace will be done.

*ERROR

The trace will contain information for errors only.

***ALL** The trace will contain information for errors, execution flow, and SQL statements issued by Apply.

***PFR** The trace will contain information which can be used to analyze performance at different stages of Apply execution.

Top

Full refresh program (FULLREFPGM)

Specifies whether Apply runs a user extension program to full-refresh a target table. When Apply determines that a target table needs to be fully refreshed, it will run the specified user extension program rather than doing the full-refresh itself. When Apply uses a full refresh user extension program, the ASNLOAD column in the apply audit trail record will have a value of 'Y'.

*NONE

No user extension program will be run.

program-name

The qualified name of a program that will be called when Apply determines it is necessary to do a full-refresh of a target table.

Top

Subscription notify program (SUBNFYPGM)

Specifies whether Apply is to run a user extension program when it has completed processing of a subscription set. You could use the notify program to examine the "CAPCTLLIB".IBMSNAP_UOW table; you could determine the transactions that have been rejected and take further actions, such as issuing a message or generating an event.

*NONE

No user extension program will be run.

program-name

The qualified name of a program that will be called when Apply completes processing a subscription set.

Top

Inactive message (INACTMSG)

Specifies whether Apply is to generate a message whenever it has completed its work and will become inactive for a period of time.

***NO** No message is generated.

***YES** Apply will generate an ASN1044 message before beginning a period of inactivity. The ASN1044 message will tell how long the Apply process will be inactive.

Top

Allow inactive state (ALWINACT)

Specifies whether or not the Apply process can run in an inactive state (sleep).

***YES** The Apply process can sleep if there is nothing to process.

***NO** The Apply process ends if there is nothing to process.

Top

Delay (DELAY)

Specifies the delay time(in seconds) at the end of each Apply program cycle when continuous replication is used.

6 Specifies a delay time of six seconds.

delay-time

Specifies a delay time between 0 and 6 seconds inclusive.

Top

Retry wait time (RTYWAIT)

Specifies in seconds how long the Apply program should wait after it encounters an error before it retries the operation that failed.

300 Specifies a retry wait time of 300 seconds.

retry-wait-time

Specifies a retry wait time between 0 and 35000000 seconds inclusive.

Top

Copy Once (COPYONCE)

The Apply program executes one copy cycle for each subscription set that is eligible at the time the Apply program is invoked, and then the Apply program terminates. An eligible subscription set is such that:

ACTIVE > 0

REFRESH_TIMING = R or B or REFRESH_TIMING = E and the specified event has occurred.

MAX_SYNCH_MINUTES and END_OF_PERIOD are honored if specified.

***NO** Specifies that COPYONCE is not used.

***YES** Specifies that COPYONCE will be in effect.

Top

Trail Reuse (TRLREUSE)

The Apply program empties the Apply trail table when the Apply program is started.

***NO** Specifies that TRLREUSE is not used.

***YES** Specifies that TRLREUSE will be in effect.

Top

Optimize single set (OPTSNGSET)

Specifies to optimize Apply performance when there is only one subscription set. If the parameter is specified and the set to be processed is the same as the previous set, Apply will not fetch the members and columns information from the control table again. This option does not apply to REPLICA.

***NO** Specifies that OPTSNGSET is not used.

***YES** Specifies that OPTSNGSET will be in effect.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN1502

Unable to find the local relational database name.

ASN1503

Apply qualifier "" is a restricted value.

ASN1504

No subscriptions are defined for apply qualifier "" at control server .

ASN1505

The subscription set table, ASN.IBMSNAP_SUBS_SET was not found.

ASN1506

Can not create the apply job table, IBMSNAP_APPLY_JOB in library ASN.

ASN1507

The apply job table, IBMSNAP_APPLY_JOB in library ASN, is not available.

ASN1513

An Apply job record was not found in the Apply Job table.

ASN1516

Cannot verify that subscriptions exist for apply qualifier "".

ASN1517

Connection to control server failed.

ASN1518

Cannot read or change the IBMSNAP_APPLY_JOB table.

ASN1519

STRDPRAPY command failed.

ASN4524

The apply job table was not found.

ASN2060

Library is not allowed in the system portion of the library list.

Top

Start DPR Capture (STRDPRCAP)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Start DPR Capture (STRDPRCAP) command starts the process that captures changes to iSeries data source tables.

The files that you want to capture changes for must first be registered.

You register files using the Replication Center or Add DPR Registration (ADDDPRREG) command. The files that you register for change capture are defined in the "CAPCTLLIB"/IBMSNAP_REGISTER table.

When you have registered the source tables to use remote journaling, you must run the STRDPRCAP command on the same system where you registered the source tables.

The values for the retention limit and the lag limit in the Tuning Parameter table IBMSNAP_CAPPARMS affect the operation of the STRDPRCAP command. You can alter these settings using the Change DPR Capture Attributes (CHGDPRCAPA) command. These values take affect when the Capture component is started. While capture is in active state you can change the capture tuning values dynamically using the Override DPR Capture Attributes OVRDPRCAPA command.

- **Note:** Do not precede an entry with an asterisk unless that entry is shown on the display itself or in the help information with an asterisk.

Error Messages for STRDPRCAP

*ESCAPE Messages

ASN2002

Capture Parameters table not found.

ASN2003

No tables have been registered.

ASN2560

Capture instance is already active.

ASN2561

Capture instance is starting.

ASN2019

Not authorized to Capture Parameters table IBMSNAP_CAPPARMS.

ASN2501

Not authorized to register table.

ASN2513

STRDPRCAP command failed.

ASN4501

Register table not found or failed to open.

Top

Parameters

| Keyword | Description | Choices | Notes |
|-----------|------------------------------|---|---------------------------|
| RESTART | Restart after end | <u>*YES</u> , *NO | Optional, Positional 1 |
| JOBDB | Job description | <i>Qualified object name</i> | Optional, Positional 2 |
| | Qualifier 1: Job description | Name, <u>QZSNDPR</u> | |
| | Qualifier 2: Library | Name, <u>*LIBL</u> | |
| WAIT | Wait | 60-6000, <u>120</u> | Optional, Positional 3 |
| CLNUPITV | Clean up interval | <i>Element list</i> | Optional, Positional 4 |
| | Element 1: Wait time | 1-100, <u>*DFT</u> | |
| | Element 2: Start clean up | <u>*IMMED</u> , *DELAYED, *NO | |
| CAPCTLLIB | Capture control library | Name, <u>ASN</u> | Optional, Positional 5 |
| JRN | Journal | Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Qualified object name</i> | Optional |
| | Qualifier 1: Journal | Name | |
| | Qualifier 2: Library | Name, <u>*LIBL</u> , *CURLIB | |
| TRCLMT | Trace limit | 1-35000000, <u>*DFT</u> | Optional |
| MONLMT | Monitor limit | 1-35000000, <u>*DFT</u> | Optional |
| MONITV | Monitor interval | 60-6000, <u>*DFT</u> | Optional |
| MEMLMT | Memory limit | 1-35656, <u>*DFT</u> | Optional |
| RETAIN | Retention period | 1-35000000, <u>*DFT</u> | Optional |
| LAG | Lag limit | 1-35000000, <u>*DFT</u> | Optional |
| FRCFRQ | Force frequency | 30-600, <u>*DFT</u> | Optional |

Top

Restart after end (RESTART)

Specifies how to start the Capture process.

- *YES The Capture process continues processing the changes from the point that it finished when previously ended. Also known as a warm start, this is the default mode of operation.
- *NO The Capture process removes all information from the Change Data tables before it processes the changes. If you specify *ALL on the JRN parameter, Capture also removes all information from the "CAPCTLLIB"/IBMSNAP_UOW table. The subscriptions for all of the affected base tables are full-refreshed before change capture resumes. This is also known as a cold start.

Top

Job description (JOBDB)

Specifies the name of the job description to use when submitting the Capture process.

*LIBL/QZSNDPR

Specifies the default job description provided with the DataPropagator product for iSeries.

job-description-name

Specifies the name (library-name/job-description-name) of the job description used for the Capture process.

Wait (WAIT)

Specify the maximum number of seconds to wait before the Capture process checks its status. You can use this value to tune the performance of the Capture process. A low value reduces the time the Capture process takes before ending or initializing, but can have an effect on system performance. A higher value increases the time the Capture process takes before ending or initializing, but can improve system performance. A value that is too high can result in decreased performance while the Capture process is performing periodic processing. The amount of the decrease in performance depends on the amount of change activity to registered files and the amount of other work occurring on the system.

120 The default maximum number of seconds the Capture process waits.

60-6000

Specify the maximum number of seconds you want the Capture process to wait.

Clean up interval (CLNUPITV)

Specify the maximum number of hours the Capture process waits before pruning old records from the Change Data tables and other control tables.

This parameter works in conjunction with the RETAIN parameter (in the case of CDs, the UOW, the SIGNAL table and the AUTHTKN table), the TRCLMT parameter (in the case of the CAPTRACE table) and the MONLMT parameter (in case of the CAPMON table). Whereas this parameter determines how frequent to prune and the three other parameters determine whether an old row is eligible for pruning.

STRDPRCAP command uses the values RETENTION_LIMIT, TRACE_LIMIT, MONITOR_LIMIT and PRUNE_INTERVAL stored in the CAPPARMS table if the user chooses the default for RETAIN, TRCLMT, MONLMT and CLNUPITV parameters, respectively. A user can supply a new value for these limits on the STRDPRCAP command. Or the user can alter their values at a later time using the OVRDPRCAPA command while capture is running.

At the time interval you specify on this parameter, the Capture process uses information from the Pruning Set table to determine which records in the Change Data tables are eligible for pruning.

This is a two-part value. The first part specifies the number of hours the Capture process waits before pruning records.

***DFT** Specifies that the default value is used for the CLNUPITV parameter. The default value is the value of the PRUNE_INTERVAL column of the Capture tuning parameters table ("CAPCTLLIB/IBMSNAP_CAPPARMS). You can change this value by changing the CLNUPITV parameter on the Change DPR Capture Attributes (CHGDPRCAPA) command.

24 The default maximum number of hours the Capture process waits.

1-100 Specify the maximum number of hours you want the Capture process to wait.

The second part specifies whether or not you want to prune records, or whether you want the Capture process to prune records immediately before capturing any changes.

***IMMED**

The Capture process prunes old records from the Change Data tables before beginning to capture changes for the selected files.

***DELAYED**

The Capture process waits the specified number of hours before pruning old records from the Change Data tables.

***NO** The Capture process does not prune records.

Top

Capture control library (CAPCTLLIB)

Specifies the name of the Capture control library to use when submitting the Capture process. The Capture Control Library contains the control tables where the source tables are registered.

ASN Specifies the default capture control library provided with the DataPropagator product for iSeries.

capture-control-library-name

Specifies the name of the capture control library used for the Capture process.

Top

Journal (JRN)

Specify a list of up to 50 journals that you want the Capture process to work with. Capture will start processing all of the registered tables that are currently journaled to the specified journal or journals.

***ALL** Capture will start working with all of the journals that have any registered tables journaled to them.

library-name/journal-name

Specify the qualified name of the journal that you want the Capture process to work with.

Top

Trace limit (TRCLMT)

Specifies the trace limit. During pruning, trace table IBMSNAP_CAPTRACE entries older than the trace limit will be pruned.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

trace-limit

Number of minutes of trace data to be kept in the capture trace table after pruning.

Top

Monitor limit (MONLMT)

Specifies the capture monitor limit. During pruning, monitor table IBMSNAP_CAPMON entries older than the monitor limit will be pruned.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

monitor-limit

Number of minutes of monitor data to be kept in the monitor table after pruning.

Top

Monitor interval (MONITV)

Specifies the monitor interval. Monitor rows will be written every n seconds as indicated by this value.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

monitor-interval

Specifies how often Capture will write out a monitor row. This is expressed in seconds. Any value less than 120 seconds will default to 120 seconds.

Top

Memory limit (MEMLMT)

Specifies the memory limit. Memory in megabytes that each Capture journal job is allowed to use. After this allocation is used up, Capture will use temporary files to store any processing data.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

memory-limit

Specifies how much memory each Capture journal job can use.

Top

Retention period (RETAIN)

Specifies the retention limit, which is the number of minutes that data is retained in the CD tables and the UOW table before it is removed.

The value of this parameter works with the CLNUPITV parameter. When the CLNUPITV value is reached, data in the CD and UOW tables is removed if the UOW table row shows that the transaction is older than the value of this parameter.

Ensure that the Apply intervals are set to copy changed information before the value on the RETAIN parameter is reached. This prevents your tables from becoming inconsistent. If they become inconsistent, the Apply program performs full refreshes.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

retention-limit (in minutes)

Specifies the number of minutes that the CD is retained.

Top

Lag limit (LAG)

Specifies the lag limit, which is the number of minutes that the Capture program can fall behind before clearing out the CD tables and starting over with change capture. When the lag limit is reached (that is, when the timestamp of the journal entry is older than the current time minus the lag limit), the Capture program assumes that it is too far behind to catch up. It then initiates a cold start for the tables that it is processing for that journal. The Apply program then performs a full refresh to provide the Capture program with a new starting point. Users typically set this value high so that it has no effect.

***DFT** Uses the value from IBMSNAP_CAPPARMS.

lag-limit (in minutes)

Specifies the number of minutes that the Capture processing of CD entries is allowed to fall behind.

Force frequency (FRCFRQ)

Specifies approximately how often the Capture program writes changes to the CD and UOW tables.

The Capture program makes the changes available to the Apply program either when the buffers are filled or when this time has expired, whichever occurs first.

Use this parameter to make source table changes more readily available for the Apply program on servers with a low rate of source table changes.

This is a global value, and is used for all defined source tables. Setting this value at a lower number can affect processor usage.

*DFT (default)

Uses the COMMIT_INTERVAL value from IBMSNAP_CAPPARMS.

force-frequency (in seconds)

Specifies the number of seconds that the Capture program keeps CD table and UOW table changes in buffer space before making them available for use by the Apply program. This value can range from 30 to 600 seconds.

Top

Examples

None

Top

Error messages

*ESCAPE Messages

ASN2002

Capture Parameters table not found.

ASN2003

No tables have been registered.

ASN2560

Capture instance is already active.

ASN2561

Capture instance is starting.

ASN2019

Not authorized to Capture Parameters table IBMSNAP_CAPPARMS.

ASN2501

Not authorized to register table.

ASN2513

STRDPRCAP command failed.

ASN4501

Register table not found or failed to open.

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