Ideas for Common Underlying Monitoring Services

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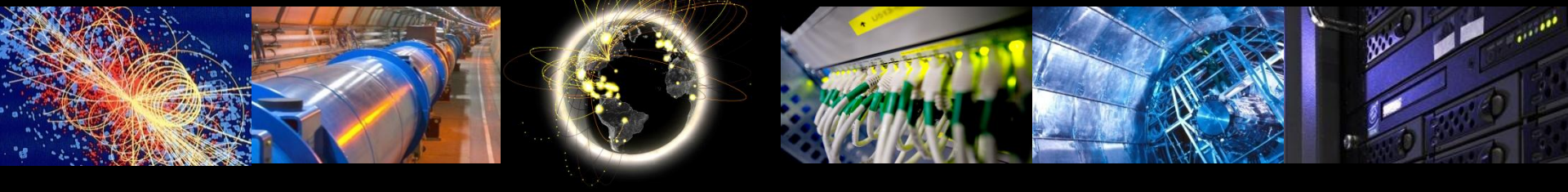

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Overview

- Summary of work done by the CERN IT Monitoring Working Group
- Benefits of common underlying services for monitoring data
- Possible discussion on this

The work in the IT Monitoring WG

- Mandate:

Outline an overall framework for monitoring developments within the IT Department, including the agreed common set of tools and services that should be used in common between different efforts (e.g. for transport, storing, mining, and visualization of monitoring data). The framework should address the key needs of all groups, and take account of the requirement to maintain the investments in existing tools, and the need to be able to integrate data from other external tools. The group should propose a strategy and implementation plan where there are gaps in the tool set.

- Deliverable:

List of a set of agreed tools and services that can be used by all of the IT groups to build the monitoring and analysis systems that they need.

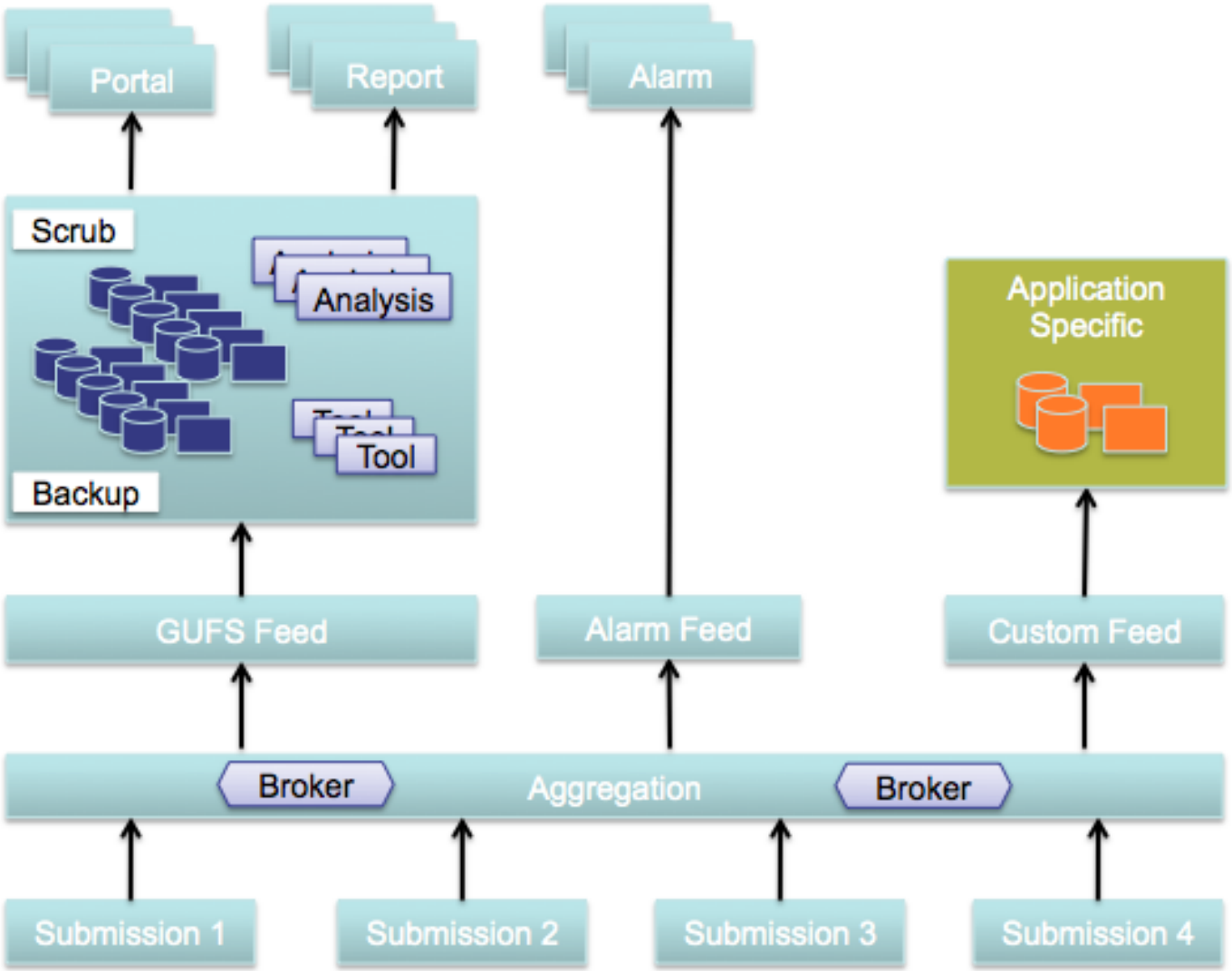
The work in the IT Monitoring WG

- What has been done:
  - analysis of the size of monitoring data used in CERN IT
  - identified use cases
  - discussion on possible technologies
  - discussion on shared architecture and data format
  - established short term plan for prototyping
  - report summarizing the work done

Size of Monitoring Data

- Applications: 35 monitoring applications
- Producers: 24988 producers
- Input Volume: 280 GB per day
- Input Rate: 696 M entries per min
  - 2,2 M entries per min without process accounting
- Query Rate: 50 M queries per day
  - 2,5 M entries per day without process accounting

Planned Shared Architecture



Overall Benefits

- Reduce duplication of similar services/tools
- Promote closer integration of monitoring data
  - Data correlation on demand for analysis
- Provide easy access to others monitoring information
- By aligning technologies:
  - Reduce training (train once, work on different systems)
  - Use solutions on local/global/regional level
  - Share operational experience

Benefits of Messaging Service

- Open, widely used technology, actively supported & developed by large communities and companies
- Reliable and scalable data transport
- Simplify clients that consume/publish data
- Single reference for producers/consumers

Benefits of Storage Service

- Storage Service for Monitoring Data
  - Investigate/prototype NoSQL approach at scale
- Common place for all agreed monitoring data
  - Easier debugging & correlating problems
- Open, widely used technology, actively developed by large communities & companies

Benefits of Common Analysis Tools

- Tools for data processing/analysis
  - Obtain raw or processed data on demand
  - easier to share/access processed monitoring data
  - simplifies availability of this service

Summary

- Common underlying services for monitoring data
- Aggregating and making available raw & processed data
- Use of Open Source technologies with large communities behind
- Open Question: Would a similar approach be valuable for WLCG?

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