



Akamai Operations Center

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1 THE CLIENT

Akamai Technologies, Inc. is a global content delivery network, cloud services, and cybersecurity provider. Hosting one of the world's largest distributed computing platforms, Akamai is responsible for serving 15% to 30% of worldwide web traffic. Customers pay to host web content across Akamai's global network of servers. When a user navigates to a URL managed by Akamai, they are redirected to the nearest hosted copy of that customer's site to reduce load times and bandwidth considerations.

With a large presence and massive stake in worldwide content delivery and cybersecurity, Akamai relies on state-of-the-art [Network Operations Command Centers](#) (NOCCs) to monitor network and server health across their entire domain.

When incidents occur, NOCC operators need to rapidly assess the situation to mitigate the issue. At their headquarters in Cambridge, MA, Akamai's professionals have built a massive control room designed to house two different operator environments: A Broadcast Operations Command Center (BOCC) and a NOCC. Split down the middle, the BOCC side of the control room is designed for Akamai's broadcast professionals. In contrast, the NOCC side of the control room is a customer-facing demonstration area designed to showcase the company's web-focused solutions, tools, and technology in real-time.



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2 THE CHALLENGE

Akamai opted to refresh their existing control rooms when they moved their Cambridge, MA headquarters. The company already had a history of working with Constant Technologies, a command center systems integrator for 24/7 control room spaces, which they brought in to help develop and equip this new control room space. Akamai planned to create a single, large control room that would house both their BOCC and NOCC. In this combined space, the company sought to incorporate new technologies that would enhance workflows and streamline operations. Realizing Akamai's vision for these control centers, Constant Tech knew that [Haivision MCS](#) would be the right partner to help deliver the necessary products and solutions.

For the NOCC portion of the room, Akamai desired a more streamlined customer tour experience. Previously, operators ran demos from their desks while additional representatives guided customers through the information highlighted on the wall. Akamai representatives wanted to raise the bar when it came to walking customers through their products and services. They wanted to access and drill into their suite of applications from anywhere in the room, on the fly, as they spoke with customers. However, the solution they needed to fully realize this space didn't yet exist in the market.

On the BOCC side, day-to-day operations focused on the continual monitoring of raw content streams and playback on a collection of the world's most used media players.

Operators needed to access streaming devices such as Apple TVs and Roku boxes to guarantee that real-time broadcasts performed as intended. To interface with these devices directly, operators had to use a physical touch screen at the back of the room that governed the functionality of each input to their video wall. Akamai wanted a solution that could not only serve the needs of the NOCC but could also help streamline the BOCC side by allowing direct user interface (UI) access to device controls for all operators in the room.



3 THE SOLUTION

Knowing that Akamai wanted new video processing capabilities, Constant Technologies recognized that Haivision had the unique ability to quickly develop a secure and reliable solution to address the company's needs. Haivision realized that in addition to superior [video processors](#) and [content management software](#), they would need to create new technology to give Akamai the capabilities they desired. Following a consultation, a new visualization solution that gave users greater flexibility at their workstations on either side of the control room was established. However, it was the introduction of a new piece of Haivision hardware, [CineAgent](#), that provided Akamai with the added functionality they desired. With immediate research and development, Haivision brought this new technology to market for Akamai's needs and future use cases.

CineAgent makes it easier for users to stream, interact with, and share any web-based or locally installed application across their control room network. Implementing CineAgent servers across Akamai's NOCC lets operators continuously run the broad suite of web applications and tools they wanted to showcase without relying on workstations that are in use by other operators. As users hold demonstrations, they can bring up the applications hosted on the CineAgent servers from any hand-held device, anywhere in the room, presenting the type of dynamic presentation they aimed to deliver to their customers.

With two teams of operators, both BOCC and NOCC, utilizing the space simultaneously, a 25x3 panel [video wall](#) was installed at the front of the control room. Operator workstations were built to house each team behind their respective half of the video wall. A small air gap between the BOCC side and NOCC side extended through the room and video wall itself. If either team needed to section itself off from the other, a glass partition would slide into this gap to separate both sides and divide video wall content between their respective teams. Two Alpha FX Elite Processors, two Site Managers, CineAgent servers, and a series of CineLink 4k encoders and decoders were installed to power both sides of the control room and manage all incoming and outgoing content through each workstation with Haivision's CineNet software.



4 BENEFITS

With this new BOCC and NOCC, Akamai created an impressive control and demonstration space for their operators and visiting customers. A web-based UI paired with Single Sign-On (SSO) integration gave Akamai new ways to securely interface with their video wall. Users in the BOCC can quickly access all physical input devices from the browser based CineNet UI at their desk. Easy-to-use, yet powerful, functionality through CineNet streamlines daily activities and product demonstrations. Operators no longer need extensive training to display local and web-based applications across the wall. With the proper credentials, users can manipulate, arrange, and interact with video wall content from any hand-held device connected to the network. Haivision's partnership with Constant Tech also ensured consistent integration of equipment throughout these control rooms and other sites where they collaborated.

One of the most significant benefits for Akamai in this control room space comes from the introduction of the new CineAgent servers.

Haivision was excited to develop this new device while collaborating with Constant Tech to collect direct customer insight from Akamai. For example, features such as full touch-screen controls were added to supplement standard KVM controls at Akamai's request. With the implementation of CineAgent servers throughout the NOCC side of this new control room space, users can easily manage dozens of local or web-based applications. Presenters can now focus on the tour they are hosting instead of guiding operators at a workstation across the room. When a client wants to see how one of Akamai's applications works with their web content, the presenter can simply run all of the controls for the video wall through the touch screen interface on their mobile device from any point in the room at a moment's notice.

Having faced multiple issues and limitations with the previous video wall software employed in the control room, users on both the BOCC and NOCC side now have greater flexibility and control with their content thanks to CineNet. Operators can customize layouts, content types, automatic behaviors, and presentation materials quickly, easily, and without in-depth training or technical experience. Between the easy-to-use interface, built-in system redundancies and backups, and brand new CineAgent servers, Akamai's new BOCC and NOCC control room gives them a dynamic edge over the competition whether they're monitoring broadcast integrity or managing network security tools.



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