

DSXL Backup and Restore Guide/Best Practices

Supported Versions

Source versions

- v1.2.0.2

Destination versions

- v1.2.0.2
- V1.2.0.3

Backup

Step 1: Extract backup scripts

Execute the installer just with the flag `--extract-migration-scripts`. This will extract the migration-related utils into a directory named `migration` located in the same directory as the installer file.

Step 2. Backup Cloudant Database

From the `migration` directory, run `backup_cloudant.sh`. It will export to json files into the sub-directory path `migration/backup_data/cloudant`. Cloudant holds user login information, LDAP settings, and some metadata.

Step 3. Backup MongoDB

From the `migration` directory, run `backup_mongo.sh`. It will export to json files into the sub-directory path `migration/backup_data/mongodump`. MongoDB stores admin settings.

Step 4. Backup Custom Images

From the `migration` directory, run `backup_imagegmt.sh`. It will export docker images and their metadata and runtime definitions (json files) into the sub-directory path `migration/backup_data/image-management`.

Step 5. Backup user data

User data such as projects, notebooks, datasets, etc. are stored in a gluster volume in the data partition filesystem. The path to the volume is `/<DATA_PARTITION>/dsx-user-home` on all three control nodes. Since it is a 2-replica, 1-arbiter volume, the backup must be performed on one of the control nodes that hold the data + metadata.

5.a) To find that control node, run `df -h /<DATA_PARTITION>` on all three nodes, and locate the one that uses the most space. The directory `/<DATA_PARTITION>/dsx-user-home` on that control node must be the one that is backed up.

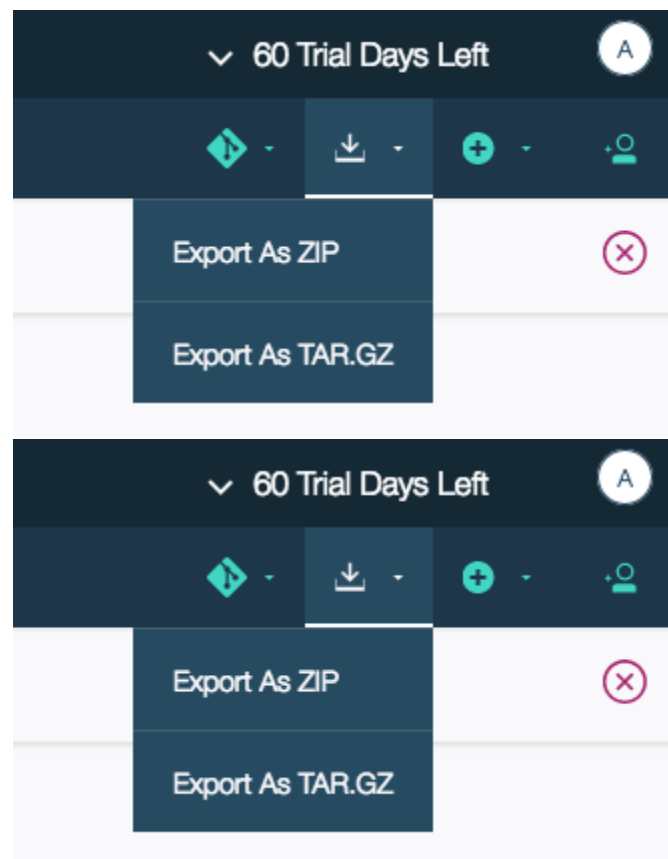
5.b) Use any backup utility of your choice to backup the directory and its contents. The backup process must retain file permissions, user/group ownership, and access/modification times. Example commands that do that are:

```
rsync -av /<DATA_PARTITION>/dsx-user-home /<BACKUP_PATH>
```

```
cp -a /<DATA_PARTITION>/dsx-user-home /<BACKUP_PATH>
```

[OPTIONAL] Step 6. Backup single projects

Users can backup their own projects and its contents individually by navigating to the project's main page and clicking on the export button located at the top-right corner of the screen:



Restore

Step 1: Copy Backed Up Data

To import Cloudant, MongoDB, and custom images, copy `migration/` and its contents from the location where the backup process was executed.

Step 2. Restore Cloudant Database

From the `migration` directory, run `restore_cloudant.sh`. It will import the json files located in `migration/backup_data/cloudant` into the Cloudant database.

Step 3. Restore MongoDB

From the `migration` directory, run `restore_mongo.sh`. It will import the json files located in `migration/backup_data/mongodump` into mongoDB.

Step 4. Restore Custom Images

From the `migration` directory, run `restore_imagegmt.sh`. It will import the docker images with their metadata and runtime definitions (json files) located in `migration/backup_data/image-management`.

Step 5. Restore user data

IMPORTANT: TO RESTORE USER DATA, THE EXISTING USER DATA WILL BE OVERWRITTEN. ENSURE THAT THE DESTINATION CLUSTER DOES NOT HAVE ANY NEEDED DATA. THERE IS NO POSSIBLE WAY TO RECOVER IT.

5.a) The backed up data must be restored into the dsx-user-home gluster volume via a mountpoint. To mount the dsx-user-home gluster volume onto a temporary mountpoint `/mnt/dsx-user-home`, run the following command from any control node:

```
mkdir -p /mnt/dsx-user-home && mount -t glusterfs localhost:dsx-user-home /mnt/dsx-user-home
```

5.b) Liking the backup process, restoration must also retain file permissions, user/group ownership, and access/modification times.

If restoring data from different versions of DSXL, there are specific files and directories to be excluded in the restoration, found in `migration/exclusion_list.txt`. If rsync is being used to do the

restoration, the files and directories can be excluded by using the argument `--exclude-from=`, like so (include the trailing forward-slashes as written):

```
rsync -av --exclude-from=/<ABSOLUTE_DIR>/migration/exclusion_list.txt  
/<BACKUP_PATH>/dsx-user-home/ /mnt/dsx-user-home
```

Otherwise, if restoring from the same version, the `--exclude-from=` argument can be omitted.

5.c) To remove the temporary mount, unmount the mountpoint and remove the directory:

```
umount /mnt/dsx-user-home && rmdir /mnt/dsx-user-home
```

[OPTIONAL] Step 6. Restore single projects

Exported projects can be imported via the "Create Project" page, from the "From File" tab:

Projects > Create Project

Create Project

Blank From File From Github

Name*

Type project name here

Project File*

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Drag and drop your .zip, .tar, or .gz file here or **browse** your local file system