

Update and plan



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PR in opened state

- **gb2_ds_get with rucio.**
 - PR review almost done.
 - Update rucio server.
- **gb2_diagnostic.**
 - PR opened
 - Lots of comments.
 - Working on it. [will take time]
- **Collection.**
 - Already in production.
 - Validation by DP ongoing.
 - New bugfix/feature PR already made.

Lifetime

- Presentation by Ueda-san [Quota-and-Lifetime.pdf](#)
- **Set lifetime per scope.**
- User scope: 1 month
- MC/Data scope: 1 year
- Solve from rucio side.
- Lifetime clock to start from when last file in dataset is added.
 - **Update lifetime of dataset each time file is added.**

Quota

- Quota will be introduced soon.
- `$ gb2_ds_quota` to see global and local quota.
 - Already in production
- Things to solve before introducing quota.
 - Set lifetime of all the output.
 - Jobs should fail after quota if filled.
 - Option to increase lifetime for datasets.

Jobs should fail if quota filled.

- Job is "Done", with **WARN** messages "insufficient quota" in the log

```

2022-01-18 04:56:44 UTC Unknown/FailoverTransfer INFO: Attempting dm.putAndRegister ('/belle/user/ueda/
ueda-20220118/output/...
2022-01-18 04:56:48 UTC Unknown/RucioFileCatalogClient WARN: Cannot bulk insert files, error :
InsufficientAccountLimit(u"There is insufficient quota on any of the target RSE's to fulfill the
operation.")
2022-01-18 04:56:49 UTC Unknown/FailoverTransfer WARN: Didn't manage to do everything, now adding
requests for the missing operation
2022-01-18 04:56:49 UTC Unknown/FailoverTransfer INFO: Setting registration request for /belle/user/
ueda/ueda-20220118/output/...
2022-01-18 04:56:49 UTC Unknown/FailoverTransfer INFO: Successfully set registration request for: SE
BNL-TMP-SE and metadata: ...
2022-01-18 04:56:49 UTC Unknown INFO: Output files successfully uploaded and registered to BNL-TMP-SE

```

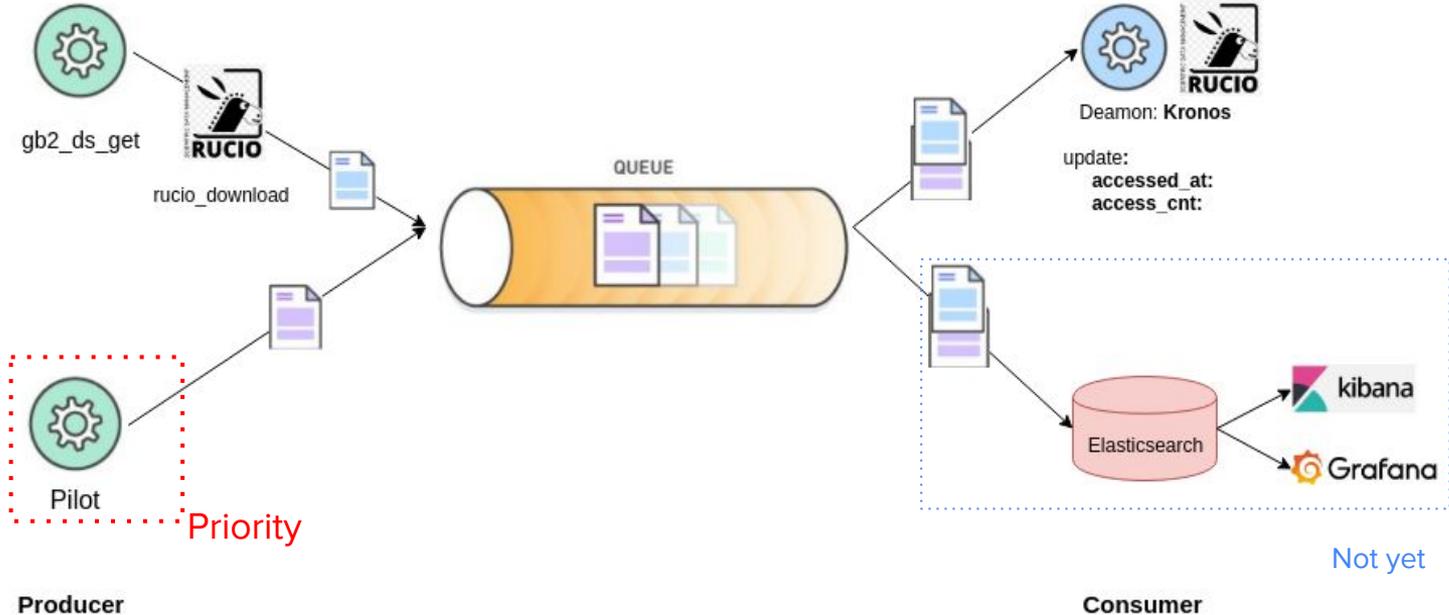
- Job shows error message when quote is filled.
- Issue: **But still register physical files to SE and metadata to AMGA.**
- Issue identified:
 - Registering file is done by RMS (request management system)
 - So the owner registering is 'dirac_srv'
- Solution:
 - Don't send RMS request for User Job.

Quota check at gbasf2 submission

- Global quota of user/group is checked at gbasf2 submission.
- Checks:
 - if =**100%** : **stop job submission** and show error message.
 - If > **90%** : **warn the user** about quota.
 - else: continue with execution.
- PR opened.
- Full test not done yet.
 - My global quota is not yet set.
 - Setting quota now might impact my analysis.
 - Probably get another grid certificate from BNL?

Good News: Justin has agreed to take on this.

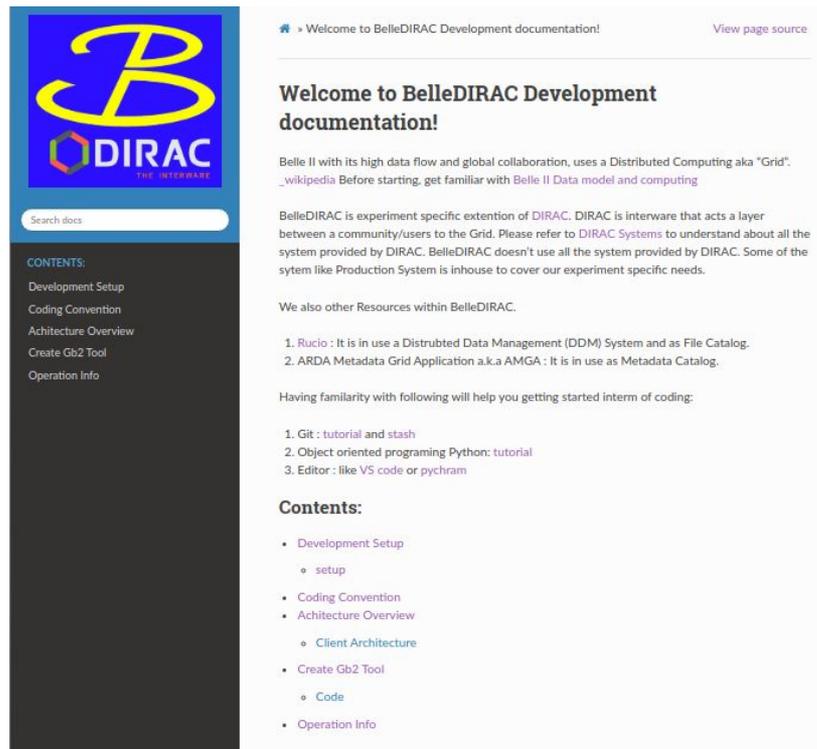
Send trace from Pilot:



Developer's doc:

- We can have extension of DIRAC documentation for developer.
- project to help new BelleDIRAC development documentation.
- This way we can attract more members contributing.

[doc link](#)



» Welcome to BelleDIRAC Development documentation! [View page source](#)

Welcome to BelleDIRAC Development documentation!

Belle II with its high data flow and global collaboration, uses a Distributed Computing aka "Grid".
_wikipedia Before starting, get familiar with Belle II Data model and computing

BelleDIRAC is experiment specific extention of DIRAC. DIRAC is interware that acts a layer between a community/users to the Grid. Please refer to [DIRAC Systems](#) to understand about all the system provided by DIRAC. BelleDIRAC doesn't use all the system provided by DIRAC. Some of the sytem like Production System is inhouse to cover our experiment specific needs.

We also other Resources within BelleDIRAC.

1. Rucio : It is in use a Distrubted Data Management (DDM) System and as File Catalog.
2. ARDA Metadata Grid Application a.k.a AMGA : It is in use as Metadata Catalog.

Having familiarity with following will help you getting started interm of coding:

1. Git : [tutorial and stash](#)
2. Object oriented programing Python: [tutorial](#)
3. Editor : like VS code or pycharm

Contents:

- [Development Setup](#)
 - [setup](#)
- [Coding Convention](#)
- [Achitecture Overview](#)
 - [Client Architecture](#)
- [Create Gb2 Tool](#)
 - [Code](#)
- [Operation Info](#)

Conclusion:

- Most of things are already in pipeline.
- I will discuss trace from pilot with Justin and give an update in future meeting.
- Any other development plans as UM-BNL team.

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