



Just Ask

SDP

QTS Introduces the Smart Data Center

Technology-enabled applications allow businesses to manage and control the data center environment from any location

COVID-19 has offered businesses countless lessons in IT preparedness, agility, flexibility and, of course, the importance of remote capabilities. While much of the attention was focused on office personnel working from home, data center managers and technicians were also impacted as these critical employees still needed to manage the data center environment.

This unexpected disruption to business-as-usual practices has prompted companies to re-evaluate their IT infrastructures and how they manage them. The future of infrastructure management will hinge on the ability to integrate innovation and advanced technologies into the IT ecosystem to support more dynamic capabilities.

According to [Gartner](#), "*Infrastructure-led innovation is an I&O [infrastructure and operations] strategy that helps stakeholders overcome business challenges and enable business growth*

using infrastructure technology and operational practices that enhance customer experiences and solutions."

As businesses look beyond the pandemic-induced remote-work environment, many are focusing on their abilities to remotely perform tasks—including those related to infrastructure management. Remote data center management can offer a series of new operational and cost efficiencies. By reducing business travel, companies minimize flights, car rentals and hoteling as well as time away from the office. This helps drive down costs and buys back precious work hours.

Innovative opportunities such as virtual access to racked equipment and smart notifications can supplement these operational efficiencies and deliver valuable insights that allow businesses to quickly identify and resolve issues to optimize performance and minimize associated costs. Performing these

tasks from mobile devices will bolster capabilities even more and enable anytime, anywhere access.

The ability to deliver this dynamic functionality at the infrastructure level will be a critical differentiator among data center service providers.

QTS Smart Data Center leads the way in next-generation visibility, access and control

QTS is meeting the remote capabilities challenge head-on with the introduction of the Smart Data Center. This suite of Smart products builds upon QTS' existing portfolio of remote, self-service capabilities to deliver an elevated level of intelligence designed to enrich real-time visibility, access and control of critical data center capabilities and assets, and empower customers to interact with their data and QTS services.



Just as the Smart Home enables homeowners to remotely adjust temperature settings, set schedules, control alarms and lights, and watch the interior and exterior of the home while away, the QTS Smart Data Center similarly industrializes capabilities to seamlessly connect customers with their data center environments without being physically on-site.

Utilizing artificial intelligence (AI), machine learning and predictive analytics, QTS' Smart products transform the data center experience, enabling more intelligent, real-time insights and functionality. This effort is buoyed by the QTS Innovation Lab (QIL), which accelerates the vetting and development process to more rapidly deliver industry-advancing products. As one of the first to market with the Smart Data Center concept, QTS is enabling businesses to make better decisions and perform more tasks that previously required direct, physical human interaction.

"QTS is the only data center that can do this because our infrastructure supports it," said Brent Bensten, Chief Technology Officer at QTS Data Centers. *"The investment we made in our technology over a number of years, allows us to quickly respond to customer requests for increased functionality that continues to revolutionize the data center. We are years ahead of the industry in our remote capabilities journey."*

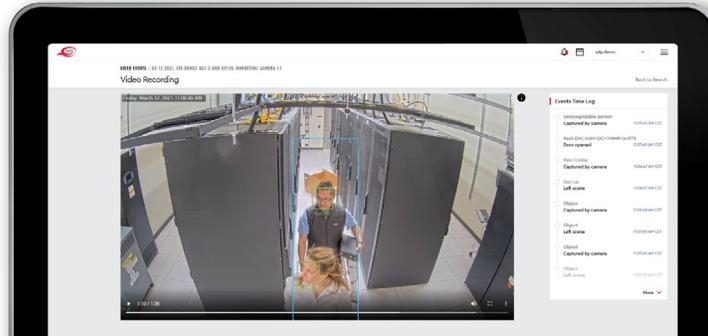
As remote capabilities continue to dominate work ideals, the Smart Data Center will increasingly drive customers to look at the data center in a whole new light to improve the efficiency, reliability and security of their operations.

"Our Smart Data Center concept has flipped the script," explained Bensten. *"Customers are no longer*

leading off conversations with questions about our data center space and power. Now they're asking about the intelligence built into our facilities."

Introducing the Smart Data Center's first family of products

The first three products in the Smart Data Center portfolio—SmartCam, SmartCart and SmartSensor are poised to deliver new levels of physical security and environmental control that no other data center provider can offer today.



QTS SmartCam

What it does: Applies AI, including facial recognition, and object and anomaly detection to live video footage; proactively alerts customers to motion-based activities

Before: Must be on-site to see what is happening within the space, or hire or dedicate a technician to monitor "dumb" camera feeds

Benefits: Preemptive visibility for improved physical security

Data center technicians are not at the data center most of the time—nor do they want to be. SmartCam, an AI-based, real-time video monitoring and management system, allows companies to monitor the data center, as if they were physically there, for an added layer of visibility and physical security. By applying advanced technologies to 24/7 live streaming video of customers' spaces, this intelligent vision system, captures, records, indexes and logs motion-based events. Integrating this video with facial recognition technology and data from QTS' physical security and badge management system, SmartCam identifies badge holders and tags unrecognized individuals. Customers can also set proactive, smart notifications for distinct events such as a specific person or unbadged visitor in the space, a delivered package, or an open cabinet door. Using machine learning algorithms, SmartCam gets smarter as more events are logged.

With insight into who is in their space and what they are doing, businesses can more tightly control the environment to minimize insider threats, verify work hours, detect objects and identify unexpected activity.

"Unintended events happening in a customer's space is a leading cause of downtime," said Bensten. *"The more customers can control these things, the better uptime they can achieve."*

QTS SmartCart

What it does: Remotely access and control racked devices from any location to diagnose, test and reconfigure colocated assets

Before: Must physically travel to the data center to manage assets

Benefits: Speed solutions to strengthen productivity and uptime

Businesses never know when a device is going to go down, and usually, if one does, they are not at the data center to quickly handle the issue. QTS' SmartCart is a secure KVM over IP service that digitizes the data center crash cart, allowing technicians to troubleshoot issues, configure and check performance statistics of key assets, and perform upgrades and maintenance from any location and from any device. Utilizing the power of SDP, customers can quickly and easily schedule a session and reserve a KVM device to access their servers and network devices to remotely do in minutes what previously took a day—or longer based on travel—to perform. By minimizing downtime and travel, QTS SmartCart helps to reduce operational costs and improve uptime without capital expenditures.



QTS SmartSensor – Q3 Availability

What it does: Intelligent control of airflow and temperature at the cabinet level; real-time climate alerts

Before: Unaware of temperature and humidity fluctuations until an issue occurs

Benefits: Proactively address concerns to optimize environment and avoid failures

Applying intelligent automation, SmartSensors provide more precise control of airflow and temperature at the cabinet level. Using SDP Sensor Analytics real-time app, SmartSensor goes beyond data hall measurements to provide cabinet-level climate readings and real-time notifications when temperature or humidity levels near a pre-determined threshold. This enables customers to take preemptive measures—including identifying and replacing a failing server or adjusting workload placements—to mitigate potentially catastrophic events. Customers will receive smart notifications at the same time as QTS to allow the companies to work in tandem to optimize the environment. This also helps reduce power and cooling costs, improve uptime, extend the life of critical data center equipment, and enhance equipment performance and efficiency.



The Smart Data Center delivers more real-time visibility, access and control of critical data center equipment and capabilities.



Ahead of the remote management curve

Even before the pandemic struck, QTS was prepared to meet the needs of a suddenly remote environment. The company had already digitized its data centers to offer customers complete transparency into their environments via its API-driven Service Delivery Platform (SDP), the industry's first software-defined colocation orchestration platform. SDP changed the way customers interact with their data center environment.

"Our investments in data center transparency and remote capabilities intersected with COVID-19," said Bensten. *"Although our data centers remained open during the pandemic, our customers were able to remotely view and manage their environments as if they were physically there."*

This included remote, on-demand access to real-time power draw by location, suite, rack, circuit and pole to better identify power availability and shift workloads to optimize the environment. Customers also received real-time, automated notifications as thresholds were neared to provide advanced warning of potential issues. Additionally, customers could quickly schedule visitors, activate and deactivate badges, and self-provision cross connects and cloud connections from their mobile devices, saving money and condensing deployment timelines from weeks to minutes.

This digital innovation was well received during the pandemic as customer usage of SDP doubled.

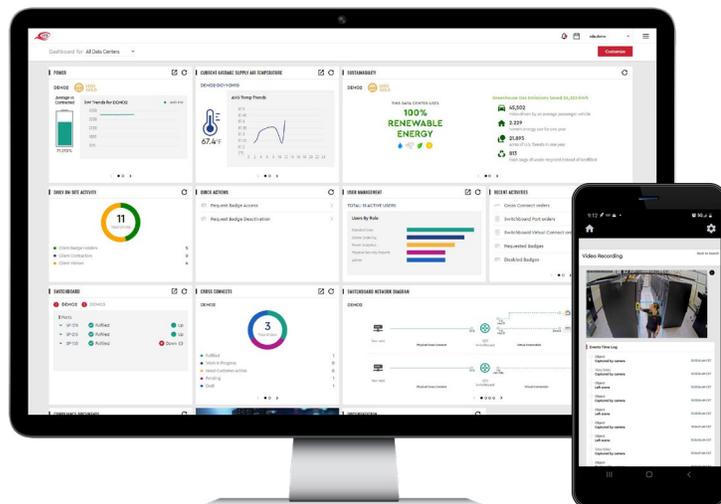
"SDP's capabilities are perfectly aligned with our response to the ongoing COVID-19 pandemic," said Thomas Harris, Chief Operations Officer at Abacus Solutions. *"The ability to remotely monitor and manage our infrastructure through a real-time, software-defined interface is truly differentiating in the data center industry. Our organization is benefitting from greater control over costs, increased security, ease of compliance and reduced risk."*

Building a better data center: One Smart application at a time

QTS remains committed to improving data center visibility and remote access, and the data center management experience.

As businesses continue to assess their infrastructures, they will continue to seek out more flexible and intelligent ways to manage, support and strengthen the data center environment. In a COVID-impacted world, remote, real-time data center capabilities, such as those delivered by QTS' expanding family of Smart products, will continue to be a critical differentiator. To meet customers' increasing appetites for these innovations, QTS will continue to invest in the Smart Data Center and other innovative data center technologies to deliver on these expectations.

"Customers are going to expect the Smart Data Center concept to evolve very quickly over the next number of years," stated Bensten. *"QTS is ahead of this curve and will continue to transform the data center industry to provide businesses with better visibility and remote control of the data center."*



ABOUT QTS

QTS Realty Trust, Inc. (NYSE: QTS) is a leading provider of data center solutions across a diverse footprint spanning more than 7 million square feet of owned mega scale data center space within North America and Europe. Through its software-defined technology platform, QTS is able to deliver secure, compliant infrastructure solutions, robust connectivity and premium customer service to leading hyperscale technology companies, enterprises, and government entities. Visit QTS at www.qtsdatacenters.com, call toll-free 877.QTS.DATA or follow on Twitter @DataCenters_QTS.