Atmospheric Science Data Center Update

CERES Science Team Meeting
May 16, 2017
CERES and FLASHFlux Archive Volume

By Data Date Through March 2017

Total Volume Archived ~ 1,461 TB
NPP Volume Archived ~ 63.0 TB
CERES Data Orders
(June 2010 – March 2017)

Total Orders: 48,272
CERES Data Distribution
(June 2010 – March 2017)

Total data distributed
• ~653 TB
• 3,042,835 data months
• ~7,688 users
User Affiliations

- Commercial: 45%
- Education: 27%
- Government: 18%
- Other: 10%
Users by Country
(June 2010 – March 2017)
Current Storage Configuration

ASDC Publicly Available Data

\- ANGe Holdings
\- CERES
\- CALIPSO
\- SRB
\- Field Campaigns

\- ECS Holdings
\- MISR
\- SAGE III
\- TES
\- MOPPITT

Data pushed via specific orders and subscriptions to customers

Limited ftp access to data

Center Firewall

Campus Network

Public
OpenStack:
- Open Source IaaS (Infrastructure as a Service)
  - Storage, Networking, & Compute resources
- Dense utilization of compute resources
- Potential for Hybrid Cloud

Current Status:
- DMZ deployment has been completed
- Hardening/testing of platform is ongoing

Upcoming work:
- Deployment of internal OpenStack
- Migration of compute workloads
- Integration with CloudForms
ASDC Cloud Pilot

OpenShift:
- Open Source PaaS (Platform as a Service)
  - Built on Docker & Kubernetes
- Container based “microservices”
- Rapid Application Development
- Easy Application deployment & scaling

Current Status:
- Internal AMI dev/test & production are now live
- Dev sandbox is available

Upcoming work:
- Deployment to DMZ for external production
- Migration of WebRA applications
- Integration with CloudForms