



Western Digital, croit, and ownCloud Deliver an Integrated, On-premise, Secure File Sharing and Content Collaboration Solution that Scales to 100s of Petabytes and Beyond



Highlights

- The general functionality of cloud-based file repositories in an on-premise solution
- Validated solution including Western Digital Ultrastar Data60 and Ultrastar Data102 storage hardware, Ceph storage appliance, and ownCloud secure file sharing and content collaboration integration
- Optional integration with Microsoft 365, or ONLYOFFICE, or Collabora Online
- Installation and upgrade of Ceph storage in minutes
- Allows management of over 50 Petabytes per administrator
- Dense datacenter footprint that can scale to 100s of Petabytes and beyond

Enterprise Storage Challenges

Companies that have large data repositories often leverage public cloud resources to host their data for sharing across the organization. However, many institutions go down this path because:

- They work with very sensitive data that cannot be placed in public cloud resources, or
- Regulatory compliance or corporate mandates require 100% company control, or
- The cost of maintaining and accessing these large data repositories in the public cloud is prohibitive

These same companies still need that data to be easily and securely shared across their organizations, but the data must to be tightly managed within their corporate walls.

Solution

Companies with the challenges described above are now able to combine powerful elements from Western Digital, croit, and ownCloud to deliver large data repositories within their own infrastructure that are protected, reliable, scalable, sharable, easy to deploy, cost effective, and easy to maintain.

Common off-the-shelf Linux servers are a perfect fit for the compute power needed to run Ceph and the rest of your applications. External storage provides the benefit of updating compute technology and storage technology independently, as well as enabling a scale up model in which data capacity can grow independently from the compute side. Western Digital's Ultrastar Data60 and Ultrastar Data102 offers innovative reliability features such as IsoVibe and Arctic flow to deliver highly reliable, high-density storage, delivering up to 2.45PB raw capacity using CMR HDDs in a 4U form factor.

Deploying the Ceph object storage layer has never been easier with the croit storage appliance. croit for Ceph installs unmodified Linux and Ceph within minutes, enabling nearly incident free object, block, and file services on Ceph. Upgrades are non-disruptive.

The croit storage software appliance handles the administration of both Linux and Ceph. Storage nodes are conveniently booted via the network and managed through a modern, innovative, web-based interface. The croit appliance includes the following components:

- Authorization and authentication of users, servers and services
- Web portal with integrated hardware inventory
- IP addresses and network management including DHCP server
- Provisioning of operating systems in the network via PXE
- Automated non-disruptive upgrades
- Logs, metrics, and statistics of the entire infrastructure and services

Once the infrastructure is in place, ownCloud's file sharing capabilities are ready to shine.

The scalability, ease of use and access users want, while maintaining full IT visibility, store sensitive company data on external servers outside of customers' control.

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ownCloud and the Kiteworks group help enterprises across many industries overcome file sharing challenges, enabling agile, scalable, and highly secure file sharing.

With croit Ceph on Western Digital storage hardware, you can create an ownCloud system design with N+2 redundancy using 8+3 or 6+3 Erasure Coding resulting in only 38 or 50% overhead, such that you can lose two whole racks or even two whole datacenters without application downtime.

High-Density Storage Features

Ultrastar Data60

- Up to 60 Ultrastar HDDs (SAS or SATA)
- Up to 1.44 PB¹ of raw CMR HDD storage
- 4U form factor



Ultrastar Data102

- Up to 102 Ultrastar HDDs (SAS or SATA)
- Up to 2.45¹ PB of raw CMR HDD storage
- 4U form factor



Daisy-chaining for High Capacity

Up to 4 units may be daisy-chained for a total raw capacity of 5.76 PB (Data60) or 9.8 PB (Data102)

Innovations for Performance and Reliability

IsoVibe™: Patented technology improves isolation of vibration propagation both to and from each individual drive to help maximize performance even in heavy workloads.

ArcticFlow™: Improves cooling via discrete airflow channels that allow cool air to reach more components within the system, improving cooling effectiveness that can improve drive reliability.

Flexible

Choose dual-port SAS for high availability or single-port SATA for low cost.

Up to 12 x 12Gb/s SAS-3 host connections.

Designed for Serviceability

- Enterprise-grade redundant and hot swappable PSUs, IO Modules, and fans.
- Rack-mounted top cover for quick and easy service.

¹ One terabyte (TB) is equal to one trillion bytes and one petabyte (PB) is equal to 1,000 TB. Actual user capacity may be less due to operating environment.

