

# Org closure migration and diagnostics HOWTO

Organization closure, or "org closure" for short, is an auxiliary data structure residing in midPoint repository. It maintains information on *who belongs to which organizational unit*, across one or multiple *is-parent-of* links. (Mathematicians would call it "transitive closure of organizational units graph", hence the "closure" in its name.) It is physically stored in the *M\_ORG\_CLOSURE* database table.

In order to increase the speed of carrying out org-related operations in the repository, we have applied an advanced algorithm for maintaining the org closure. It has been introduced in midPoint **v3.0.1devel-554-gee3dd98**. For those upgrading to this or later version of midPoint, here are some useful notes:

1. The repository structure has changed. What you have to do depends on whether you want to let midPoint to apply the change (usual for development/testing environments) or you want to do it yourself (usual for production environments).
2. So, if you have your `<hibernateHbm2ddl>` config flag set to **update** (the former case), midPoint detects it is using old version of the closure table, drops it, and re-creates it anew.
3. In all other cases, you have to manually apply a migration script. For example, for H2 the script is in the **config/sql/midpoint3.0h2h2-3.0-closure-upgrade.sql** file. However, midPoint will automatically fill-in the closure table with necessary information for you.

If you'd ever need to **downgrade**, you have to drop the "new" closure table and either manually restore its original structure, or let midPoint do it (if `hibernateHbm2ddl=update`). In either case, however, the table will be empty, and there is no automatic procedure that would fill it in. One possible solution then is to export all organizations and reimport them. The closure will be recomputed during that process.

TODO some notes on configuring closure-related actions at startup (checking, rebuilding)

TODO about manual check/recomputation of the closure (About->xxx menu item).