Eating Our Own Dog Food

Ceph at Novacoast

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Agenda

• Storage Today
• Looking at the Future
• Customer Use Case
• Why Ceph
• What Went Right
• What Went Wrong
• What Comes Next
Storage Today

- Expensive
- Vendor Lock-in
- Proprietary
- Performance Oriented
Looking at the Future

- Data growth is enormous
- New use cases
- Distributed globally
- Flexible access protocols
- Data security needs growing
- Open source integration is critical
Customer Use Case

• Three different legacy SANs
• Two datacenters
• Fully dockerized or virtualized workloads
• Push for innovation
• Need a flexible, scalable, affordable solution
Why Ceph?

- Proprietary solutions sucked
- Cost for traditional SANs too high
- Comfortable with open source solutions
- Massively scalable and reliable architecture
- No vendor lock-in
- Rapid development pace
- Good relationship with SUSE
- Chance to speak at SUSECON
What Went Right

• Initial storage cost cut in half
• Storage growth costs down 80%
• No downtime or loss of data
• Pace of innovation fantastic
• Excellent interaction with SUSE
• End users don’t know anything changed
• Got to speak at SUSECON
What Went Wrong

• Didn’t spec out hardware perfectly
• Datacenter availability impacted implementation
• Goals not fully defined before implementation
• Use cases changed over time
• Stumbled into a few bugs early
What Comes Next

• Additional scale out of storage capacity
• Integration with Software Defined Everything
• More upgrades/more features
• Greater CephFS usage
• Use of erasure coding
• Additional workload migration
• World domination
What Comes Next

- Surveillance video storage (CephFS)
- Unstructured file data (iSCSI file shares)
- Medical imaging (iSCSI file shares)
- Geographically dispersed VM snapshots (iSCSI)
- Re-use existing hardware (iSCSI)
- Data archival (object storage)
- Persistent container storage (RBD)
- Machine learning storage (CephFS)
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