Database-related Long Running Utilities for Open Systems

Adabas Manager has two different ways of working with utilities:

- For utilities with a short processing time the job status is displayed in the detail-view. The user has to wait until the action is completed.
- For the so-called *Long Running Utilities* the job status is written to the System Management Hub Job Monitor. The utility runs in the background and leaves the user free to carry out other actions.

  For detailed information on the SMH Job Monitor see *Monitoring Events and Jobs* in the *System Management Hub* documentation. For detailed information on Adabas utilities see the *Adabas for Open Systems Utilities* documentation.

The functions *Create Database* and *CLOG/PLOG Statistics* are designated long running utilities.

A number of other long running utilities have been grouped as **Utilities**.

To display database-related long-running utilities:

1. Expand the open systems databases and click **Utilities** for the database you are working with.

   The utilities are listed in detail-view.
2. Mark the utility you want to start and click **OK**.
3. In the detail-view panel, specifiy your options and the location of the output file and click **OK**

The utilities are described in more detail in the following sections:

- Backup (ADABCK)
- Create WORK (ADD_CONTAINER)
- Create SORT (ADD_CONTAINER)
- Create TEMP (ADD_CONTAINER)
- Error Log (ADAERR)
- Display Descriptors (ADAFIN)
- File Usage (ADAFIN)
- List Protection Log (ADAPLP)
- Regenerate (ADAREC)
- Reorder (ADAORD)

- Restore (ADABCK)
- Unused Storage (ADAREP)
- Show Layout (ADAREP)
- Verify (ADAVFY)

Backup (ADABCK)

Options:

1. Allow parallel updates (DUMP)
   Parallel updates are permitted on the files to be backed up while the backup is in progress. If this option is disabled, only ACC users (access only) can access the files to be backed up while the backup is in progress (EXU_DUMP).

2. Enable **Create New Protection Log** if you want to close the current protection log file and create a new log file after executing the backup.

3. If you have allowed parallel updates, enter a value to define the time (in seconds) that the system waits for ET-logic (end transaction) users to come to ET status at the end of the backup in the **Time To Wait For ET Status** field. If you do not enter a value, the value currently in effect for the database nucleus is taken.

Output:

1. Enable/Disable **Use Parallel Output Devices**.

2. The specification of the backup save set is displayed in the **File *x*** box. Either leave the specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

3. Enable **Create Two Physical Copies** check box if you want to create two copies of the save set.

4. Enable/Disable **Replace Existing Files**.

5. Click **OK** to start the utility or **Cancel**.

Create WORK (ADD_CONTAINER)

Options:

1. The default block size that is to used for the new WORK container file is displayed in the **Block Size** box. To change it, enter the required value.

2. The amount of space to be assigned to the new WORK container file is displayed in the **Size** box. To change it, enter the required value.

3. Either leave the **Path** specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.
4. Enable/Disable **Replace Existing Files**.
5. Click **OK** to start the utility or **Cancel**.

Create SORT (ADD_CONTAINER)

Options:

1. The amount of space to be assigned to the SORT container file is displayed in the **Size** box. To change it, enter the required value.
2. Either leave the **Path** specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.
3. Enable/Disable **Replace Existing Files**.
4. Click **OK** to start the utility or **Cancel**.

Create TEMP (ADD_CONTAINER)

Options:

1. The amount of space to be assigned to the TEMP container file is displayed in the **Size** box. To change it, enter the required value.
2. Either leave the **Path** specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.
3. Enable/Disable **Replace Existing Files**.
4. Click **OK** to start the utility or **Cancel**.

Error Log (ADAERR)

Option:

1. Either enter the specification for the error log input file directly or browse to another file.
2. Click **OK** to start the utility or **Cancel**.

Display Descriptors (ADAFIN)

Options:

1. Choose **All Descriptor** to create a report about all of the descriptors in all of the files in the database or enter the names of the descriptor you want to display.

2. Select the **Histogram** box to include a graphical overview of the descriptor-value lengths in the report.

3. Click **OK** to start the utility or **Cancel**.

File Usage (ADAFIN)

Create a report about the percentage to which the blocks in the database are used. The report also includes information about the number of allocated, used and free blocks, together with information about the length of the records in the files.

Option:

1. Select the data structure for which you want to create the report by selecting the appropriate check box.

2. Click **OK** to start the utility or **Cancel**.

List Protection Log (ADAPLP)

The function is used to list the contents of a protection log. The information displayed includes the protection log number, its creation date, information about the checkpoints, and the number of modifications for each file. The List Protection Log function also checks the internal structure of the protection log to ensure that it is consistent.

Option:

1. Either leave the specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

2. Click **OK** to start the utility or **Cancel**.

Regenerate (ADAREC)

The Regenerate function is used to recover a database. The database to be recovered must be active. Some functions however, (List, Close, Copy) can be executed when the database is inactive.

Data protection information, in the form of ’before’, ’after’ and ’delta’ images of all updated records, is written to the protection log during each Adabas session provided that the nucleus parameter PLOG is set. This information is used to reapply the updates.

Protection Log:

1. The specification of the protection log file that is to be used for the regenerate is displayed in the **Input File** box. Either leave the specification displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

2. Either accept the number of the protection log that is displayed in the **Log Number** box, or enter the number of the protection log that is to be used to regenerate the database. Use **Find** to display information about the protection log if it is in a raw disk section.

3. Either leave the specification displayed in the **Output Errors File** box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

4. Enable/Disable **Replace Existing Files**.

Action on Error:

1. Use the options **Exclude File with Error** and **Abort Regeneration** to select the action to be taken if non-fatal errors are detected during processing.

   If **Exclude File with Error** is enabled, the file in question is excluded from the regenerate if Data Storage errors occur (nucleus response codes 17, 49, 75, 77 and 79.

   If **Abort Regeneration** is enabled, the regenerate is abnormally terminated if errors are detected.

Miscellaneous:

1. Select **Check Before Image Consistency** to check the consistency of the before images in the protection log against the data in the database.

   If you have not selected **Check Before Image Consistency**, it is strongly recommended that you select **Log Inconsistencies**. If any inconsistencies are detected, they will be written to the error log, which is then displayed automatically, or can be redisplayed using the **Error Log** function.

   Important:
   If you do not select **Check Before Image Consistency** or **Log Inconsistencies**, the regenerate process may result in an inconsistent (i.e. invalid) database.

2. Click **OK** to start the utility or **Cancel**.

Reorder (ADAORD)

Reordering a database rearranges the database's global areas, and eliminates fragmentation of the files' Address Converter, Data Storage and Index extents by physically changing their placement. The Reorder function consists of implicit Export and Import functions.

Option:

1. The specification of the temporary data file (ORDEXP) that is used during the reorder is displayed in the **Export Data** box. Either leave the specification that is displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

2. Click **OK** to start the utility or **Cancel**.

Restore (ADABCK)

The Restore function is used to restore a database. The database to be restored must be inactive.

Options:

1. If **Allow for Allocation** is specified, the utility reallocates all files to be overlayed or the specified subset rather than attempting to restore them in the same block ranges as in the backup. Using this option reduces the number of file extents as much as possible.

2. If you want to restore the save set of one database into another database with a different DBID, select the **Ignore DBID in Backup File** check box, for example to restore the save set 'BCK001.004' (from the database with the DBID 4) into the database with the DBID 12.

3. Select the **Format Associator** and/or **Format Data Storage** check box if you want to format the blocks of the Associator and/or Data Storage. Formatting increases the time required for the restore to complete. If **Allow Relocation** is specified, ADABCK reallocates all files to be overlayed or the specified subset rather than attempting to restore them in the same block ranges as in the backup. Using this option reduces the number of file extents as much as possible.

Input:

1. The specification(s) of the save set(s) to be used for the restore is/are displayed in the **File *x*** box(es). Either leave the specification that is displayed in the box unchanged if you want to accept it, or enter the specification directly. You can also browse to another file.

Additional Options:

1. It is possible to see whether the save set can be used to restore a database by choosing **Read Check**. This function checks the readability (absence of parity errors) and completeness of the ADABAS backup copy.

2. You can display information about the backup save set by selecting **Report**.

   Type:

   The options **Contents**, **Summary**, and **Files** are available.

   Contents displays a list of files (names and numbers) in an ADABAS backup save set, together with the name and number of the database.

   Summary displays general information (name and number of the database, number of files loaded, maximum number of files, system file numbers), and the physical layout of the database.

   Files displays status information for the files in an ADABAS backup save set.

3. Click **Restore** to start the utility or **Cancel**.

Note:
An interrupted restore of a database must be rerun from the beginning.

Unused Storage (ADAREP)

This report shows the amount and location of unused space available for Associator and Data Storage.

- Mark **Unused Storage** and click **OK** to create the report.

Show Layout (ADAREP)

This report displays a summary of the use of the logical blocks in the ASSO and DATA, and reports lost blocks.

- Mark **Show Layout** and click **OK** to create the report.

Verify (ADAVFY)

Verify is used to verify the internal consistency of a database. The general control block (GCB) is validated together with each file control block (FCB) and each field definition table (FDT) of the loaded files. You can verify the Associator (Address Converter and Index) and/or the Data Storage.

Running the **Verify** function with an active database may lead to errors being reported; this is because updates may be made while the function is processing, and these updates will only be reflected in the nucleus buffer pool.

Verify Associator:

1. Select **File Control Block** to verify the file control blocks together with the field definition tables for all of the files in the database.
2. Select **Address Converter** to verify the Address Converter; this function validates from the Address Converter to the Data Storage, and checks to see that records can be found in the specified Data Storage.

   Choose the extent of your output in the dropdown list.
3. Select the **Index** check box if you want to verify the index.

   The dropdown list contains a list of the parts of the index for which information can be obtained; select the part that you want to be dumped.
4. The **RABN to dump from** boxes are used to specify a range of RABNs (Relative ADABAS Block Numbers) in the index. Only the RABNs specified will be dumped.

Verify Data:

1. Select **Data** to verify the Data Storage of the files in the database. This validates from the Address Converter to the Data Storage, and from the Data Storage to the Address Converter.

   Record validates the Data Storage and check the structure of each record.

   Choose the extent of your output in the dropdown list.
2. Enable **Field** to verify the record structure and validate the contents of packed, unpacked and floating point fields.

Miscellaneous:

1. Select **Search Lost Blocks** to search for lost RABNs in the database. The Dump Physical Structure option dumps the layout of the database.
2. Enter the maximum number of errors to be reported before the Verify function terminates.
3. Click **OK** to start the utility or **Cancel**.