Container-based Architecture to Optimize the Integration of Microservices into Cloud-Based Data-Intensive Application Scenarios

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Open Geospatial Consortium
The OGC Mission

Global forum for collaboration of developers and users of spatial data products and services

Advance development of international standards for geospatial interoperability
The Open Geospatial Consortium

Not-for-profit, international voluntary consensus standards organization; leading open innovation for geospatial data

- Founded in 1994
- 530+ member organizations
- 100 innovation initiatives
- 48 Open Standards
- 787 standard compliant products
- Thousands of implementations
- Enabling access to 100K+ datasets
OGC Programs

Innovation Program

Communications & Outreach

Standards Program

Requirements

Gaps & Enhancements

Engineering Reports & Compliance Tests

Adopted Standards

Developer Support

Engineering Support

Community Support

Decision Maker Support

Requirements

OGC®

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OGC Cloud Hackathon between T13 and T14

Process Sentinel 1 RADAR data for Northwest Territories at beginning and end of the 2017 summer

Sentinel Application Platform (SNAP)
- SNAP Toolbox in a Docker container.
- SNAP workflow performing 5 tasks

BorealCloud: Openstack cluster, Xeon, Cuda cores and 400 TB of NAS storage

detect fire scars
Application developer
Mission Platforms

Application consumer

OGC
Application consumer

Mission Platforms

OGC®

CAT

Q&B

WPS

W*S

Q&B

WPS

W*S

Q&B

AP

CAT

W*S

WPS

W*S

WPS
Future Work

• Semantic Interoperability
  – ML algorithms with particular training
  – *Local* classification schemes
  – Online taxonomies, codelists, ontologies

• Temporal and Spatial Alignment
  – Spatial: yes
  – Temporal: max size of delta?

• Technical & Standardization Challenges
  – Hype of the day, flavor of tomorrow
  – CWL, SAML, OAuth, ODC
  – Quotation / Billing >> Political…
Thank You