



Innovating data center physical security

QTS enhances visibility and control to strengthen physical security

Executive overview

Physical security has long served as a necessity to protect a business' critical infrastructure and data from unauthorized access. In the data center market, physical security controls such as perimeter fencing, card readers and even biometric technology have become industry-standard safeguards to provide proper access. However, as risks—and even the way we routinely conduct business—continue to evolve and become more complex, businesses need to augment these controls with more advanced solutions. QTS' innovative technology provides customers with real-time, on-demand visibility and control of their data center space without being physically onsite. This enriched oversight empowers customers by allowing them to remotely manage access and monitor activity in near real time to better control physical security in a rapidly evolving security landscape.

Do not overlook data center physical security

Amidst the meteoric rise of the remote workforce, continued digital transformation and the ever-evolving threat landscape, physical security remains a critical component of the corporate security strategy. In a [recent report](#), security professionals cited managing employee and visitor safety, dealing with physical security threats and remote management, and securing buildings as leading challenges during the pandemic. Twenty percent of respondents also reported an uptick in physical security incidents during the pandemic, and one-third expected it to continue to escalate in 2021. With rising physical security threats likely on the horizon, businesses need to enhance their security programs to mitigate these risks and better protect their environments.

20% of security professionals reported an uptick in physical security incidents during the pandemic

1/3 expect it to continue to escalate in 2021

PHYSICAL SECURITY REQUIRES A MULTI-LAYERED APPROACH

To help meet their security needs, many businesses leverage third-party data centers to provide the necessary physical security and compliance to help satisfy their own requirements and promote availability. As multi-tenant facilities, data centers must employ strict physical security programs that provide ready access to authorized personnel while restricting unauthorized individuals. To provide this critical support, colocation providers conduct risk assessments as part of the site selection process and continue these assessments periodically throughout the life cycle of



the data center to proactively abate new challenges. They also utilize layered physical security defenses and best practices such as building setbacks, perimeter fencing, card readers, biometric access controls, patrolling armed guards, video monitoring and visitor screenings to bolster physical security and make it more difficult for malicious actors to access critical systems and information. This layered approach is also known as defense in depth.

Data centers also maintain specific certifications and accreditations such as SOC 1, SOC2, PCI DSS, ISO27001, HITRUST and FISMA to provide independent, third party assurance of the provider's control implementation. Although data centers are not directly responsible for a tenant's compliance, businesses can leverage their data center provider's compliance programs and controls to help meet their own regulatory obligations.

While these protections and programs are vital to a secure data center environment, today, they are minimum requirements for physical security. In an increasingly digital and risk-laden business domain, security programs must integrate more modern and innovative technologies that offer businesses improved oversight and tighter control of their physical environments to mitigate increasingly complex threats and remain secure and compliant.

Data center physical security features

- Site selection
- Building setbacks
- Perimeter fencing
- Video surveillance
- Badge/proximity card readers
- Biometric access controls
- Patrolling security guards 24x7x365
- Armed security guards
- Visitor screenings
- Ongoing risk and threat assessments

The QTS Advantage

QTS Data Centers, a leading provider of hybrid colocation and mega scale data center solutions, goes beyond industry-standard physical security measures to change the way data center customers interact with their colocation provider and their own environments. By supplementing its leading-edge physical security features and security best practices with advanced technologies, QTS takes physical security to the next level to provide customers with real-time visibility and control of their environments from their own workspaces.

QTS takes physical security to the next level to provide customers with real-time visibility and control of their environments from their own workspaces.

DIGITIZING PHYSICAL SECURITY

This online accessibility is a product of QTS' ongoing commitment to full data center transparency. By digitizing its data centers and applying artificial intelligence (AI), machine learning and predictive analytics to its data, QTS provides customers with real-time, on-demand visibility of and access to their environments. Customers receive key metrics and actionable information at the same time it is available to QTS to allow them to make better, more informed decisions about the security of their data center environments.

"We've worked to integrate the physical security access control systems with the QTS Service Delivery Platform, providing customers with unprecedented on-demand, near real time access to physical security data," said Andrew Wild, Chief Information Security Officer at QTS Data Centers. *"This allows organizations to remotely view and control their environments to*



ensure only authorized people have physical access to their IT workloads and to immediately know who has accessed the space. This is a major differentiator for QTS and something no other data center can offer."

SDP delivers self-service, on-demand access to the physical environment

This array of information and insight is available via QTS' proprietary Service Delivery Platform (SDP), the industry's first software-defined orchestration platform. By aggregating digitized data and integrating it with QTS' physical access control system and IT service management platform, SDP builds in increasing layers of intelligence that empower customers to remotely monitor and manage their security infrastructure in real-time from any location and any device. The platform's self-service capabilities allow administrators to directly make changes to their security controls without involving a data center account manager to speed change and improve efficiency.

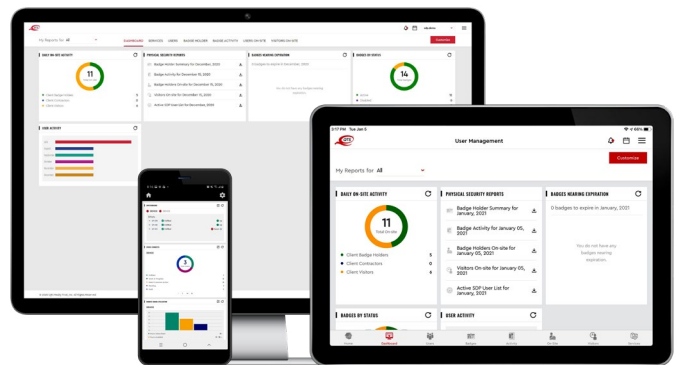
"The ability to remotely monitor and manage our infrastructure through a real-time, software-defined interface is truly differentiating in the data center industry," said Thomas Harris, Chief Operations Officer at Abacus Solutions. "Our organization is benefitting from greater control over costs, increased security, ease of compliance and reduced risk."

The SDP difference

- Digitized environment for complete transparency
- Improved visibility and control
- Enhanced efficiency
- On-demand access
- Self service capabilities
- Real-time data
- Filterable and automated reports
- Remote accessibility

Remote visibility and control of the physical environment

SDP's User Management module centralizes access to a series of security features designed to tighten security and control, increase visibility, speed changes and outcomes, and generate data-driven reports. With badging and onsite security systems fully integrated within SDP, this online tool allows users to easily and instantaneously view and manage the environment's physical security.



THE USER MANAGEMENT DASHBOARD

The User Management dashboard displays a series of widgets that offer authorized users at-a-glance views of various security metrics and controls such as currently onsite badge holders and visitors, the number of active badges and their statuses.

MANAGING THE ROSTER

While data centers manage their physical spaces, including doors, locks and card readers, customers are responsible for managing their rosters of authorized users. Using SDP, administrators can activate and deactivate badges, assign role-based user permissions, grant or restrict site access, and more. Keeping this list up to date is a critical piece of every security program and requires frequent reviews to ensure roles and privileges are still appropriate. The roster management function allows administrators to easily track and manage the personnel—whether employees or contractors—that visit the data center.



"Employees transition in and out of roles all the time," explained Wild. "QTS' remote visibility and control allows administrators to quickly review, assign and revoke authorization levels and permissions to ensure the right people have the right access."

All of this information is integrated with QTS' physical access control system to provide on-demand reports designed to provide a deeper understanding of the controls in place and limit accessibility.

BADGING SYSTEMS

SDP also provides customers with complete visibility into both badge reader activity, allowing them to track a badge holder's movement, including when and where they entered and exited a facility, and where they went while onsite. The user management system of SDP has been integrated with QTS' physical access control systems to automate the updating of access permissions, which determine whether to grant or deny access to a badge holder. Every badge swipe and resulting action is time stamped and logged to create a history of the activity, complete with the badge holder's name, the time and location of the activity, and whether or not the person was granted access.

VISITOR MANAGEMENT

Those that require temporary, unescorted access to the data center utilize a visitor badge. QTS allows organizations to directly schedule this access through the online platform. When visitors arrive at the QTS facility, a security team member checks them in and provides a badge encoded with the appropriate permissions. Customers can then track when the visitor arrived, left and where they went during their time in the data center.

SDP-enabled security reports

The wealth of data captured in SDP allows organizations to generate a series of on-demand reports to help them review, modify and strengthen their physical security controls. This data is available to customers directly from SDP for self-service, on-demand consumption. Using a series of filters, authorized users can narrow and

define the reports directly on the platform to deliver more pointed data. These granular capabilities allow customers to target specific information and deliver it daily, weekly, monthly or quarterly, depending on the report and the needs of the user.

AUTOMATION DRIVES ADDITIONAL EFFICIENCIES

To further promote efficiency and informed insights, QTS allows businesses to automate the delivery of these reports. Using the Notification System, administrators can schedule reports to be delivered at specific time intervals, and on a specific day and time. SDP automatically sends the report in an email to only the assigned user to ensure information is controlled and appropriately shared.

While SDP delivers this information in a user-friendly report, QTS' API-first approach also allows customers to pull this data into their own management systems using QTS' RESTful API documentation.

"This level of automation enables our customers to be more efficient and effective in aggregating critical physical security data," said Wild. "This heightened visibility provides them with the information they need to strengthen their security posture and protect their environment."

Using SDP, customers have access to several security-focused reports:



Badge Holder Report. The Badge Holder Report uses the information created in the roster to provide detailed information on every badge holder created for the company, including employees, contractors and visitors.



Badge Activity Report. This report documents badge usage, providing details around when and where active badge holders have swiped their badges. This includes both general badge readers and dedicated customer badge readers throughout the property. As with all the reports,

customers can filter search criteria to better define the information they need. For example, administrators can pull reports that only include activity at their customer-assigned readers over a daily, weekly or monthly time span.



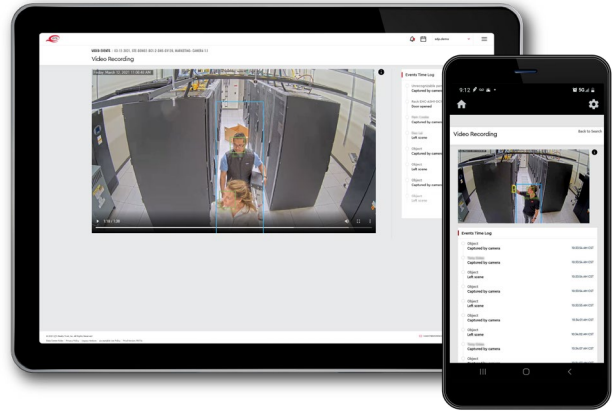
Users Onsite Report. This real-time report is a subset of the Badge Activity Report, and tracks QTS-owned badge readers at ingress and egress points to detail who is onsite at a given time, and when they arrived and exited the facility. This information is also available on the Daily Onsite Activity widget on the User Management dashboard.



Visitors Onsite Report. The Visitors Onsite Report documents when temporary visitors come onsite. Administrators can run these reports for specific time frames to understand when visitors have accessed their space.

COMPLIANCE REPORTS

QTS also assembles its compliance documentation in a single repository in SDP. Customers have on-demand, self-service access to these documents, allowing them to export reports to demonstrate QTS' security practices, certifications and accreditations. These third-party attestations assure auditors, customers and prospects that specific security protocols and practices are in place within the data center.



SmartCam: The next generation of physical security

QTS continues to keep its eyes trained on the future of data center physical security. The organization recently introduced the Smart Data Center, a new level of intelligence that enriches its existing real-time visibility, access and control of the data center. These "smart" solutions provide previously unavailable data center insights that empower customers to make better decisions and perform more tasks that previously required direct, physical human interaction.

The SmartCam Security System is one of the first products in the Smart Data Center family. This AI-based video monitoring and management system provides customers with real-time views of their dedicated spaces within the data center. By applying advanced technologies to 24/7 live streaming video of customers' spaces and data from QTS' physical security and badge management system, SmartCam identifies, captures and records motion-based events. Utilizing facial recognition technology, SmartCam identifies badge holders and tags unrecognized individuals, allowing companies to monitor their data center environments as if they were physically present.

Customers can also set proactive, real-time notifications to identify distinct events such as a specific person or unbadged visitor in the space, a delivered package, or an open cabinet door. This real-time visibility greatly improves physical security by allowing businesses to more tightly control their environment to minimize insider threats and identify unexpected activity.



Looking to the future of data center physical security

As businesses continue to look for ways to fortify physical security, QTS is poised to support its customers in this increasingly critical endeavor. The remote workforce will continue to drive the need for improved physical security, and the ability to view and control the data center environment from remote locations will become increasingly vital to strengthen overall security and drive operational integrity. Businesses need to look beyond existing physical security controls to advanced technologies that can meet rising challenges and allow IT administrators to work smarter—from any location—to quickly and effectively protect the company, its assets and its data.

ABOUT QTS

QTS Data Centers 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.