



Crisis management

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Test drive | Remote console can check up on your network even when it's not running

Controlling network hardware remotely is becoming common these days, but MRV Communications has found a way to combine remote management, convenience and security into one easily configurable network appliance.

The LX 4000T series appliance is a remote console server that uses serial ports over Ethernet to manage devices. This means that anything with a serial port can be managed via the server, even older equipment that more modern network KVM switches can't handle. We tested this theory during the review process.

Devices with serial ports are attached via a transfer cable into the standard Category 5 jacks at the back of the LX 4000T. The unit we tested had 16 ports, but different models in the series can have as few as eight or as many as 48. Our test unit cost \$2,580; models with fewer ports sell for as little as \$1,595, with the 48-port models reaching \$4,545.

Once your devices are connected, you have three interface choices with which to manage them. You can use the Web interface, which is functional and fast. There is also a graphical interface, which takes up more bandwidth but features a lot of nice extras such as color-coded displays showing port activity. Finally, there is a terminal interface that should be familiar to anyone who has configured switches or routers using their console interface.

Most of the console commands are similar to those we have seen in other devices, so no real retraining is necessary. The terminal interface is the most painful to wrestle with but takes up almost no bandwidth.

The reason for the different interfaces is that the LX 4000T is designed to work when little else does. Even if your entire network has failed, you can still manage devices using the 4000T. Besides the obvious way to log in using the Web, there are three choices for out-of-bandwidth communication with the device.

The first is using the local management port, though this would require someone to be physically with the device. If you plug into that port, you can use the full-fledged graphical interface to change any settings on the unit itself or manage any connected device. The obvious problem is that you won't always have someone stationed locally in an emergency.

In that case, it's time for the second interface, which is access via a dial-up modem. The unit we tested had an internal V.90 modem, which we attached to a phone line. Dialing into the device is easy, and even at 56 kilobits/sec, you can use the standard Web interface, and the MRV responds quickly to commands.

An advertisement for Government Health IT. On the left, the text 'Government Health IT' is written vertically in a green, sans-serif font. To the right, there is a collage of magazine covers. The top cover is titled 'A Guide to Public-Private Health Care Convergence'. Below it are covers for 'Government Health IT' featuring 'The health record' and 'EDGE'. To the right of the collage, the text reads: 'To subscribe, advertise or learn more about our integrated media offerings, visit www.GovHealthIT.com'. At the bottom right, there is a logo for '1105 GOVERNMENT Information Group'.

If all the phones are down, you still have a third way to get into the 4000T: a cellular modem. The only thing you'd need is power to the device, which could be supplied from an uninterruptible power supply. You might have to drop down to the least graphical interface at this point, but at least you can get to your equipment in an emergency.

There are also many options for administrators to parcel out access to the device. You can easily set up groups with different passwords and permissions. If, for instance, you have a 48-port device that covers the equipment in three offices, you could give each office manager full access to the device, or just full access to the ports that go to devices within their realm of control. This will prevent accidental tampering with another office's systems, as group commands sent to the device will only apply to the systems assigned to that group.

And to keep outside users from tampering with your systems, all traffic is encrypted to Federal Information Processing Standard 140-2 cryptographic standards. Although you won't see much of it, there is a Linux operating system driving everything in the background, streamlined to be fail-safe and provide constant uptime.

Finally, if you add an MRV 5250/4800 Power Control module, you can plug all your devices into it and even manage the power supply, shutting down servers in emergencies or if they require a reboot.

The setup of our test 4000T server went smoothly. Because we had the advantage of full network access during the setup process, we used the graphical interface, which is good and, at a glance, will tell you everything you need to know about what the 4000T is doing.

Attaching six newer servers to the 4000T took about 20 minutes. Then we hooked up a server running Windows NT that had been in our storage room since 1999. We also connected an eight-year-old dot-matrix printer to the server, proving that anything with a serial port can connect.

We simulated a network outage by simply turning off the hub that the 4000T and all the devices were plugged into. Then we used the V.90 modem to dial in. Using the lowest possible graphical setting, we were able to check the health of each device. Any management function that was possible through the serial port was possible in our testing, even though it was a bit slow because of the 56 kilobits/sec interface.

When coupled with power management and a solid UPS system, the 4000T can be an invaluable shield against being out of touch in a crisis. If you add a cellular modem to back up the standard dial-up, you should be able to get access to your network even if everything else is failing. And that can be a valuable piece of your security puzzle, especially considering the device costs less than \$3,000 for 16 ports.

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