

***Requirement 7: Defined Unique
Government Requirements and Solutions***

Cloud-based Disaster Response

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Unique Government Requirements

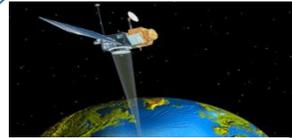
- USG agencies are subject to policy and regulatory requirements
- USG agencies have public trust responsibilities
- An example of government responsibility that will not be met by the commercial sector
 - **Disaster Response -- at the state, national and international levels**

Stakeholder Cloud #1



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Stakeholder Cloud #2



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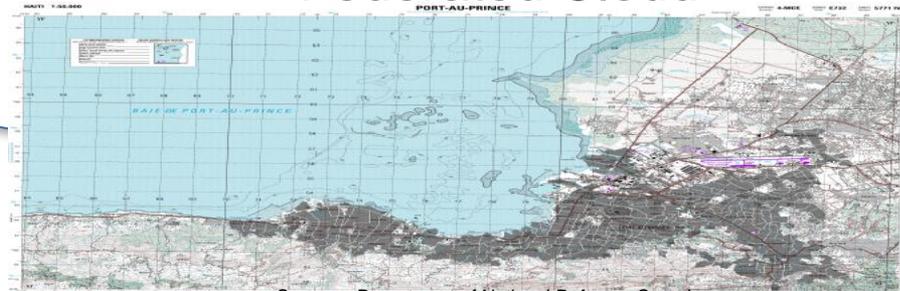
Stakeholder Cloud #3



First Responders



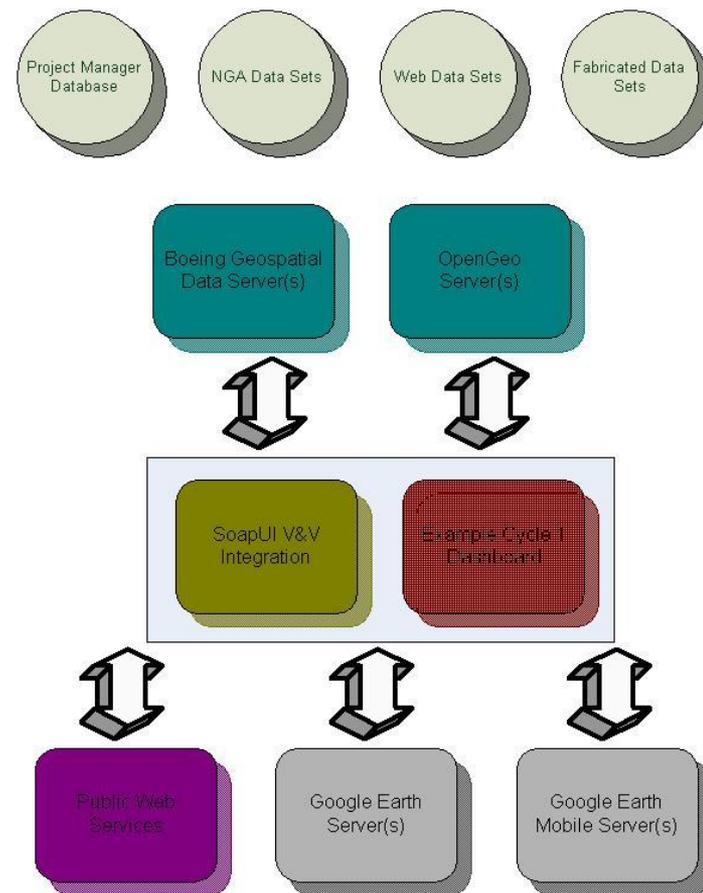
Federated Cloud



Source – Department of National Defense, Canada
Port-au-Prince, Haiti

NGA/NCOIC GEOINT Community Cloud Prototype

- The National Geospatial-Intelligence Agency (NGA) has contracted the Network-Centric Operations Industry Consortium (NCOIC) to run a pilot project for a **Geospatial Intelligence Community Cloud for Disaster Response**
 - Leverage industry best practices to provide global
 - Enable data mobility
 - *Enable each participating organization to manage the data they provide*
 - *Protect* digital GEOINT data from unauthorized use
- NCOIC GCC Cycle One Team Members:
 - NJVC, Boeing, The Aerospace Corp., the Open Geospatial Consortium
- Three-Cycle Project Approach:
 - Cycle One Infrastructure
 - Cycle Two Software
 - Cycle Three Enhancements

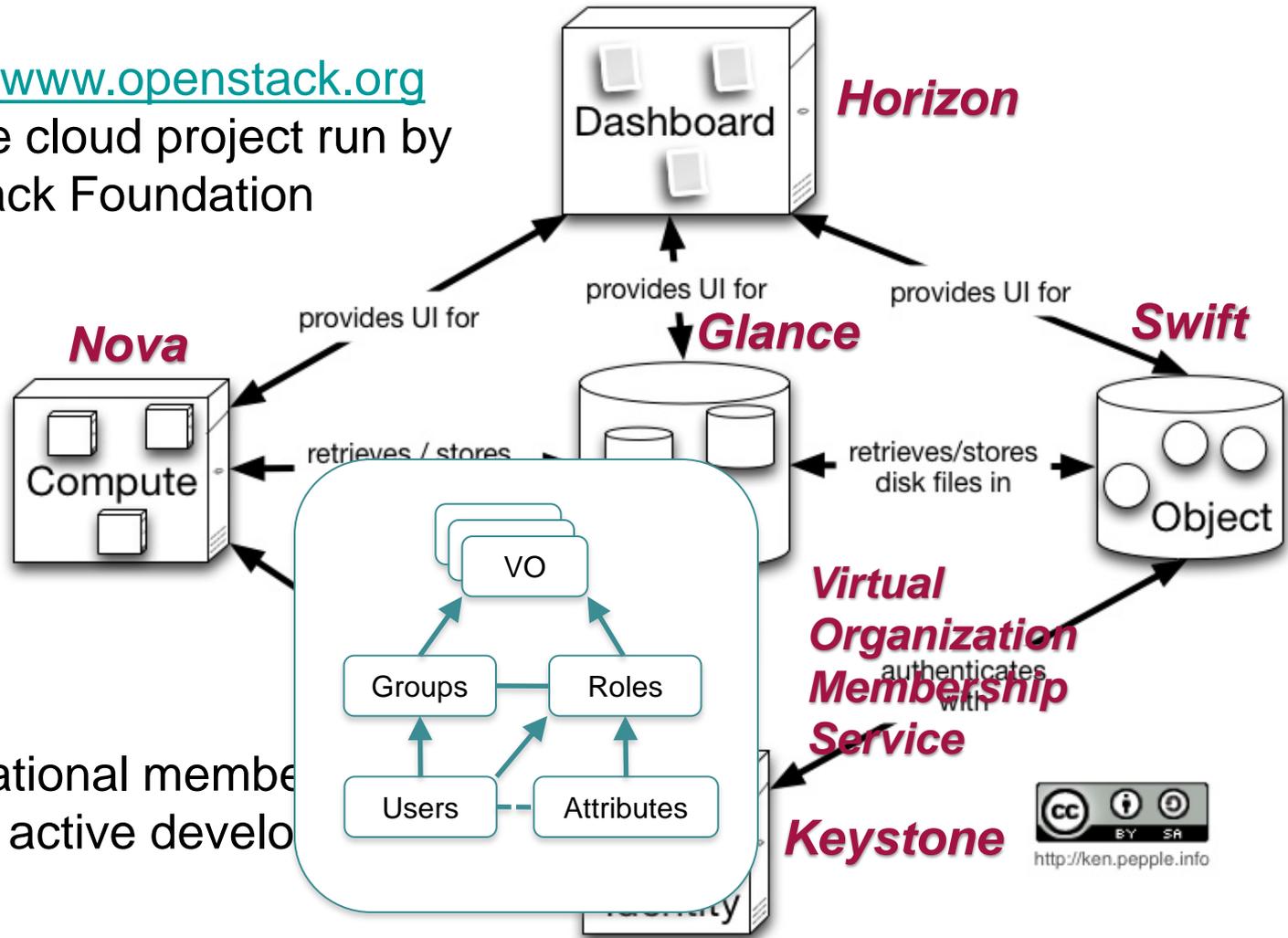


Federating Clouds

Simplified OpenStack Architecture

OpenStack -- www.openstack.org

- Open source cloud project run by the OpenStack Foundation



- 87 countries
- 140 organizational members
- Hundreds of active developers

Operational VOs: Worldwide LHC Computing Grid

WLCG Dashboard: <http://dashb-earth.cern.ch>



Summary



- The USG has unique policy and regulatory requirements that must be observed in cloud-land
- Some public responsibilities will never be met by the private sector
 - e.g., Disaster Response – at the state, national, and international levels
- On-demand collaboration requires the integration of:
 - Federated Identity Management
 - Federated Access Control
 - Trust Federations
- The NGA/NCOIC GEOINT Community Cloud prototype is a key effort to demonstrate these capabilities
- Broad applicability to wide range of functions:
 - Business-to-business
 - Agency-to-agency
 - All manner of cloud-based federated collaborations