

Ceph in Ctrip

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- **Status of Ctrip Cloud**
- **Ceph Scenarios : Continues Delivery**
 - Ceph RGW & COS
- **Next Steps**
- **Q&A**

Ctrip Cloud Introduction



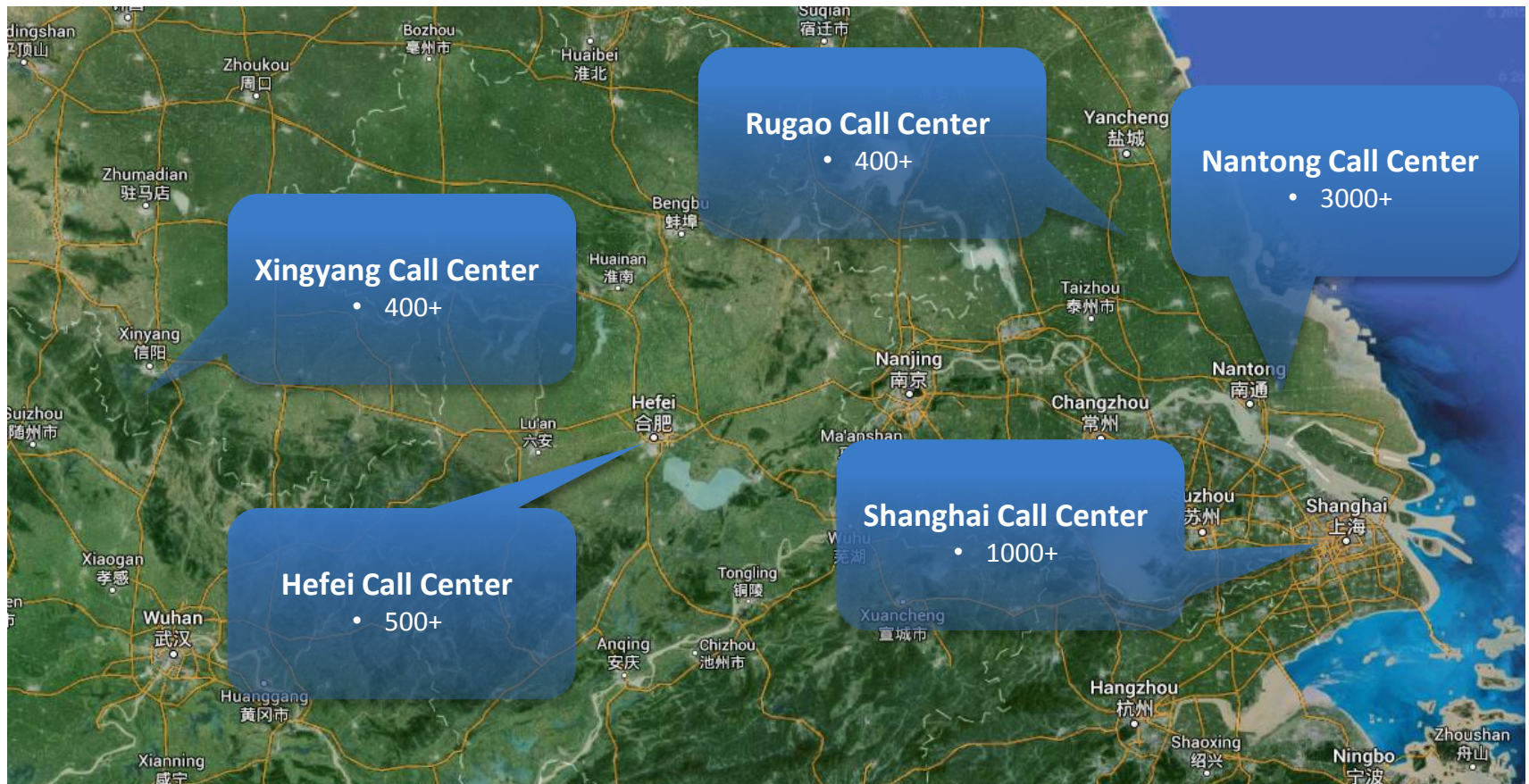
- **Focus on IaaS / PaaS**
- **Base on OpenStack**
 - Icehouse
- **Key Business Cases**
 - Ctrip Private Cloud
 - Ctrip VDesktop



3 Region , Hypervisor 2000 + , VM 12000+



Agents: 15000+, VM:6000+ , Calls: 450k+/day, Peak: 850k+/day



Now

- **Commercial**
 - SAN (HP/ HPS) 1+ PB, Database
 - NAS (HW) 800+T, File Sharing
- **Open Source**
 - GlusterFS 1+ PB, Database Backup
 - FastDFS 1+ PB, 100000K Picture
 - HDFS 10+ PB, Big Data

Future

OTA Business

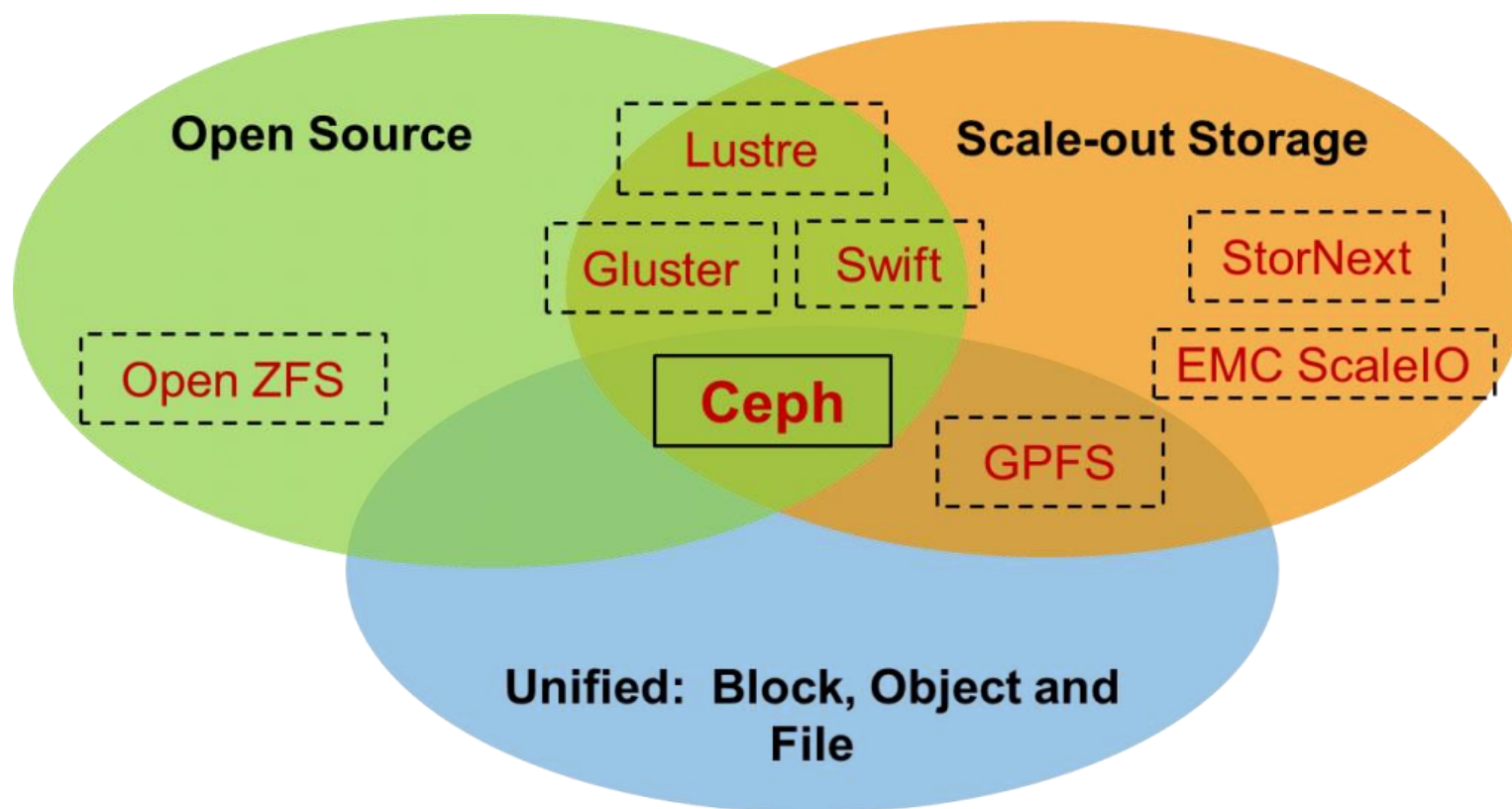
10X UP

Why Ceph



| Feature | Means | Final Benefit |
|---------------------|--|---|
| Open Source | No license fees | Lower cost |
| Software-defined | Different hardware for different workloads | Broader use cases, higher efficiency |
| | Use commodity hardware | Lower cost, easier to evaluate |
| Scale-out | Manage many nodes as one system | Easier to manage = lower operational cost |
| | Distributed capacity | Multi-PB capacity for object & cloud |
| | Distributed performance | Good performance from low cost servers |
| Block + Object | Store more types of data | Broader use cases |
| Enterprise features | Data protection | Don't lose valuable data |
| | Self-healing | Higher availability, easier management |
| | Data efficiency | Lower cost |
| | Caching/tiering | Higher performance at lower cost |

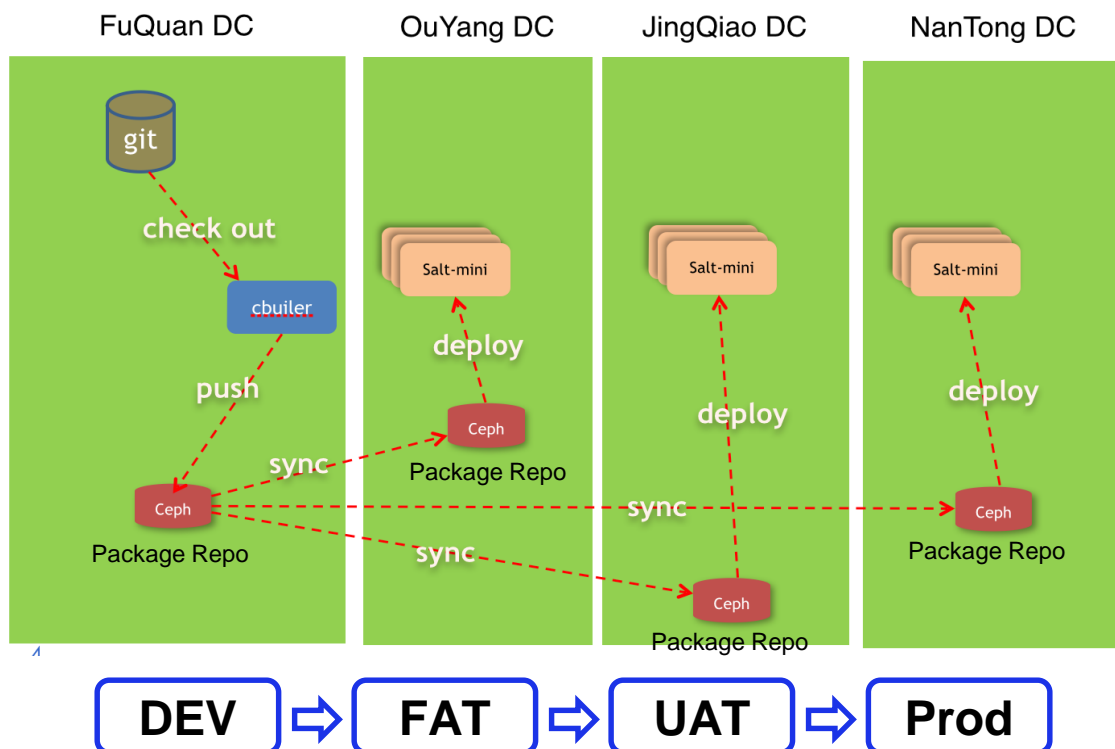
Why Ceph



Scenarios : Continuous Delivery



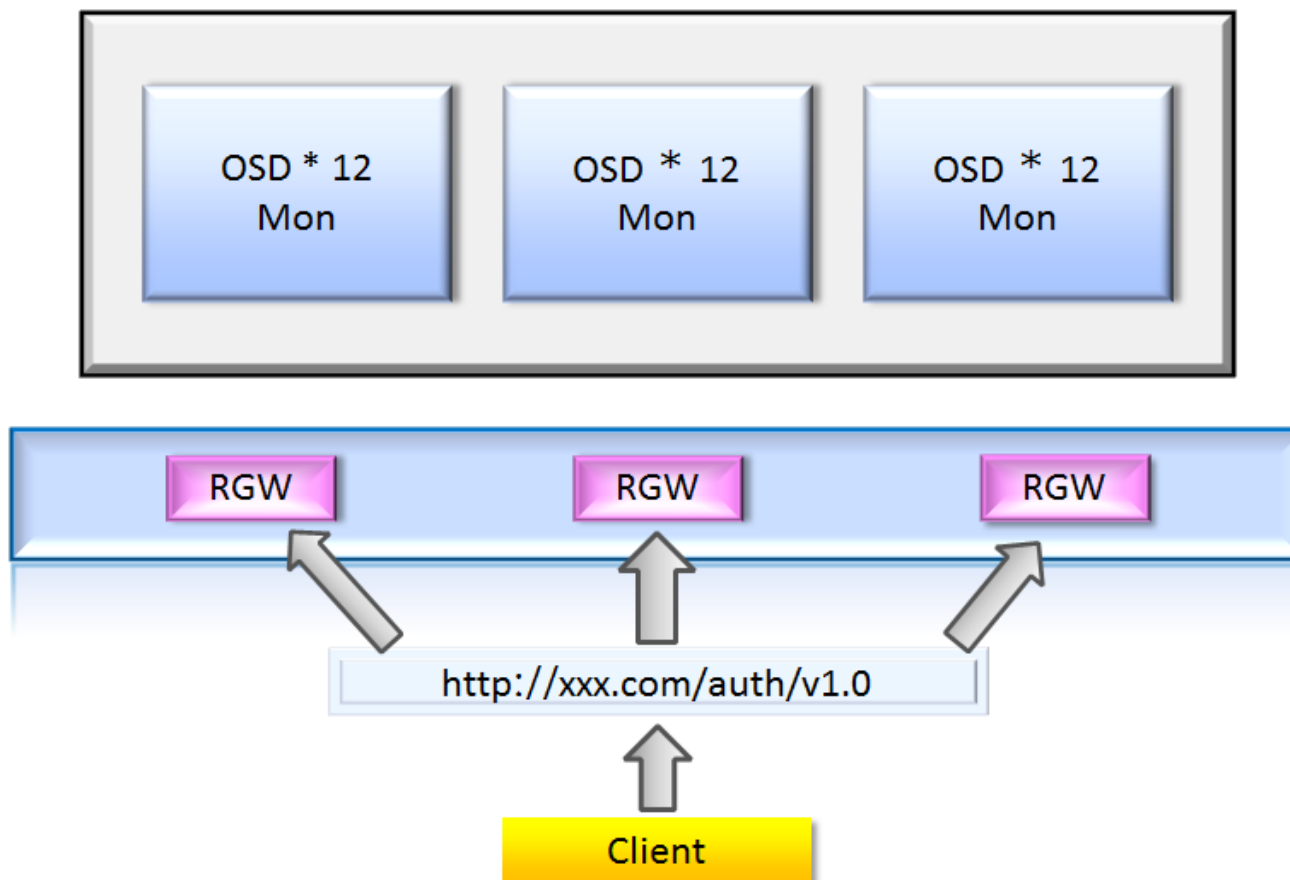
- **Requirements of Package Storage**
 - Massive package storage
 - Package sync between IDCs with low latency
 - Access cross platform
 - Data access control



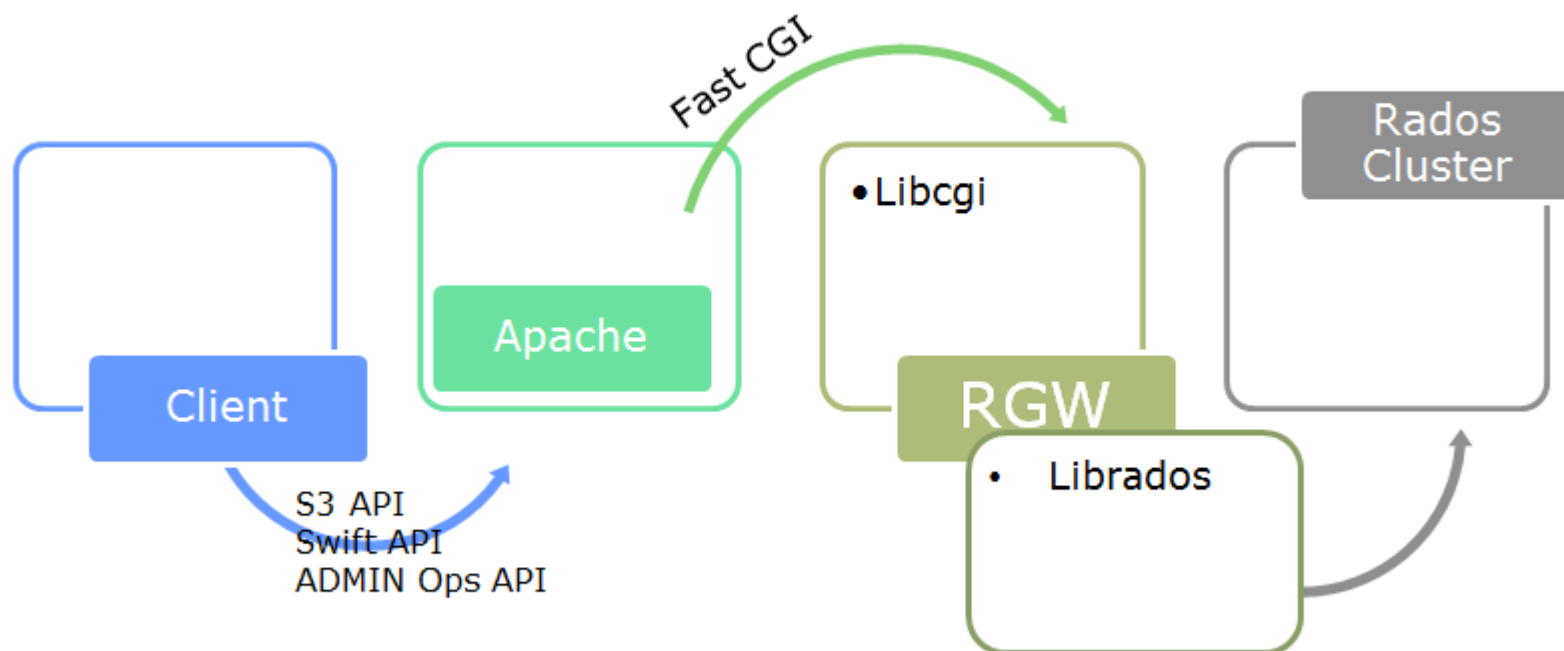
RGW + Data Sync between IDCs

- **Ceph Version: 0.94.2 , H release**
- **Object Storage: RGW + Swift API**
- **SDK: Python/ Java/ C#/ Ruby**
- **OS: Centos 6.4**
- **Hardware :**
 - CPU(2 channels & 32 Core)、 Mem 128GB、 disk (12*3TB/SATA disk +2*256GB raid1 SSD) 、
NIC(4*Gigabit LAN, bond 2 in 1 pair)

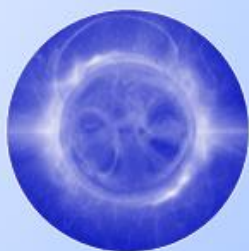
RGW Deployment



RGW Architecture

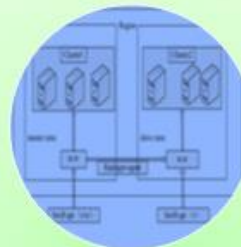


Data Sync between IDCs



Modify Crushmap

VS.

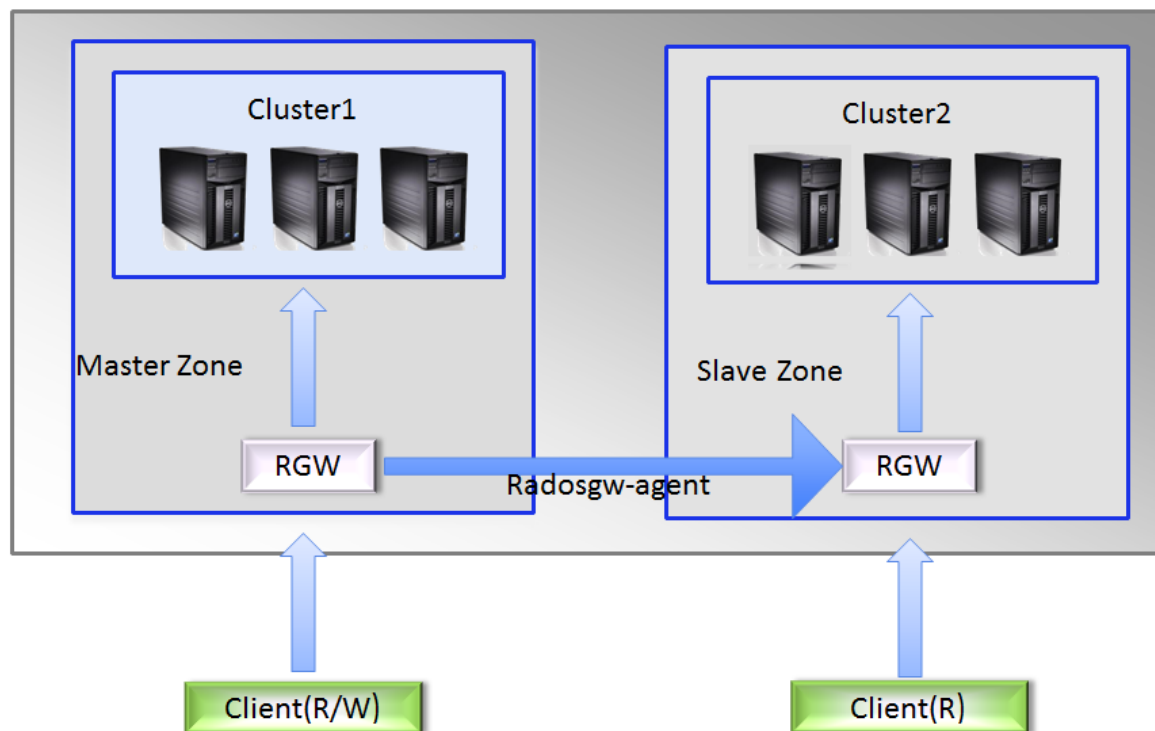


Radosgw-agent

Federate Gateways

Drawbacks

- Unstable
- Inflexible
- Unexpandable



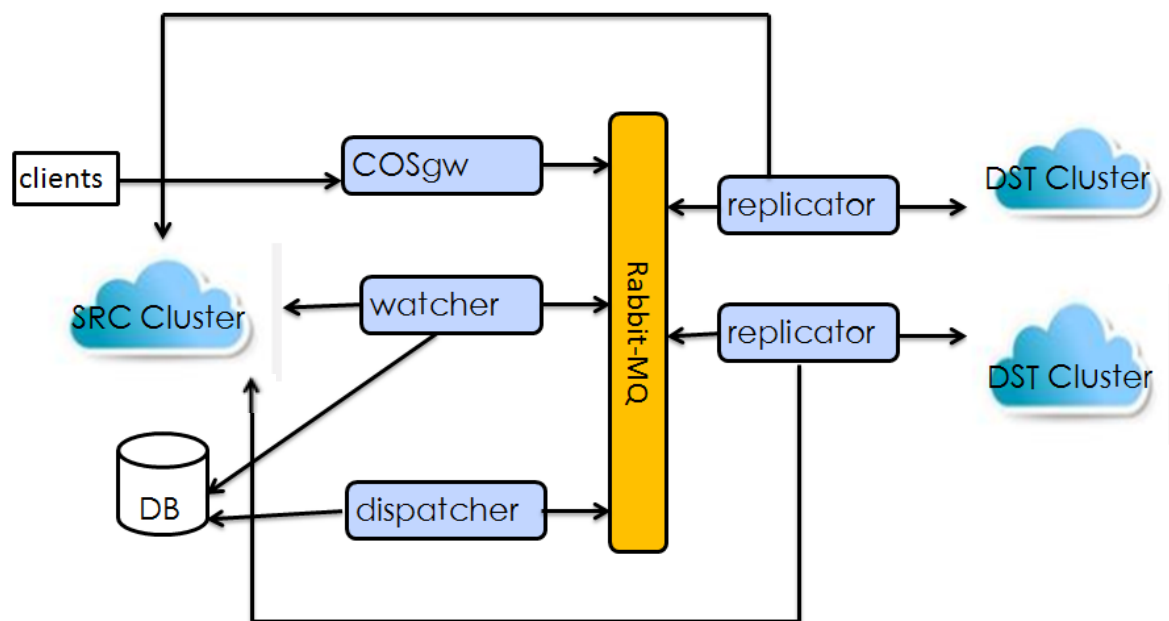
COS

COS Architecture

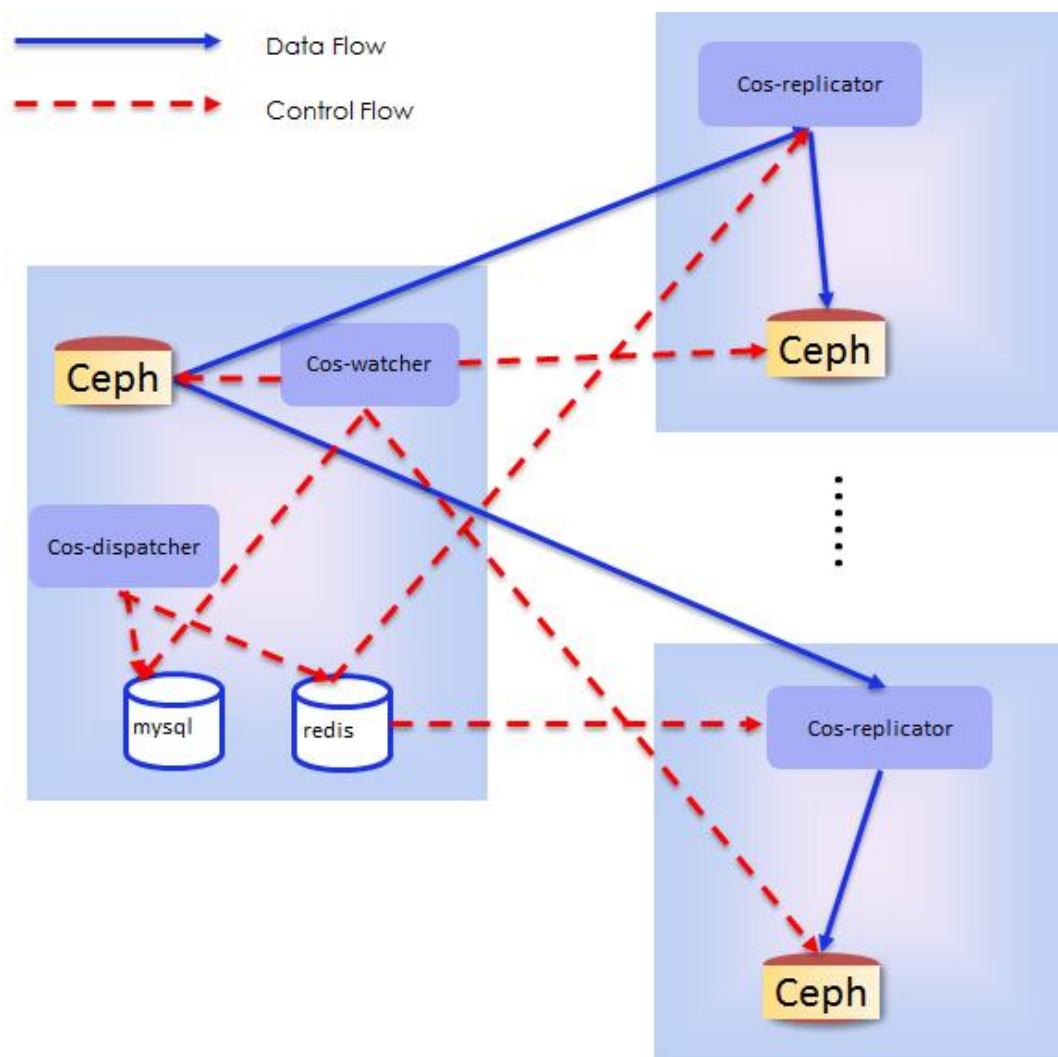


Points of Focus

- Stable
- Flexible
- Expandable



COS Deployment



Next Steps



- **Database on Ceph (Dev & QA Farm)**
- **Openstack / Docker Integrate with Ceph**
- **IT “Dropbox”**



We are hiring!

- Storage Development Engineer
- OpenStack Development Engineer
- Cloud DevOps Engineer



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Thanks

