Zimbra et RedHat Ceph Storage

Comment “Scaler” le stockage avec Zimbra

Images Ceph : CC-BY :ross@inktank.com
Images RedHat : ylegrand@redhat.com

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BeeZim

- Since2012
- Email and collaboration
- Integration, development, maintenance, training
- 100 customers, 4M+ mailboxes

What we wanted to fix with ceph ?

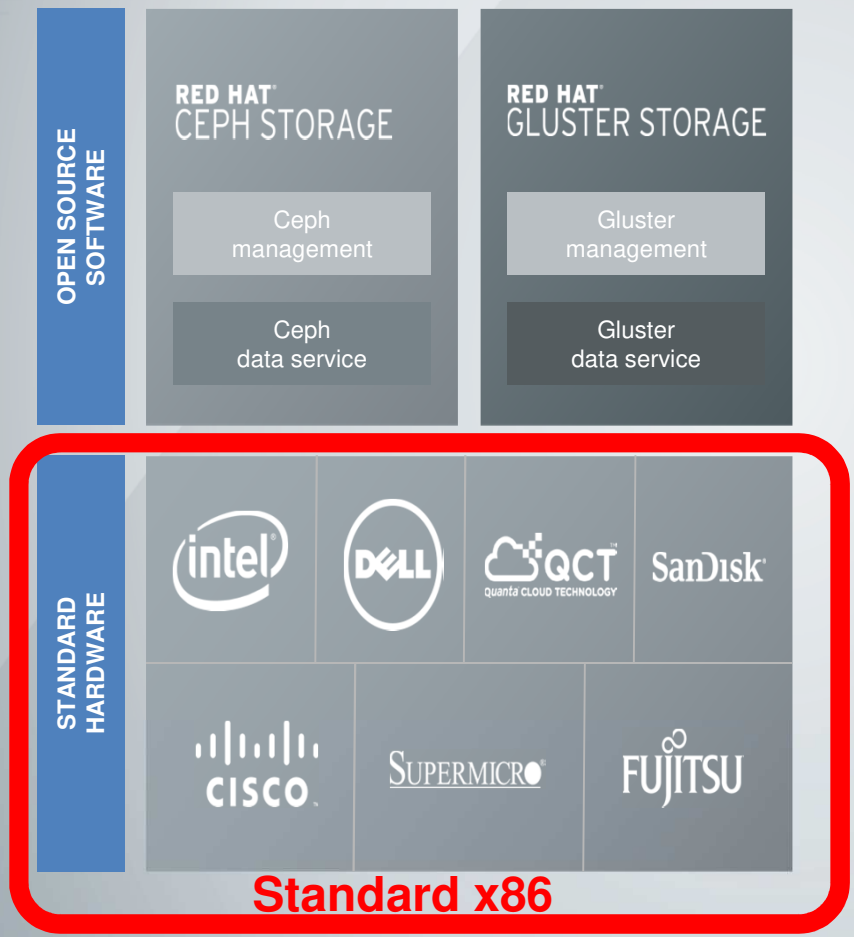
redhat.

Beezim
Expertise Opensource

- Storage Cost and regular increase
- Backups time and restoration
- Large VM backups (Zimbra Stores)
- Improve user experience

Introduction à RedHat Ceph Storage

THE RED HAT STORAGE PORTFOLIO



Share-nothing, scale-out architecture provides durability and adapts to changing demands

Self-managing and self-healing features reduce operational overhead

Standards-based interfaces and full APIs ease integration with applications and systems

Supported by the experts at Red Hat

redhat

FOCUSED SET OF USE CASES

RICH MEDIA

SME

Seafile

pydio

PUT YOUR DATA IN ORBIT

BACKUP / ARCHIVE

ownCloud

zimbra

SYNC AND SHARE
AND
COLLABORATION

NAS WORKLOADS

Microsoft

vm

Vmware / Microsoft

INTERNET of THINGS

splunk>

Spark

ANALYTICS

Hyperconverged
Scale compute and storage together

openstack

RED HAT ENTERPRISE VIRTUALIZATION

CLOUD / VIRTUAL

MySQL

PostgreSQL

mongoDB

MariaDB

cassandra

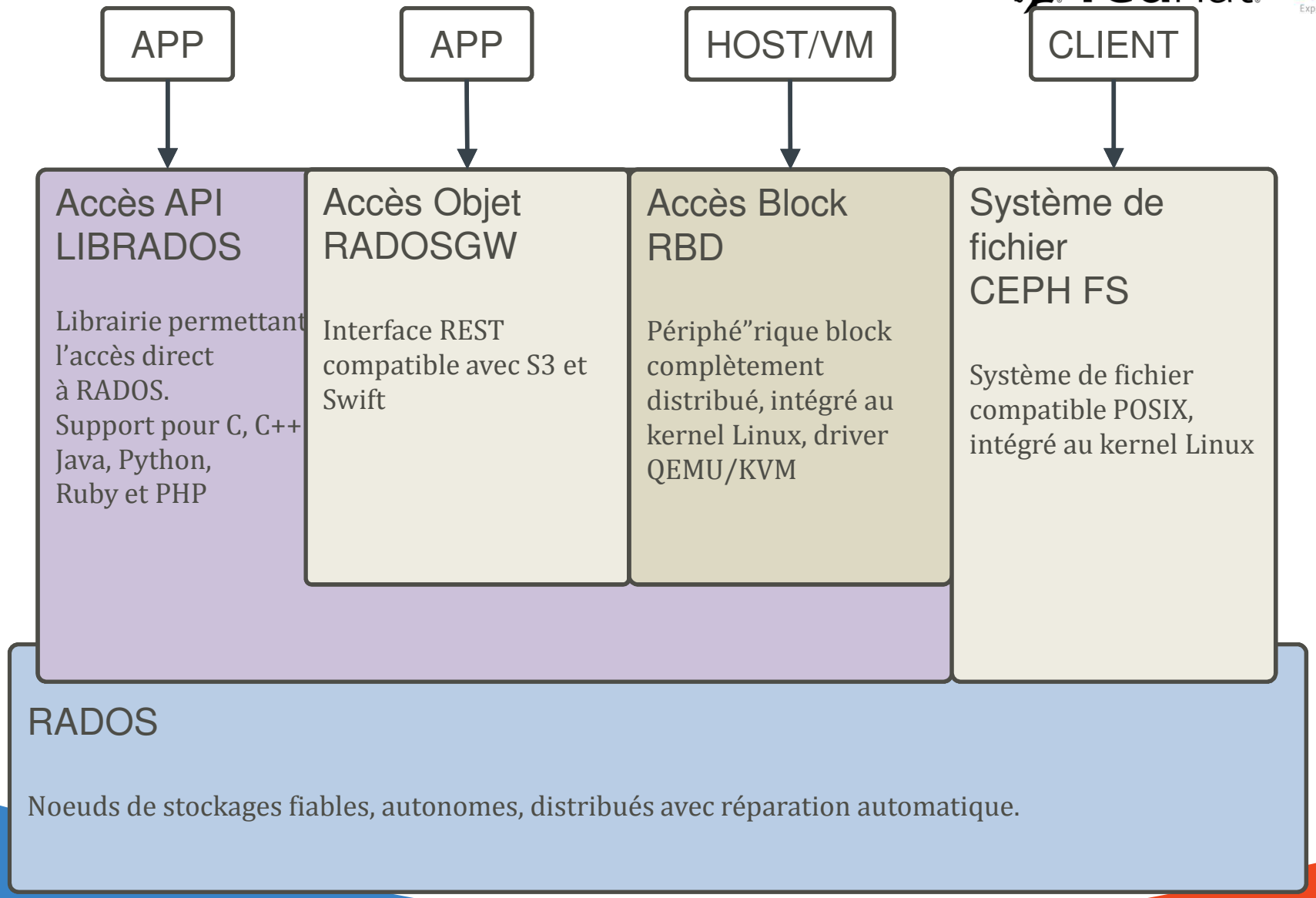
Flash Storage

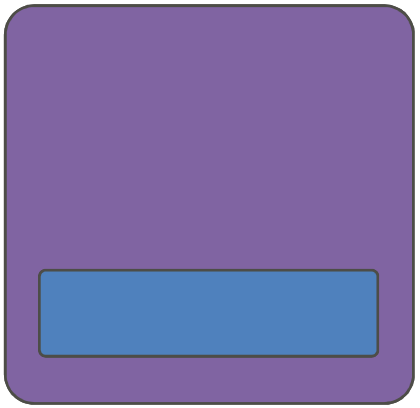
STORAGE FLASH /
SGBD

RED HAT ATOMIC

OPENSHIFT

CONTAINERS


APP
APP
HOST/VM
CLIENT
Accès API
LIBRADOS
Librairie permettant l'accès direct à RADOS. Support pour C, C++ Java, Python, Ruby et PHP
Accès Objet
RADOSGW
Interface REST compatible avec S3 et Swift
Accès Block
RBD
Périphé"rique block complètement distribué, intégré au kernel Linux, driver QEMU/KVM
Système de fichier
CEPH FS
Système de fichier compatible POSIX, intégré au kernel Linux
RADOS
Noeuds de stockages fiables, autonomes, distribués avec réparation automatique.

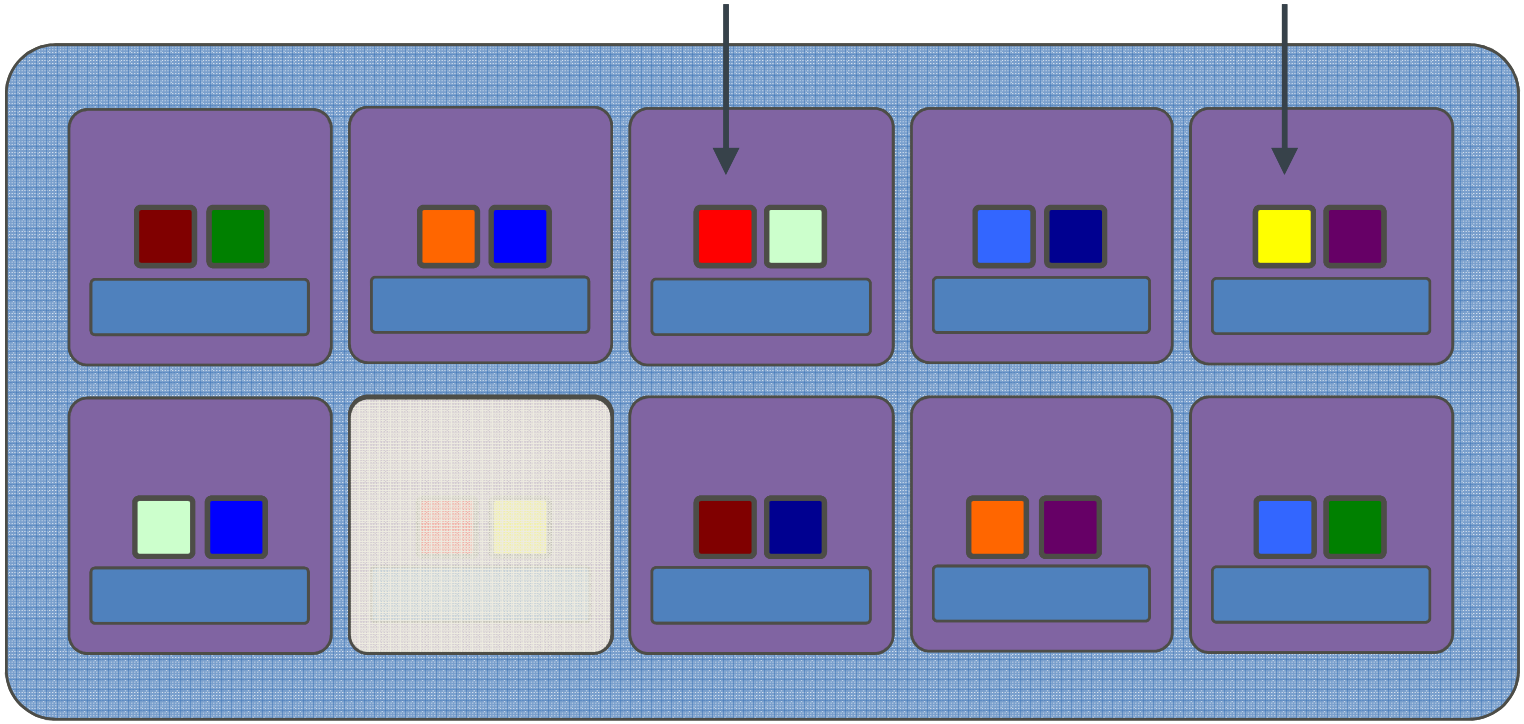


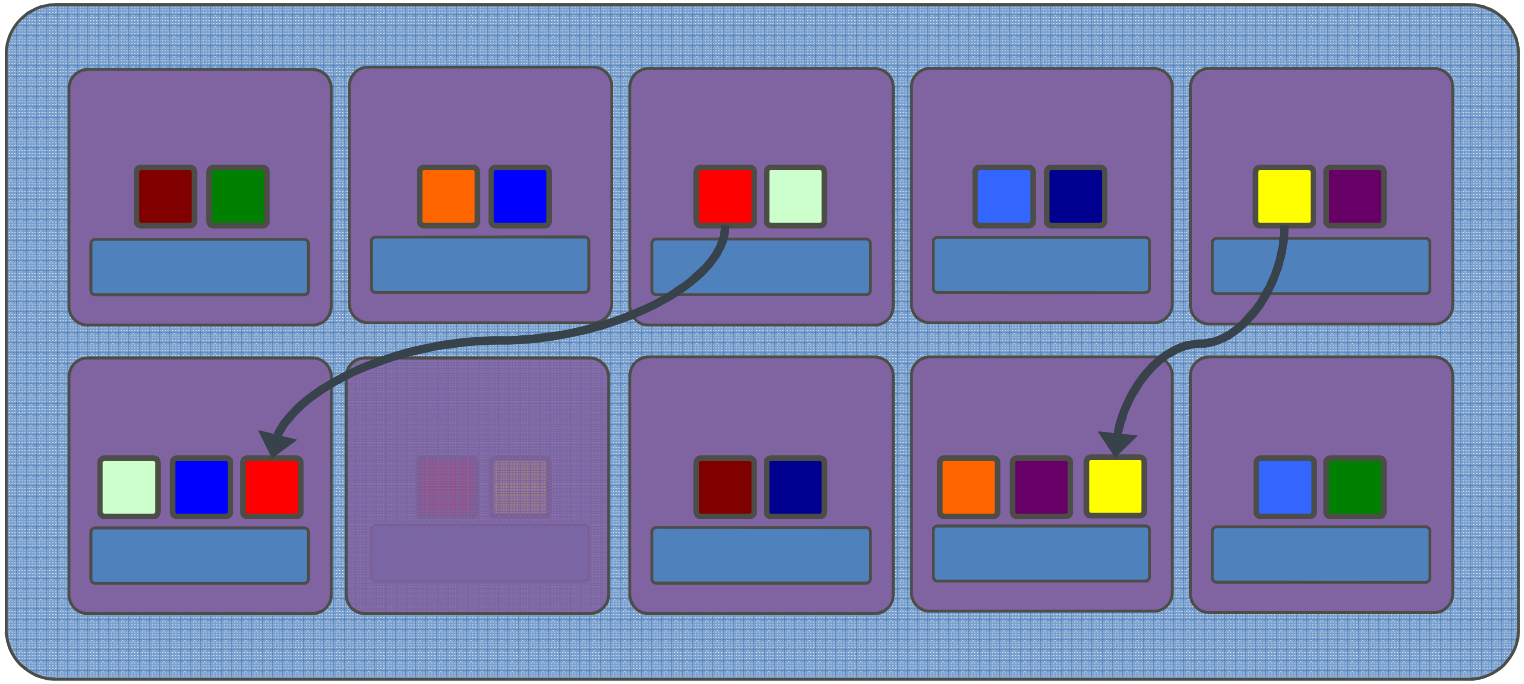
OSDs:

- 1 à 10000 dans un cluster
- Un par disque
- Fournissent les objets aux clients
- Répliquent et réparent les données intelligement

Monitors:

- Contient l'état et la liste des membres du cluster
- Consensus pour la prise de décision distribuée
- Petit nombre
- Ne fournissent pas les données aux clients



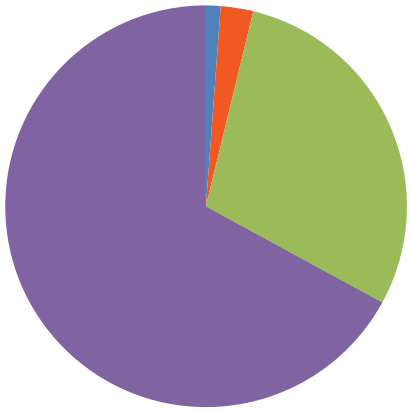


Zimbra et RedHat Ceph Storage

Where are my data ?

Zimbra : 4 type of data

- MariaDB (≈ 4%)
- Lucene (≈ 9%)
- Blobs (100%)
- Backups (≈ 230%) for 15 days



Disque classique

ceph

Quick Win to object storage

redhat.

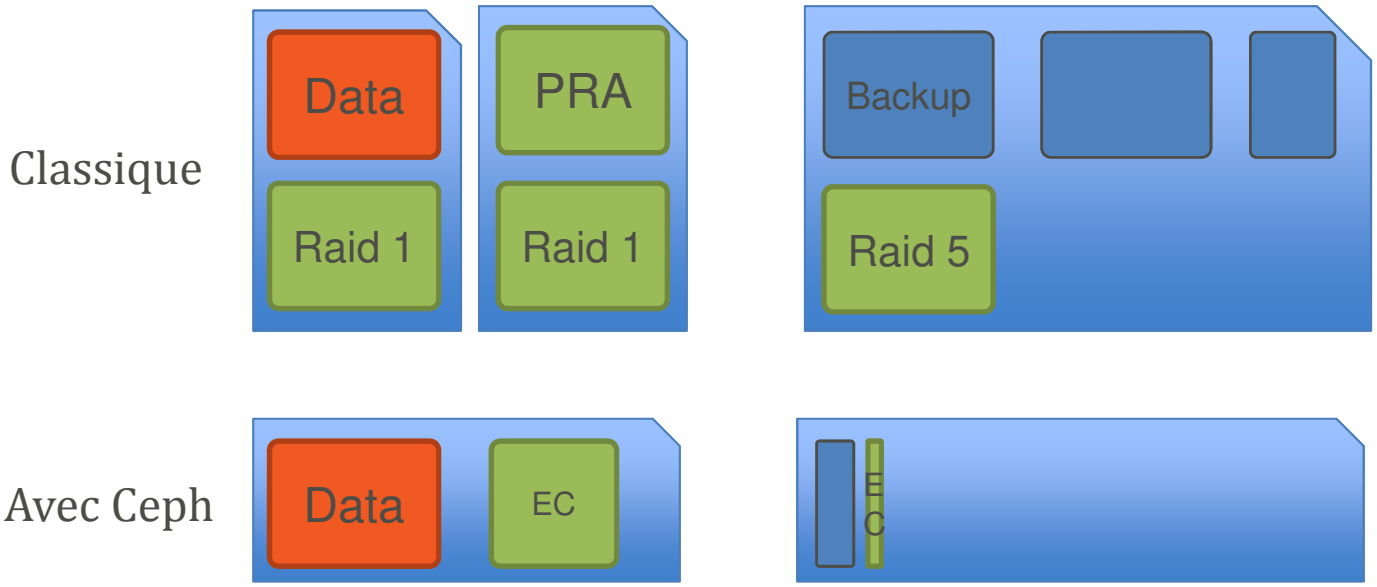
Beezim
Expertise Opensource

- Reduce storage Size
- Improve disaster recovery and reliability
- Divide backup time by 25
- Divide restore time by 20
- Deduplication

Quick Win to object storage

- Deduplication across servers
- Reduce VM size
- Increase # mailboxes/server
- Easy rolling upgrade
- Easy storage management
- More performance than other object storage connectors with // Ios
- Idempotent IO

Sample


Classique
Data
Raid 1
PRA
Raid 1
Backup
Raid 5
Avec Ceph
Data
EC
EC

Simple installation

From Zimbra :

- Add a new server
- Configure the Ceph connector
- Move Mailboxes

Démo

Université de Lorraine

- Migration from april to june without downtime
- 200.000 messages and 32 Go each day
- Double quote for 91000 mailboxes
- 60% deduplication
- Backup 100.000 mailboxes each night
- Instant restore
- Increased backup retention (15 to 60 days)
- Update without downtime

Q and A

Yoann Legrand

ylegrand@redhat.com

@RedHat_France

www.redhat.com

Florent Manens

contact@beezim.fr

@beezimfr

www.beezim.fr