A Welcoming Ceph

Experience Improvements for First-Time Users

Or: How To Make Beginners Love Ceph
**Ceph Cluster**
deployed over the last 2 years

| 225 Nodes | 5400 Cores | 58 TB RAM | 1.8 PB (nvme) | ~ 900 OSDs |
Our Ceph implementations

Clusters we deploy regularly

• 3-5 Nodes
• No storage switches (saving money)
• Proxmox VE + Ceph (RBD & cephfs only)
• Full meshed network
  • Bonded RR with manual routing or
  • RSTP with open-vSwitch
Lessons learned

From 75 HCI deployments in 2 years

• Experience is negligible: If a product rocks, you make it work
• Starting is easy – But problems are bound to happen
• Problems create Anxiety
• Empowering customers is very important!

• Conclusion: Some Topics are a MUST-KNOW!
Important beginner topics and typical questions

- What does a MON / MGR / MD service do?
- What's the reasoning for the service naming?
- What are OSDs and its statuses
  - What can I achieve with OSD flags?
  - How can I swap disks?
  - How do I integrate new disks?
Ceph 101 - 02

... Important beginner topics and typical questions

- my cluster is not working anymore
  - osd has 95% (!) usage
- parameters to monitor in a ceph cluster?
- What is SIZE and MIN-SIZE (MIN=1 OK?)
- How does a pool work in ceph?
- what are PGs and why are there so many different states of PGs?
- What is the pgautoscaler for?
- how does rebalancing work in ceph?
Ceph 101 - 03

… Important beginner topics and typical questions

- How can I put files into ceph via terminal?
- aka: „how to setup cephfs“
- How does data get written in (simplified data-flow) in replicated setups
- How can I shutdown a ceph cluster completely?
Some ideas…
…for welcoming first time ceph users

- Start with the absolute minimum
- Focus on first time users with small clusters
- Use pictures and diagrams to illustrate topics
- Simplify explanations as much possible
Some ideas…

…for welcoming first time ceph users

• Provide useful Links and do it prominently!
  • Docs, Forums, Blogs, Mailing lists …

• Provide Help and Guidelines for good questions on mailing list
  • Logs, command-outputs …

• Create space to showcase typical beginner problems (and how to tackle them)

• Most important Topics:
  • 95% OSD usage
  • OSD replacement
  • basic ceph-services (MON, MGR, MDS)
How do **WE** get started?

… so beginners do not get lost in the *Deep Sea* of ceph

**Thank you** for your attention!

Feel free to add me on LinkedIn: **Jonas Sterr**