



Exclusive:

## Raritan changes the KVM game

The new Raritan Dominion® KX II is slick, fast, and in total control

ALTHOUGH KVM OVER IP HAS BEEN around for years, it hasn't been perfected yet. There are plenty of players in this game, and each solution has its share of idiosyncrasies that can prove frustrating when trying to fix server problems from afar. Raritan's original Dominion KX line of KVM switches were sturdy and stable, yet somewhat cranky when used over WAN links with high latency. They were certainly functional, but left something to be desired.

When I first received the Dominion KX II, I noted that it seemed basically identical to the first series. Flipping the unit over, however, I discovered redundant power supplies, a few more USB ports, and gigabit NICs. I plugged it into a few servers, an LCD panel, a keyboard and mouse, and fired it up. Much to my surprise, a graphical mouse-driven UI appeared. Even more surprising, it's the same UI found on the remote Web interface.

Gone are the days of the familiar Scroll Lock, Scroll Lock, double tap, and arrow-key port selection. Gone are the text-driven menus at the rack console and stand-alone client applications. This new Raritan UI is slick and fast, whether run from the local console or remotely. KVM connections are no longer limited to a single screen, but can be pulled up in multiple windows, much like RDP



(Remote Desktop Protocol) or terminal sessions. The mouse tracking is much, much better than any previous Raritan product, and the screen calibration is also improved.

### Media here, installation there

On top of that, the new connection UI now permits the use of universal virtual media with the USB computer interface module. Thus, using only the Raritan console, it's possible to do a bare-metal server installation remotely from an ISO image or physical CD/DVD on the local system. Many servers have remote management controllers that can also handle these tasks, but some server vendors such as HP require a premium license to use virtual media and even to use graphical remote console tools. With the Dominion II, that premium need not be paid.

I tested the Dominion KX II over a variety of connections: locally wired at gigabit speeds, wireless on an 802.11b/g network, from a coffee shop across an IPSec VPN, and from a hotel

wireless network across an SSL VPN. I tested the Web client on Windows, Linux, and Mac OS X, with Internet Explorer, Firefox, and Safari Web browsers. In all instances, the console loaded with surprising speed, server console connections were handled with aplomb, and the mouse tracking proved very accurate. With lower-

### Raritan Dominion KX II

Raritan, [raritan.com](http://raritan.com)

EXCELLENT		8.9
Ease-of-use (25%)	9	
Management (25%)	9	
Scalability (20%)	9	
Interoperability (10%)	9	
Setup (10%)	8	
Value (10%)	9	

**COST:** Models start at \$2,995

**BOTTOM LINE:** The Raritan Dominion KX II is light-years ahead of its predecessor, the Dominion KX. The interface is clean and easy to navigate, and the presentation is identical whether you're on the local console or connected remotely. Multiple simultaneous sessions are supported, and so is virtual media when used with the right interface module. All in all, this equals a big thumbs-up for the Dominion KX II.

bandwidth connections, or environments with high latency, you can shift color depth on the fly, dropping from the standard 15-bit color profile to 8-bit color or even 4-bit gray scale to improve speed and response time. These changes happen immediately and do not require closing the console window. Furthermore, all connections from the client to the Dominion KX II are encrypted via SSL.

The new Web UI, which is also Java-based, picks up all the preferences set in the previous version of the remote client, retaining all keyboard macro settings and connection profiles. Unfortunately, the new client isn't compatible with the first-generation Dominion KX switches, and vice versa, but given the features and performance of the second generation, this is a very small price to pay. As for hardware compatibility, the Dominion KX II uses the same CIM (Computer Interface Module) dongles as the previous generation, so upgrading from the Dominion KX to the KX II requires only replacing the switch itself. The one caveat is that taking advantage of the new universal virtual media feature requires the new version of the USB CIM.

As with the previous incarnation, the Dominion KX II offers LDAP and RADIUS authentication. The LDAP

configuration is better in this version, but still lacks a testing mechanism, which makes it tricky to configure remotely. As far as server compatibility goes, Raritan offers a variety of CIMs, including PS/2, USB, and Sun versions, as well as special CIMs that interface with a switching power strip or power distribution unit that permits power outlet management from within the Dominion UI.

### **A KVM worthy of switching**

After working with the Dominion KX II for a few hours, I called a friend who is an IT manager at a company with several remote sites. He's currently using Dominion KX switches and likes them, but says they can be "flaky." I had him log in to the Dominion KX II. His first question was, "What is this?" A few minutes later, his second question was, "When can I buy this?" If my friend's reaction is any indication, Raritan will have many requests for trade-ins. The original Dominion KX series was good, but the KX II series is far better. Oh, and the price hasn't changed.

There are a few nits to pick with the Dominion KX II, but they're minor. The loss of the quick-flip, keystroke-only access at the console is annoying at first, since switching between consoles now requires a mouse click, even at the console. Remotely, it's a nonissue be-

cause several consoles can be opened simultaneously in their own windows. Another wrinkle is the aforementioned incompatibility with older switches. These small issues aside, the solid performance of the core functions of the Dominion KX II show that Raritan has definitely built a better mousetrap. There are no external requirements for normal operation (some other solutions require a dedicated server), and centralized management of multiple switches is available through Raritan's CommandCenter network operating center.

Overall, the Dominion KX II 432 that I tested was rock solid. In fact, the console interaction offered by the Dominion KX II was better than that of some embedded server management processors, which are typically custom-built for the server and integrated into the server's video framework. At some point the concept of the KVM switch may be marginalized by embedded server management, but Integrated Lights-Out cards can be expensive to license or even install, and if the Dominion KX II can deliver a fast and functional remote console from a centralized management framework, why bother?

*Paul Venezia is senior contributing editor of the InfoWorld Test Center.*



For more information on Raritan's Dominion KX II, visit [www.raritan.com/kvm](http://www.raritan.com/kvm).