

# QxStack

with Cloud Native Platform



## Pre-validated Container Platform Accelerates Your Cloud Native Application

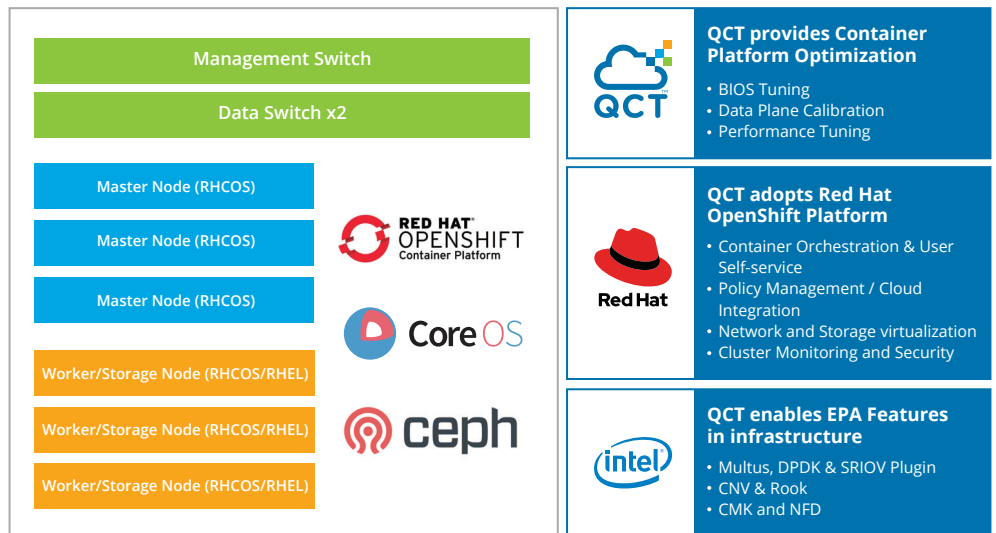
### At a Glance

Cloud-native technology has been emphasized in the modern cloud infrastructure design with light-weight containers. It accomplishes efficient development and operation (DevOps) and facilitates agile service deployment and innovative business.

The cloud native environment is the foundation for breeding prosperous advancement and application onboarding, so a stable and reliable infrastructure is necessary. QCT QxStack with Cloud Native Platform is a Platform as a Service (PaaS) solution built up by Red Hat® OpenShift® Container Platform with Intel® Enhanced Platform Awareness (EPA) technology. It is an optimized platform emphasizing network performance improvement. It is also an environment that supports container and VMs coexisting and sharing the resources on the same platform. QCT selects the most suitable models and implements the commodities and technologies to build the platform which fits the requirement for cloud native application. It is a Hyper Converged Infrastructure (HCI) architecture with high extensibility, outstanding scalability, and ideal for CAPEX and OPEX in any stage of new technology implementation.

### Key Values:

- Pre-validated solution to immediately respond to market and demand.
- Accelerated network performance to provide a more flexible and more powerful platform.
- Intel® EPA technology implemented in Red Hat® OpenShift® Container Platform to realize better environment for cloud native applications
- High scalability with HCI architecture
- Solution validation for Microservice architecture



Powered by Intel® Xeon® Gold processor

### Key Features and Capabilities



#### Extraordinary network performance brings excessive values to the company

To implement cloud native technology, the infrastructure needs to offer high flexibility and low latency to innovate service development and deployment with agility. This stack adopts Intel® EPA technology, which provides proven network performance enhancement. QCT QxStack with cloud native platform implements CNI (container network interface) to create multiple interfaces between pods and utilizes SRIOV and DPDK on the same node to achieve superior network performance, bringing efficiency to the max to realize agility in daily operations.



**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



## High Scalability

Because containers are light weight, it can achieve faster deployment and provide high scalability. With consideration to maximize the effectiveness of scalability on the platform, QCT utilizes a Rook plugin to bridge Ceph as persistent storage and to create its HCI architecture. Ceph is Software Defined Storage that can promptly respond to the requirements for high scalability. QxStack with Cloud Native Platform enables the worker node to perfectly interact with Ceph storage and offers flexibility for the user to apply the platform to various purposes.



## Suitable model for Container Platform

For QxStack with Cloud Native Platform, QCT selected its QuantaGrid D52BQ-2U for the worker node which also supports the role of persistent storage. QuantaGrid D52BQ-2U reaches ultimate compute and storage density, supporting up to 26 drive bays and 10 expansion slots, and provides high flexibility for various combination to achieve different goals.

## Recommended Minimum Specifications

	Master Node	Worker Node
Model Name Form Factor	<b>QuantaGrid D52B-1U</b> 	<b>QuantaGrid D52BQ-2U</b> 
Scale	3 nodes	3 nodes
Processor	2x Intel® Xeon® Gold 5218N	2x Intel® Xeon® Gold 6252N
RAM	DDR4 2666MHz 384GB	DDR4 2666MHz 384GB
NIC	1x 10G OCP Mezz dual port	1x 10G OCP Mezz dual port 2x 25GbE xxV710 dual port
Storage	2x 800GB SATA SSD with RAID 1	2x 800GB SATA SSD with RAID 1

## About QCT

QCT is a global data center solution provider extending the power of hyperscale data center design in standard and open SKUs to all datacenter customers. Product lines include servers, storage, network switches, integrated rack systems and cloud solutions, all delivering hyperscale efficiency, scalability, reliability, manageability, serviceability and optimized performance for each workload. QCT offers a full spectrum of datacenter products and services from engineering, integration and optimization to global supply chain support, all under one roof. The parent of QCT is Quanta Computer Inc., a Fortune Global 500 technology engineering and manufacturing company. <http://www.QCT.io>

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