

# A Proven Highly Available Architecture with Faster Time-to-Value



QCT introduces QxStack Ubuntu OpenStack Edition, a converged cloud solution powered by The Canonical Distribution of Ubuntu OpenStack. It delivers a fast and reliable way to build an OpenStack cloud with a verified and thoroughly tested architecture, which dramatically reduces the time and risk associated with your OpenStack cloud. With QxStack, building an OpenStack cloud is no longer complicated, but instead fast and easy.

### Production-Quality Highly Available Configuration | High Reliability

QxStack Ubuntu OpenStack Edition is designed to provide high availability of not only all services in OpenStack but also physical structure in this reference architecture. It's tested through destruction verification and real-world production requirements. It ensures continuous access to business services and delivery of enterprise-grade SLAs.

### Key Values

- High availability configuration ensures business continuity
- Ubuntu OpenStack MAAS and Juju provides fast deployment and easy management to fasten time-to-value
- Modular scalability allows flexible expansion on independent resource
- SDS and SDN innovations improve utilization of hardware appliances and flexibility to construct production cloud for various demands

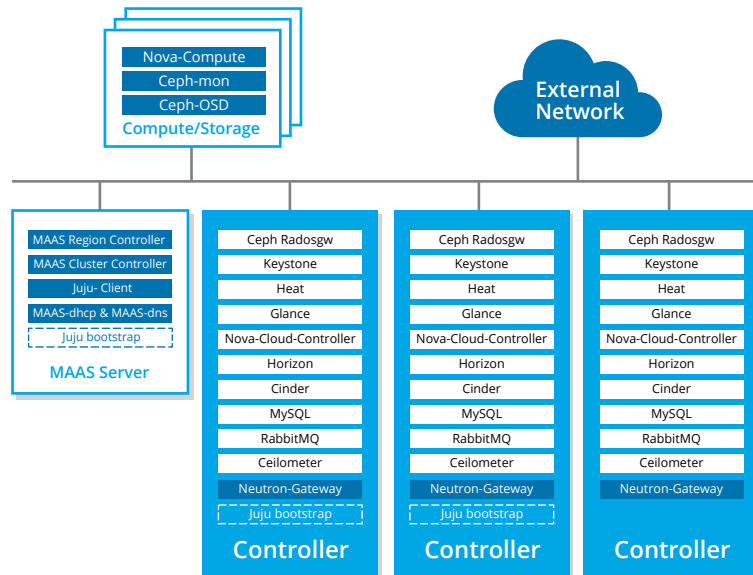
### Fast Deployment and Ease of Management | Faster Time-To-Value

With QxStack, building an OpenStack cloud is no longer difficult to achieve. QCT has created optimized reference architecture while keeping the flexibility to deploy the cloud that better suits your business. Moreover, by leveraging Ubuntu OpenStack MAAS and Juju, users can literally go from bare metal to a well-configured OpenStack cloud in minutes and manage racks of servers as a single resource, increasing data center efficiency and lowering operating cost.

### Modular Scalability | Flexible Expansion on Resources

QxStack Ubuntu OpenStack Edition can scale resources up or down as needed by adding hardware, creating a new availability zone or reallocating existing resources. It allows you to start small and linearly scale up compute and storage resources without infrastructure re-engineering. QxStack significantly streamlines the cloud operations at scale in production.

### Logical Model of Reference Architecture



### OpenStack Innovation | Agility

QxStack utilizes distributed software-driven storage, and can be deployed in a hyper converged compute-storage architecture, which largely improves utilization efficiency of hardware resources. For the networking, it supports Open vSwitch and VLAN bridging solutions in cloud set-up. It also supports multiple hypervisors like KVM, Xen and LXI. These innovations provide flexibility to construct a production cloud that meets IT and business requirements.

# Specifications



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

QCT authorized partner

## Deployment and System Requirements

QCT QxStack supports all OpenStack released components, ensuring service providers and enterprises have best-in-class capabilities to deploy an open source cloud. Components include:

- **Deployment node (MAAS)** provisions bare metal servers for Controller and Compute-Storage nodes.
- **Controller node** provides the self-service, image repository and management capabilities.
- **Compute-Storage node** hosts VMs for workloads running in the cloud, and hosts block or object storage using Ceph or Swift.

## Recommended Specification

QCT QxStack Ubuntu OpenStack Edition delivers 2 models: QS-200 High-Density and QS-300 Rack for different demand and IT environments.

### QS-200 High-Density



### QuantaPlex T42S-2U (2 sets)

- Ideal for regional office and branch office, and small enterprise
- 2U 4-node server featuring highest computing density

| Role            |                    | Processor                            | RAM               | Storage                      |
|-----------------|--------------------|--------------------------------------|-------------------|------------------------------|
| MAAS            | 1 node             | 2 x Intel® Xeon® Gold 5115 Processor | 64GB              | 2 x 480GB SSD                |
| Controller      | 3 nodes            | 2 x Intel® Xeon® Gold 5118 Processor | 128GB             | 2 x 480GB SSD                |
| Compute-Storage | 4 nodes            | 2 x Intel® Xeon® Gold 5118 Processor | 256GB (max 512GB) | 2 x 480GB SSD<br>4 x 2TB HDD |
| Networking      | 10GbE ports switch |                                      |                   |                              |

### QS-300 Rack



### QuantaGrid D52B-1U/D52BQ-2U

- Full-featured design for demanding storage and computing workload
- Up to 3TB memories
- 1U twelve 2.5" and 2U twelve 3.5" drives for Compute and Storage nodes
- More than four 10GbE LAN ports for high redundancy

| Role       |                    | Processor                            | RAM             | Storage                       |
|------------|--------------------|--------------------------------------|-----------------|-------------------------------|
| MAAS       | 1 node             | 2 x Intel® Xeon® Gold 5115 Processor | 64GB            | 2 x 480GB SSD                 |
| Controller | 3 nodes            | 2 x Intel® Xeon® Gold 5118 Processor | 128GB           | 2 x 480GB SSD                 |
| Compute    | 9 nodes            | 2 x Intel® Xeon® Gold 5118 Processor | 256GB (max 3TB) | 2 x 480GB SSD                 |
| Storage    | 3 nodes            | 2 x Intel® Xeon® Gold 5115 Processor | 64GB            | 2 x 480GB SSD<br>12 x 8TB HDD |
| Networking | 10GbE ports switch |                                      |                 |                               |

## About QCT

Quanta Cloud Technology (QCT) is a global datacenter solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation datacenter design and operation challenges. QCT serves cloud service providers, telecoms 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.

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