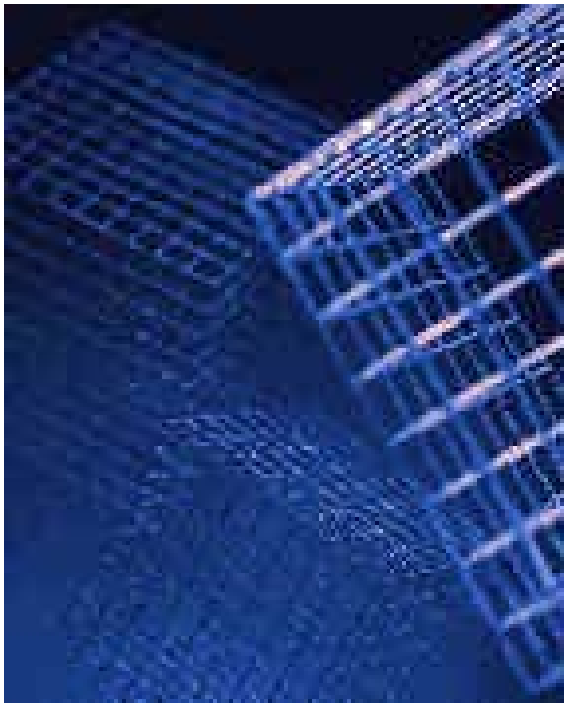
Upgrading Database Instances Including the Database Software



From Version 7.3 to 7.4

Copyright

© Copyright 2003 SAP AG.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.1 or any later version published by the Free Software Foundation.
For more information on the GNU Free Documentation License see http://www.gnu.org/copyleft/fdl.html#SEC4.

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax
	Tip

Contents

Copyright 2
Icons 3
Contents 4
Upgrading Database Instances Including the Database Software 5
Upgrade Using the SDBUPD Program 5
Upgrade Using the SDBINST Program with Additional Steps 5
Prerequisites 5
Procedure 6
Result 7

Upgrading Database Instances Including the Database Software

For SAP DB version 7.3 databases, there are two ways for upgrading the database instances including the database software:

- Upgrade using the SDBUPD program
- Upgrade using the SDBINST program
  If the SDBINST program is used, additional steps must be carried out afterwards.

The procedure you can use, depends on the installation structure, that is whether one or more database instances refer to the installation path of the software version to be upgraded.

Upgrade Using the SDBUPD Program

The program SDBUPD can be used by SAP customers for a simultaneous upgrade of the database software and the database instances in SAP systems from version 7.3 to 7.4. It is part of the installation package for the server.

You can also use this program for a simultaneous upgrade of software and database instances, if these instances are not part of SAP solutions. The essential prerequisite is that each of them relates to a separate 7.3 software installation.
The SDBUPD program is also part of the SAP DB 7.4 software package (`sapdb-all-<os>-<32|64>bit-<arch>-7_4_3_7beta.tgz`), and can be downloaded from the SAP DB homepage at *http://www.sapdb.org*.

Upgrade Using the SDBINST Program with Additional Steps

Prerequisites

- Your database instance is **not** part of an SAP System
- There are multiple version 7.3 database instances that relate to the same installation path (`<dependent_path><7.3>`).
- The database instance to be migrated is of version 7.3 with the minimum build number 025.
- A backup medium for a complete data backup is available.

Procedure

Install the software version 7.4 as per the instructions given in the Database *Software Installation Guide*. Depending on your operating system, you can use the Red Hat Package Manager or the SDBINST program for the installation. If using the SDBINST program, take care to install the version 7.4 software **in parallel** to version 7.3.

When being asked to choose the ID of the database instance to be updated, choose "**None**". This way, the program will ask you to specify a new installation path. Specify a path in parallel to the version 7.3 installation path.

After having installed the new software, perform the following migration steps for each of your version 7.3 database instances individually.

To ensure the security of your data in the case of a possible error during the migration process, we recommend that you perform a complete data backup of the instance in the COLD operational state, as step 6 of the migration. As it is necessary to stop the database instance to do this, this leads to a certain amount of downtime. However, if an error occurs, the data backup produced in this way can be imported into a database instance of version 7.3 or of version 7.4.
Alternatively, you can perform a complete data backup in the WARM operational state before beginning the migration. However, if errors occur, this backup could only be used to restore the database instance in version 7.3, and is therefore not a complete alternative to a data backup in the COLD operational state during the migration process.

Procedure		Command
1.	Call the Database Manager CLI as the DBM operator, and connect to the database instance to be migrated.	**dbmcli – d <database_name> -u <dbm_user>,<password>**
2.	Stop the database instance in accordance with the rules. Use the `db_offline` command to do this, and not the `db_stop` command. Only by doing this do you ensure that you can restart the database instance if an error occurs.	**db_offline**
3.	Transfer the database instance to the COLD operational state.	**db_cold**
4.	Execute the command to prepare the migration.	**util_execute migrate**
5.	Open a utility session	**util_connect**
6.	Perform a complete data backup in the COLD	**backup_start <medium>**

	operational state.	
7.	End the utility session	`util_release`
8.	Transfer the database instance to the OFFLINE operational state.	`db_offline`

9.	**In UNIX:**
	Assign the new software version 7.4 to the database instance.
	
	In Microsoft Windows:
	Delete the registration of the database instance. Use the software version 7.4 of the DBMCLI for re-creating the database instance.
		In UNIX:
		`db_register –R <dependent_path><7.4>`
		
		In Microsoft Windows:
		`db_drop WITHOUTFILES`
		
		`"<dependent_path><7.4>\pgm\dbmcli" –s db_create <db_name> <dbm_user>,<password>`

10.	End the Database Manager CLI.	`exit | release | quit |bye`
11.	Log on to the Database Manager CLI again. Until now, you have been communicating with version 7.3 of the DBM server. With this new logon, you create a connection to version 7.4 of the DBM Server.	`dbmcli – d <database_name> -u <user_name>,<password>`
12.	Start the migration of the database parameters.	`param_checkall`
13.	Transfer the database instance to the ADMIN operational state.	`db_admin`
14.	Execute the migration command. Governed by the size of the database instance, this may take some time. Do not interrupt the execution of the command.	`util_execute migrate database`
15.	End the utility session	`util_release`
16.	Transfer the database instance to the OFFLINE operational state.	`db_offline`
17.	Restart the database instance. The database catalog is migrated from 7.3 to 7.4.	`db_online`
18.	Reload the system tables.	`load_systab`

Result

Your database instances including the database software have been upgraded. The database instances are ONLINE.