NIST Big Data Public Working Group

Breakout 3: Reference Architecture and Interfaces
Discussion Overview

NIST Campus
Gaithersburg, Maryland
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Breakout 3 – David Boyd

Volume 6, Reference Architecture

- Need to put the conceptual view in context of stakeholders and their concerns
  - Reflect domain needs and requirements
  - Consider new diagram
- Need to address Data Management
  - Own fabric?
  - Subrole of management (Data and System subroles)
- System Orchestrator issues
  - Business or Technical
  - Relates back to compromises and multiple thoughts in V1
  - Add Finances/Costs and also Service Level requirements
  - Consider renaming
- Find place to represent Provenance and Pedigree activities
- Add 4th to Security and Privacy (Accounting? Find definitions)
- Need text on non-linear flow – Consider mapping use case flows through architecture.

Breakout 3 – Gregor von Laszewski (laszewski@gmail.com)

Discussions Vol.8

- Volume 8 reference implementation implies that a service layer exist as part of the system orchestrator
- REST is one architectural approach to be used in a reference implementation, other could exist.
  - Reminder REST is one technology to implement SaaS
  - Add Section to stress that choice.
  - Move REST related terminology possibly in the appendix
- JSON format proved as very advantageous.
  - Some asked should we use more complex specifications such as xml
- Object:
  - Possibly using “Resource” instead of “Object” but that binds us to REST
  - Use Model? This may provide its own challenges
- Remember Vol 8 must be supporting reference implementation

Cloudmesh Tutorial

- Cloudmesh Tutorial at PEARC17
- **Monday**, July 10 • 9:00am - 12:30pm, New Orleans
- Advanced Tutorial to learn how to create virtual clusters with the help of Cloudmesh on NSF sponsored Comet
- Comet
  - > 15000 Cores
  - > 1500 Servers
  - 7 PB storage