Atelier 2 - Implémentation et manipulation d'une arborescence HDFS

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Nous proposons un rendu basé sur une conception en amont, conception obtenue suite à l'échange avec notre intervenant ainsi qu'à une adaptation/continuité de notre premier TP.

La conception vise à montrer l'arborescence souhaitée, les scripts montrent notre implémentation.

Pour lancer les scripts, il faut procéder comme suit:

- rendre les scripts exécutables: `chmod +x script_to_make_executable.sh`
- lancer le premier script `cluster_overall.sh`
- lancer le second script `create_user_folder.sh` avec les arguments associés comme dans l'exemple suivant : `./create_user_folder.sh -e -u "username" -a "appname"`

En amélioration, nous aurions souhaité implémenter un système de gestion de restriction d'accès en fonction des utilisateurs du serveur HDFS.

Conception en amont (fondée sur notre rendu de TP1 et les retours de l'intervenant)

```
/
    /users
        /client
            /client-001
                /appName
                    /logs
                        logs-date/
                            logs-date.txt
                /save
                    arborescence-date.txt
                    /appName
                        save-date/
                            logs-date.zip
                /analytics
                    /appName
                /alerts
                    /appName
```

```
                    /client-002
                        [...]
                        /appsettings
                            /appName
                                appsettings-env-version.*[json, xml ...]
                        /analytics
                            /appName
                        /alerts
                            /appName
                    /client-003
                        [...]
                        /vcs
                            /path
                                pathfile
                            /file
                        /analytics
                            /appName
                        /alerts
                            /appName
                /admin

        /logs
            [date]/
                logs-date.txt
```

Scripts de manipulation

```
#cluster_overall.sh

#!/bin/bash

sudo -u hdfs hdfs dfs -mkdir /logs
logs_creation=$(date)
dir_date_format=$(date +%F)
sudo _u hdfs hdfs dfs -mkdir /user/client
sudo _u hdfs hdfs dfs -ls /user/client
sudo -u hdfs hdfs dfs -mkdir /logs/$dir_date_format
sudo -u hdfs hdfs dfs -touch
/logs/$dir_date_format/logs-$dir_date_format.tx
t
echo "Logs folder creation $logs_creation" | sudo -u hdfs hdfs dfs -
appendToFile - /logs/$dir_date_format/logs-$dir_date_format.txt
```

```
#create_user_folder.sh

#!/bin/bash

usage() { echo "Usage: $0 [- 'express'|'standard'|'premium'] [-u <string>]"
```

/

```bash
1>&2; exit 1; }
account_type='';
while getopts "espu:a:" o; do
    case "${o}" in
        e)
            account_type='Express'
            ;;
        s)
            account_type='Standard'
            ;;
        p)
            account_type='Premium'
            ;;

        u)
            username=${OPTARG}
            ;;
        a)
            appname=${OPTARG}
            ;;
        *)
            usage
            ;;
    esac
done

echo $account_type
echo $username
echo $appname

create_Express(){
    echo $1 "EXPRESS"
    count=$(hdfs dfs -ls /user/client | grep -E '^d' | wc -l)
    echo $count
    currentuser="$1"-"$count"
    echo $currentuser
    formatdate=$(date +%F)
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/$2
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/$2/logs
    sudo -u hdfs hdfs dfs -mkdir
/user/client/$currentuser/$2/logs/logs-$formatdate
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/save
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/save/$2
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/analytics
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/alerts
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/analytics/$2
    sudo -u hdfs hdfs dfs -ls -R /user/client/$currentuser/$2
    sudo -u hdfs hdfs dfs -ls -R /user/client/$currentuser
}
 create_Standard(){
    echo $1 "STANDARD"
    create_Express "$1" "$2";
    sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/appsettings
```

```bash
        sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/appsettings/$2
        sudo -u hdfs hdfs dfs -ls -R /user/client/$currentuser/appsettings
}
create_Premium(){
        echo $1 "PREMIUM"
        create_Standard "$1" "$2";
        sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/vcs
        sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/vcs/path
        sudo -u hdfs hdfs dfs -mkdir /user/client/$currentuser/vcs/file
        sudo -u hdfs hdfs dfs -ls -R /user/client/$currentuser/vcs
}


case $account_type in

        Express)
                create_Express "$username" "$appname"
                ;;
        Standard)
                create_Standard "$username" "$appname"
                ;;
        Premium)
                create_Premium "$username" "$appname"
                ;;
esac
```