

## Sentinel 2 Cloud Detector – Experiment Instructions

### Cloud Discrimination Experiment

- Requirements
  1. Pi Hat Profiler program has been compiled by running the **“buidAllDependencies.sh”** script.
  2. Sentinel 2 Cloud Detector and its dependencies have been installed according to the **“docs/sentinel2\_CloudDetector.pdf”** document.
  3. FTP server has been setup on the host or remote (may require port-forwarding) machine according to the **“docs/FTP\_Server\_Tutorial.pdf”** document .
- Description
  - The cloud discrimination experiment performs the following tasks on separate hardware threads:
    1. Performs cloud classification and cloud masking on the Sentinel 2 data files contained in the **“examples/”** directory
    2. Encrypts each data file.
    3. Compresses each encrypted file.
    4. Transmits the compressed data file if the pixel ratio of the image is acceptable.
    5. Runs Pi Hat Profiler Executable (Records power measurements from the Raspberry Pi).
- Instructions
  1. Run **“sh runImgGenAndFtpWithPiHat.sh <ftpServerIpAddress> <ftpServerPort>”**
  2. To terminate the experiment, run **“sh killImgGenAndFtpPythonProcesses.sh”**