OPENWAY

Operation Manual

Redefinition Tool

03.50.30

14.02.2020

Contents

This document is intended for WAY4 Cards system administrators (bank or processing centre employees).

Familiarity with the following documents is recommended before working with this document:

- DB Manager Manual
- "WAY4™ PA-DSS Implementation Guide".

The following notation is used in the document:

- Field labels in screen forms are shown in *italics.*
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS_HOME>.

Warnings and information are marked as follows:

> ⚠ Warnings about potentially hazardous situations or actions.

> ⓘ Messages with information about important features, additional options, or the best use of certain system functions.

1.   Overview

The Redefinition Tool product is used to reorganize WAY4 database (DB) tables with a minimum of downtime.

Redefinition Tool can be used for the following:

- Deleting unused columns
- Partitioning tables with default parameters
- Partitioning tables with optional parameters
- Recreating tables in new tablespaces (including in encrypted tablespaces).

2. Use cases

To start Redefinition Tool, run the RedefineWiz.bat file (<OWS_HOME>/install/RedefineWiz.bat).

2.1 General information

General information about working with the utility:

- On the "Migration Candidates" tab, select the table (tables) whose structure must be changed.

    The following options are supported:

    - Delete unused columns; the "Compact" checkbox is selected. For example, after WAY4 has been upgraded, some columns may be marked as "unused".
    - Partition a table with default parameters; the "(Re)partit" checkbox is selected. Default parameters are defined in the WAY4 data model.
    - Partition a table with optional parameters. The "Opt. Part." checkbox is selected. Parameters for partitioning by date or range can be specified for several dynamic tables, as defined by the WAY4 data model.
    - Recreate a table in a new tablespace (unencrypted); no checkboxes are selected.
    - Recreate a table in an encrypted tablespace; the "Encrypt" checkbox is selected. The list of tables that contain sensitive data and must be in encrypted tablespaces is defined in the WAY4 data model.

    To allow the "(Re)partit" checkbox to be selected or cleared, the "Allow edit" checkbox must be selected. To exclude tables from the list of those for partitioning, clear the "Partitioning enabled" checkbox.

    To disable the ability to partition tables with Redefinition Tool, add the following strings to the DB.INI file (Replacing section):

```
partition_beg=/*
partition_end=*/
```

    A reference list of instructions that will be executed when reorganizing a table can be obtained using the "View Migration Script" context menu item.
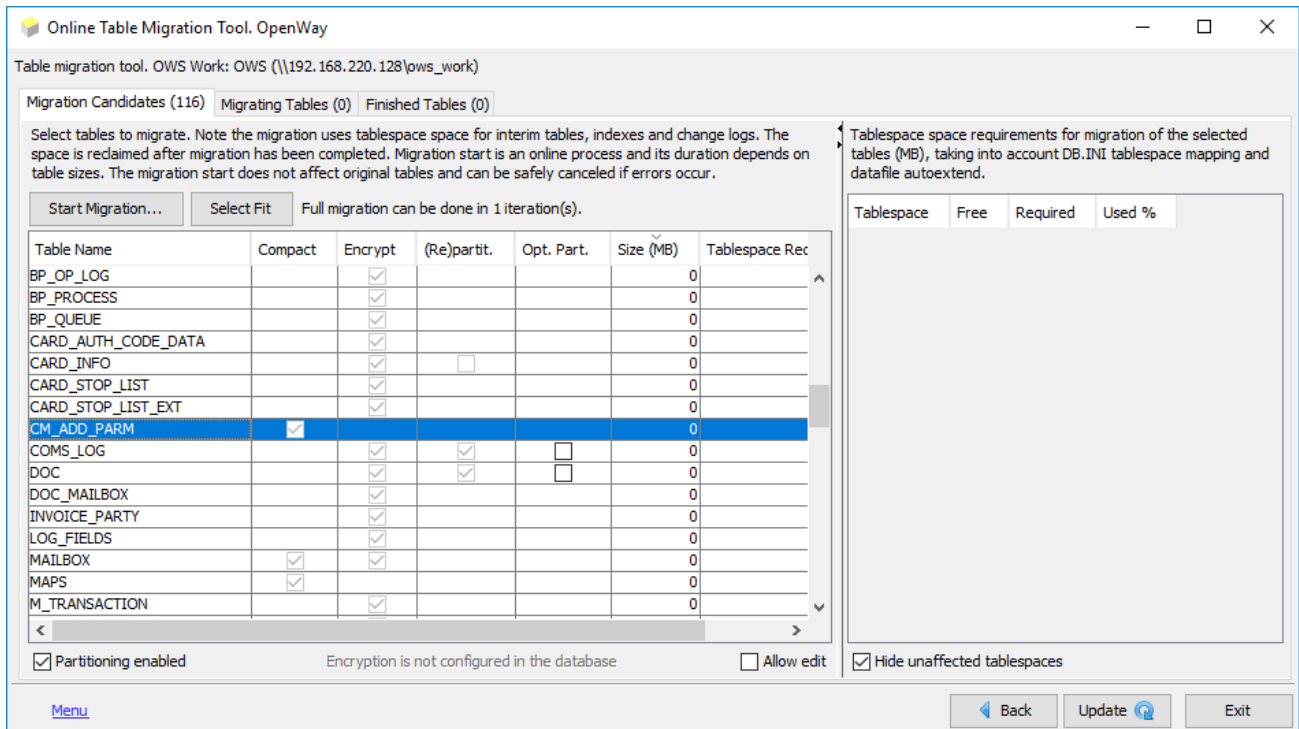
Fig. Selecting a table for migration

- Click the [Start Migration] button to start the migration process. During migration, a temporary table and indexes with the "IM__" prefix are created and data is copied to the temporary table. Wait for the process to finish.
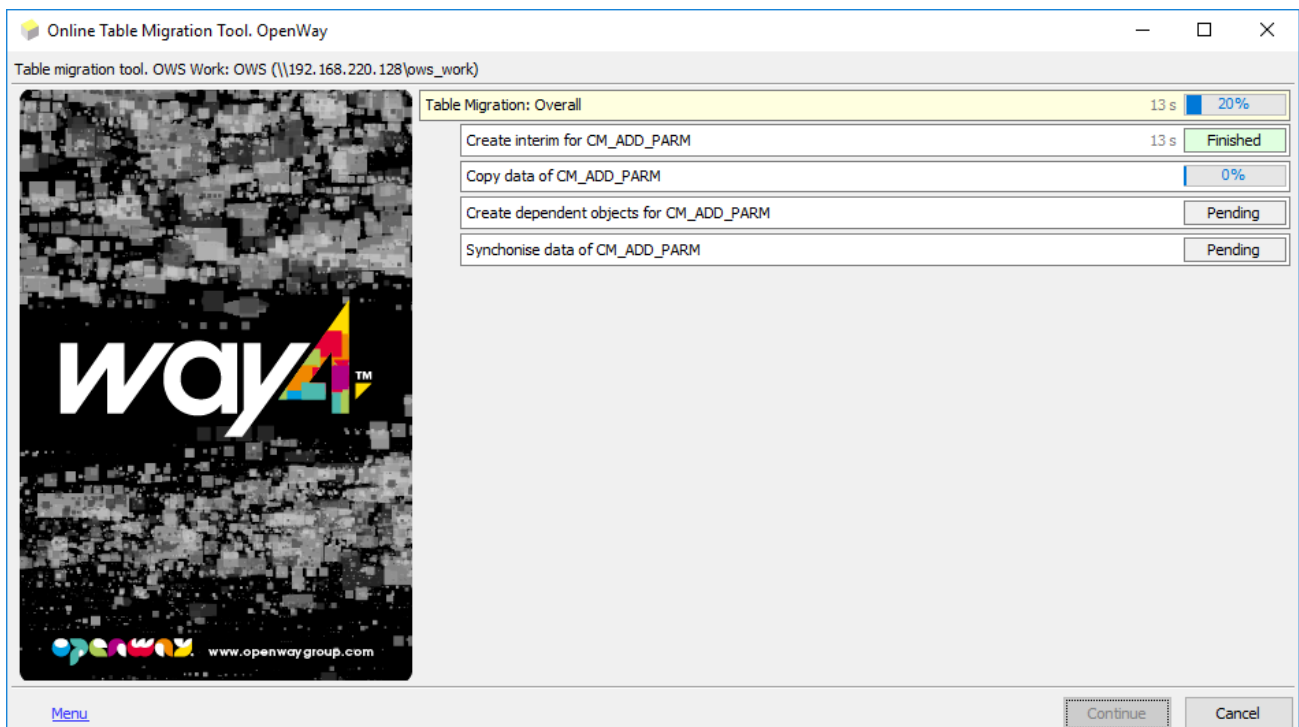

Fig. Starting the migration process

- On the "Migrating Tables" tab, click the [Finish Migration] button to finish the migration process.

> (i) During this step, all WAY4 activity must be stopped before switching to new objects.

If necessary, system downtime when switching to new objects can be reduced by using the [Synchronise] button to repeat synchronization. to cancel the migration process, click the [Abort] button.
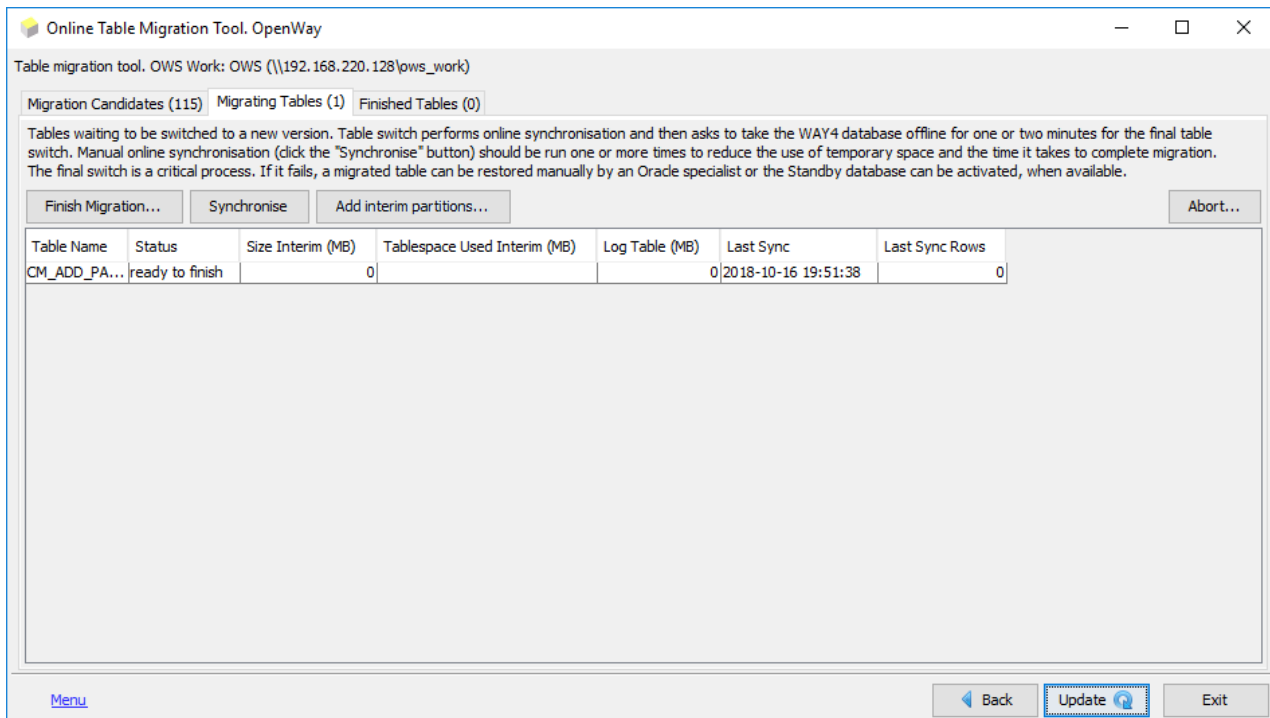

Fig. Tables for migration

If some time has elapsed between the start of the migration process (creation of a temporary table) and its completion, an error due to the lack of table partitions may occur during data synchronization.
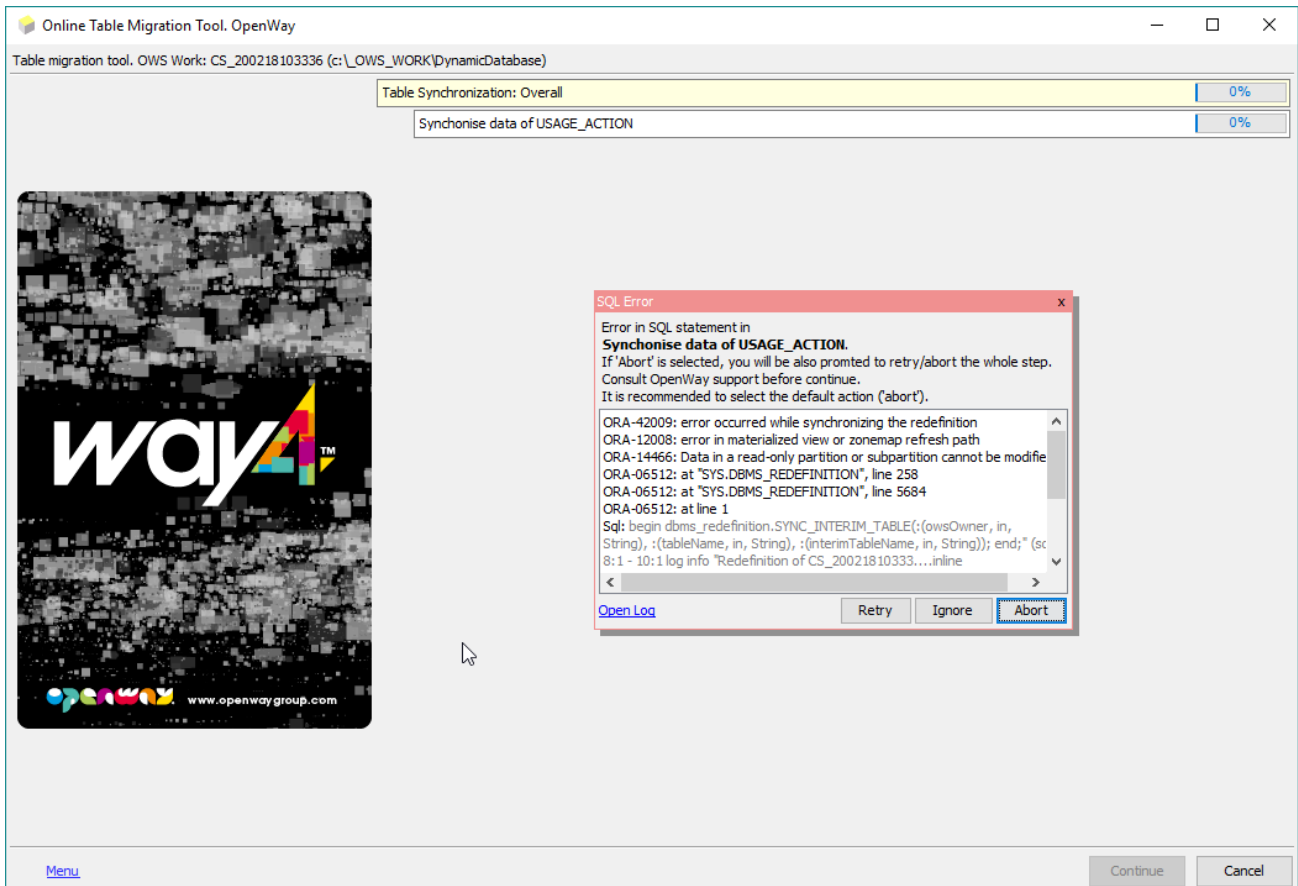
Fig. Data synchronization error

> To create the missing partitions, click the [Add interim partitions] button, specify the date up to which partitions must be created and click the [Ok] button. Next, repeat synchronization of data ([Synchronise] button) and finish the migration process ([Finish Migration] button).
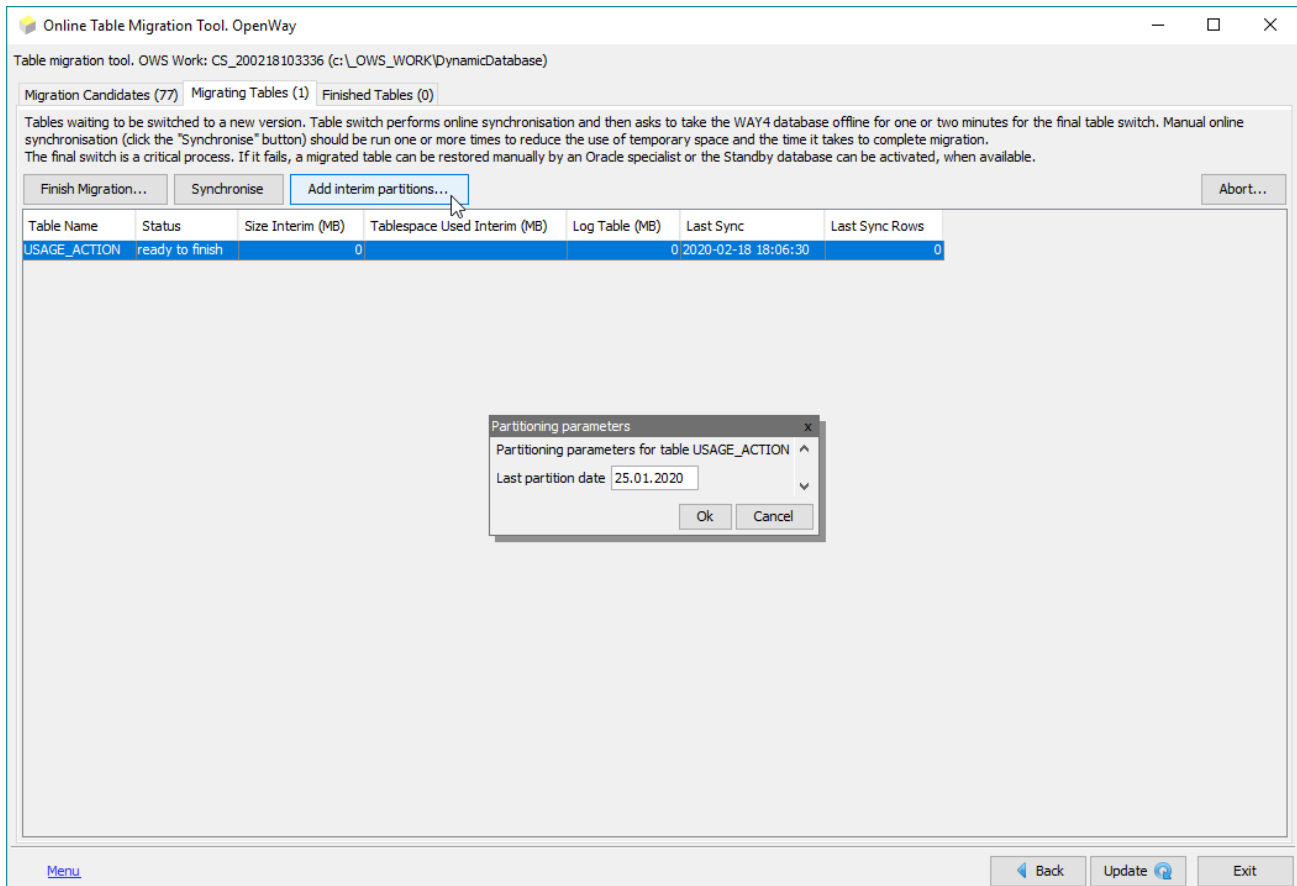
Fig. Creating table partitions

Use the [Block Clerks] button to close WAY4 user sessions. Use the [Block On-line] button to close all other sessions. Click the [Next] button. Wait for the migration process to finish.
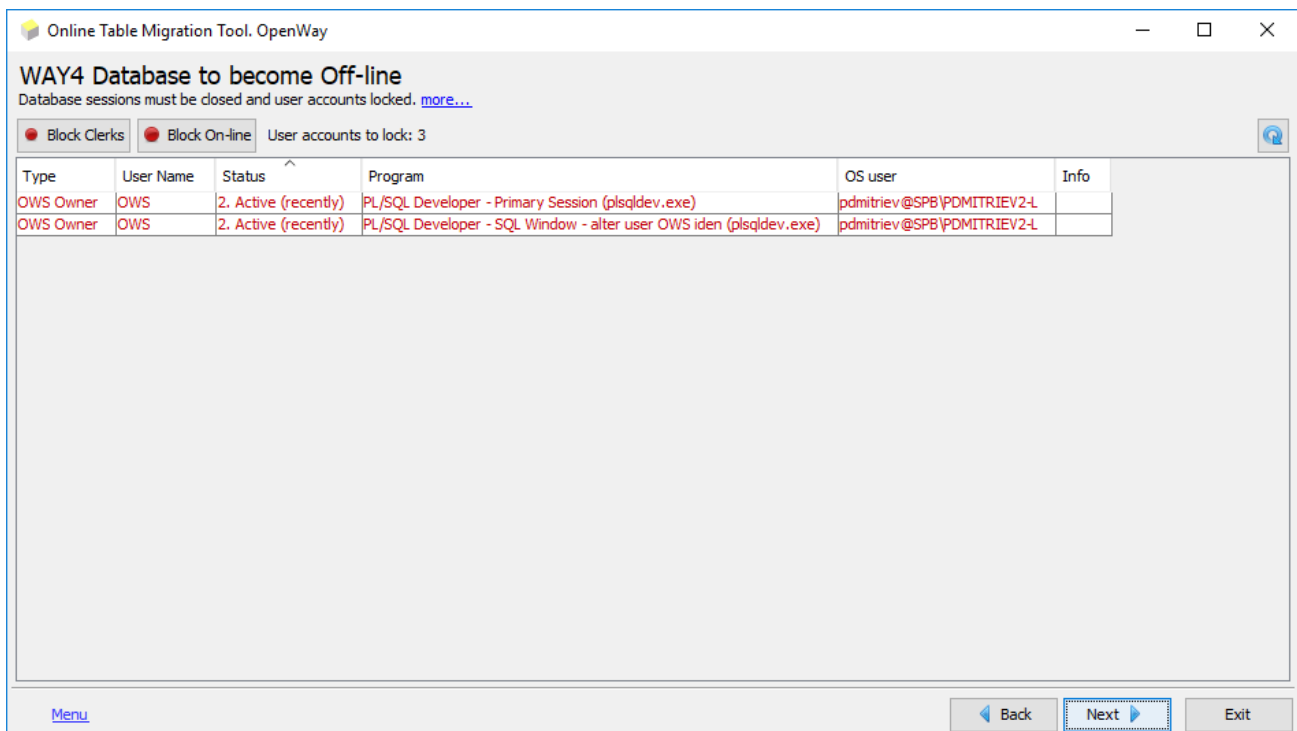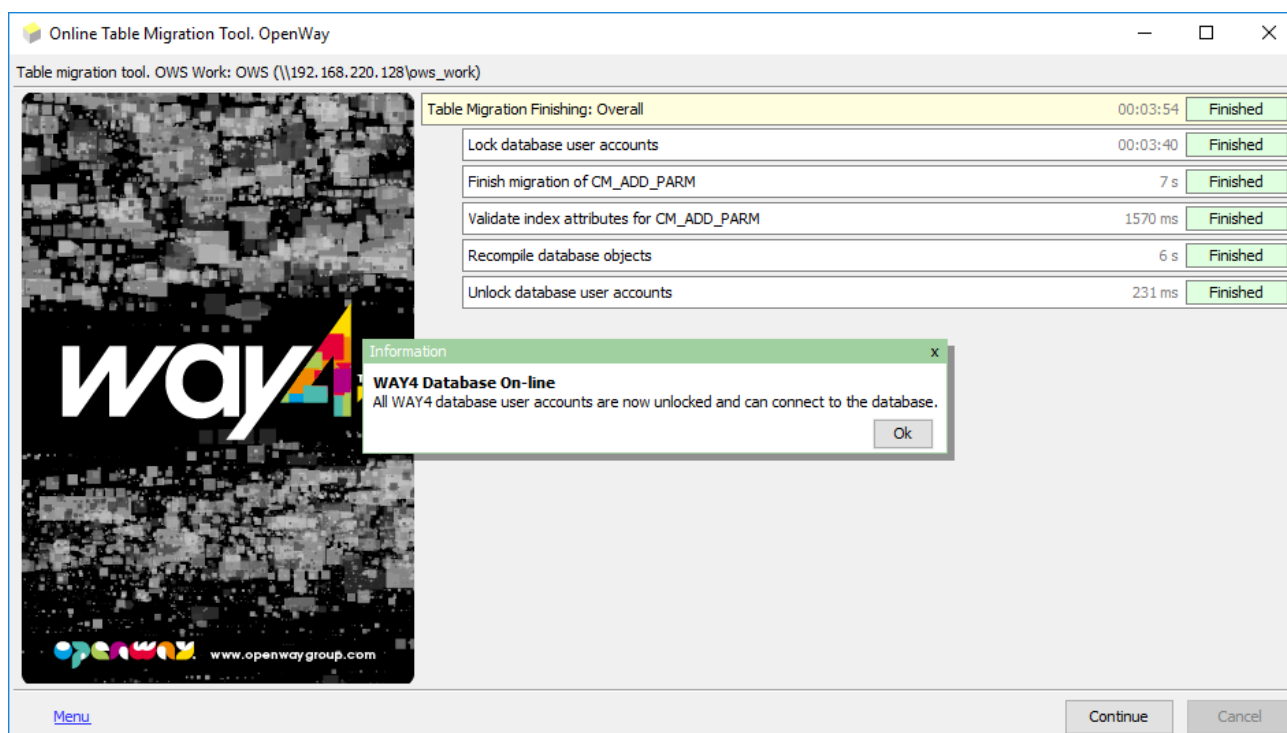
Fig. Closing sessions

Fig. Message about completion of the migration process

- After a table has been reorganized successfully, "old" objects may be deleted by clicking the [Drop Interim...] button on the "Finished Tables" tab.
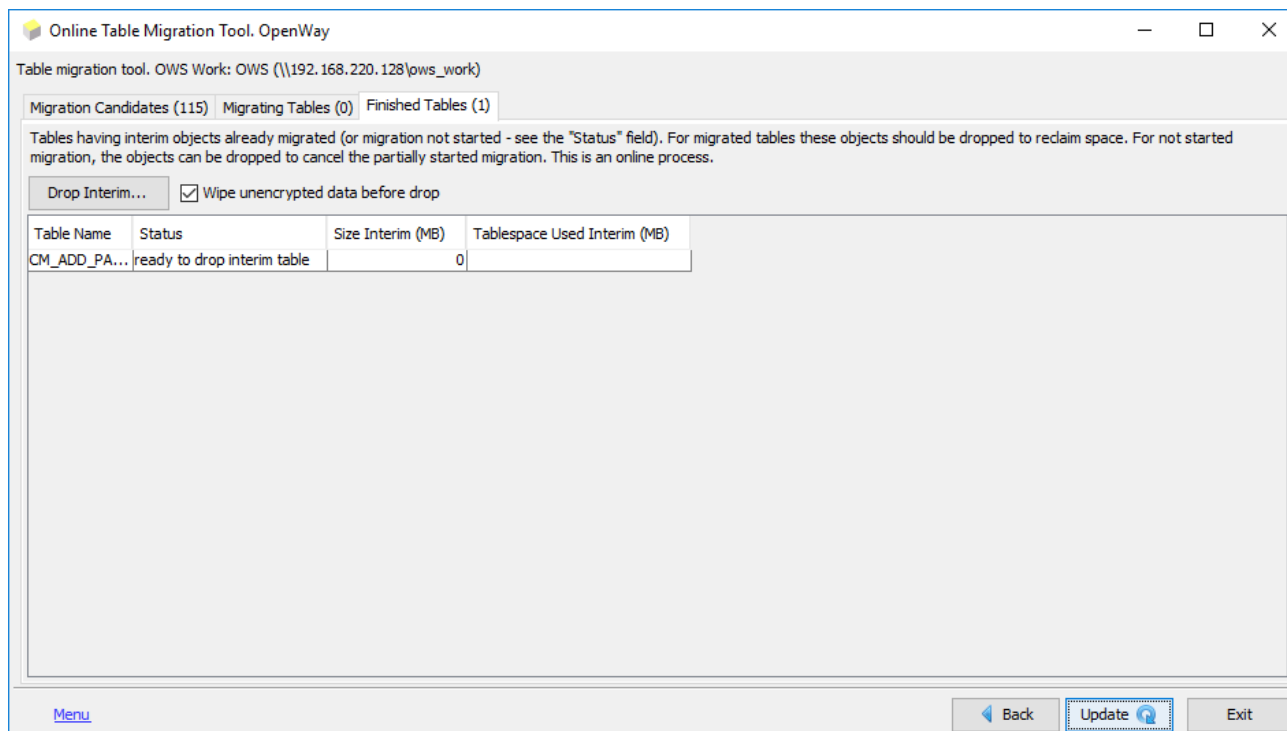

Fig. Deleting temporary objects

To set the parallel degree when creating indexes, use the parameter CreateIndex_<STANDARD_TABLESPACE_NAME>=parallel <PARALLEL_DEGREE> in the DB.INI file ("Replacing" section); for example:

```
CreateIndex_OWDOC_I=parallel 8
```

2.2 Deleting unused columns

Tables for which unused columns are to be deleted have the "Compact" checkbox selected.

To delete a table's unused columns, select the table and click the [Start Migration] button (see "General information").
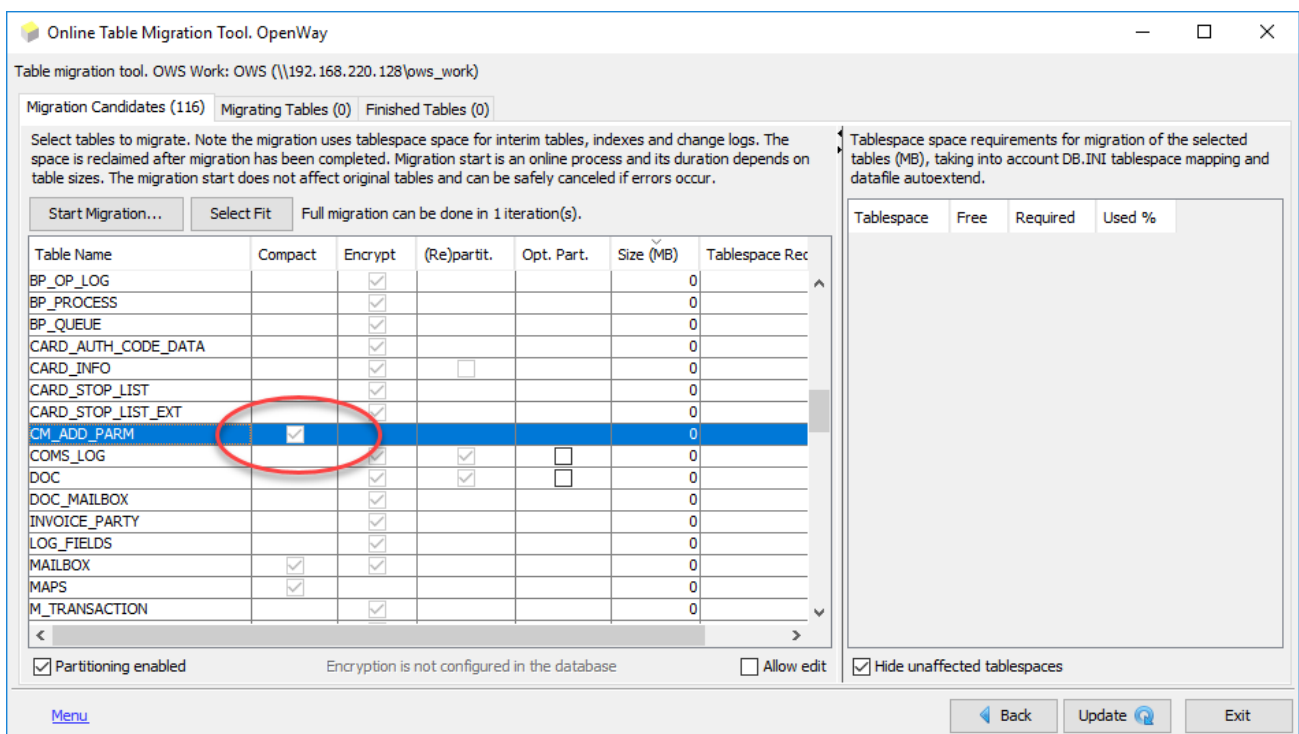

Fig. Deleting unused columns

2.3 Partitioning tables with default parameters

Tables for partitioning with default parameters have the "(Re)partit" checkbox selected.

To partition a table, select it and click the [Start Migration] button (see "General information").
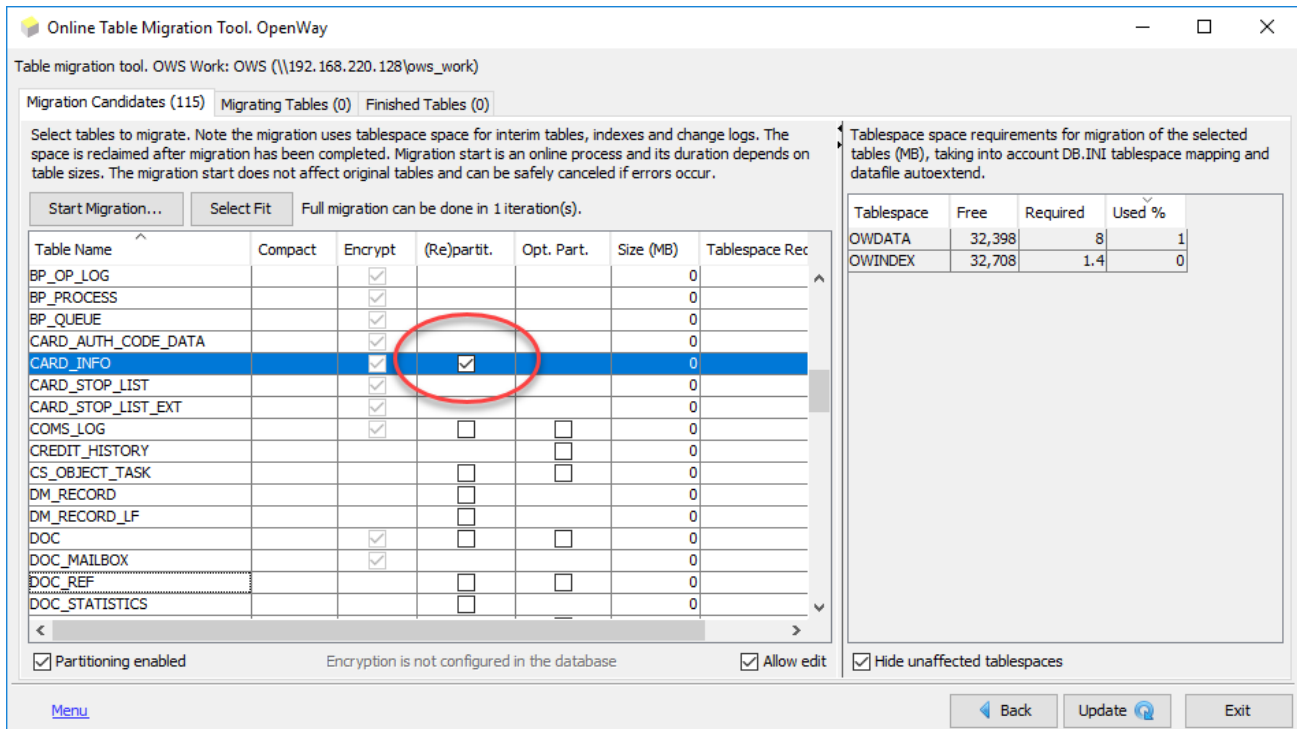
Fig. Partitioning tables with default parameters

The number of partitions is set in the partitions_concurrent parameter in the DB.INI file ("Replacing" section):

```
partitions_concurrent=partitions <number of sections>
```

2.4   Partitioning tables with optional parameters

Tables for partitioning with custom parameters have the "Opt. Part." checkbox selected.

To partition a table, select it, set parameters and click the [Start Migration] button (see "General information").
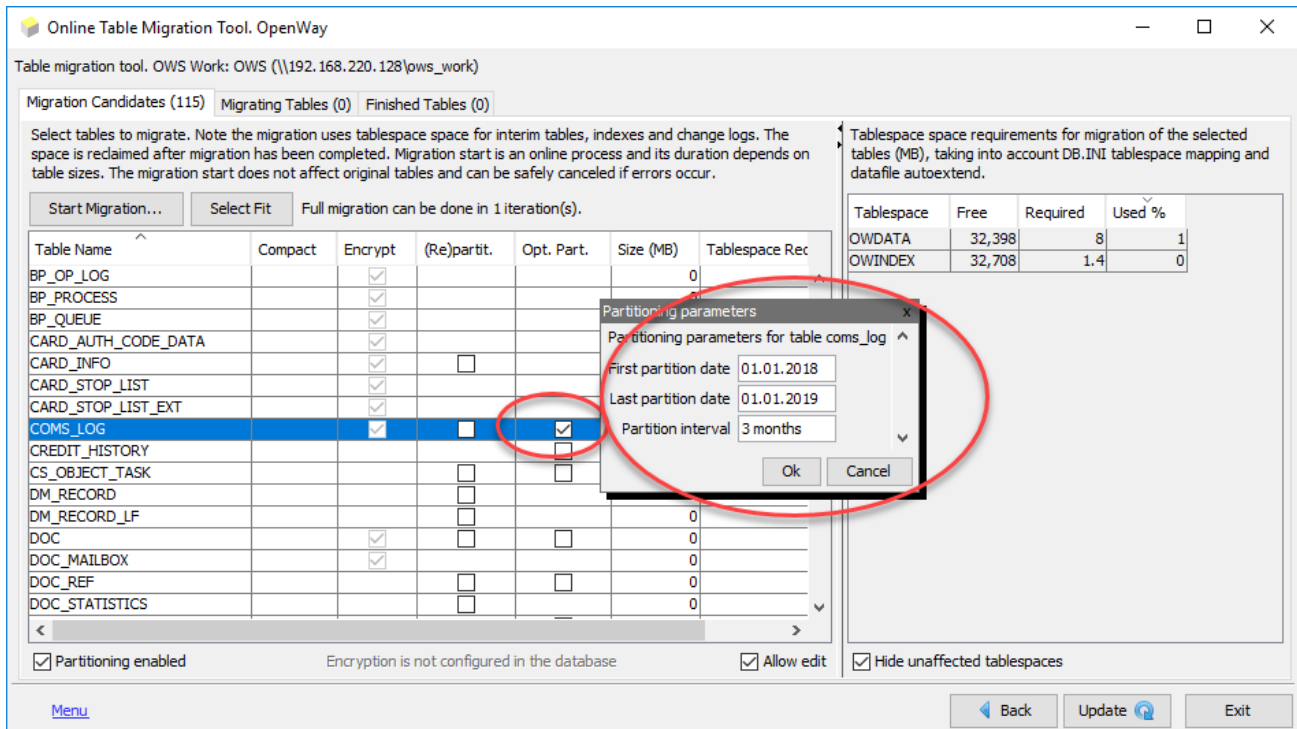
Fig. Partitioning with custom parameters

Partition interval parameters for various tables can be set in advance in the DB.INI file ("Replacing" section):

- To configure partitioning by date for tables with custom parameters, the <TABLE_NAME>_PRT_DATERANGE parameter is used; for example:

```
DOC_PRT_DATERANGE=3 months
```

- To configure partitioning by number for tables with custom parameters, the <TABLE_NAME>_PRT_NUMBERRANGE parameter is used; for example:

```
SI_LOG_SRC_PRT_NUMBERRANGE=1000000 round -6
```

2.5   Recreating a table in a new tablespace

For simple recreation of a table in a new tablespace, no checkboxes should be selected for the table, and mapping to the new tablespace should be set in the DB.INI file.

To recreate a table, select it, clear the checkboxes, click the [Start Migration] button and confirm the table's recreation (see "General information").
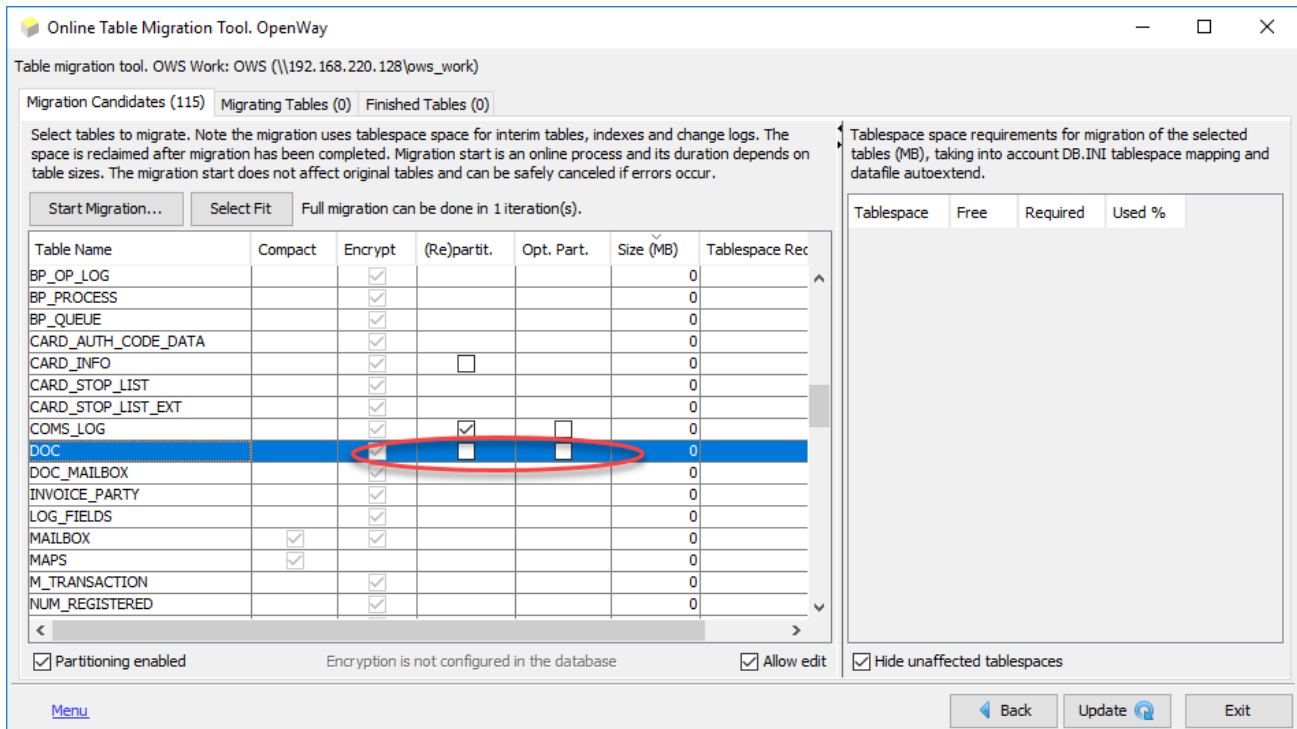
Fig. Recreating a table in a new tablespace

2.6   Recreating a table in an encrypted tablespace

Detailed requirements for storing WAY4 data are described in the document ""WAY4™ PA-DSS Implementation Guide".

To use encrypted tablespaces, in the DB.INI file set mapping to encrypted tablespaces with the _E postfix (for example, OWLARGE_E_D). Parameters must refer to encrypted Oracle tablespaces created earlier by the administrator.

To create mapping, copy existing mapping for all tablespaces except OWTEMP, adding the _E postfix to each line:

```
# early present lines
OWLARGE_D=OWLARGE_D
OWLARGE_I=OWLARGE_I
# mapping added for Tablespace Encryption
OWLARGE_D=OWLARGE_D
OWLARGE_I=OWLARGE_I
OWLARGE_E_D=OWLARGE_E_D
OWLARGE_E_I=OWLARGE_E_I
```

If parameters with mapping to encrypted tablespaces were specified in DB.INI before system installation or upgrade, tables and indexes will be created in encrypted tablespaces.

To recreate a table in an encrypted tablespace, select the table, click the [Start Migration] button and confirm recreation of the table (see "General information").
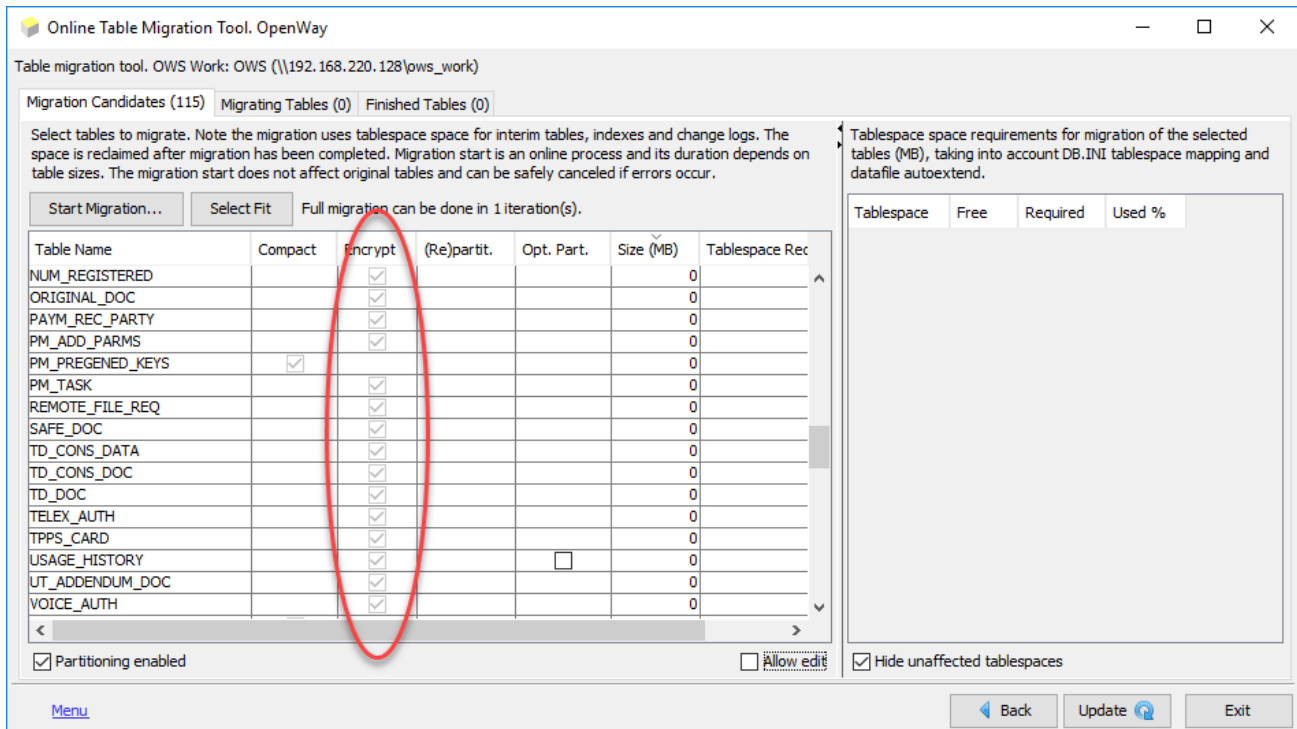
Fig. Recreating a table in an encrypted tablespace

2.7 Adding a table to the list of migration candidates

If a table is not in the list of tables on the "Migration Candidates" tab (for example, if the table cannot be partitioned), the TABLEMIG.FORCE_TABLES parameter in the DB.INI file ("Replacing" section) can be used to force addition of the table, for example:
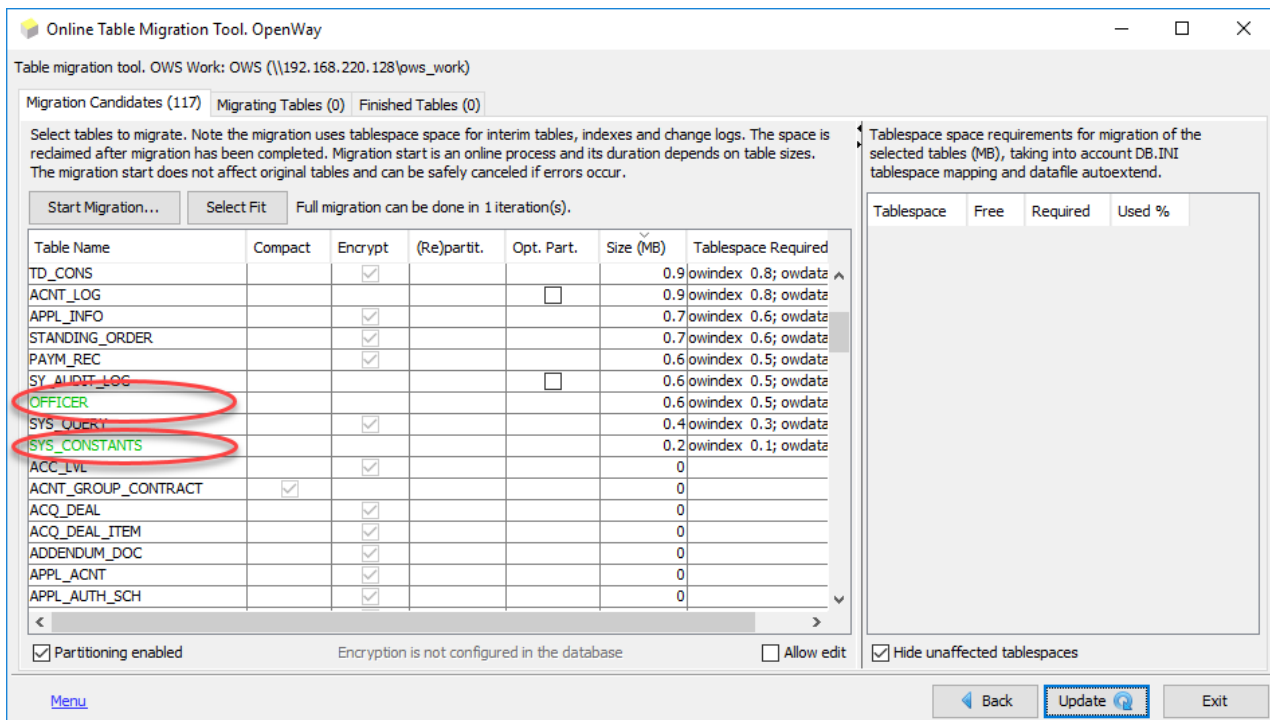
```
TABLEMIG.FORCE_TABLES=officer, sys_constants
```

Fig. Forcing addition of tables to the list of candidates