

Qumulo QC-Series File Storage Platforms

As businesses struggle with the unrelenting growth in unstructured data and how to use this data to unlock business value they look to IT to provide a smart, flexible and cost efficient storage infrastructure. IT leaders recognize that, all too often, storage is the bottleneck in their business. Many of today's storage systems are either all-flash, which are fast but also very expensive; or lack robust data management, effective data protection and do not scale seamlessly in the hybrid cloud.

Qumulo is the pioneer and leader of hybrid cloud file storage that runs on Qumulo's branded QC-Series, P-Series (<https://qumulo.com/product/performance/qumulo/>) and K-Series (<https://qumulo.com/product/nearline-archive/qumulo/>) hardware as well as on third-party hardware and in the public cloud. You get to choose what is best for your business. Qumulo's hybrid cloud file storage offers the same interface and capabilities to users, no matter if it is on-prem, off-prem, or scaling across both. Administrators can take advantage of the elastic compute resources that the cloud offers and then move data back to their data centers.

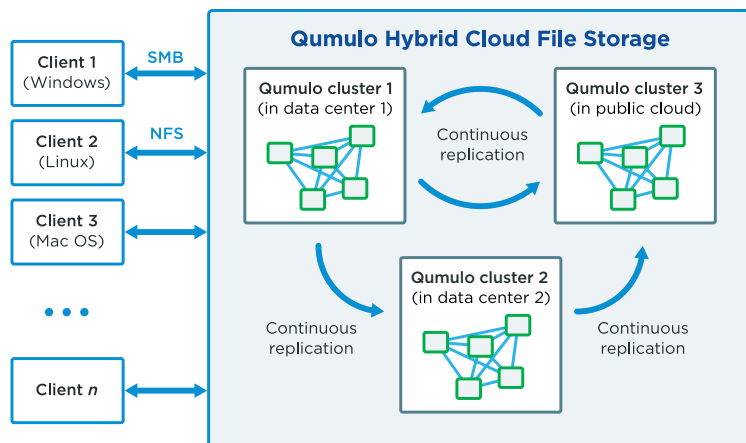
Seamless Scalability

Qumulo's QC-Series contains a mix of solid state drives (SSDs) and hard disk drives (HDDs). The QC-Series provides a starting capacity of 96TB and linearly scales to over 10PB raw storage. It is built on standard hardware that is provided and supported by Qumulo. The QC-Series provides flash performance at archive prices. The QC-Series scales from four nodes to 50 nodes in a single cluster, creating a single file system and global namespace.

Each QC-Series node is a dense, self-contained modular building block comprising compute, cache, networking, SSDs, and HDDs. Each node runs Qumulo's hybrid file cloud storage and participates in the cluster as a fully symmetric peer, managing write and read requests, and coordinating transactions with other nodes within the cluster. Additional nodes can be added to the cluster easily and non-disruptively, linearly scaling both storage capacity and performance.

Qumulo's hybrid cloud file storage clusters work together to form a globally distributed but highly connected storage fabric tied together with continuous replication. Customers interact with the storage clusters using industry-standard file protocols, the REST API, and a web-based graphical user interface for storage.

QF2 Architecture



QC-Series **1U**

QC24 | QC40 | C-72T



QC-Series **4U**

QC104 | QC208 | QC260 | QC360

Key Features & Benefits

- Scales to billions of files**
 Use any mix of large and small files and store as many files as you need. There is no practical limit with Qumulo's hybrid cloud file storage advanced file-system technology. There is no penalty for small files.
- Real-time control at scale**
 Get answers and solve administration problems in real time, no matter how many files and directories you manage.
- Highest performance**
 Qumulo's hybrid cloud file storage is the highest performance file storage system in the data center and in the cloud. Get multi-GB/s throughput for your toughest on-prem and cloud workloads.
- Lowest cost**
 Qumulo's hybrid cloud file storage is one third the cost of legacy storage appliances on a capacity basis. And, you actually can use 100% of provisioned capacity.

Best Customer Value

The Qumulo QC-Series newest member, C-72T provides massive gains in economics, density and power efficiencies. The Qumulo QC-Series hybrid storage appliance family features seven options so you can get exactly what you need. The QC-Series 1U appliances (QC24, QC40 and Q-72T models) give users a choice between lower-cost entry requirements and higher performance/higher capacity needs. The Qumulo QC-Series 4U appliances (QC104, QC208, QC260 and QC360 models) give users a choice between cost-optimized requirements and the highest density, lowest cost per GB solution.

Technical Specifications

1U

4U

Per Node	QC24	QC40	C-72T	QC104	QC208	QC260	QC360
Connectivity ports	2 x 10GbE SFP+		2 x 25GbE SFP28 Ports	4 x 40GbE QSFP+			
Management ports	1 x IPMI 1GbE Base-T (RJ45)			1 x IPMI 1GbE Base-T (RJ45)			
Storage media (all hot-swappable)	4 x 6TB HGST HDD	4 x 10TB HGST He10 HDD	12 x 6TB HGST HDD	26 x 4TB HGST HDD	26 x 8TB HGST He8 HDD	26 x 10TB HGST He10 HDD	36 x 10TB HGST He10 HDD
	2 x 800GB eMLC SSD		4 x 480GB eMLC SSD	13 x 480GB eMLC SSD			4 x 1.6TB eMLC SSD
CPU	1 x Intel Xeon E3-1270V5 3.60GHz 4-cores		Intel® Xeon-D D-1531, SoC 6 cores, 2.2GHz	2 x Intel Xeon E5 2620v3 2.40GHz 6-cores			
Memory	64GB			128GB			256GB
Raw storage capacity	24TB	40TB	72TB	104TB	208TB	260TB	360TB
Power supply	2 x 650W (fully redundant, hot-swappable)		2 x 400W Platinum PSU (Fully redundant, hot swappable)	2 x 750W (fully redundant, hot-swappable)			
Dimensions (H x W x D)	1.75" (4.5cm) x 17.2" (43.7cm) x 27.9" (70.8cm)		1.7" (4.3 cm) x 17.2" (43.7cm) x 36.25" (9.21cm)	7" (17.8cm) x 17.2" (43.7cm) x 29" (73.7cm)			
Weight	55lbs (24.9kg)		63 lbs (28.6kg)	155lbs (70.3kg)			166lbs (75.3kg)
Power requirements	100 – 240V, 50/60hz			100 – 240V, 50/60hz			
Typical power consumption	0.65A @ 240V, 1.41A @ 110V		0.59A @ 240V, 1.29A @ 110V	2.71A @ 240V, 5.91A @ 110V			
Typical thermal rating	155W (VA), 529 BTU/hr		142W (VA), 484 BTU/hr	650W (VA), 2,218 BTU/hr			
Maximum power consumption	1.04A @ 240V, 2.28A @ 110V		1.0A @ 240V, 2.18A @ 110V	3.55A @ 240V, 7.73A @ 110V			
Maximum thermal rating	250W (VA), 855 BTU/hr		240W (VA), 818 BTU/hr	850W (VA), 2,900 BTU/hr			
Operating temperature	50° F – 95° F (10° C – 35° C)		41° F – 95° F (5° C – 35° C)	50° F - 95° F (10° C – 35° C)			
Non-operating temperature	-40° F – 158° F (-40° C – 70° C)		-40° F – 149° F (-40° C – 65° C)	-40° F - 158° F (-40° C – 70° C)			
Operating relative humidity	8% to 90% (non-condensing)			8% to 90% (non-condensing)			
Non-operating relative humidity	5% to 95% (non-condensing)			5% to 95% (non-condensing)			

Certifications

Safety	UL, cUL
Country	FCC (USA), NRTL (USA and Canada)
Emissions	FCC Part 15 Class A, ICES-003 Class A
Immunity	North America

About Qumulo

Qumulo is the leader in universal-scale file storage. Qumulo File Fabric (QF2) gives data-intensive businesses the freedom to store, manage and access file-based data in the data center and on the cloud at petabyte and global scale. Founded in 2012 by the inventors of scale-out NAS, Qumulo serves the modern file storage and management needs of Global 2000 customers. For more information, visit <http://qumulo.com>

