DOMA Status Update

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Coordination of meetings

Quite some interesting topics on various agendas

     Data/Network challenges

     Tape exercises

     Analysis facilities

Discussed (too) many times in

     DOMA general or working group meetings

     GDB

     Experiment internal computing workshops

Want to improve in the future and avoid repetition

     DOMA coordinators invited to GDB steering group

     Try to have presentations better targeted for specific audience (although there is overlap)

     Not everyone needs to join every meeting

TODAY: Brief summaries - no repetition of all content from DOMA meeting

QoS Update

QoS DOMA working group led by Paul Millar and Oliver Keeble

Present WLCG pledge system know only two classes of storage resources
>   Archival storage: As of today essentially tape (main exception 'archival disk' for ALICE at KISTI)
>   Disk storage
>   - Pledge only addresses capacity
>   - No formal agreement about reliability or IO performance
>   - Actual implementation decided by the site, e.g. 2(+) replicas on JBODS, RAID6, erasure encoding

Report from working group: [Link] DOMA general meeting Oct 27th
>   Workshop
>   Whitepaper
>   Demonstrators, mainly from ATLAS sites
>   Overall topic could have been a bit more dynamic

QoS Update

Discussion about storage pledges with the WLCG MB [WLCG MB minutes - Nov 2021]

      Pledge system should not be modified without compelling reasons

      For now: no changes!

Updated directions of QoS group [Link] DOMA general meeting Nov 24th

      Shift focus away from storage diversity

      Focus on driving down the cost (and QoS) for "Disk"

- Could translate into larger capacity at flat budget
- Explore how sites can be recognised for that effort
    - Sites should be encouraged not penalised
- QoS class "EXPERIMENTAL" could give experiences with managing another class

TPC -> BDT

Third Party Copy (TPC) DOMA group: Some recent changes

New team of chair persons

      Maria Arsuaga Rios (CERN)

      Petr Vokac (Prague)

      Brian Bockelman (Morgride)

New name: Bulk Data Transfers (BDT)

      Scope of the group went beyond third-party-copy topics already before

      Present topics are mainly being continued

BDT Main Topics

More detailed presentation: [Link] DOMA general meeting Jan 26th 2022

Data access with WLCG JWT tokens
> Close collaboration with WLCG AuthZ working group
> Coordination of development, integration and deployment of token based infrastructure
> Revive/improve DOMA integration testbed

Archival storage
> Short term: Finish transition to SRM+HTTPS
> Mid term: Replace SRM with HTTP REST API

Network awareness of scheduled transfers
> Engage with existing working groups and projects
> Commission SDN aware components in the WLCG ecosystem

Upcoming network challenges
> 2023 challenge targets at 30% scale of HL-LHC
> Opportunity to gain experience with advanced SDN aware middleware

Another pre-Run3 Tape Exercise

Wrap-up of 2021 Data Challenge: https://zenodo.org/record/5767913

Some tests remain to be done still before Run-3 starts

Preliminary schedule: 2nd-3rd-4th week of March with partial experiment overlap

More realistic transfer pattern from the experiments to Tier-0 and Tier-1s

Communication channels

Regular meetings reestablished (DOMA Indico category)

E-group: *doma-data-challenges-development@cern.ch*

Slack: https://tapetest.slack.com

Common (Development) Items in 2022

More detailed collection by the experiments: [Link] DOMA general meeting Jan 2022

Cross experiment areas of work relevant for DOMA

Data Management

- CTA commissioning
- Rucio (ATLAS & CMS)
- FTS (ATLAS, CMS & LHCb)

Network

- Prototyping of packet marking
- Network orchestration together with GNA-G DIS effort (Global Network Advancement Group, Data Intensive Science)

Monitoring

- Primary focus of improvement
- Deficits particular in the area of network usage

Common Challenges

- Tape Test 2022
- Preparation of Network Challenge 2023 ("30%")

LHCC Review

DOMA review document

     Common Software Activities in Data Organisation, Management and Access

     Editors: Mario Lassnig, Oliver Keeble

     Contributors: Coordinators of the various storage middlewares and data management tools

     Made public in Jan 2022: https://zenodo.org/record/5839866

Editors of all LHCC review documents received a first a **non-public** reply from the reviews

     Official recommendations expected soon

Summary

DOMA is evolving

    QoS

        Re-scoping towards "driving down the cost of DISK"

        Exercise additional QoS class 'EXPERIMENTAL'

    Bulk Data Transfer BDT

        Continues topics of TPC groups

        Slightly enlarged scope: Engage with SDN related projects

Common DOMA topics for 2022

    Pre-Run3 tape exercise beginning of March

    Developments in the area of Data Management tools, monitoring, networks …

Usual reminder

    DOMA has no own resources (money, people…)

    DOMA can only foster exchange and willingness to collaborate

    DOMA can help to identify synergies to be exploited for mutual benefit