

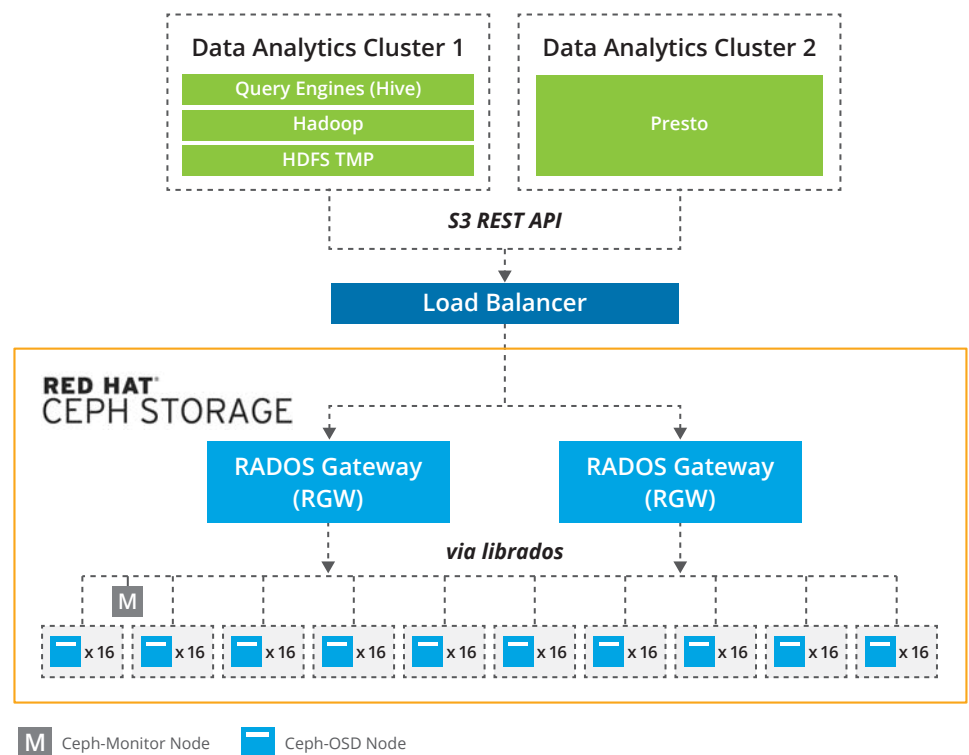
## Data Lake with All-Flash Ceph for Big Data Analytics

With the emergence of big data platforms for next-generation data analytics and data warehouse platforms for business intelligence, QCT has designed an optimized architecture for big data workloads, meeting the performance requirements for analytical tasks. QxStor Red Hat Ceph Storage Edition is a family of Ceph solutions for building different types of scale-out storage clusters based on Red Hat Ceph Storage – each is optimized to suit different workloads and budgetary needs.

### Disaggregated Architecture for Data Analytics

Disaggregated architecture provides a cost-efficient configuration for analytical purpose with identical performance to that of hyper-converged architecture. By separating storage and computing resources, users can easily add building blocks to independent resource pools, achieving better optimization and efficiency of purchased appliances.

### Solution Architecture: Data Lake with All-Flash Ceph for Big Data Analytics



- Comprehensive QCT QxStor object storage solutions based on Red Hat Ceph Storage
- Adopted Intel® CPU technology and NVMe interface SSD to meet the high-performance demand for big data analytics
- Optimized performance for diverse data analytic workloads including Hive and Presto
- Cost-effective disaggregated architecture to achieve better optimization & efficiency



### Outstanding Ceph Performance

Ceph is the most popular distributed software-defined storage platform in the market. Together with Red Hat, QCT QxStor is a total solution that integrates optimized and validated Red Hat Ceph Storage on QCT servers, offering robust and petabyte-scale block and object storage for various enterprises. For data analytic purpose, QCT designs an all-flash configuration that's proven to achieve 100% improvements in I/O with 50% reduction in latency after professional tunings on both hardware and software.



**Found at:**  
[www.QCT.io/wheretobuy](http://www.QCT.io/wheretobuy)

**United States**  
 QCT LLC., Silicon Valley office  
 1010 Rincon Circle, San Jose, CA 95131  
 TOLL-FREE: 1-855-QCT-MUST  
 TEL: +1-510-270-6111  
 FAX: +1-510-270-6161  
 Support: +1-510-270-6216

**China**  
 云达科技, 北京办公室  
 (Quanta Cloud Technology)  
 北京市朝阳区东大桥路 12 号润诚中心 2 号楼  
 TEL: +86-10-5920-7600  
 FAX: +86-10-5981-7958

云达科技, 杭州办公室  
 (Quanta Cloud Technology)  
 浙江省杭州市西湖区古墩路浙商财富中心  
 4 号楼 303 室  
 TEL: +86-571-2819-8650

**Japan**  
 Quanta Cloud Technology Japan 株式会社  
 日本国東京都港区芝大門二丁目五番八号  
 牧田ビル 3 階  
 TEL: +81-3-5777-0818  
 FAX: +81-3-5777-0819

**Taiwan**  
 雲達科技 (Quanta Cloud Technology)  
 桃園市龜山區文化二路 211 號 1 樓  
 TEL: +886-3-286-0707  
 FAX: +886-3-327-0001

**Germany**  
 Quanta Cloud Technology Germany GmbH  
 Hamborner Str. 55, 40472 Düsseldorf  
 TEL: +49-2405-4083-1300

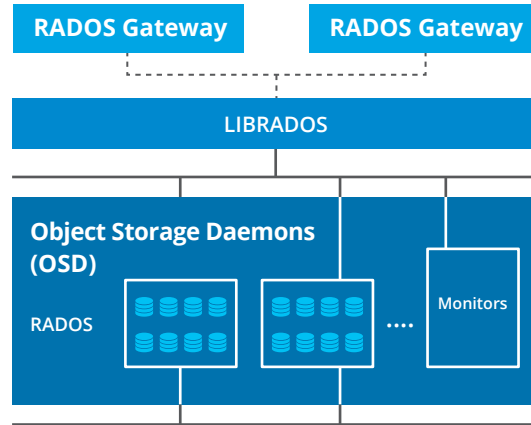
**Other regions**  
 Quanta Cloud Technology  
 No. 211 Wenhua 2nd Rd., Guishan Dist.,  
 Taoyuan City 33377, Taiwan  
 TEL: +886-3-327-2345  
 FAX: +886-3-397-4770




## Perfect Hardware Designed for Analytic Purpose

Adopting the new Intel® Xeon® Scalable Processors, QCT servers are flexible enough to support various software-defined workloads with 1.5x larger memory bandwidth and 3.9x higher throughput. Along with extreme computing power, this cutting edge storage server plays a critical role in data analytic workloads, responsible for performing mission critical calculations.

Also applied are Intel P4500 SSDs based on the NVMe interface, which significantly pushes the performance, latency and throughput of flash-based storage. With their exceptional performance in sequential read and write along with high I/O performance, Intel P4500 SSDs are the suitable flash appliance to adopt I/O intensive workloads such as data analytics.

## RED HAT® CEPH STORAGE



RADOS Gateway (RGW)	
<b>QuantaPlex T42S-2U</b> 	<ul style="list-style-type: none"> <li>• CPU: Intel® Xeon® Gold 6126 Processor</li> <li>• RAM: 256GB</li> <li>• Storage: 1 x 480G SSD SATA (Boot OS)</li> <li>• NIC: 1 x 40GbE dual</li> </ul>
Ceph Object Storage Daemons	
<b>QuantaGrid D52BQ-2U</b> 	<ul style="list-style-type: none"> <li>• CPU: Intel® Xeon® Gold 6152 Processor</li> <li>• RAM: 256GB</li> <li>• Storage: 8 x 4TB Intel® P4500 NVMe + 1 x 480G SSD SATA (Boot OS)</li> <li>• NIC: 2 x 40GbE dual</li> </ul>
Ceph Monitor Node (Optional)	
<b>QuantaPlex D52B-1U</b> 	<ul style="list-style-type: none"> <li>• CPU: Intel® Xeon® Gold 5115 Processor</li> <li>• RAM: 128GB</li> <li>• Storage: 1 x 480G SSD SATA (Boot OS)</li> <li>• NIC: 1 x 10GbE dual</li> </ul>

## Optimized Performance for Diverse Data Analytic Workloads

Among various Hadoop distributions within the market, CDH from Cloudera is adapted due to its well-developed release policy such as bug fixes and feature backports for all platform components.

QCT's integrated and optimized Hadoop ecosystem software with in-house designed hardware appliances, enable QxStor to reach optimized performance under various big data workloads including Hive and Presto despite the methodology differences behind the two SQL query engines.

## About QCT

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyper-scale hardware with infrastructure software from a diversity of industry leaders to solve next-generation data center design and operation challenges. QCT serves cloud service providers, telecom and enterprises running public, hybrid and private clouds.

Product lines include hyper-converged and software-defined datacenter solutions as well as servers, storage, switches, integrated racks with a diverse ecosystem of hardware component and software partners. QCT designs, manufactures, integrates and services cutting edge offerings via its own global network. The parent of QCT is Quanta Computer, Inc., a Fortune Global 500 corporation.

## About Red Hat Ceph Storage

Red Hat Ceph Storage is massively scalable, open source, software-defined storage system that gives you unified storage for your cloud environment. To learn more about Red Hat Ceph Storage, visit: <https://www.redhat.com/en/technologies/storage/ceph>

QCT authorized partner

All specifications and figures are subject to change without prior notice. Actual products may look different from the photos.

QCT, the QCT logo, Rackgo, Quanta, and the Quanta logo are trademarks or registered trademarks of Quanta Computer Inc.

All trademarks and logos are the properties of their representative holders.

Copyright © 2018 Quanta Cloud Technology Inc. All rights reserved.



Powered by Intel® Xeon® Gold processor

Intel, the Intel logo, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and/or other countries.

Intel Inside®. New Possibilities Outside.