

PROCEDURE FOR LAUNCHING COMMAND-LINE PROCESSING

Processing of color composition or NDVI radiometric index on different S2 bands

1. Submission of the process

Entries: ID of a S2 Product to process

For these inputs to be used for processing, they must be put into a file named *data.json*, which takes the following form.

```
{
  "inputs": {
    "product-title": "PRODUCT_TITLE",
    "timeout": 15,
    "notif-email": true
  }
}
```

The API-KEY can be found in GEODES platform, in the My informations page:

```
export APIKEY="YOUR_API_KEY"
```

On the same console, the process can be launched using the following command, in this example the curl command was executed where the file *data.json* is located:

```
curl -XPOST -k --data "@data.json" -H "Content-Type:application/json" -H "X-API-Key: $APIKEY" -H "Prefer:respond-async" "https://geodes-portal.cnes.fr/processing/processes/ndvi-s2st/execution"
```

Response:

The *JobID* is returned in case of a successful launch.

2. Launch follow-up

It is possible to view the status of a specific job using its ID or the status of all the launched jobs for a specific user using his email address.

i. The case of visualizing the status of a specific job:

The following command lists the status of a specific launched job:

```
curl -XGET -H "X-API-Key: $APIKEY" -k "https://geodes-portal.cnes.fr/processing/jobs/JOB_ID"
```

JOB_ID should be replaced by the ID of the job!

Response:

```
{
  "processID": "ndvi-s2st",
  "jobID": "857dc1c8-7f08-11ee-b4e2-0242ac140169",
  "status": "running",
  "message": "Job submitted to Scheduler",
  "progress": 50,
  "parameters": "S1A_EW_GRDM_1SDH_20200101T024913_20200101T025017_030601_038174_4E78",
  "user": "email.address@email.com",
  "job_start_datetime": "2023-11-09T14:01:47",
  "job_end_datetime": null,
  "links": [
    {
      "href": "https://geodes-portal.cnes.fr/processing/jobs/857dc1c87f08-11ee-b4e2-0242ac140169/results?f=html",
      "rel": "about",
      "type": "text/html",
      "title": "results of job 857dc1c8-7f08-11ee-b4e2-0242ac140169 as HTML"
    },
    {
      "href": "https://geodes-portal.cnes.fr/processing/jobs/857dc1c8-7f08-11ee-b4e2-0242ac140169/results?f=json",
      "rel": "about",
      "type": "application/json",
      "title": "results of job 857dc1c8-7f08-11ee-b4e2-0242ac140169 as JSON"
    },
    {
      "href": "https://geodes-portal.cnes.fr/processing/jobs/857dc1c8-7f08-11ee-b4e2-0242ac140169/results",
      "rel": "about",
      "type": null,
      "title": "results of job 857dc1c8-7f08-11ee-b4e2-0242ac140169 as None"
    }
  ]
}
```

ii. **The case of visualizing the status of all the jobs for a user:**

The following command lists the status of all the launched jobs for a specific user:

```
curl -XGET -H "X-API-Key: $APIKEY" -k "https://geodes-portal.cnes.fr/processing/jobs"
```

USER_EMAIL should be replaced!

Response:

```
{
  "jobs": [
    {
      "processID": "ndvi-s2st",
      "jobID": "04335ccc-7fcb-11ee-bfa7-0242ac140152",
      "status": "successful",
      "message": "Job complete",
      "progress": 100,
      "parameters": "S2B_MSIL1C_20211230T161339_N0500_R111_T01CDM_20221226T141602",
      "user": "email.address@email.com",
      "job_start_datetime": "2023-11-10T13:14:02",
      "job_end_datetime": "2023-11-10T13:17:13",
      "links": [
        {
          "href": "https://geodes-portal.cnes.fr/processing/jobs/04335ccc-7fcb-11ee-bfa7-0242ac140152/results?f=html",
          "rel": "about",
          "type": "text/html",
          "title": "results of job None as HTML"
        },
        {
          "href": "https://geodes-portal.cnes.fr/processing/jobs/04335ccc-7fcb-11ee-bfa7-0242ac140152/results?f=json",

```

```

        "rel": "about",
        "type": "application/json",
        "title": "results of job None as JSON"
    }
]
},
{
    "processID": "ortho-s1-grd",
    "jobID": "857dc1c8-7f08-11ee-b4e2-0242ac140169",
    "status": "running",
    "message": "Job submitted to Scheduler",
    "progress": 50,

    "parameters": "S1A_IW_GRDH_1SDV_20230408T194947_20230408T195012_048009_05C53C_531A",
    "user": "email.address@email.com",
    "job_start_datetime": "2023-11-09T14:01:47",
    "job_end_datetime": null,
    "links": [
        {
            "href": "https://geodes-portal.cnes.fr/processing/jobs/857dc1c8-7f08-11ee-b4e2-0242ac140169/results?f=html",
            "rel": "about",
            "type": "text/html",
            "title": "results of job None as HTML"
        },
        {
            "href": "https://geodes-portal.cnes.fr/processing/jobs/857dc1c8-7f08-11ee-b4e2-0242ac140169/results?f=json",
            "rel": "about",
            "type": "application/json",
            "title": "results of job None as JSON"
        },
        {
            "href": "https://geodes-portal.cnes.fr/rocessing/jobs/857dc1c8-7f08-11ee-b4e2-0242ac140169/results",
            "rel": "about",
            "type": null,
            "title": "results of job None as None"
        }
    ]
} ] } ],

```

```
"links":[
  {
    "href":"https://geodes-portal.cnes.fr/processing/jobs?f=html",
    "rel":"alternate",
    "type":"text/html",
    "title":"Jobs list as HTML"
  },
  {
    "href":"https://geodes-portal.cnes.fr/processing/jobs?f=json"
    "rel":"self",
    "type":"application/json",
    "title":"Jobs list as JSON"
  }
]
```

3. Results retrieval

The command bellow will retrieve the results of a specific job:

```
curl -XGET -H "X-API-Key: $APIKEY" -k "https://geodes-portal.cnes.fr/processing/jobs/JOB_ID/results"
```

JOB_ID should be replaced!

Response:

```
{
  "execution_time": 12087,
  "product_path": "/nfs/GDH_DEV/ci/portal/data/processing/ndvi-s2st/78d357c2-247111ee-b721-0242ac10193c.zip",
  "product_url":"https://geodes-portal.cnes.fr/processing-access-data/ndvi-s2st/78d357c2-247111ee-b721-0242ac10193c.zip"
}
```

4. Description of the process

The command below provides a description of the process:

```
curl -XGET -H "X-API-Key: $APIKEY" -k "https://geodes-portal.cnes.fr/processing/processes/ndvi-s2st?f=json"
```

Response:

```
{
  "version": "0.1.0",
  "id": "ndvi-s2st",
  "title": "NDVI calculation",
  "description": "NDVI is the Normalized Difference Vegetation Index. The index is calculated in float mode at full resolution (10 m) using the following bands: B8 (842 nm) B4 (665 nm) \n          Input: Sentinel-2 tile product \n          Output: The result is tiled according to the Cloud Optimized Geotiff recommendation and losslessly compressed with DEFLATE.",
  "keywords": [
    "PEPS_S2_L1C",
    "PEPS_S2_L2A"
  ],
  "links": [
    {
      "type": "text/html",
      "rel": "about",
      "title": "information",
      "href": "https://example.org/process",
      "hreflang": "fr-FR"
    },
    {
      "type": "application/json",
      "rel": "self",
      "href": "https://geodes-portal.cnes.fr/processing/processes/ndvi-s2st?f=json",
      "title": "Process description as JSON",
      "hreflang": "en-US"
    },
    {
      "type": "text/html",
      "rel": "alternate",
      "href": "https://geodes-portal.cnes.fr/processing/processes/ndvi-s2st?f=html",
      "title": "Process description as HTML",
      "hreflang": "en-US"
    },
    {
      "type": "text/html",

```

```

    "rel":"http://www.opengis.net/def/rel/ogc/1.0/job-list",
    "href":" https://geodes-portal.cnes.fr/processing/jobs?f=html",
    "title":"jobs for this process as HTML",
    "hreflang":"en-US"
  },
  {
    "type":"application/json",
    "rel":"http://www.opengis.net/def/rel/ogc/1.0/job-list",
    "href":" https://geodes-portal.cnes.fr/processing/jobs?f=json",
    "title":"jobs for this process as JSON",
    "hreflang":"en-US"
  },
  {
    "type":"application/json",
    "rel":"http://www.opengis.net/def/rel/ogc/1.0/execute",
    "href":"https://geodes-portal.cnes.fr/processing/processes/ndvi-
s2st/execution?f=json",
    "title":"Execution for this process as JSON",
    "hreflang":"en-US"
  }
],
"inputs":{
  "product-title":{
    "title":"Titre produit",
    "description":"Sentinel-2 L1C product",
    "schema":{
      "type":"string"
    },
    "minOccurs":1,
    "maxOccurs":1,
    "metadata":null,
    "keywords":[
      "titre",
      "produit"
    ]
  },
  "user":{
    "title":"User email",
    "description":"The email of user which requests process execution",
    "schema":{
      "type":"string"
    },
    "minOccurs":1,
    "maxOccurs":1,

```

```
    "metadata":null,
    "keywords":[
      "user",
      "email"
    ]
  },
  "notif-email":{
    "title":"Email notification flag",
    "description":"Flag to indicate if an email notification must be sent
after processing termination",
    "schema":{
      "type":"bool"
    },
    "minOccurs":1,
    "maxOccurs":1,
    "metadata":null,
    "keywords":[
      "email",
      "notification"
    ]
  },
  "timeout":{
    "title":"Processing timeout in mn",
    "description":"The process is canceled if timeout reached",
    "schema":{
      "type":"int"
    },
    "minOccurs":0,
    "maxOccurs":1,
    "metadata":null,
    "keywords":[
      "timeout",
      "processing"
    ]
  }
},
"outputs":{
  "result":{
    "title":"Produit de sortie",
    "description":" The result is tiled according to the Cloud Optimized
Geotiff recommendation and losslessly compressed with DEFLATE.",
    "schema":{
      "type":"object",
      "contentType":"application/json"
    }
  }
}
```



```
    }
  },
  "example":{
    "inputs":{
      "user":"user@mail.com",
      "product-
title":"S2B_MSIL1C_20230209T225459_N0509_R058_T59MPU_20230210T000951",
      "email-notif":true
    }
  },
  "jobControlOptions":[
    "sync-execute",
    "async-execute"
  ],
  "outputTransmission":[
    "value"
  ]
}
```