NASA Cloud Computing Panel [1]

  Submitted by superadmin on Wed, 2012-02-01 11:55   Thursday, January 5, 2012 - 14:00 to 15:30
Event: Winter Meeting 2012 [2]
Session Type: Breakout [3]
Collaboration Area: Cloud Computing [4]
Abstract/Agenda:

This session is to discuss the current status of NASA cloud computing activities:

1) Karen Petraska - NASA cloud strategy/activities and data center consolidation.

2) Emily Law - JPL science data systems. Slides [5]

3) Ray O'Brien - Implement and operation of private cloud and overview of NASA Nebula cloud environment. Slides [6]

4) Mike Little - Report and observation on working with cloud environments (Amazon, Azure, and Nebula).

Each topic will be 15 minutes, Q&A, and discussions will be following the presentations. Panelists

Notes:

What we have learned

1. Federal Data Center Consolidation Initiative - migrate/relocate under-managed federal data centers.
2. Federal Cloud First Initiative - to reform federal IT management to improve efficiency in data archive operation and large-scale IT programs
3. Report on current state of NASA Nebula cloud computing environment and its operation
4. The Nebula team's contributions to the OpenStack project
5. JPL's advanced science data systems including its successful Lunar Mapping and Modeling Project using Amazon EC2 for image tiling
6. Some information and report on on the current NASA High End Computing Program task which involves testing on three cloud computing environments (Amazon, Azure, and Nebula)
7. Moving to the cloud doesn't mean eliminating all system administration. It takes aways the concerns for hardware or datacenter facility management issues, but applications/services still require administration

Some questions/issues

1. Cloud interoperability - not all clouds are created equal. How to prevent vender lock-in?
2. Some users of Nebula complained about the default 100GB default storage space. Ray O'Brien indicated bigger storage is not an issue. Users should email or contact Nebula to increase the default.
3. Data movement is an issue. A sea-suface temperature representative expressed the concern of having to moving large amount of data in order to be process into a larger data result set. The costing for moving data in/out of the cloud and computation. The recommendation was to review the current process on the need to download large amount of result data for localized analytic or can the analytic be performed on a cloud platform.
4. Complexity in cost estimation according to the pay-by-the-drink model
5. The lack of standardization on metric on evaluating cloud service provider. We need better guideline in evaluate cloud service providers.

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