GLUSTER

The storage for your Hybrid Cloud

Amar Tumballi,
Manager, Storage Engineering
Maintainer, GlusterFS
SDC India - 24th May, 2018
CONTENTS

● Define: Hybrid Cloud & Infrastructure
● Understand: What are the storage needs of hybrid cloud
● Why Gluster fits the use-case really well?
● Future: Features in the making...
WHAT IS HYBRID CLOUD?

Hybrid cloud is a combination of one or more public and private cloud environments.
HYBRID CLOUD

AT LEAST ONE PUBLIC AND PRIVATE CLOUD (OFF & ON PREMISES) THAT HAVE A DEGREE OF INTEROPERABILITY, APPLICATION OR DATA PORTABILITY OR COMMON MANAGEMENT
HYBRID CLOUD IS GROWING
Nearly 62% are / will have multiple cloud environments

How will organizations use different cloud environments in the next 2 years?

- 38.4% Will focus primarily on a single cloud environment
- 20.4% Will have multiple ‘different’ cloud environments, but little to no interoperability between the environments
- 12.6% Will have multiple cloud environments to migrate workloads or data between cloud environments
- 28.6% Will have multiple cloud environments where the delivery of a single business function across the different cloud environments is seamless

Source: 451 Research Voice of the Enterprise, Cloud Transformation Q1 2017
KEY REQUIREMENTS

- Interoperability
- Unified Management
- Scalability
RE-THINKING INFRASTRUCTURE OPERATIONS

The impact of hybrid cloud

NEW MODEL

DevOps Team

OLD MODEL

SYS ADMIN
STORAGE ADMIN
NETWORK ADMIN
WHAT DOES IT MEANS FOR STORAGE

- Scriptable & Flexible Management APIs
- FaaS (Function as a Service)
- Scalability - Need of flexible volume sizes (1GB - few PBs), and volume’s existence time (minutes to lifetime of storage).
- Storage is becoming invisible (or #Unstorage!!)
UNSTORAGE

HYBRID CLOUD AND CONTAINERS HAVE SHAKEN UP THE STORAGE LANDSCAPE

- co-located storage & apps
- dynamically provisioned
- DevOps & cloud admins
- served out of containers
- programatically managed
- not storage admin silos

All this is great!!

Now lets see how Gluster gets into game!!
All this is great!!

Let's see how it looks!!

Works with what you have today, and where you're going tomorrow.
GLUSTER - A NATURAL FIT

- No hardware dependency
- Software defined storage
  - scale out, programmable, portable.
- Runs everywhere, on-prem, virtualized setup, containers, or cloud.
- Volume sizes can vary from very minimum 1GB, to a max of ~8PB
  - scale of million+.
NOT JUST THOSE

- Scalable management layer with ReST APIs.
- Intelligent Volume Provisioner.
- Performance enhancements to suit different use-cases.
- Multiple ways of accessing data - FileSystem, Object, Block.
  - Applications can choose what they need.
- Well integrated with orchestration engines like k8s.
A customer implemented a hybrid development platform based on Red Hat OpenShift Container Platform deployed across a multi-cloud environment with Microsoft Azure and AWS plus on-premises virtualization and private cloud with Gluster Storage, CloudForms, Fuse and 3Scale helping make it all work together.
FUTURE

- Stretch Cluster
- Halo Replication
- +1 Scaling of nodes
- Cloud Sync
  - Seem-less migrations of data between cloud and on-prem.
THANK YOU

Want to get involved?

- Community - https://www.gluster.org
- Company :-) We are hiring!! Get in touch

Reach out to me - amarts@redhat.com