



Case Study



Stay Home, Stay Professional: Deployment of Microsoft Virtual Desktop Infrastructure During the COVID-19 Outbreak as a Contingency Plan

Challenge

Doing Business in a Lockdown World

The coronavirus outbreak this year has taken a heavy toll on the world's economy as well as people's lives. Numerous countries have launched strict lockdown measures to curb this pandemic, resulting in hundreds of millions of people working from home and regular production activities suspended until the infections are controlled.

California issued a statewide order on March 19, 2020 to ask nearly all residents to stay at home, posing a significant challenge to all businesses within that state, and among them, major tech companies that are headquartered around the Silicon Valley.

How to continue business operations, maintain productivity, and ensure data security while employees work from home became a top priority for these companies.

QCT USA was no exception. Our employees experienced difficulty transitioning from a face-to-face working environment to a telework new normal. In particular, the complexity involved in ensuring every employee had the appropriate applications and data they needed for work, and the effort required to ensure data security posed a huge burden on our IT team, who were also working from home.





Solution

Build Your Office at Home with a Virtual Desktop Infrastructure

Under the urgent need of creating an efficient and secure work-from-home environment, many companies turned to cloud-based solutions. Microsoft Virtual Desktop Infrastructure (VDI), a common use case of Azure Stack HCI (AzS HCI), emerged as an ideal option. It allows quick deployment and easy maintenance with central management. On top of that, it provides a highly scalable architecture supported by Microsoft-validated technologies and protected by unified security management and advanced threat protection.

VDI uses server hardware to run desktop operating systems and software programs on a virtual machine. For as long as operating system virtualization exists, VDI offers the flexibility of running traditional desktop workloads on centralized servers. There is a wide range of advantages of leveraging VDI in a business setting, including keeping sensitive company applications and data in a secure data center, accommodating to a work-from-home policy without worrying about personal data getting mixed with corporate assets, and reducing liability when corporate assets are lost - covering both data loss prevention, as well as exposure of sensitive data to potential corporate espionage and/or hackers.

In a nutshell, the Microsoft VDI technology entails the following:

- Every end user can access their virtual desktop, which is stored on a centralized server, from any device.
 - An administrator can grant/deny users access to specific applications from a central management console.
 - An administrator can easily identify when licensing is going to expire and determine whether any of your desktop instances requires updates.
 - A selected virtual desktop can be maintained and supported by an administrator from a centralized server without having to disrupt the production environment.
 - Every end user is assigned a specific VM with dedicated resources. All VMs run in isolation from one another, meaning that they cannot affect one another's performance and get hold of private data.
 - All data is stored on a physical server in the data center, meaning that if a virtual desktop fails, you can still retrieve the required information from a remote server.
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- Support and maintenance within the VDI environment are much easier compared to that within a traditional PC infrastructure in that an administrator can easily detect any issues and solve them from a centralized server.
- An end user can connect to their virtual desktop using a thin client, zero client, or thick client, as well as laptops or docking stations, tablets or phones. Note that the device should be connected to a corporate network in order to perform any I/O operations.

Seamless Integration of On-prem and Cloud Resources: QCT USA's Deployment of Microsoft VDI

QCT USA faced the challenge of looping hundreds of employees working from their private residences in a new virtual working environment, without its customers or partners ever being aware of the transition process.

Microsoft VDI was chosen as our work from home solution because of the following key benefits:

• High scalability and reliability

Resource demand for a VDI workload typically grows proportionally to the number of users requiring desktop virtualization. QCT was able to scale resources easily and predictably satisfy those needs through HCI.

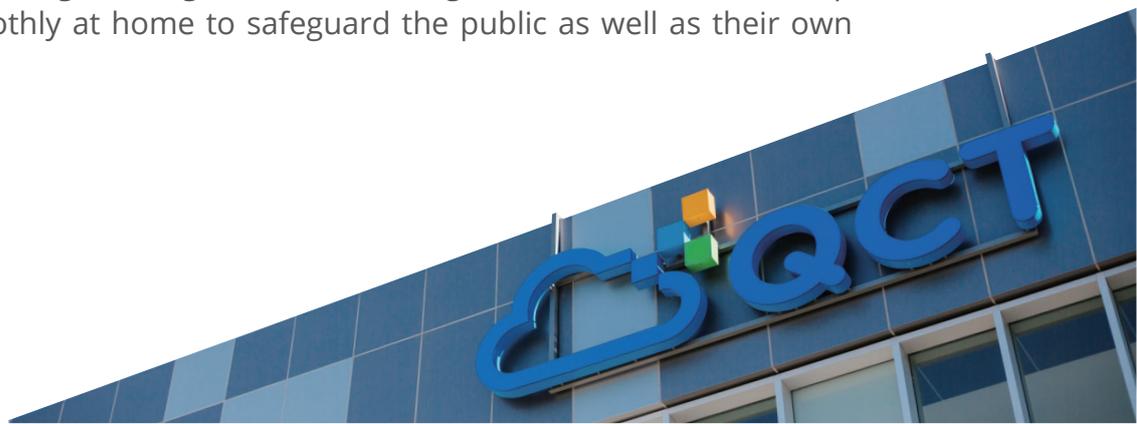
• Customizable configuration

HCI hardware can be configured to suit user needs. In this case, QCT as our own hardware provider selected QuantaGrid D52BQ-2U, a dense compute and storage server, as the VDI platform, supported by storage and networking components that perfectly matched the predicted workloads.

• Windows as a shared platform between host and guest

Both the guest and the host running versions of Windows entails numerous advantages for administration, performance, and technical support. In addition, file shares become much easier as both guest and host have native access to data stored on the AzS HCI cluster.

Leveraging Azure Stack HCI, our IT team managed to complete VDI deployment, testing, and launching in a very short time, allowing our US staff to carry out everyday work including meetings, decision-making, and customer relationship maintenance smoothly at home to safeguard the public as well as their own health.



"It's more common that we help our customers deploy VDI environments. Under this very critical circumstance that affects every business all over the world, QCT had to deploy its own VDI environment quickly, too," said Howard Wu, Vice President of Global Head of Networks & GM, QCT USA. ***"I am more than grateful to enjoy effective VDI systems all powered by QCT's products. Had it not been for the fact that I work for QCT, I couldn't imagine when we would finally get back on track for our customers."***

Below, you can find a how-to guide for building and deploying VDI environment on Azure Stack HCI:
[How to Build a Dedicated Virtual Desktop Infrastructure Using Windows Server 2019](#)

QCT Hardware

QuantaGrid D52BQ-2U

- Ultimate Compute and Storage Density
- Flexible and Scalable I/O options
- Tool-less HDD/SSD Tray and PCIe Riser Module
- Quick Deployment and Maintenance



Contact Information



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About QCT

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyperscale 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, telecoms and enterprises running public, hybrid and private clouds.

Product lines include hyperconverged and software-defined data center solutions as well as servers, storage, switches and 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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