DPM : what's missing

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Note

- We run a site supporting wLCG computing

- And other non-wLCG stuff

- Dropping support for volatile storage is not an option

First off

- DPM works!

- Support for pools, user mapping, ACLs, multiple backend servers

- Generally verbose logging, in most cases with relevant info

- Only one instance of "completely bizarre" behavior

- Extensive wiki troubleshooting page, DPM admin guide (also frequently updated)

- As far as grid middleware goes this is pretty good!

Missing things

- Management

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Incomplete support for storage types

- ATLAS has dedicated durable pool

- ATLAS can also write to generic volatile pool (see next bug)

- We publish durable for durable and volatile for volatile

- ATLAS selects a path and tries to write, but it is full

- File automatically goes to volatile pool ... No way to stop this!!

- Need to be able to specify storage class (no middleware support!!) and have DPM respect it ... And/or associate a path to a specific pool.

- GGUS #16646

ACL support : one or none

- Previous example would be less of a problem if we could prohibit ATLAS from writing to the volatile pool

- In DPM, we have the following choices

  - Pool is accessible to one specific group only

  - Pool is accessible to all groups

- Need the ability to provide a list of accepted, or prohibited, groups per pool

- GGUS #16642

ACL support : one group per user

- With VOMS, a particular user may belong to multiple groups

- This is not supported in DPM : user is mapped to one single group

- Hence storage only works as desired for one of the user's roles

- Example

  - user has "production" and "normal user" roles in that order

  - User will have access to ATLAS production pool, but not ATLAS normal user pool.

- GGUS #16643

Other Trouble Spots

◆ Documentation on architecture / design / message flow is very hard to find (Athens EGEE-I presentation?)

◆ Support for migration of files between pools, but this is so slow as to be unusable (migrates ~ 20 GB/day)

◆ Stability is sometimes an issue (likely due to GGUS #13998) ... Sometimes few restarts per week, sometimes weeks without restart

◆ Logging is more developer-oriented and it is not possible to configure the logging verbosity