CernVM-FS at ASGC

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CernVM-FS stratum one

- It was awkful in past months.
  - The stratum one became really unstable since we migrated it to new hardware and storage system.
  - It took sometime to do debug from network, server hardware to storage hardware.
  - There was indeed network problem.
    - Traffic wasn't going through LHCOPN...
  - But the big issue turned out to be storage(sort of)
    - The argument there with our vendor was, storage server was basically fine, but it slowed down entire Ceph I/O and resulted big gap while mirroring from stratum zero.
      - So, we took long time to convince vendor to replace the hardware.
    - Everything is fine after we replaced the hardware.

CernVM-FS Activites

- Apart from LHC and other HEP collaborations, ASGC also uses cvmfs to widely support the other applications in Asia.

  - Mostly, MPI softwares and applications.

  - Bioinfo softwares and some DB or expression data.

  - Various small projects including our own developed softwares and middlewares.

CernVM-FS Issue and challenges

- Single file 4GB limitation is still big concern for us.
  - Most of bioinfo and social science databases can't reside in CVMFS.
    - 10GB~25GB database files are most of cases....
- Container is killer application against cvmfs...
  - Users start using container to wrap their applications, so it slightly makes cvmfs less important than before..
  - Of course, for big applications and databases, cvmfs is still useful. :)
    - > 4GB doesn't count anyway... :(
- Using cvmfs inside container could be next trend.
  - However, we never really make it..., is there any trick?

Thanks a lot!