



Neo4j Admin and Neo4j CLI

Introduction

`neo4j-admin` and `neo4j` are command-line tools for managing and administering a Neo4j DBMS. Both are installed as part of the product and can be executed with a number of commands. The `neo4j` commands are equivalent to the most important commands in the `neo4j-admin` server category.

Both `neo4j-admin` and `neo4j` commands support the `--help` option, which prints the command's usage and options, and the `--version` option, which prints the version of the command. All admin command options can also be provided in a file and passed to the command using the `@` prefix. This is useful when the command line becomes too long to manage. For example, `neo4j-admin database import full @/path/to/your/<args-filename> mydb`. For more information, see [PicoCLI → AtFiles](#) → official documentation.

NOTE

All admin commands must be invoked with the same user as Neo4j runs as. This guarantees that Neo4j will have full rights to start and work with the database files you use.

The `neo4j-admin` tool

The `neo4j-admin` command-line tool is located in the `bin` directory.

General synopsis

`neo4j-admin` has the following general synopsis:

```
neo4j-admin [category] [command] [subcommand]
```

`neo4j-admin` commands per category

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All administration commands, except for `help` and `version`, are organized into the following three categories:

- `dbms` -DBMS-wide (for single and clustered environments) administration tasks
- `server` -server-wide administration tasks
- `database` -database-specific administration tasks
- `backup` -backup-specific tasks

Table 1. Available commands per category

Category	Command	Description
dbms	<code>set-default-admin</code>	Sets the default admin user when no roles are present.
	<code>set-initial-password</code>	Sets the initial password of the initial admin user (<code>neo4j</code>). For details, see Set an initial password .
	<code>unbind-system-db</code>	Removes and archives the cluster state of the <code>system</code> database so the instance can rebind to a new cluster state of the <code>system</code> database.

Category	Command	Description
server	console	Starts DBMS server in the console.
	get-id	Displays the server ID of an instance. The server ID can be used to specify a server in Cypher commands.
	license	Accept the license agreement. Possible options are <code>--accept-commercial</code> for the commercial or <code>--accept-evaluation</code> for the evaluation license . This command must be run before starting the Neo4j Enterprise Edition. Starting from Neo4j 2025.04, when using an evaluation license, the command prints information about the days remaining in the trial period. If the evaluation license has expired, the command prints a warning with the number of days since the license expired. <code>neo4j-admin server license</code> also logs information about license status in the <i>neo4j.log</i> file on startup.
	memory-recommendation	Prints recommendations for Neo4j heap and page cache memory usage. For details, see Get initial memory recommendations .
	migrate-configuration	Migrates server configuration from the previous major version. For details, see Migrate configurations .
	report	Produces a ZIP/TAR of the most common information needed for remote assessments. For details, see Generate a report about the system .
	restart	Restarts the server daemon.
	start	Starts the server as a daemon.
	status	Gets the status of the server.
	stop	Stops the server daemon.
	unbind	Removes cluster state data from a stopped Neo4j server. For details, see Unbind a server .

Category	Command	Description
	<code>validate-config</code>	Performs configuration validation without starting the server. For details, see Validate configurations .
	<code>windows-service</code>	A command whose subcommands can be used to install, uninstall, and update Neo4j as a Windows service.

Category	Command	Description
database	aggregate-backup Deprecated in 2025.01	Aggregates a chain of backup artifacts into a single artifact. For details, see Aggregate a database backup chain . Replaced by <code>neo4j-admin backup aggregate</code> .
	backup	Performs an online backup from a running Neo4j enterprise server.
	check	Checks the consistency of a database. For details, see Check database consistency .
	copy	Copies a database and optionally applies filters. For details, see Copy a database store .
	dump	Dumps a database into a single-file archive. For details, see Back up an offline database .
	import	Imports a collection of CSV files. For details, see Import .
	info	Prints information about a Neo4j database store. For details, see Display store information .
	load	Loads a database from an archive created with the <code>dump</code> command. For details, see Restore a database dump .
	migrate	Migrates a database from one store format to another or between versions of the same format. For details, see Migrate a database .
	restore	Restores a backed up database. For details, see Restore a database backup .
	upload	Pushes a local database to a Neo4j Aura instance. For details, see Upload to Neo4j Aura .

Category	Command	Description
backup	inspect	Lists the metadata stored in the header of backup files. For details, see Inspect the metadata of a backup file .
	aggregate <small>Introduced in 2025.01</small>	Aggregates a chain of backup artifacts into a single artifact. For details, see Aggregate a database backup chain .

The neo4j tool

The `neo4j` command-line tool is located in the [*bin*](#) directory.

General synopsis

`neo4j` has the following general synopsis:

```
neo4j [command]
```

neo4j commands

The `command` is an alias for the most important commands in the `neo4j-admin server` category.

Table 2. Equivalence between *neo4j* and *neo4j-admin* commands

neo4j command	Equivalent neo4j-admin command
neo4j console	neo4j-admin server console
neo4j restart	neo4j-admin server restart
neo4j start	neo4j-admin server start
neo4j status	neo4j-admin server status
neo4j stop	neo4j-admin server stop
neo4j windows-service	neo4j-admin server windows-service

Version command

Version can be obtained by invoking the `version` command, `--version` command option, or its short alternative `-V`, on the root level of both `neo4j` and `neo4j-admin` commands. For example, `neo4j --version`, `neo4j-admin -V`, `neo4j-admin version`, or `neo4j version`.

Help command

Help can be obtained by invoking the `help` command, `--help` command option, or its short alternative `-h`, with both `neo4j` and `neo4j-admin` commands. `--help` and `-h` options can be invoked on any level, namely root, category, command, and subcommand. For example, `neo4j --help`, `neo4j [command] -h`, `neo4j-admin -h`, `neo4j-admin [category] --help`, or `neo4j-admin [category] [command] [subcommand] -h`.

The help command can be invoked on any level except the last one, which means command-level for commands that do not have subcommands or subcommand level for commands with subcommands. The help command also accepts a parameter. For example, `neo4j help`, `neo4j-admin help`, `neo4j-admin [category] help`, `neo4j-admin help [category]`, `neo4j help [command]`, or `neo4j-admin [category] [command] help [subcommand]`.

Limitations

When using both a multi-value option and a positional parameter, the multi-value option is "greedy" and pulls in the next positional parameter via its convertor. This is a limitation of the underlying library, Picocli, and is not specific to Neo4j Admin. See [Picocli → Variable Arity Options and Positional Parameters](#) → official documentation for more information.

Configuration

Administration operations use the configuration specified in the `neo4j.conf` file. Sharing configuration between the DBMS and its administration tasks makes sense as most settings are the same. In some cases, however, it is better to override some settings specified in `neo4j.conf` by configuring the tasks (instead of updating the config settings in the `neo4j.conf` file) because administration tasks generally use fewer resources than the DBMS. For instance, if the page cache

of your DBMS is configured to a very high value in *neo4j.conf*, and you want to override this because the admin tasks like backup do not need so much memory, you provide configuration for the admin tasks instead of updating the page cache setting in the *neo4j.conf* file.

There are several options for overriding settings specified in the *neo4j.conf* file using administration tasks:

- `--additional-config` option — almost all administration commands support the `--additional-config` option, which you can use to provide a path (full path, local path, or symlinks) to a file with additional configuration. The file format should be the same as *neo4j.conf* (or *neo4j-admin.conf*). The file must be readable by the user running the admin command.
- *neo4j-admin.conf* — a configuration file located in the same directory as the *neo4j.conf* file, which you can use to provide administration-task-specific settings.
- Some commands also support a command-specific configuration file. Such files are also looked for in the same directory as the *neo4j.conf* file. The following table lists command-specific configuration files:

Table 3. Command-specific configuration files

Command	Configuration file
neo4j-admin database backup	neo4j-admin-database-backup.conf
neo4j-admin database check	neo4j-admin-database-check.conf
neo4j-admin database copy	neo4j-admin-database-copy.conf
neo4j-admin database dump	neo4j-admin-database-dump.conf
neo4j-admin database import	neo4j-admin-database-import.conf
neo4j-admin database load	neo4j-admin-database-load.conf
neo4j-admin database migrate	neo4j-admin-database-migrate.conf
neo4j-admin database restore	neo4j-admin-database-restore.conf

All four configuration sources are optional and settings for administration commands are resolved from them with the following descending priority:

1. `--additional-config` option
2. command-specific configuration file
3. `neo4j-admin.conf`
4. `neo4j.conf`

NOTE

The commands for launching the DBMS, `neo4j start` and `neo4j console`, must be configured only in the `neo4j.conf` file.

Environment variables

Neo4j Admin can also use the following environment variables:

Environment variable	Description
NEO4J_DEBUG	Set to anything to enable debug output.
NEO4J_HOME	Neo4j home directory.
NEO4J_CONF	Path to the directory that contains <i>neo4j.conf</i> .
HEAP_SIZE	Set JVM maximum heap size during command execution. Takes a number and a unit, for example, 512m.
JAVA_OPTS	Additional JVM arguments.

If set, `HEAP_SIZE` and `JAVA_OPTS` override all relevant settings specified in the configuration file.

Exit codes

When `neo4j` and `neo4j-admin` finish as expected, they exit with code `0`. A non-zero exit code means something undesired happened during command execution.

Table 4. Exit codes

Exit code	Description
0	Successful execution.

Exit code	Description
1	The command failed to execute.
3	The command failed to execute because the database is not running.
64	The command was invoked with incorrect options/parameters. See the printed usage for details.
70	An exception was thrown, not handled otherwise.

The non-zero exit code can contain further information about the error, for example, see the `backup` command's [exit codes](#).

Command-line completion

From 5.4 onwards, Neo4j supports command-line completion.

- For Unix-based systems, the tab completion applies to the `neo4j` and `neo4j-admin` command line interfaces in terminals such as Bash and ZSH.
- For RPM and DEB packaged installations, the necessary files are automatically installed in `bash-completion`.
- For tarball installations, the files are located in the `bin/completion/` directory with detailed instructions for manual installation.

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CONTACT US →

US: 1-855-636-4532

Sweden +46 171 480 113

UK: +44 20 3868 3223

France: +33 (0) 1 88 46 13 20

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