FSC / FPOC

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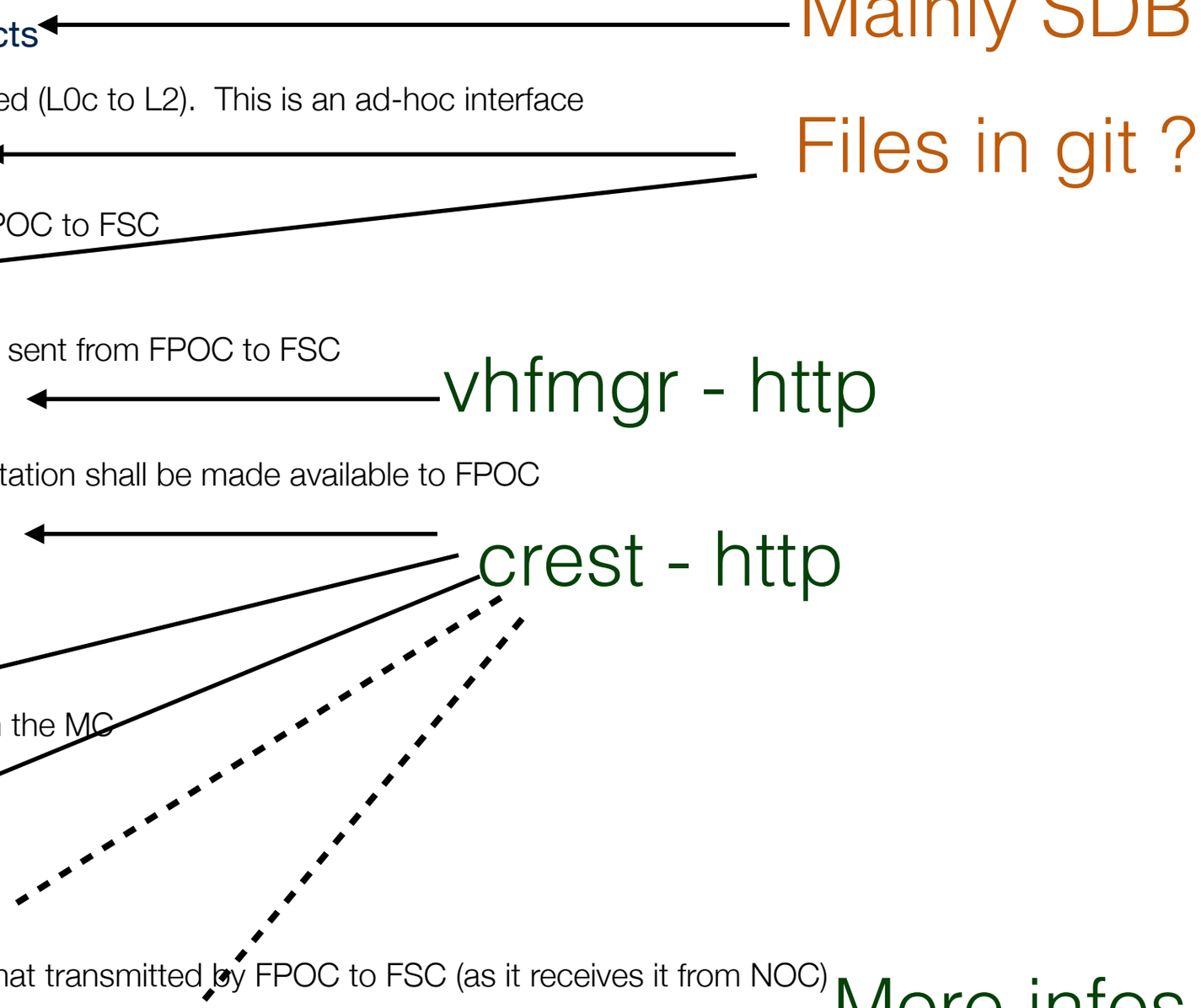
Exchanges FSC/FPOC

- FSC_FPOC_Long-Term-Archive-Products
  - Delivery of science products to be archived (L0c to L2). This is an ad-hoc interface
- FPOC_FSC_BD-VHF-Update
  - New VHF DataBase Update sent from FPOC to FSC
- FPOC_FSC_BDI-Update
  - New BDI (Instruments DataBase) Update sent from FPOC to FSC
- FSC_FPOC_VHF-TM
  - VHF TM received by FSC from the VHF station shall be made available to FPOC
- FPOC_FSC_VHF-STATUS-STATION
  - Status of VHF Stations
- FPOC_FSC_Workplan
  - Current workplan provided to FPOC from the MC
- FPOC_FSC_OEF
  - Orbit Events File sent from FPOC to FSC
- FPOC_FSC_OEM-CCSDS
  - Orbit Elements messages in CCSDS format transmitted by FPOC to FSC (as it receives it from NOC)
- FPOC_FSC_Combined-Obs-Request
  - Combined Observation Request sent by FPOC to FSC to identify that a Combined Observation has been required in the Workplan



Crest API

- Crest is a storage for heterogenous data varying with time
  - Create a “generic” file name (e.g.: WORKPLAN-01)
  - Upload new workplans files using a beginning of validity time (the default end of validity is “until the next one…”)
  - Additional metadata available (content type and other)
- API Deployment
  - Available inside FSC integration cluster at Lal
    - svom-fsc-0.lal.in2p3.fr:20097/api/xxxxx (web ui available)

VHFMGR API

- VHFMGR is the service dedicated to the classification and storage of all VHF data coming from ground stations
  - A station sends a binary packet
  - The raw packet is registered, decoded, duplication are checked, checksum are (will be) checked
  - All packets data are available from the server:
    - svom-vhfmgr.lal.in2p3.fr/api/vhf/packets? + query params + header params to determine the output type (Raw, Decoded, Binary)
    - Today the query params are : api (name or id), obsid, time ranges…
- Deployment
  - Service in http available at Lal….

Curl examples….

- Swagger-UI doc:
  - https://svom-vhfmgr.lal.in2p3.fr/ext/web/ui/index.html
  - (then request the file: /api/swagger.json)
- Retrieve Raw packets
  - Using GET method and some query params:
    - Command curl -H "X-VHF-PktFormat: raw" "https://svom-vhfmgr.lal.in2p3.fr/api/vhf/packet/search?by=obsid:1000,apidname:TmVhfEcl&sort=receptionTime:ASC" | json_pp > raw.json
    - Output: a json object with an array (list of packets)

Output Json

- The definition of the output is the following:

Example Value | Model


```
{
  "criteria": "string",
  "size": 0,
  "pkttype": "string",
  "packets": [
    {
      "pktformat": "string",
      "pkttype": "string",
      "hashId": "string",
      "insertionTime": 0,
      "pktsize": 0,
      "packet": "string",
      "uri": "string"
    }
  ]
}
```


- Packet content: determined by header X-VHF-PktFormat : {raw | binary | decoded}

Example for raw

- Here is a formatted output using the previous curl


```
{
   "pkttype" : "raw",
   "packets" : [
      {
         "hashId" : "e188a9ff80b995061fa8285bfaec2691bd4c5a8a4bfc6edd63ae5dc0e8e98e86",
         "insertionTime" : 1568286486466,
         "pkttype" : "TmVhfEclairsAlert",
         "packet" : "010000005d7a26f000000000000000000000000000000000000001000018761e0018000240c00100575d7a272c000003e8000511e070434c414c4552544c0000010000014c
4552544c310045434c414c4552544c000000004c414c4552544c310045434c414c4552544c310045434c414c4552544c3100000000000000000000cdd0",
         "pktformat" : "HEXA",
         "uri" : null,
         "pktsize" : 256
      },
      {
         "packet" : "010000005d7a26f200000000000000000000000000000000000001000187622001800024140010057 5d7a2734000003e80511e0700001000000000000000000000000000
14650000103a00000c9b00000a790000060400000302053d0379032902ba01ae00cd057703b10353027d01b300ba04a9041403a10278010900d4e7f7",
         "pkttype" : "TmVhfEclairsHighPriorityLightCurve",
         "pktsize" : 256,
         "uri" : null,
         "pktformat" : "HEXA",
```


- The packet itself is in HEXA