Ceph User Survey 2018
About

- Survey conducted from May 1st to May 25th
- 342 complete responses
- 52 different countries
- 4 continents
General questions
Where are the Ceph users?

- North America: 20.06%
- Europe, Middle East, and Africa: 56.34%
- Asia and Pacific: 17.39%
- Latin America: 5.50%
Organizations using Ceph

- Commercial: 64.31%
- Government: 3.54%
- Academic: 16.52%
- Non-profit: 2.95%
- Personal: 10.91%
- Other: 1.77%
Why Ceph?
How long have you been using Ceph?
Are you satisfied with the technology?
Ceph Clusters
Total raw capacity

- Up to 10 TB: 8%
- From 10 TB to 100 TB: 28.31%
- From 100 TB to 1 PB: 37.84%
- From 1PB to 10PB: 20.91%
- From 10PB to 100PB: 4.92%
Usable capacity

- Up to 10 TB: 14.79%
- From 10 TB to 100 TB: 35.69%
- From 100 TB to 1 PB: 33.76%
- From 1 PB to 10 PB: 13.38%
- From 10 PB to 100 PB: 2.57%
How many clusters do you operate?
Which Ceph release(s) do they run?
Which Ceph packages do you use?
What O.S. are used on the cluster nodes?
How many OSD nodes in your cluster?

- Up to 10 nodes: 56.19%
- From 10 to 100 nodes: 35.31%
- From 100 to 1000 nodes: 7.18%
- From 1000 to 15000 nodes: 1.25%
How many OSDs in your cluster?

- 100-999: 34.15%
- 10-49: 28.31%
- 50-99: 14.77%
- 3-9: 13.85%
- 1000-1999: 4.21%
- 2000-2999: 1.85%
- 3000-4999: 0.92%
- 5000-9999: 0.92%
- More than 10000: 0.92%
Which OSD backends are used?
What kind of redundancy is used?
Erasure code 'k' and 'm' levels
Which erasure code plugins do you use?

- jcrasure: 64.38%
- lsa: 12.33%
- slfec: 2.05%
- lrc: 3.42%
- Other: 25.34%
Hardware
What hardware vendors do you use for the nodes?
What processor architecture do you use?
Which type of storage devices are used?
What type of NICs are used on the nodes?

![Bar Chart]

- 1 Gbps Ethernet: 31.74%
- 10 Gbps Ethernet: 71.06%
- 25 Gbps Ethernet: 5.99%
- 50 Gbps Ethernet: 2.40%
- 100 Gbps Ethernet: 4.49%
- Other: 8.68%
Do you use a dedicated network for the OSDs?
Use cases, platforms and interfaces
What are the use cases for the Ceph cluster?
What are the use cases for the Ceph cluster? (cont)
Which platforms do you use with Ceph?
What are the interfaces used on the cluster?
Environments and Interfaces
Programming languages and Librados/Librbd
RADOS Block Device (RBD)
RBD workloads
Interfaces to access RBD

- Librbd: 74.91%
- Linux Kernel RBD: 50.52%
- iSCSI (tcmu-runner): 5.84%
- iSCSI (LIO with /dev/rbd*): 11.34%
- rbd-rbd: 9.97%
- Other: 3.09%
VMware access methods

- Require iSCSI manually: 16.61%
- Require VVOL support + iSCSI: 2.21%
- Require VVOL support + ...: 0.44%
- Require VAAI management...: 0.88%
- I don't use VMware: 75.66%
- Other (please specify): 3.98%
Hyper V (or Windows clients) access methods

- CIFS: 6.19%
- iSCSI: 11.35%
- I don't use HyperV: 78.20%
- Other: 2.65%
RADOS Gateway (RGW)
RGW APIs
RGW client side libraries do you use?
RGW authentication mechanisms

- RGW (built-in): 65.92%
- Keystones: 30.42%
- LDAP: 15.76%
- Other: 11.41%
RGW external load balancers
RGW federated multi-sites
CephFS
CephFS workloads
Interfaces to access CephFS

- **Linux Kernel CephFS**: 65.99%
- **Ceph-fuse**: 40.10%
- **Libcefhs**: 9.34%
- **NFS (nfs-genesys)**: 10.29%
- **NFS (Kernel NFS server)**: 15.74%
- **CIFS (Samba)**: 21.32%
- **Other**: 10.66%
Management & Operation
Management and monitoring tools
Monitoring and management tools (cont)

![Bar chart showing monitoring and management tool usage percentages.]

- InfluxDB: 14.73%
- Prometheus: 21.63%
- Ceph-metrics: 4.08%
- Grafana (custom): 36.99%
- Zabbix: 20.38%
- Nagios/Splunk: 27.27%
- Graphite: 13.17%
- Collectd: 17.24%
- Performance Co-Pilot: 0.31%
- Other (please specify): 15.99%
Deployment and configuration management tools

- Ansible: 45.13%
- Chef: 4.22%
- Juju: 2.60%
- Puppet: 21.10%
- Salt: 12.01%
- Ceph-deploy: 46.10%
- Reak: 1.30%
- Other: 11.04%
Ceph support from a commercial vendor?

![Bar chart showing support from various vendors with the majority not supporting Ceph.]

- **No, I don't**: 80.43%
- **Red Hat**: 4.28%
- **SUSE**: 6.42%
- **Canonical**: 1.22%
- **Minatis**: 0.31%
- **Fujitsu**: 0.31%
- **Other**: 7.03%
If you need help, where is your first stop?
Where Ceph community should focus its efforts?

- Interoperability: 21.65%
- Management and ease of use: 53.66%
- Performance: 62.80%
- Scalability: 27.74%
- Other: 14.63%
Ceph: the future of Storage