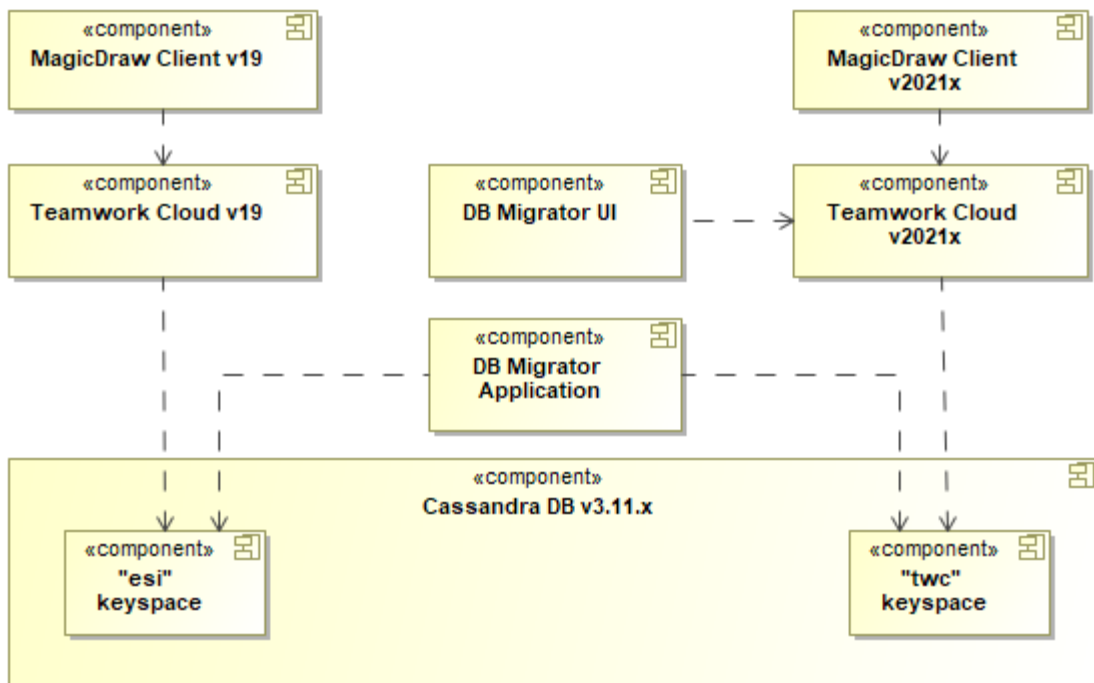# Migrating database

After upgrading Magic Collaboration Studio to a new version, you have to migrate its database as well. The database migration tools support incremental migration, which means that selected resources are migrated version by version. During migration, new resources and partially migrated resources are still accessible in the source database, therefore users can work with them avoiding downtime. To learn more about different approaches you can use to migrate the database, see Migration strategies.

For database migration, two migration tools are used:

- **The command-line migration tool** (to be deployed on the source database server). Upon initial launch, this tool creates a new database schema and migrates all non-model data (users, roles, etc.).
- **The UI migration tool** (to be deployed on any machine with GUI support). The UI migration tool provides visual migration control and is used to migrate all resources.

The following figure illustrates how these migration tools work.

This schema displays how database migration tools work.

> ⊙ **Important**
>
> - It is highly recommended not to work with the upgraded version of Magic Collaboration Studio before initial database migration, except for
>   setting up a license with the default Administrator user

> ⚠ **Migration prerequisites**
>
> - Before starting modeling activities in the version 2021xR2 project, make sure that the project is fully migrated along with its ALL used projects.

To migrate the database

> ⚠ The migration tool must be started using Java 11x version.

1. On the source database server, download and extract the *migrationtool_<version_number>_no_install.zip.*
2. Run the *migrationtool_<version_number>_no_install/MigrationTool/migrator* for Linux (if you are working on Windows, run the *migrationtool_<version_number>_no_install\MigrationTool\migrator.bat* file).

ⓘ

Before starting the migration, make sure the following requirements are met:

<div>

Command-line migration tool

Upon initial launch, this tool creates a new database schema within the Teamwork Cloud keyspace and migrates all non-model data (users, roles, etc.). If non-model data is changed in the source database between different resource migration iterations. e.g., new users are created or new roles are assigned, these changes are migrated to the target database after each resource migration. If non-model data is manually

</div>

You can migrate the database only from versions 19.0 SP3 and 19.0 SP4 (schema version #26). The schemas of the databases of earlier versions are not suitable for migration. If you want to migrate a database of an earlier version, you must migrate it to version 19.0 SP3 or 19.0 SP4.

3. Download and extract the migration tool.
4. Run the *migrationtool_<version_number>_ui-linux/migrationtool_ui/migrator* for Linux (For Windows, run the *migrationtool_<version_number>_ui-win/migrationtool_ui/migrator.bat* file).

For more information, see Migrating data to version 19.0 SP3 or Migrating data to version 19.0 SP4.

<div>

⚠ You can also run the files from your desktop machine which has access to Magic Collaboration Studio.

</div>

5. When the resource migration wizard opens, enter the user name, password, and server name of the target version of Magic Collaboration Studio and click **Next**.

- **The Magic Collaboration Studio 2021x license must be applied before migrating.**

  If a license is not applied, the migrator cannot establish a connection with Magic Collaboration Studio.

6. Select the resources you want to migrate.
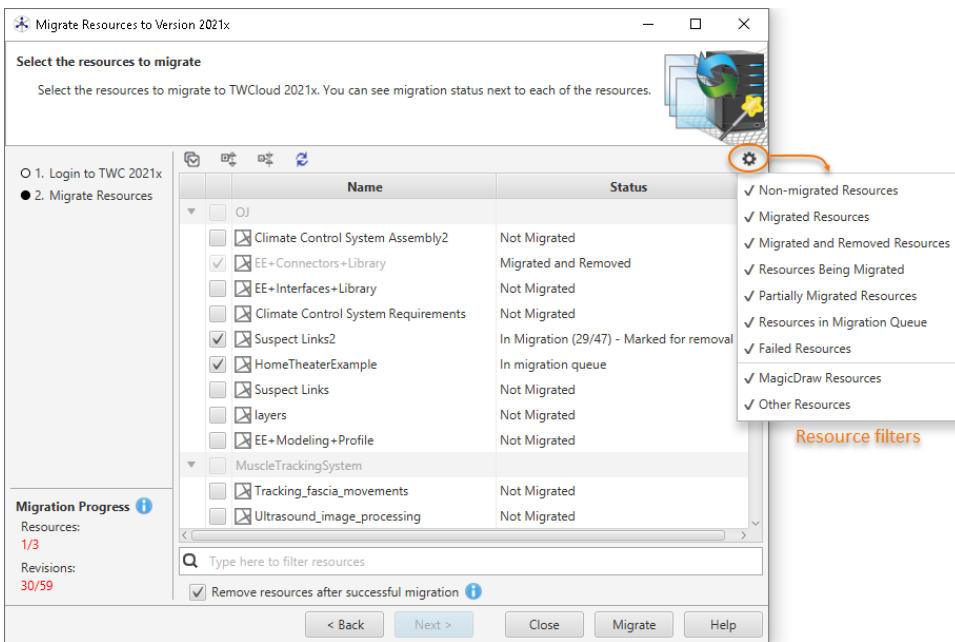
Migration statuses

On the left side of the resource migration wizard, you can see the migration status of each resource. Migration statuses can be the following:

- **Not Migrated** - the resource has never been selected for migration.
- **Migrated** - all resource versions are migrated to the target database. No new resource versions have been created in the source database.
- **Migrated and Removed** - ...
- **Partially Migrated** - ... Working with such resources in source database will no longer be possible in source database These new resource versions can be migrated to the target database.
- **In migration queue** - the resource is marked for migration and is waiting in the migration queue.
- **Failed** - resource migration failed. You can look for the reason of the failure in the migration tool log files. The migration of failed resources is re-attempted during the next migration iteration.

7. Do one of the following:
   - Clear the **Remove resources after successful migration** check-box to migrate all versions of the selected resources to the target database, but leave them available in the source database as well. All new resource versions created in the source database after migration can be migrated during the next iteration.
   - Select the **Remove resources after successful migration** check-box to migrate all versions of the selected resources to the target database and remove them from the source database. If you choose this migration option, the resources will be fully migrated and visible in the target database. Working with such resources in source database will no longer be possible. These new resource versions can be migrated to the target database.

Important

If you choose the migration option where the **Remove resources after successful migration** check-box is not selected, the migrated resources will not be visible in the target database. However, users will be able to continue working with them in the source database.

8. Click the **Migrate** button.
9. Once the resources are migrated, close the resource migration wizard.
10. If you chose the incremental migration approach (see Migration strategies), repeat steps 3 to 8 for every following migration iteration.

To filter resources by their status or type, click ⚙ as shown in the figure above.