



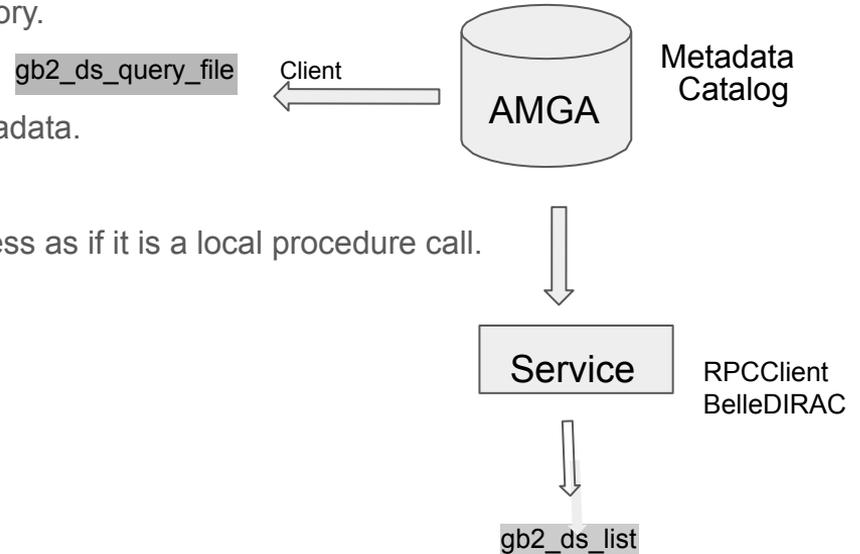
BelleDIRAC Development

gb2_ds_list [BIIDCD-902](#)

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Idea:

- Currently , gb2_ds_list just lists the LFN of the file/directory.
- We will like to attached the 'Status' of the file with LFN.
- gb2_ds_query_file is in use to see the status of file.
- gb2_ds_query directly calls the AMGA server to get metadata.
- Idea is to use RPCClient(service) to call AMGA.
- RPCClient is already implemented.
- RPC is method to execute a procedure in different address as if it is a local procedure call.
- RPC is initiated by client .



AMGA: ARDA Metadata Grid Application

Application LFN: Logical File Name

RPC : Remote Procedure Call

Implementation: Calling AMGA just once for the whole list of file.

Still Working on : gb2_ds_list <dataset> -l

```
from DIRAC.Core.DISET.RPCClient import RPCClient

res = am.getAttributesValues(args.dataset,['status'])
status = []
for key,value in res['Value'].items():
    status.append(value)

for i in range(0,len(lfns['Value'])):
    print lfns['Value'][i]
    print status[i]
```

```
[apanta@cw05 BelleDIRAC]$ gb2_ds_list /belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000001_prod00005678_task00000001.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000002_prod00005678_task00003920.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000003_prod00005678_task00000003.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000004_prod00005678_task00000004.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000005_prod00005678_task00000005.root
['good']
```

```
[apanta@cw05 BelleDIRAC]$ time gb2_ds_list /belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00 -l -g
KEK2-TMP-SE: (1000/1000), 2.0 TB
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000001_prod00005678_task00000001.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000002_prod00005678_task00003920.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000003_prod00005678_task00000003.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000004_prod00005678_task00000004.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000005_prod00005678_task00000005.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000006_prod00005678_task00003921.root
['good']
/belle/MC/release-02-00-01/DB00000411/MC11/prod00005678/s00/e0000/4S/r00000/mixed/mdst/sub00/mdst_000007_prod00005678_task00000008.root
['good']
```

Performance timing:

gb2_ds_list
<dataset_name>

Before (No AMGA call) :

Real 0m 2.092s
user 0m 0.822s

sys 0m 0.227s

After AMAGA call:

Real 0m 2.334s
User 0m 0.734s

sys 0m 0.211s

gb2_ds_list <dataset_name> -l -g

Before (No AMGA call) :

Real 0m 7.092s
user 0m 0.925s
sys 0m 0.325s

After (AMGA call):

Real 0m 11.015s
User 0m 1.026s
sys 0m 0.342s

Problem and Next Step:

- gb2_ds_list is implemented for file and directory both.
- The 'Status' call can only be done for file not for datablock (directory) using this procedure.
- This is because attributes from AMGA call is different for file and directory.
- Have to implement validation whether the input is file or directory .