Gefen KVM connects users to enable controlled learning and recreation outcomes

Executive Summary

A high security correction facility in Australia was installing an in-cell computer and video access system to allow education learning and controlled recreational activities for inmates. 110 centrally managed computers were needed to connect to a workstation comprising of a keyboard, screen, audio and mouse. The "in-cell" workstations needed to provide access to content, internet and additional facilities for remote learning and other activities. Access and availability needed to be centrally managed by correctional services staff based on the security and user requirements.

The Gefen KVM over IP solution met the requirements of the facility to create the system which provided the controlled delivery of access to multiple sites simultaneously using the existing IT infrastructure and avoiding the need for a dedicated audio visual cabling infrastructure.

Challenges

The high security nature of the facility limited the installation options available. The system needed to be developed within the specifications of the existing IT infrastructure.

The correctional facility required a system that allowed the authority to control the content via a remote location across multiple delivery points with varied levels of content access.

Solution

A learning hub was created in 110 locations within the high security correctional facility.

The Gefen system provided a sender and receiver, and distributed a PC signal from a remote location to the learning hubs. The hub would allow the user (inmate) to have keyboard, video, audio and mouse functionality (KVM), while the system disallows user access to the computer hardware which is held at a remote central location within the facility.

All access can be monitored over the IP system and also managed either via Gefen's free software suite as part of the product package, or using a third party software solution.

The senders and receivers connect to the existing "Cat 6" network which employs Hewlett Packard 5120 switching infrastructure. Each of the switchers were interconnected using a standard network structure via the bussing ports to ensure a decentralised switching matrix which can be expanded in the future - the system can grow to be over 16,000 KVMs if required.

The DVI KVM over IP extends DVI, USB, analog audio and RS-232, over a Gigabit Local Area Network. Resolutions up to 1920 x 1200 (WUXGA) and 1080p Full HD are supported. HDMI digital audio is also supported when using HDMI sources and displays with HDMI to DVI adapters.

Local monitoring of video is made possible by the DVI Local Output connector on the Sender unit. The Sender and Receiver units can be automatically or manually configured to unique IP addresses to allow the connection of multiple Senders and Receivers to the same network.

Any combination of Gefen Video over IP HDMI, DVI and VGA Senders and Receivers can be used together to create a "Virtual Matrix", where each Sender can be accessed by multiple receivers.
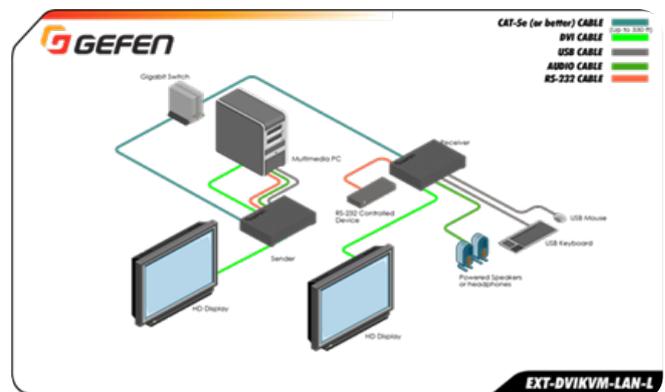
Results

Cabling infrastructure: Gefen's DVM over IP solution allowed the use of existing IT technology and infrastructure

User Management: The system had an open API allowing third party systems to control and manage the routing and scheduling of access

Signal Security: The Gefen solution offered an encrypted signal which stops interception by unauthorised parties

Reliable operation: Gefen provided a secure and reliable solution

Ease of implementation: As this Gefen KVM solution has an open API and uses industry standard technologies such as IP protocol and standard "off the shelf" gigabit switchers, the system was able to co-exist with other facility network demands.