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SftpClient Setup and Usage Guide - Ubuntu

This guide explains how to prepare, configure, and run SftpClient.jar on Ubuntu. It also includes instructions for scheduling the application to run daily at 05:00 AM and for removing the scheduled task.

Note: SftpClient is a Java-based application that connects to an SFTP server and uploads files to a specified directory.

Prerequisites

- 1. **Java Runtime Environment (JRE)** Ensure the jre folder is included in the same directory as the SftpClient.jar.
- 2. **Environment Variables** The run_ubuntu.sh script requires several environment variables to be set. Update these to match your environment before execution.
- 3. **Required Folders** The following folders in the root directory of the application (created during the zip packaging) are used by default for file uploads:
 - o user indicator: for stock-related indicator files.
 - o macro_indicator: for macro indicator files.
 - o portfolio: for portfolio files.

You may create your own folders and update the environment variables in run ubuntu.sh accordingly.

Environment Variables

Below are key environment variables, their purposes, and usage examples:

SFTP_PORTFOLIO_FILE_MAPPER

- **Purpose**: Maps external IDs to substrings in file names for portfolios, enabling automatic renaming before upload.
- Example: PortfolioExternalId1-Portfolio1, PortfolioExternalId2-Portfolio2
- Mock File Name: Portfolio1_Report.csv renamed to PortfolioExternalId1-[timestamp]-[operation].csv
 (The substring Portfolio1 in the file name matches the mapping PortfolioExternalId1-Portfolio1. The file is renamed to PortfolioExternalId1-[timestamp]-[operation].csv before being uploaded)

SFTP PORTFOLIO FILE MAPPER DEFAULT OPERATION

• **Purpose**: Specifies the default operation for portfolio files.



- F = replace file and delete history
- o M = modify file
- Example: M Files will be uploaded with the "modify" (update) operation unless specified otherwise.

SFTP_USER_INDICATOR_FILE_MAPPER

- Purpose: Same logic as for portfolios, but applies to user indicator files.
- Example: UserExternalId1-UserIndicator1, UserExternalId2-UserIndicator2
- Mock File Name: UserIndicator1_Data.csv renamed to UserExternalId1-[timestamp]-[operation].csv and zipped before upload

SFTP_USER_INDICATOR_FILE_MAPPER_DEFAULT_OPERATION

- Purpose: Default operation for user indicator files.
- Example: M Files will be uploaded with the "modify" operation unless specified otherwise.

SFTP MACRO INDICATOR FILE MAPPER

- **Purpose**: Same mapping logic, applied to macro indicator files.
- Example: MacroExternalId1-MacroIndicator1, MacroExternalId2-MacroIndicator2
- Mock File Name: MacroIndicator1_Stats.csv 2 renamed to MacroExternalId1-[timestamp]-[operation].csv

SFTP_MACRO_INDICATOR_FILE_MAPPER_DEFAULT_OPERATION

- **Purpose**: Default operation for macro indicator files. F means replace the file, and M means modify the file.
- Example: F Files will be uploaded with the "replace" operation unless specified otherwise.
- Ensure all environment variables are correctly set in run_ubuntu.bat before running the application. If you encounter issues, check the log file (log.txt) in the application's directory for details.

Manual Execution Steps

- 1. Edit the Script
- 2. Make the File Executable:
 - Open the terminal and navigate to the directory containing run_ubuntu.sh.
 - o Run the following command to ensure it is executable:

chmod +x run ubuntu.sh

3. Run the Script:

Execute the script:

./run_ubuntu.sh



4. Verify Execution:

o The script will check for the presence of the Java runtime and execute SftpClient.jar.

Schedule SftpClient.jar to Run Daily at 05:00 AM

1. Prepare the Script:

o Ensure schedule_ubuntu.sh is in the same directory as run_ubuntu.sh.

2. Run the Scheduler Script:

Execute schedule_ubuntu.sh to create a cron job:

```
./schedule ubuntu.sh
```

3. Verify the Task:

o Check the cron jobs to confirm the task is scheduled:

```
crontab -
```

Remove the Scheduled Task

1. Run the Removal Script:

Execute remove_schedule_ubuntu.sh to remove the cron job:

```
./remove_schedule_ubuntu.sh
```

2. Verify Removal:

• Check the cron jobs to confirm the task is removed:

```
crontab -l
```

Schedule SftpClient.jar to Run Daily at 05:00 AM

1. Prepare the Script:

o Ensure schedule_ubuntu.sh is in the same directory as run_ubuntu.sh.

2. Run the Scheduler Script:

Execute schedule_ubuntu.sh to create a cron task:

```
./schedule_ubuntu.sh
```

3. Verify the Task:

o Check if the task is loaded:

```
crontab - | grep run_ubuntu.sh
```



Remove the Scheduled Task

1. Run the Removal Script:

o Execute remove_schedule_ubuntu.sh to remove the cron task:

```
./remove_schedule_ubuntu.sh
```

2. Verify Removal:

Oheck if the task is unloaded:

```
crontab - | grep run_ubuntu.sh
```

Important Notes



- All .sh scripts (run_ubuntu.sh, schedule_ubuntu.sh, remove_schedule_ubuntu.sh) must be in the same directory as SftpClient.jar and the jre folder.
- The folders user_indicator, macro_indicator, and portfolio are created during packaging. You may use custom folders by updating run_ubuntu.sh.
- If you encounter errors, check logs in the Task Scheduler or in log.txt.

File Structure

The directory should have the following structure:

/your-directory

- --- run_ubuntu.sh
- schedule_ubuntu.sh
- remove_schedule_ubuntu.sh
- SftpClient.jar
- --- README_UBUNTU.md
- --- README UBUNTU.pdf
- ├— jre/
- user_indicator/
- macro_indicator/
- ├— portfolio/

Troubleshooting

- Java Runtime Not Found Ensure the jre folder is present and correctly populated.
- Task Scheduler Errors Confirm you have the required permissions. Check the History tab for details.



•	Incorrect Environment Variables Double-check the variables in run_ubuntu.sh for typos or invalid
	values.