

OPEN HYBRID CLOUD

# IT BEGINS HERE

红帽混合云建设

张国华

Senior Solution Architect

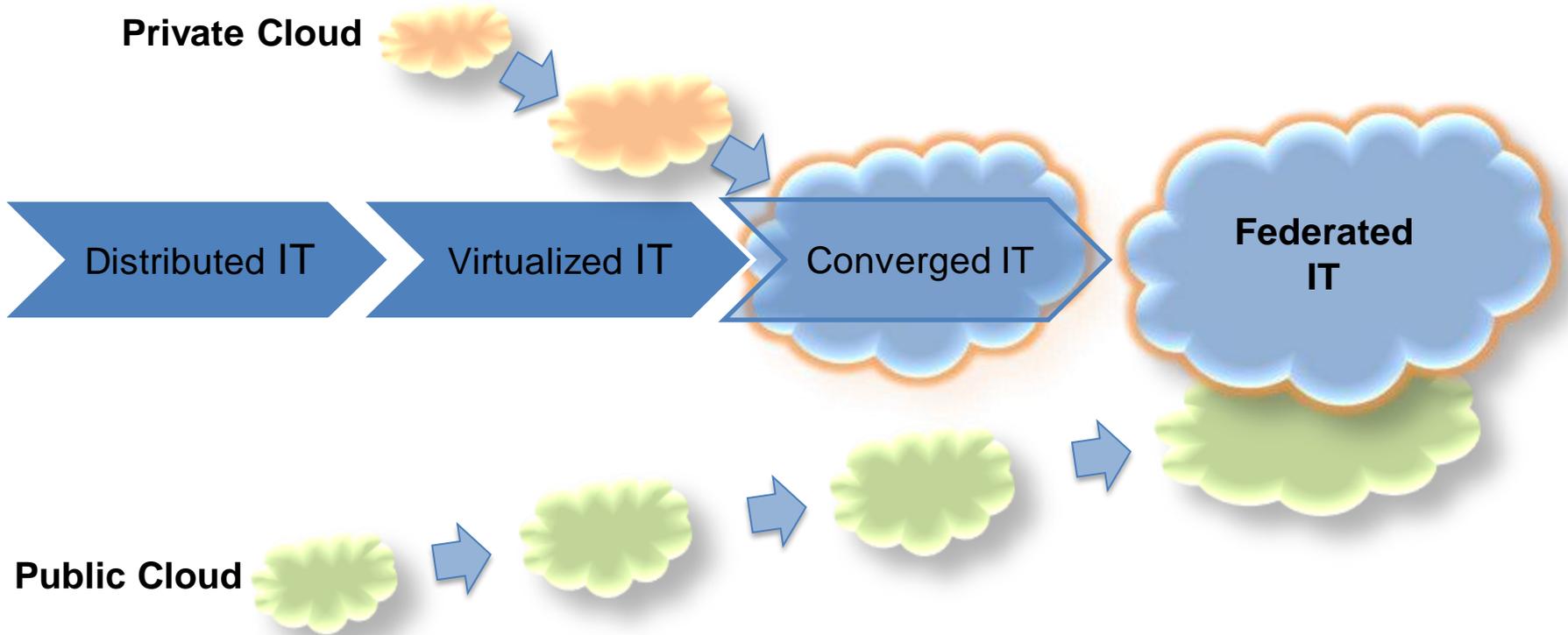
[gzhang@redhat.com](mailto:gzhang@redhat.com)

2013-4

Presented by

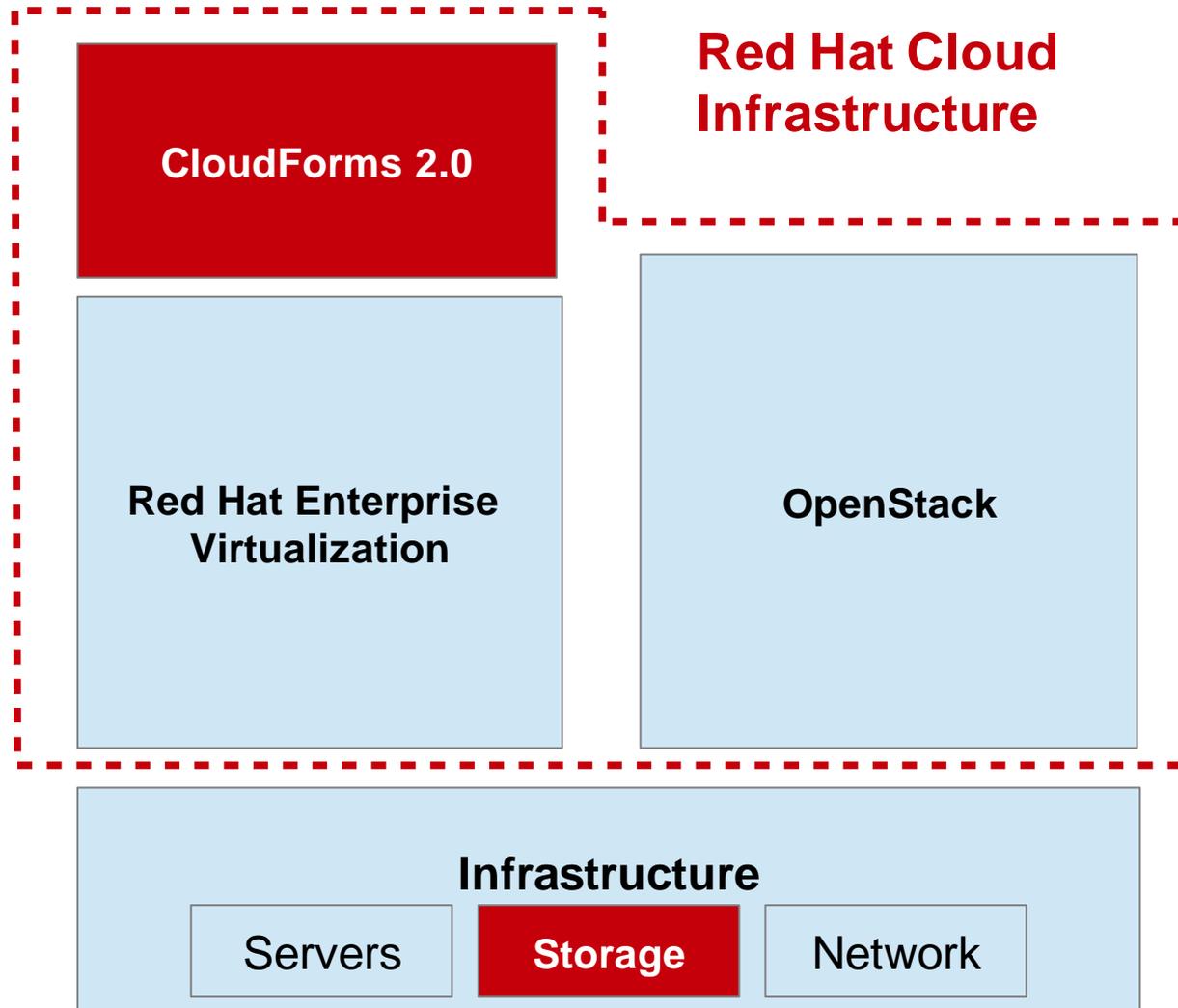


# 混合云的进化



**\*\*\* *It's all happening at the same time!!***

# RHCI – Red Hat Cloud Infrastructure

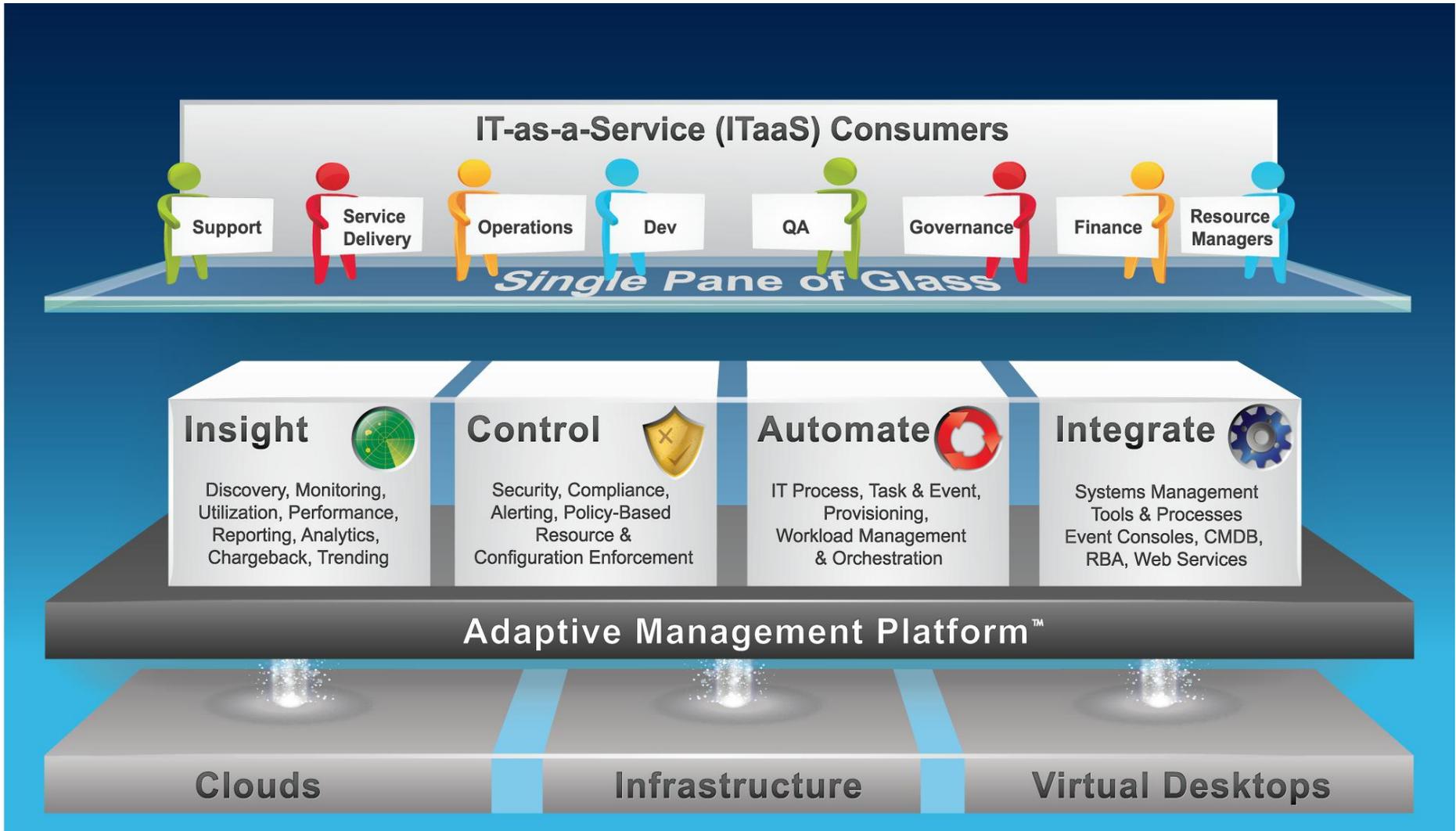


# 混合云管理 - ManageIQ

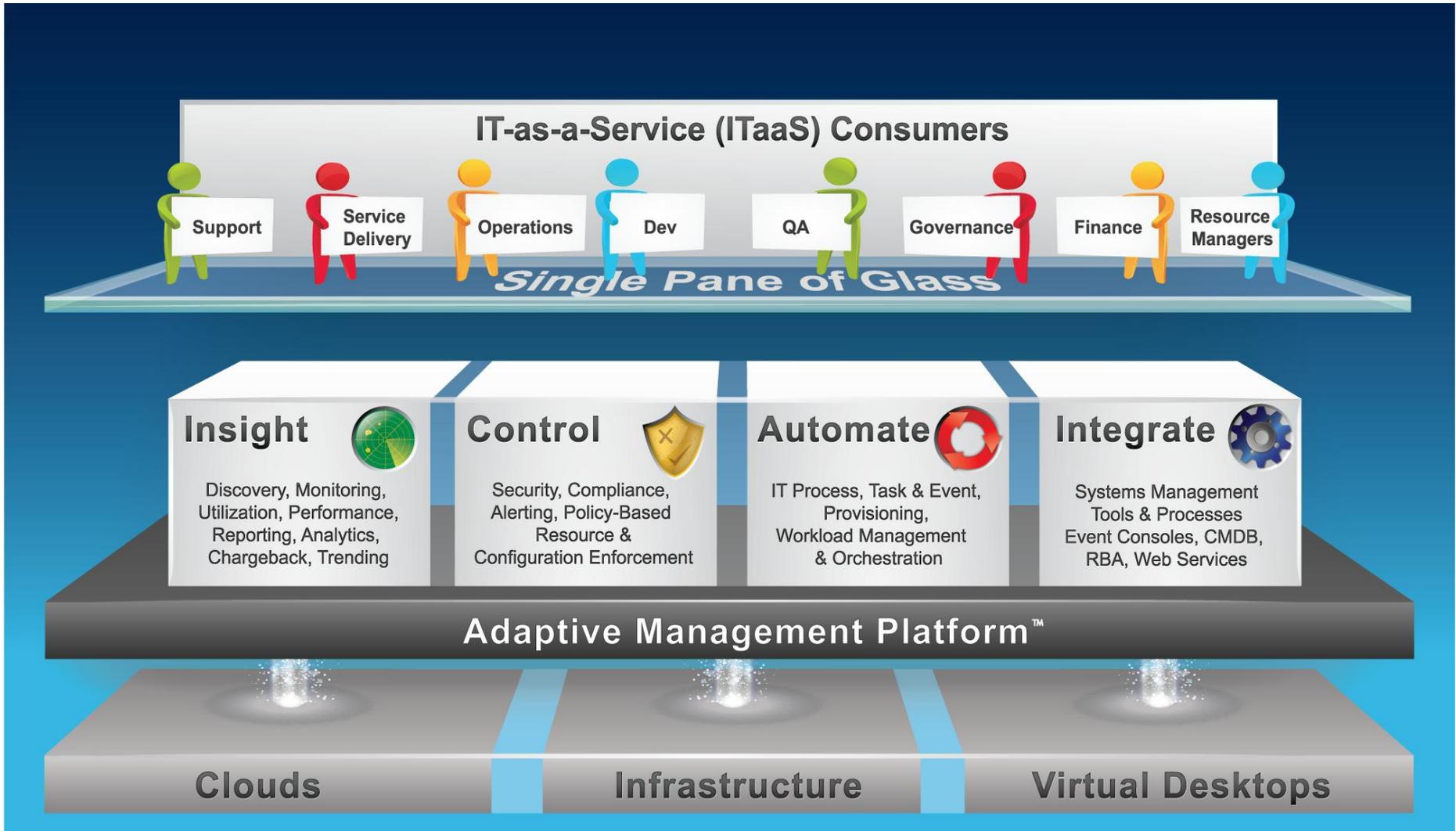
## Integrations



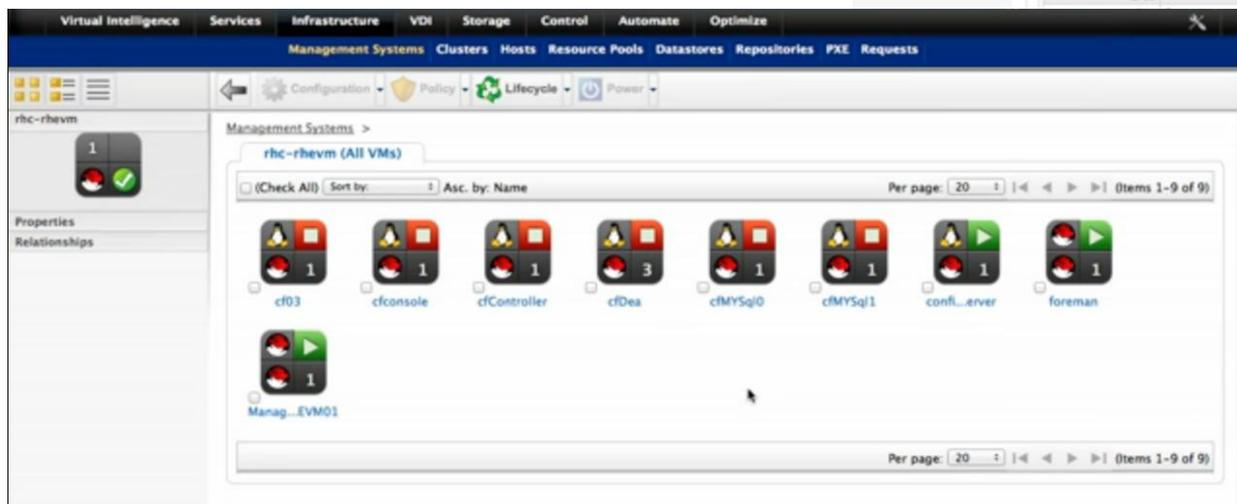
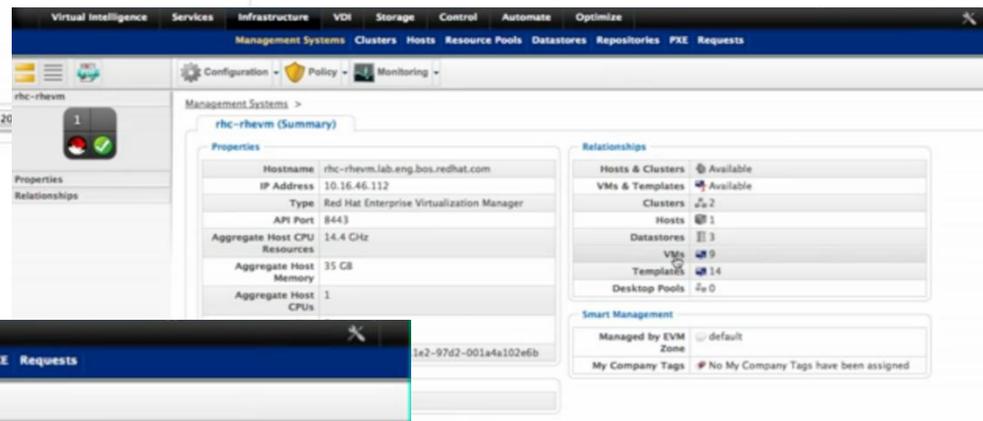
# 统一监控，管理和自动化企业云



# 统一监控，管理和自动化企业云



# EVM-管理你的混合云



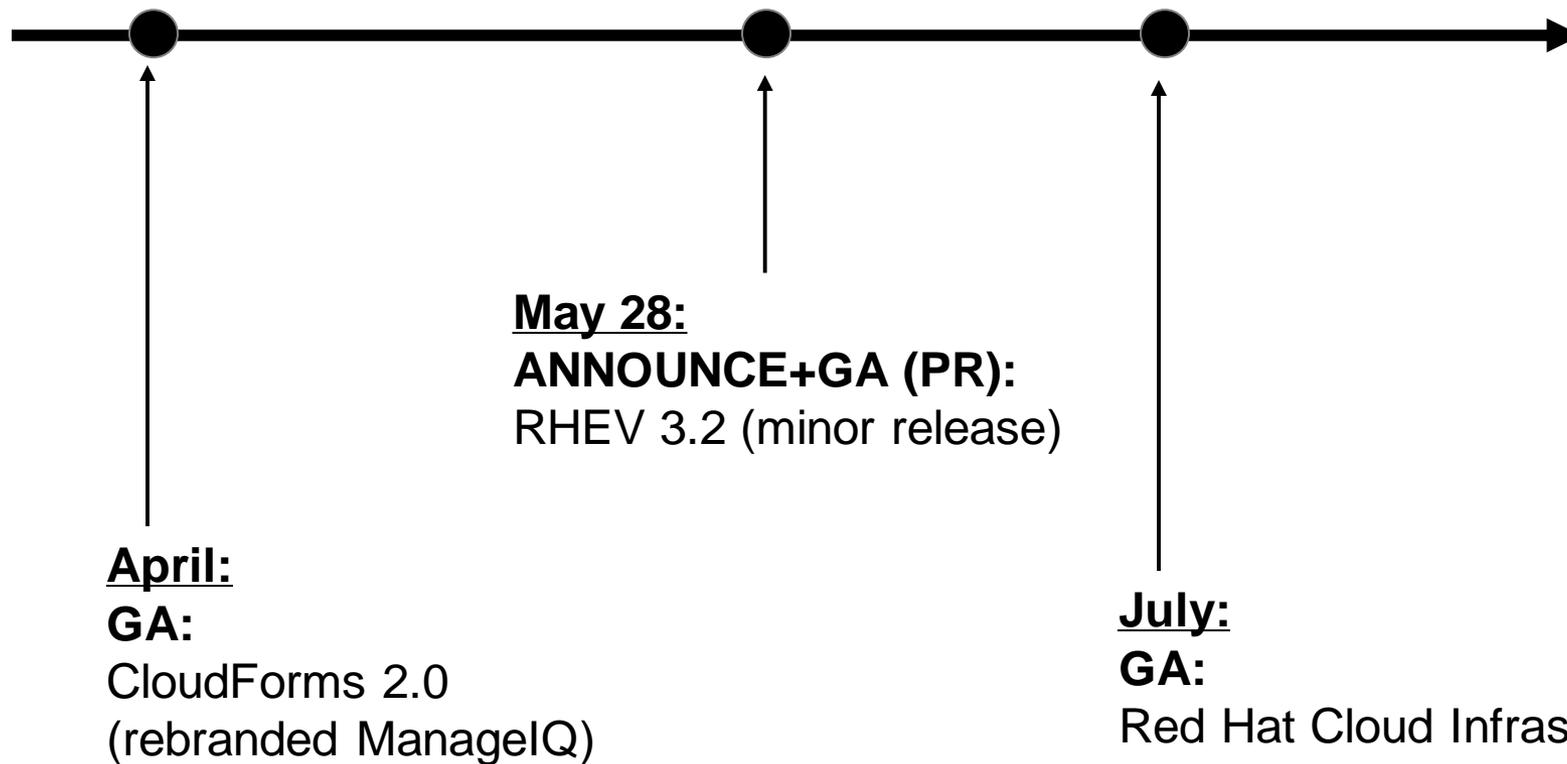
# EVM-管理你的混合云

The screenshot displays the EVM management console with the following sections:

- Navigation:** Virtual Intelligence, Services, Infrastructure, VDI, Storage, Control, Automate, Optimize.
- My Services:** Catalogs, Requests, Virtual Machines.
- VMs & Templates:** A tree view on the left showing a hierarchy of VMs and templates under 'rhc-rhev' and 'rhc-dcl'.
- VM "foreman" Details:**
  - Configuration:** CPU Affinity, Snapshots (1), Advanced Settings (0), Resources (Available), EVM GUID (c0679d86-5c1e-11e2-9b94-001a4a102e6b).
  - Lifecycle:** Discovered (Fri Jan 11 18:43:12 UTC 2013), Last Analyzed (Never), Retirement Date (Never).
  - Relationships:** Management System (rhc-rhev), Cluster (clusterA), Host (rhc-04.lab.eng.bos.redhat.com), Resource Pool (Default for Cluster clusterA), Datastores (DATA), Parent VM (None), Genealogy (Show parent and child VMs), Drift History (None), Analysis History (None), Desktop (None).
  - Storage Relationships:** Filters (0), LUNs (0), Volumes (0), File Shares (0).
  - VMsafe:** Enable (false).
  - Normal Operating Ranges (over 30 days):** CPU High (Not Available), Average (Not Available), Low (Not Available).
  - Security:** Users (0), Groups (0).
  - Configuration:** Packages (0), Init Processes (0), Files (0).
  - Datstore Allocation Summary:** Number of Disks (1), Disks Aligned (Unknown), Thin Provisioning Used (False), Disks (40 GB), Memory (2 GB), Total Allocation (40 GB).
  - Datstore Actual Usage Summary:** Disks (40 GB), Memory (2 GB), Snapshots (0 Bytes), Total Datstore Used Space (40 GB), Unused/Overcommitted Allocation (0 Bytes).
  - Diagnostics:** Running Processes (Not Available), Event Logs (Not Available).
  - Smart Management:** My Company Tags (Parent Folder Path (Hosts & Clusters): Datacenters, Parent Folder Path (VMs & Templates): Datacenters/cbu/vm).



# CloudForms 2.0 基于ManageIQ



# RHS(Gluster)的前世今生

## ❖ 200,000+ downloads

- ~16,000 /month

## ❖ 550+ registered deployments

- 45 countries

## ❖ 2,500+ registered users

- Mailing lists, Forums, etc.

## ❖ Active community

- Diverse testing environments
- Bugs identification and fixes
- Code contributions

## ❖ Member of broader ecosystem

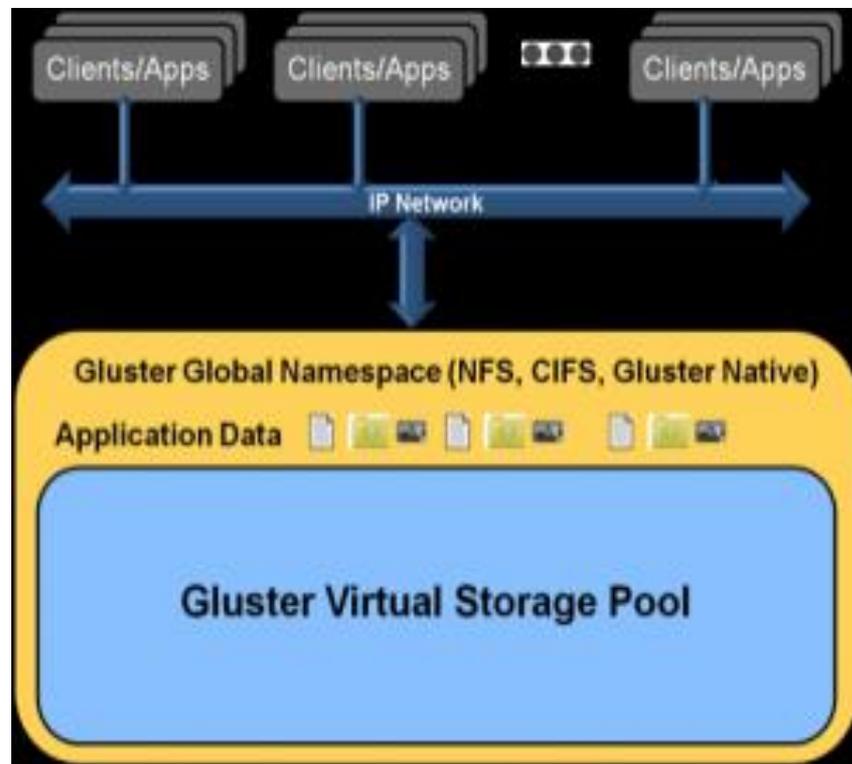
- OpenStack, Linux Foundation, Open Virtualization Alliance

2011年10月4日被Red Hat收购  
目前版本为RHS 2.0



# RHS(Gluster)简介

- ✓ RHS是Scale-Out目标的存储解决方案，是一个开源的分布式文件系统，具有强大的横向扩展能力，通过扩展能够支持数PB存储容量和处理数千客户端
- ✓ GlusterFS借助TCP/IP或InfiniBand RDMA网络将物理分布的存储资源聚集在一起，使用单一全局命名空间来管理数据。
- ✓ GlusterFS基于可堆叠的用户空间设计，可为各种不同的数据负载提供优异的性能



# Gluster的特点

扩展性和高性能

高可用性

全局统一命名空间

弹性哈希算法

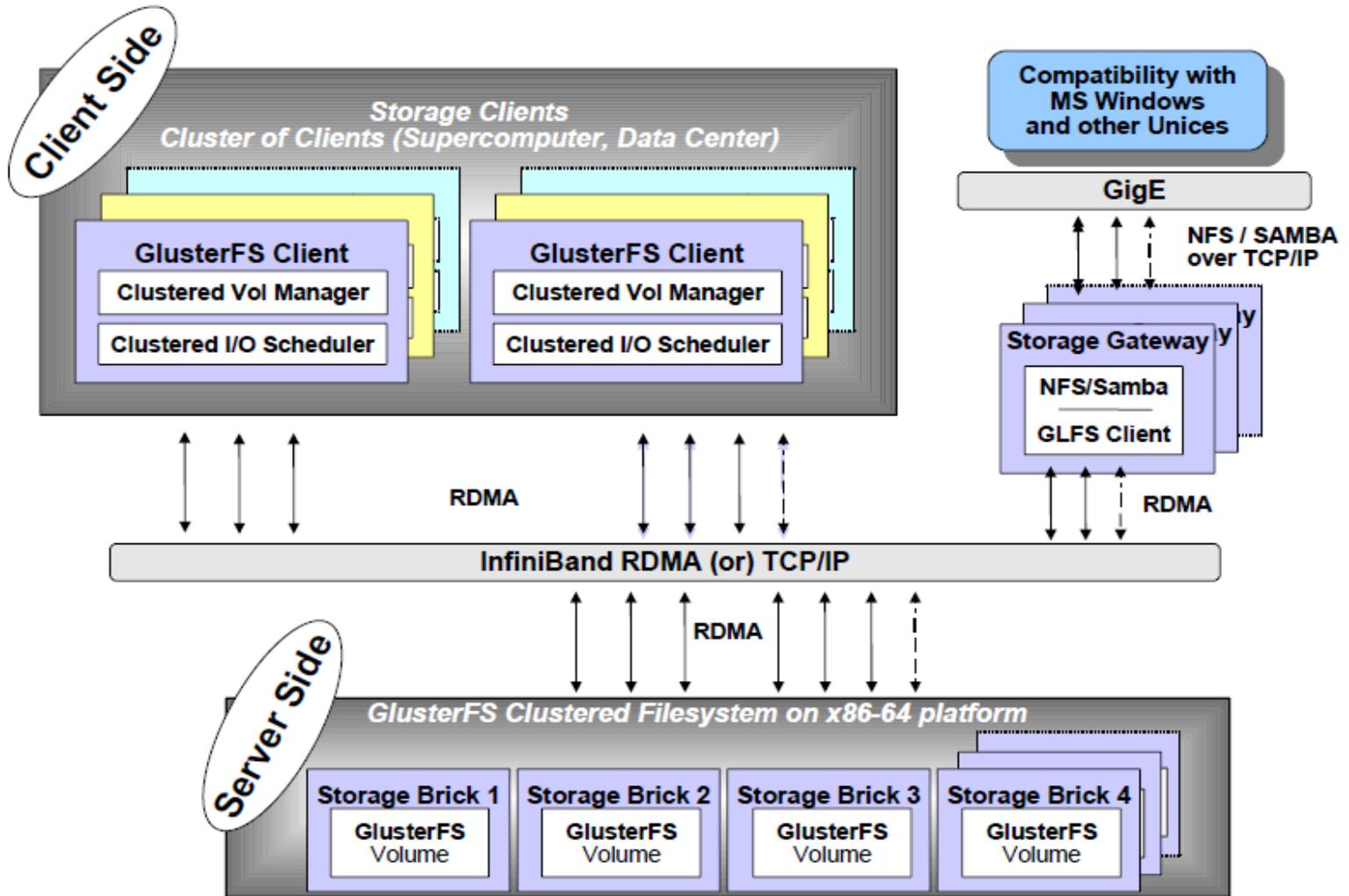
弹性卷管理

基于标准协议

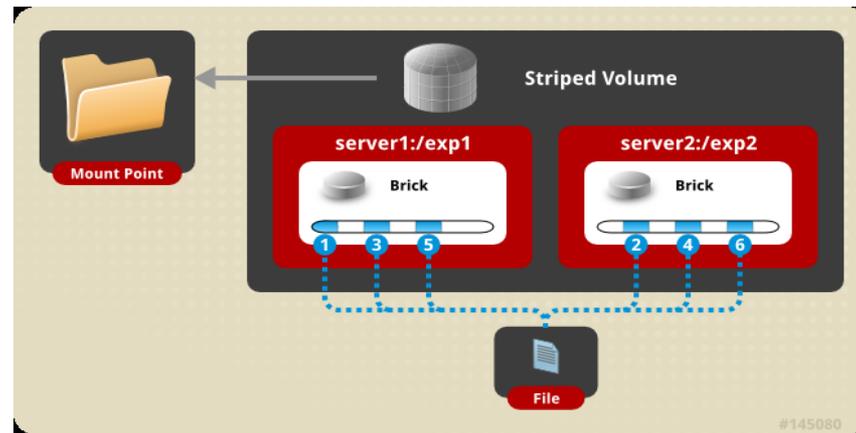
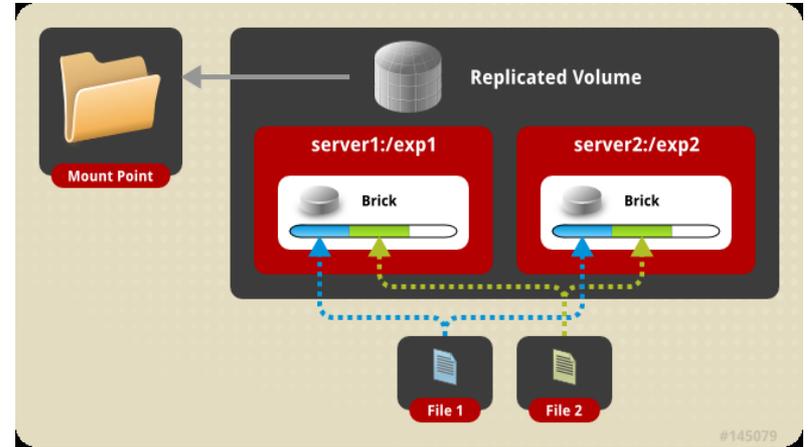
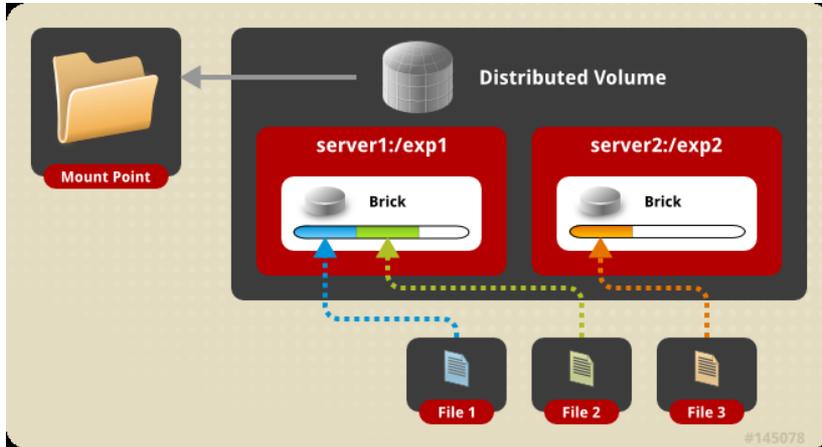
- ✓ 完全软件实现 ( Software Only )
- ✓ 完整的存储操作系统栈 ( Complete Storage Operating System Stack )
- ✓ 用户空间实现 ( User Space )
- ✓ 模块化堆栈式架构 ( Modular Stackable Architecture )
- ✓ 原始数据格式存储 ( Data Stored in Native Formats )
- ✓ 无元数据服务设计 ( No Metadata with the Elastic Hash Algorithm )



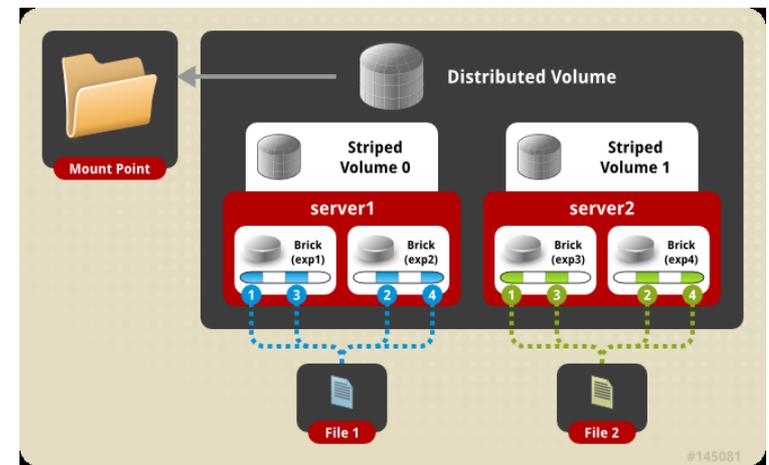
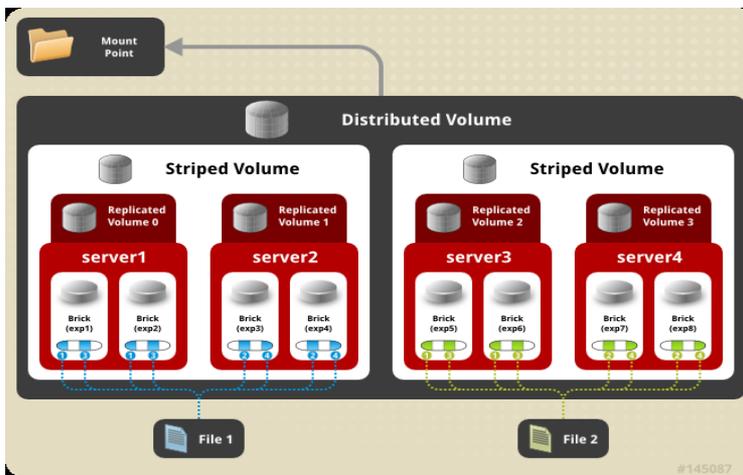
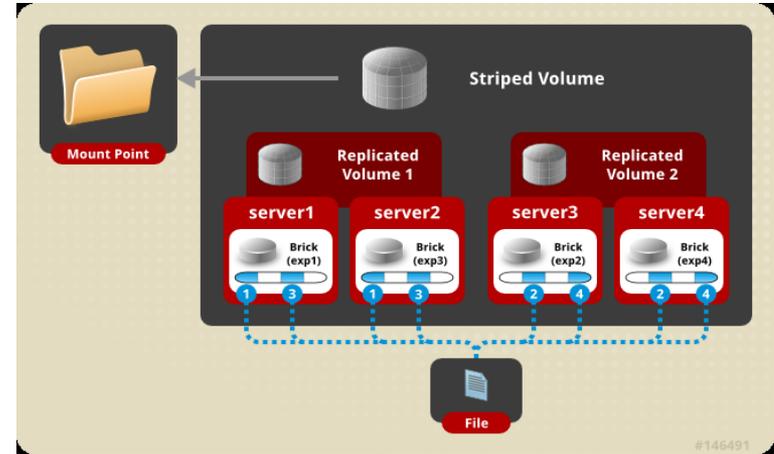
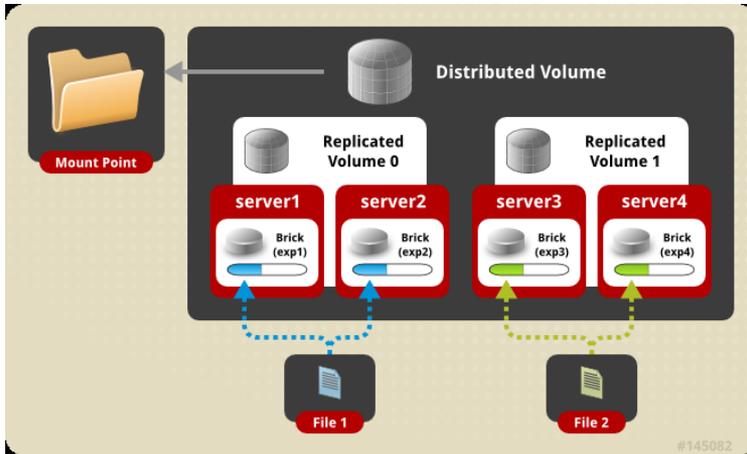
# Gluster总体架构



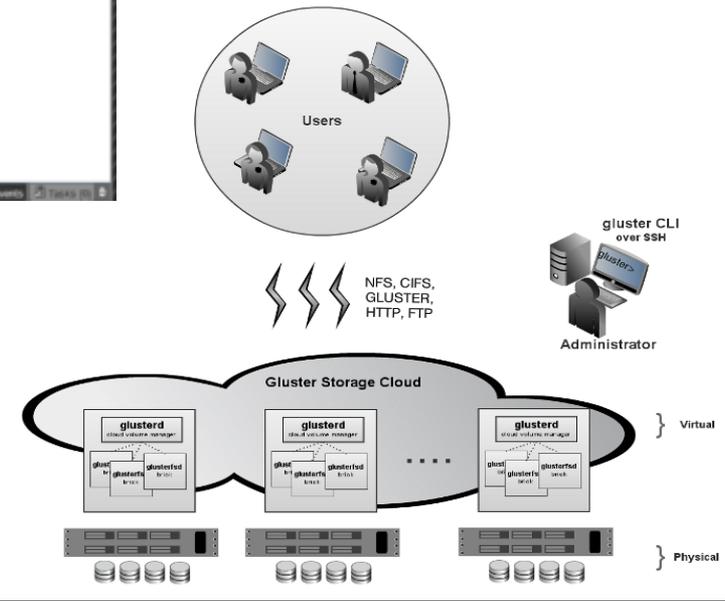
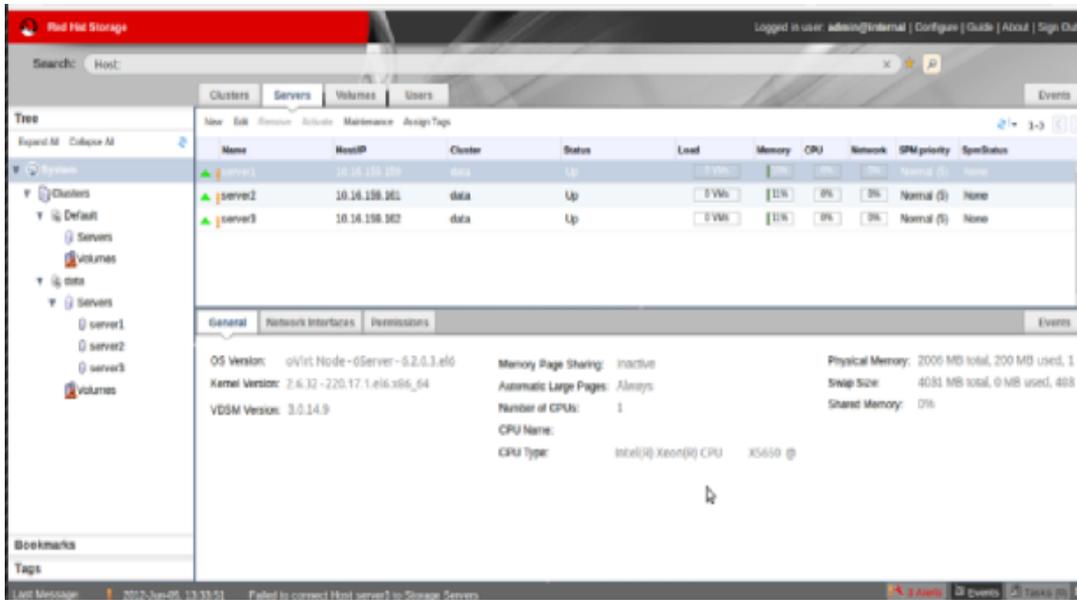
# Gluster的3种基本卷类型



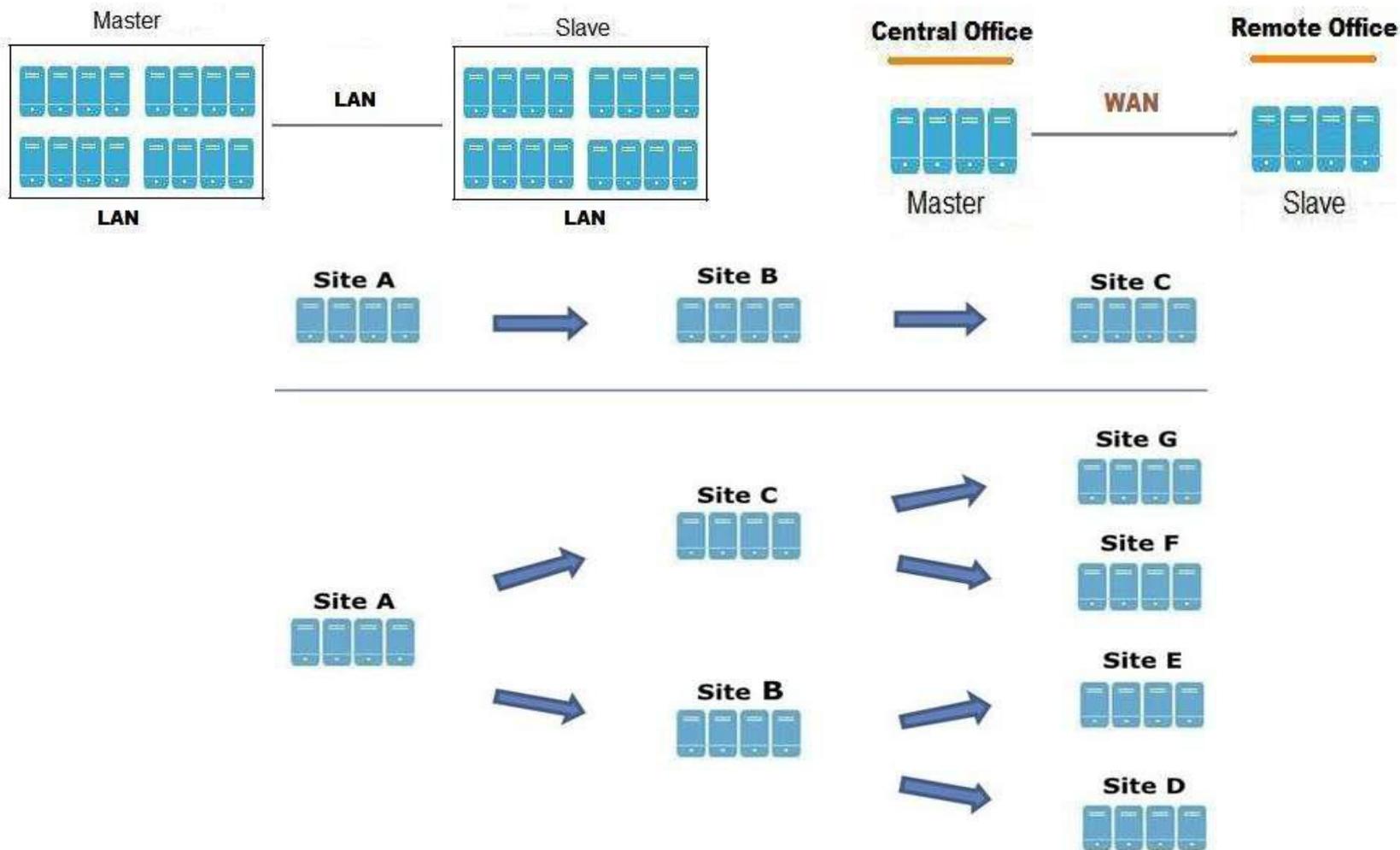
# Gluster的复合卷类型



# 管理和使用Gluster

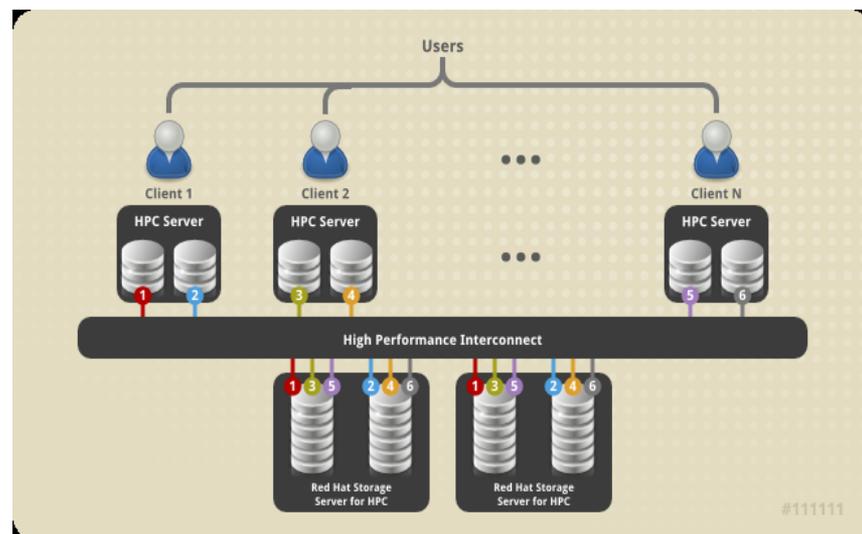
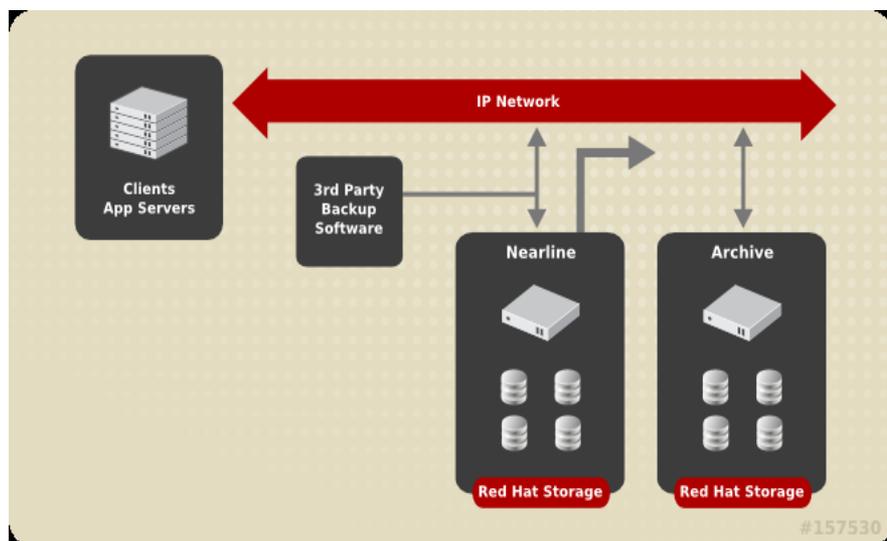
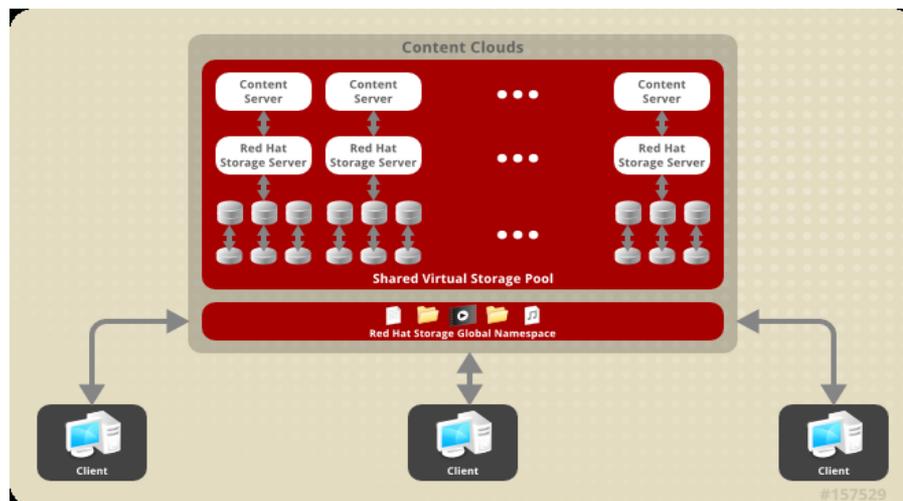


# Gluster的灾备方案



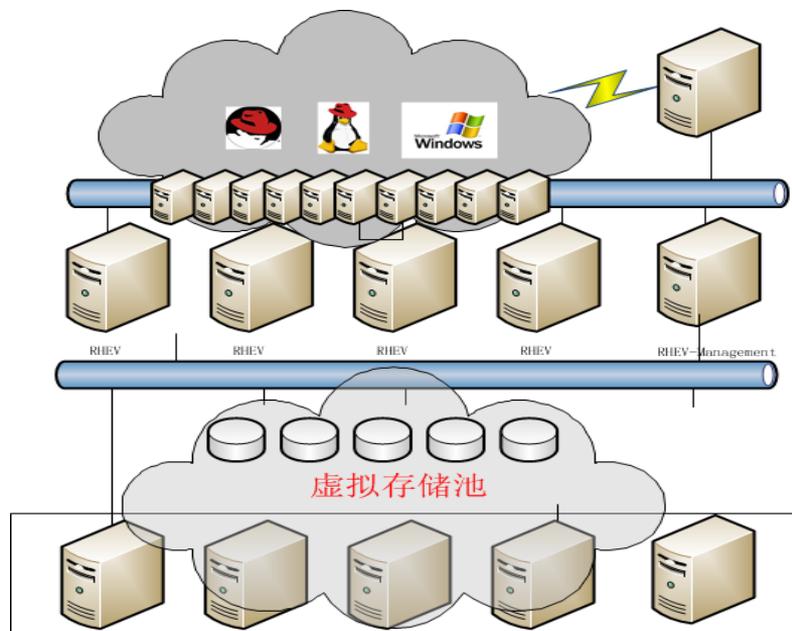
# Gluster 主要用途

- ✓ 内容存储
- ✓ 近线存储
- ✓ 高性能计算



# Gluster和混合云计算

提供一个统一命名空间的共享存储空间  
横向扩展，消除性能瓶颈  
原始数据存放，兼容性好  
RHEV3.2计划支持Gluster作为虚拟机存储



OPEN HYBRID CLOUD

# IT BEGINS HERE

Trust OpenSource !

Trust Red Hat !

