



**PackDB  
User manual**





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## 1. About application

PackDb is a console application for making backups, restoring and transferring local MS SQL Server databases.

### Built-in help

When executing the application without parameters the console will show the list of available actions: backup, restore, copy, verify, repack, addprivileges. When executing the application with one of these commands with key -? or --help, the console will show the list of required parameters.

### Required permissions

1. The application must be executed by the Windows user with the Create Global Objects permissions (see [https://technet.microsoft.com/en-us/library/dn221972\(v=ws.11\).aspx](https://technet.microsoft.com/en-us/library/dn221972(v=ws.11).aspx)). To give those permissions to a specific user you can use the addprivileges command.

*Example: PackDb.exe addprivileges -- account JohnDoe*

2. Sql Server user must have sysadmin role.

### Available database operations

1. Backup – creates a database backup, stores it on the hard drive in the compressed mode. Can create an encrypted archive with the specified password.
2. Restore – restores the database from the backup. To execute the command one must specify a backup archive file.
3. Copy – copies the specified database on the fly (without storing the backup file and later restoring it). Can copy databases within the single SQL Server instance or between several local SQL Server instances.
4. Verify – verifies the backup but does not restore it, and checks to see that the backup set is complete and the entire backup is readable.
5. Repack – repacks backup into another archive format.

*PackDb works for **local MS SQL Server** instances only.*

E-mail: [sales.global@sparesync.com](mailto:sales.global@sparesync.com), <http://sparesync.com>



## 2. Creating a database backup(backup command)

Key	Key (full name)	Description	Is mandatory	Default value
	--format	Created archive format. Available values: zip, 7z, bz2, gz, xz, none	No	none. Data is not compressed and is stored as a .bak file
	--stdout	Send the resulting backup to a standard output stream	No	<b>Important:</b> can be used with the following formats only: bz2, gz, xz, none
	--compressionlevel	Data compression level. Available values: high, low, normal, fast, ultra, none	No	fast
-f	--force	Force overwrite the specified backup/archive if it already exists.	No	No
-a	--archive	Full path to the created archive	No	
-s	--server	Name of the named SQL Server instance	No	Uses the default instance
-d	--database	Database name	Yes	
-u	--login	SQL Server user login	No	If login and password are not specified, Windows authentication will be used
-p	--password	SQL Server user password	No	
	--archivepassword	Password for the created archive	No	No password
-b	--backup	Backup file name. Is mandatory when using --format none option (can include relative or absolute path).	<b>No/Yes</b>	Backup file name will have the following format: {database name}_{current date and time}.bak



### 3. Restoring database (restore and verify commands)

When restoring a database, one should specify a source of the archived copy. The possible sources are: standard input stream (*stdin*), archived database backup (*a*), unarchived database backup (*b*). When using both keys, it is implied that the archive with the backup should be used, and the backup name is stated under the *b* key.

Key	Key (full name)	Description	Is mandatory	Default value
	--stdin	Use this option to read the backup data from standard input stream. <b>Important:</b> reading compressed data is not supported.	No	
-a	--archive	Full path to the database archive	No	
-s	--server	Name of the named SQL Server instance	No	Uses the default instance
-d	--database	Restored database name	Yes (not mandatory for verify command)	
-u	--login	SQL Server user login	No	If login and password are not specified, Windows authentication will be used
-p	--password	SQL Server user password	No	
	--archivepassword	Archive password	No	
-b	--backup	Archived backup file name/ full path to backup file	No	If the specified archive contains a single backup file, it will be used. Otherwise, an error will be shown.



-f	--force	Force overwrite the restored database if it already exists	No	No
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#### 4. Copying database (copy command)

Key	Key (full name)	Description	Is mandatory	Default value
	--sourceserver	Name of the named source SQL Server instance (containing the copied database)	No	Uses the default instance
	--sourcedatabase	Copied database name	Yes	
	--sourcelogin	Source SQL Server user login	No	If login and password are not specified, Windows authentication will be used
	--sourcepassword	Source SQL Server user password	No	
	--targetserver	Name of the named target SQL Server instance (where the database must be copied to)	No	Source SQL Server instance
	--targetdatabase	New database name	No	By default has the same name, as the source database. If the base is copied to the same SQL Server instance and the name is not specified, the new base will be renamed automatically.
	--targetlogin	Target SQL Server user login	No	If login and password are not specified, Windows authentication will be used. If targetserver is not specified, sourcelogin and
	--targetpassword	Target SQL Server user password	No	



				sourcepassword values will be used.
-f	--force	Force overwrite the target database if it already exists.	No	No

## 5. Repacking database (repack command)

Ключ	Ключ (полное название)	Описание	Обязательный	Значение по умолчанию
	--format	Created archive format. Available values: zip, 7z, bz2, gz, xz, none	Yes	
	--compressionlevel	Data compression level. Available values: high, low, normal, fast, ultra, none	No	fast
	--stdout	Send backup to a standard output stream	No	
	--sourcearchive	Full path to the database archive	Yes	
	--sourcearchivepassword	Archive password	No	
	--targetarchive	Full path to the created archive	No	
	--targetarchivepassword	Password for the created archive	No	No password
-f	--force	Force overwrite the specified backup/archive if it already exists.	No	No
	--deletesourcearchive	After the operation is	No	No



		completed the source archive will be deleted		
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## 6. Adding privileges (addprivileges command)

Key	Key (full name)	Description	Is mandatory	Default value
	--account	Name of the user account that must be given the privilege. Required format: "domain\account" or "account"	Yes	

## 7. Examples.

**Case 1.** Create a database backup from the named SQL Server instance. SQL Server name: SQLEXPRESS. Target archive format: 7z. Required command line:

```
PackDb.exe backup -s .\SQLEXPRESS --database DressesShopDb --archive "D:\File Storage\ShopDbBackup.7z" --format 7z
```

**Case 2.** Restore a database from the backup created in the case 1.

```
PackDb.exe restore -s .\SQLEXPRESS --database DressesShopDb -a "D:\File Storage\ShopDbBackup.7z" --force
```

**Case 3.** Copy the database within the default SQL Server. Authentication mode: SQL Server.

```
PackDb.exe copy --sourcedatabase DressesShopDb --targetdatabase DressesShopDb_copy --sourcelogin sa --sourcepassword qwerty
```

**Case 4. Repack database to another archive and change compression level**

```
PackDb.exe repack --sourcearchive "D:\File Storage\ShopDbBackup.7z" --targetarchive "D:\File Storage\ShopDbBackup.gz" --format gz --compressionlevel high --deletesourcearchive
```

