Veeam Tehnical Problem Report

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1 Introduction

The task consists of creating a program that syncs two files, the original one and a replica. The replica is a folder in which we copy all content from the original folder. This program needs to update the replica periodically and all the actions that are done to the replica folder (copy, creation, deletion) need to be logged to a file and to the console.

2 Usage

2.1 Help

python3 ./main.py –help
By running this command the user can see what arguments it needs to write.

2.2 Running the app

python3 ./main.py -src {original_folder_path} -repl {replica_folder_path} -p {period_seconds} -log {log_file_path}
The file paths should be : {file_path} or {./file_path}
-src : The path to the original folder (the one that we want to keep a backup of)
-repl : The path to the replica folder (the backup folder) -p : The time interval at which the replica is updated (in seconds)
-log : The log file path

Example:
python3 ./main.py -src ./src -repl ./replica -p 5 -log log.txt

3 Implementation

Firstly, the program checks whether the replica folder exists or not. In case it doesn‘t exist it creates one. In case it exists it deletes everything from that folder.

After that, it calls the function update_replica periodically, its purpose being to update the replica folder so it matches the original folder.

Inside the update_replica function the program checks for files that are in the replica folder, but not in the original folder. In case such files exist it deletes them. After that, the program checks for files that are in the original folder, but not in the replica. In case such files exists, the program copies the files to the replica. During the copying, the program checks for corruptions using the MD5 hashing.