Hi Ronak,

I have gone through the requirements, for most of the things we can reuse the existing functionality by extending them for the new Local Sync option.

There are some things for which we have to do write new logic.

Below are those functionalities

1. Data Backup Frequency

There are two options:

* Immediate Backup – This can be easily incorporate with existing Watcher implementation(of online backup)
* Schedule for particular time – We will make use of java’s ScheduledExecutorService

1. Store file in secure way in external hard disk

* Instead of making all the backup files as password protected, we will store the backup file in encrypted form using **AES strategy**, so that no one will be able to see the content of the file except the application. We will use username as the key for the AES technique. Whenever required we take decrypt the files using same strategy to its original contents.

1. Document Versioning

* For document versioning, we will maintain the document version based on the timestamp of the file modified into separate folder for versioning. This folder will be hidden.
* These files will also be encrypted using the AES strategy and will be kept as hidden on the hard drive.
* Whenever user wants to restore the file to previous version, we will decrypt the selected version file and restore it.

1. New Menu Options

* Option to add for restoring from Local Backup
* Option to add configuration for data backup frequency
* Option to add configuration for Document Version
* Option to select backup type – Local/Cloud/Both

Below are some assumptions which will be taken during implementation

1. For local backup, no information needs to be sent to cloud server regarding files getting backup.
2. Whenever user selected different Hard Drive and select an option to DELETE old back up, all the data from the current hard drive will be deleted.
3. As we will store the backup data into encrypted form, the backup files will be visible to user.
4. Size of the version files will not be considered into backup limit size.
5. Whenever the file is modified and there is no space available on the external drive, we will not delete the oldest versioned files. Application will give warning regarding disk space.

Thanks & Regards,

Rahul