Migration of the LHCb docs to EOS web

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CERN - LHCb

Introduction

- As already mentioned CERN is phasing out AFS
- Web pages hosted on WEBAFS must be moved to EOS (or DFS)
- Software project web pages are no exception

I'll show what I've done for Gaudi

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A bit of history

Introduction of Projects docs

- A student developed Gaudi doc web site
    - PHP scripts
    - hierarchy of symlinks
    - automatically extract infos from AFS release area
    - basically a template system
- It was good, so it was ported to LHCb projects
    - adapted and extended
- Some limitations
    - bound to CMT and SVN
    - archived projects not shown
      (there's a workaround by Gloria)

Doxygen documentation

- Doxygen documentation is special
- Initially built in the release area
    - part of the deployment procedure
    - just the project in component projects (LHCb, Lbcom, …)
    - with all dependencies for applications (Brunel, DaVinci, …)
- Evolved to an automatic asynchronous system
    - always full coherent software stacks
    - Doxygen appears the day after a project is deployed

AFS phase out

Moving from AFS to EOS

- We cannot rely on AFS $\Rightarrow$ copy data to EOS
- EOS does not work well for many small files (e.g. Doxygen)

The case of Gaudi

Choosing the technology

- Old site
  - part dynamic (PHP)
  - part static (Doxygen)

- New trend in web site development: SSG
  - SSG = Static Site Generator
  - *compile* static pages from *sources*
  - preferred technique for sites on GitHub/GitLab
  - example Starter Kit

Choosing the technology

- What do we want/need?
    - no need for dynamic server pages (rare changes)
    - Git hosting (better control of changes)
    - web pages based on templates
- Which tool to use?
    - embarrassing variety: `https://www.staticgen.com/`
    - picked up the most common: Jekyll

Prepare the infrastructure

- Following doc at KB0003905 (GitLab Pages at CERN)
    - prepare EOS space (user or project, see Web pages in CERNBox)
    - create web site on `https://cern.ch/webservices`
    - create project on GitLab

- Trivial mapping from old PHP to Jekyll concepts
    - small user written chunks decorated via templates
- Non-trivial migration of the actual content
    - write *Liquid* templates from PHP ones
    - define *collections* (if needed)
    - map old data to new format
    - extend Jekyll (if needed)

Doxygen (again)

- Did I say that Doxygen is special?
- Recently configured Gaudi to generate Doxygen from GitLab
- Now updated to publish Doxygen zip files to the web site
- The Jekyll based web site contains links pointing to them

Some interesting details

- Added minimal extensions to Jekyll template engine (Liquid)
  - filter to sort by version number
  - filter to map a version to the Doxygen URL
- 2 steps build
  - collect data from Gaudi Git repo (e.g. release notes)
  - standard Jekyll build
- New implementation of *latest* concept
  - replaced symlink with redirection

Conclusions

Summary

- Migration of Gaudi web site relatively easy
    - most of the time spent learning Jekyll
    - content generated from 2 sources
        - normal pages
        - main Git repository

- Consolidated the technique to deploy web pages in zip files
- SSGs are very handy for contents not changing too often
- Use of Git/GitLab opens to interesting possibilities
    - e.g. generate release skeleton page when tags are created
- More web pages could be migrated, not only projects pages