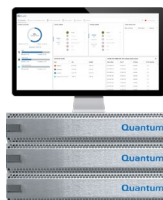# Leading University Ensures Campus Safety with Quantum Hyperconverged Infrastructure

In March 2013, UCF faced an active shooter situation in which a former student planned to pull the fire alarm in a residence hall and then shoot his classmates as the building was evacuated. However, the shooter's gun jammed, and as officers were closing in on the gunman, he took his own life. During the university's response to the incident, accessibility to critical video data was a major issue. UCF had cameras in the area where the incident took place, but first responders had no way of viewing it without being at the physical location of the actual video recorder, potentially putting themselves in harm's way.

At the time, UCF had a wide variety of standalone systems in place, including non-integrated video surveillance, access control, and intrusion systems. As a result, in active-shooter situations or other potentially life-threatening events, there was no way to centralize the video feeds so security personnel could safely monitor the situation without sending someone into the line of fire. To make matters worse, the video systems were permissions-based according to different departments with different viewing privileges, which further compounded access to video. Also, the IT team

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" We wanted a security solution that specialized in video storage. Quantum VS-HCI was easily the hands-down winner due to its resilience and the ability to access video data from any device, at any time. We collaborated with our IT team during the selection process and in our opinion, Quantum delivered the best solution. "

Joseph Souza
Assistant Director of Security, UCF Office of Security Management

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that managed the system did not have the security expertise to maximize the benefits of its technology investments.

Jeff Morgan, Director of Security and Emergency Management for UCF, and university officials realized that UCF needed to modify how it managed its security technology and appointed Joseph Souza to the role of Assistant Director of Security for UCF's Office of Security Management. "I came in to help the university optimize its technology infrastructure and focused on building a

> "UCF is continuing to grow and we need technology systems that can easily scale and expand with us. We continue to increase and record more video, and that is what makes Quantum VS-HCI such a valuable solution for us. The Quantum solution will be a critical part of our technology infrastructure as we move forward with our expansion plans."
>
> **Jeff Morgan**
> Director of Security and Emergency Management, UCF

team to help with this initiative. I was able to quickly hire a camera coordinator and an access control coordinator to launch our efforts," Souza said.

"Focusing on the technology — how it is managed and ensuring it is used properly — is one of my main initiatives," according to Souza. The challenges started with the lack of communication between devices and the need to modernize or replace older analog platforms that were reaching end-of-life and extended to the management of 58 standalone servers, 12,000 access points, and wide variety of DVRs that were all being operated in separate silos. UCF required a solution that would allow IT staff and security personnel to centralize system management, store video data more effectively and reliably, and enable the security team to deliver situational awareness to responders when needed.

"It is common for universities to struggle with IT infrastructure because they often lack a dedicated security manager to manage it," Souza commented.

"Often times, infrastructure is managed by IT, but they may not have the background knowledge of how to best use security technology, optimize camera placement and address challenging lighting conditions. For us, it is critical to partner closely with our IT teams to maximize the value of all our technology investments."

An Enterprise-Class Solution
Purpose-Built for Video

During a source selection and bid process, UCF was introduced to Quantum VS-HCI optimized for demanding, data-intensive workloads. Using standard off-the-shelf server hardware, VS-HCI aggregates the storage and compute resources from multiple servers into a single unified pool that all cameras can access, which maximizes performance and storage capacity utilization. "We wanted a security solution that specialized in video storage. Quantum VS-HCI was easily the hands-down winner due its resilience and the ability to access video data from any device, at any time," Souza said. "We collaborated with our IT team during the selection process and in our opinion, Quantum delivered the best solution."

After an evaluation process in which UCF tested a variety of storage and infrastructure solutions, UCF deployed VS-HCI in its datacenter to host its various software platforms. This included hosting Milestone video management software (VMS), which serves as a centralized source to manage video and effectively protect its security data. VS-HCI eliminated the complexity of managing 58 separate servers and reduced UCF's total cost of operations by consolidating servers, storage, and client workstations into one enterprise-class solution that is easily managed from a single user interface.

"We are a small but lean team here at UCF so we look to streamline processes and system management where we can," Souza noted. "Reduced complexity was a critical component in our selection of Quantum VS-HCI." Quantum's purpose-built HCI solution for video surveillance streamlines video management and storage capabilities by hosting VMS software and storage management on a single platform. It also offers industry-leading resilience — critical in environments where compliance and data protection is crucial, such as higher education institutions. If multiple hardware failures occur, servers remain online, and previously recorded data is protected and available if needed for forensic purposes. VS-HCI is also designed to support multiple mixed application workloads on a single infrastructure, which lowers datacenter costs and accelerates the return on investment for the university as its security and IT needs evolve.

With Quantum VS-HCI, the UCF security team can rapidly access video from any device or location when it's needed, for investigations or liability concerns. The university's Quantum implementation supports up to three petabytes of storage, which addresses UCF's growing demand to deploy more video systems across its campuses. As their needs grow, VS-HCI can scale linearly and non-disruptively, aggregating storage resources with each added appliance. These advantages, along with the VS-HCI ability to manage the demanding, write-intensive nature of large-scale video environments — an increasingly challenging task for DAS-based recording systems – have effectively modernized UCF's entire surveillance ecosystem.

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> **Joseph Souza**
> Assistant Director of Security,
> UCF Office of Security
> Management

Protecting a Growing Campus

UCF continues to attract accomplished students, professors and researchers to its ever-growing academic programs and strong athletic offerings and is in the process of building a new campus in downtown Orlando, which will bring its camera count to more than 3,000 devices. According to Souza, the university also has plans to add license plate recognition capabilities which will need to be supported on the same infrastructure.

With growth comes additional challenges. To address potential risks head-on, UCF is in the process of building a state-of-the-art global security operations center. This facility, which is being converted from an existing Emergency Operations Center media briefing room, will serve as a central consolidation point for all technology systems and is designed to help the security and emergency management team monitor system health, augment response, increase situational awareness and provide a common operational picture.

ABOUT THE UNIVERSITY OF CENTRAL FLORIDA

The University of Central Florida (UCF) is a thriving, pre-eminent research university in Orlando, FL, and one of the largest universities in the country with more than 64,000 students and 12,000 faculty and staff. UCF is regularly recognized as one of the best universities for quality, access, impact and value. U.S. News & World Report has named UCF one of the nation's most innovative universities, while Kiplinger's ranks the school a best-value university. Founded in 1963, UCF and its 13 colleges offer more than 212 degrees from its main campus, hospitality campus, health sciences campus, online and through its 10 regional locations. The 1,415-acre main campus is 13 miles east of downtown Orlando and adjacent to one of the top research parks in the nation.

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