Design Geo-publication service in the Cloud

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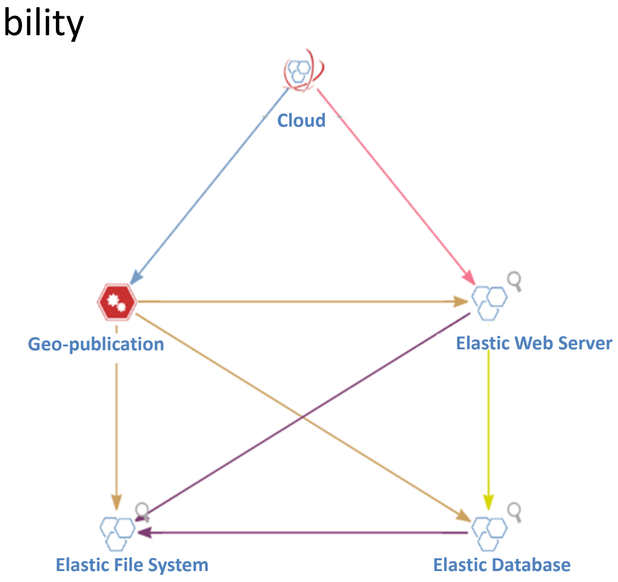
Aims of the Project

- Build Cloud frameworks for efficient on demand applications Focusing on Geo-publication Service
- Execute performance tests on Geo-publication servers
- Create Geo-publication service based on clusters giving high availability



Expected Impacts

SCALABILITY

Support large data volumes and high throughput
Support increasing dataset sizes

ELASTICITY

Support a varying number of users
Support on demand computations

CUSTOMIZABLE

Support a larger number of software requirements

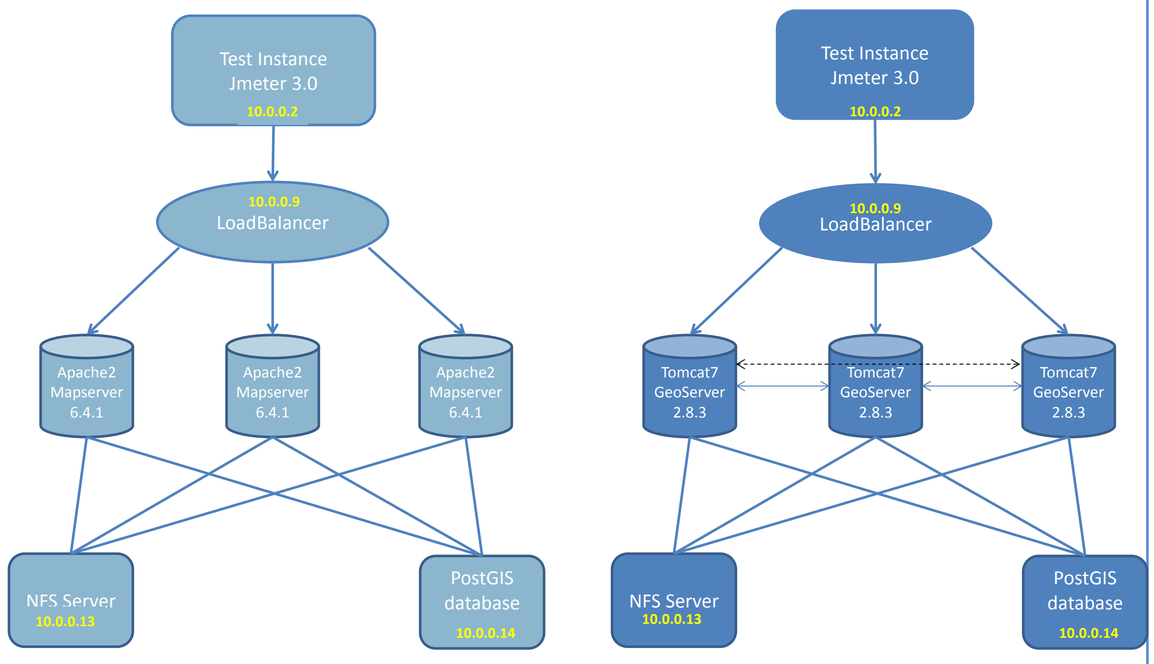
COST REDUCTION & MAINTABILITY

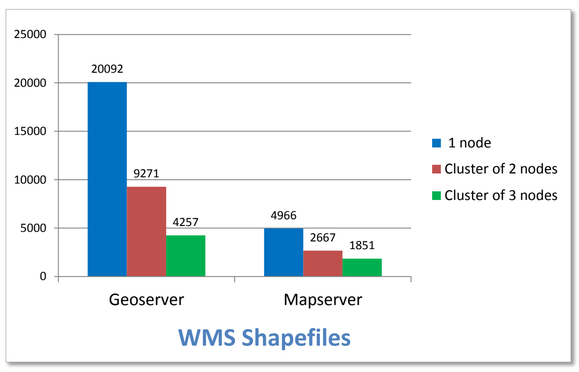
Reduce infrastructural cost during low platform usage
Use of Open Source solutions

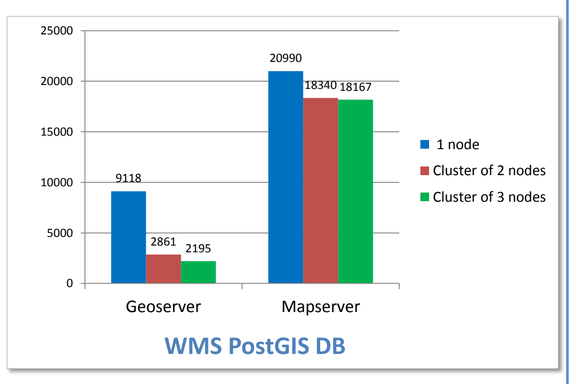
Project Process

1. State of the Art of Geo-publication Services
2. Execute performance tests
3. Define Proof of Concept
4. Service Automatization
5. REST API Development

Cluster test

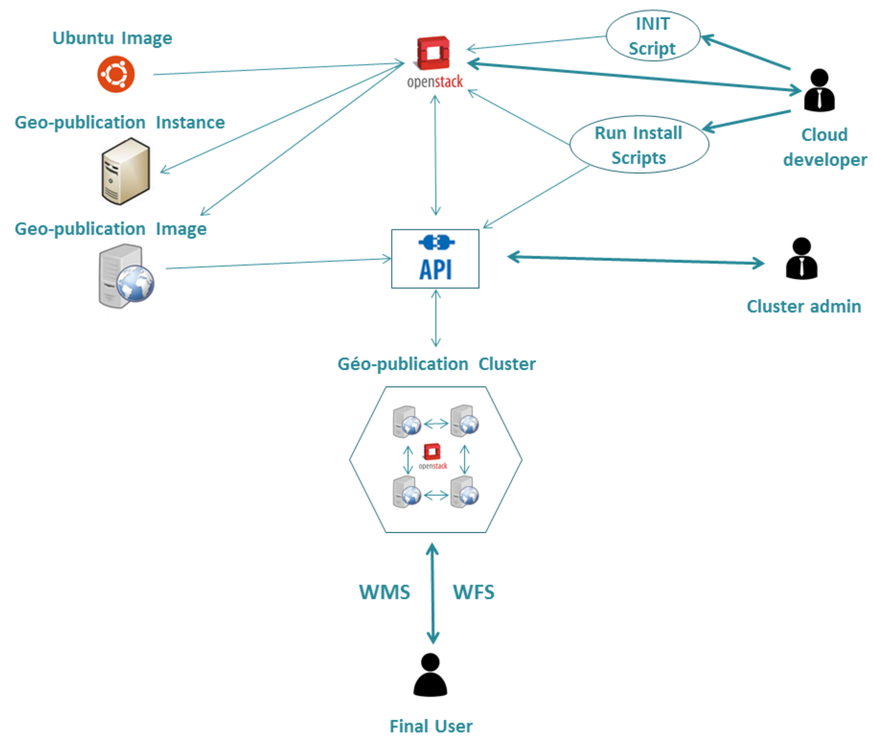






- Clustering is improving performances in terms of response time
- The response time gains decrease when scaling horizontally

Geo-publication Service Design



Conclusion & Perspectives

- GIS applications benefit from the Use of Cloud capabilities “PaaS”
- The complete set of services needs to be developed
- Need of a client side platform to manage data and users
- Searching for new project partners

Technologies

GeoServer, MapServer, openstack, PostgreSQL, PostGIS, OpenStack4j

Contact

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