Create solar system EPN-TAP service using DACHS on docker

- Pierre Le Sidaner
- Stéphane Erard
- Cyril Chauvin
- Baptiste Cecconi

DACHS is the publishing framework that work simply on Debian

ENP-TAP is the solar system flat data model (extendable)

What we propose is a quick ans easy way to build a service in Docker using configuration files stored in gitlab

*** You need to have Docker install and docker-compose**

*** You also need git to reach the different config files (+ account)**

https://voparis-gitlab.obspm.fr/vespa/dachs/docker_dachs_server

*** And the magic " docker compose up -d "**

What is inside
Description of Dachs on Docker

Description of repository gitlab

https://voparis-gitlab.obspm.fr/vespa/dachs/docker_dachs_server

*** Dachs installation in a debian docker image (deb 12) :**

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- including postgres15, pgsphere, q3c ...
- Virtual machine for small size service (all inclusive)

*** Dachs configuration**

- Dachs work with config files the server .conf, for registering the “naming auth ID, and the services (via defaultmeta.txt and q.rd files). Providers can see examples in the gitlab.
- Service configuration for metadata ingestion in the gitlab (q.rd)

* **Awstats installation and config**.

config file is specific to dachs log format + remove select * from ...

Configuration of your service in a gitlab

https://voparis-gitlab.obspm.fr/vespa/dachs/docker_dachs_server

(Use Geant eduteams AAI,)

- **example creating a service to adjust on the gitlab changing .env containing the path to describe your server and the associated services**

  GITREPO_INSTITUTION=PADC
  GITREPO_SERVER=voparis-tap-example

- **You may add extra packages in the docker-entrypoint.sh**

- **create volume for dachs and apache logs**

- **ready for registering in rofr when IP is public and stable**

Configuration of your service in a gitlab

https://voparis-gitlab.obspm.fr (Use Geant eduteams AAI you have to be invited)

https://voparis-gitlab.obspm.fr/vespa/dachs/services/padc/voparis-tap-example/planets_tuto

- server description (defaultmeta.txt gavo.rc)

https://voparis-gitlab.obspm.fr/vespa/dachs/

- case where you ingest a CSV file

https://voparis-gitlab.obspm.fr/vespa/dachs/services/jacobsuni/mars_craters_lagain

- case where metadata are in a database

https://voparis-gitlab.obspm.fr/vespa/dachs/services/padc/voparis-tap-helio/hfc1ar

- case where data are online

https://voparis-gitlab.obspm.fr/vespa/dachs/services/baa/baa-server/csa

- case where you read files

https://voparis-gitlab.obspm.fr/vespa/dachs/services/padc/voparis-tap-planeto/spectro_m_ast/-/blob/master/q.rd?ref_type=heads

Bonus

Service helpdesk

- We can drive you to realise an epn-tap service

* support at support.epntap@obspm.fr
* many examples of config files for running services close to what you need
* helping to define extra parameters specific to your service
* possibility to discuss about hosting your service

- **Specific supplementary**

* both coverage in region (circle, polygon ...) and MOC
* conversion for solar data region description using sunpy and mocpy
* routines to read specific file format.
* examples of python script for data transformation in the process (custom grammar)

Easy to deploy everywhere

- no system administration knowledge
- work easily with EOSC or other cloud environment
- only need public stable IP adress or DNS name

Bonus

Service Validator

- **https://voparis-validation-backend.obspm.fr/validators/epntap**

It use Topcat validator

- Human Validation.

revue of the service to check content and possible conflict in extended collumn names
test in the portal (https://vespa.obspm.fr) and topcat
(https://www.star.bris.ac.uk/~mbt/topcat/#install)

Service monitoring :

- up and running
- registered in the registry
- validation (https://voparis-validation-reports.obspm.fr/validation/services)
- Download access to file worked

usage statistics

- use awstats on port 8080 with a custom config file

Conclusion

- Ideal for implementation tutorial
- used in production by some providers

IPSL, OV-GSO ….

- Easy to debug with config files available
- Upgrade simple