

# Rebuild Fedora Indices

Fedora maintains a set of internal indices containing information derived from the persistent storage, namely the underlying OCFL (Oxford Common File Layout). These indices act only as a cache of information that is persisted in the underlying OCFL and can be destroyed and rebuilt as necessary.

These indices currently maintain the following information:

- the LDP containment hierarchy
- resource membership relationships
- relationships between resources
- searchable fields, and
- the relationship between Fedora resources and their associated OCFL objects.

These indices are built initially when Fedora is started for the first time on a non-empty OCFL. As content is added, updated and deleted, the indices are updated accordingly. You may at some point wish to rebuild these indices from scratch for a variety of reasons. For example, it is likely that a future change (in subsequent releases) to the index structures could require a rebuild. In that case you can accomplish this task by simply restarting Fedora with the following flag:

```
-Dfcrepo.rebuild.on.start=true
```

**NOTE:** Depending on the size of your repository, the type of database, and/or the capacity of your database server, the rebuild can take anywhere from a few seconds to several hours (i.e if you have many millions of objects).


## Continuing a failed rebuild

If a previous rebuild of the Fedora indices was interrupted and you have some records indexed in the database you can "continue" the rebuild with the following flag:

```
-Dfcrepo.rebuild.continue=true
```

This flag will restart the process of iterating over all objects in the OCFL filesystem but will only index objects it does not find in the existing indices. This flag takes precedence over the fcrepo.rebuild.on.start flag, if both are specified the indices will **NOT** be truncated.

For the full list of database properties, please refer to the **Database** section of the [Properties](#) documentation.

 You can find additional information on this wiki about [configuring supported databases](#) and the [structure of the tables](#) in the database.

## Additional Configuration

To help with long rebuilds, optional properties can be passed in

Property	Default Value	Note
-Dfcrepo.rebuild.validation	true	Enables validation of the ocfl repository before running reindexing. Set to <b>false</b> to skip this step.
-Dfcrepo.rebuild.validation.fixity	false	Sets a flag in the ocfl validation to run fixity checks on bitstreams during validation. Set to <b>true</b> to enable fixity checks. <b>Note: -Dfcrepo.rebuild.validation must also be enabled for fixity checking</b>
-Dfcrepo.ocfl.verify.inventory	true	Tells the ocfl repository that the inventory for an ocfl object should be validating during read and write operations. Set to <b>false</b> to disable checking of the inventory.