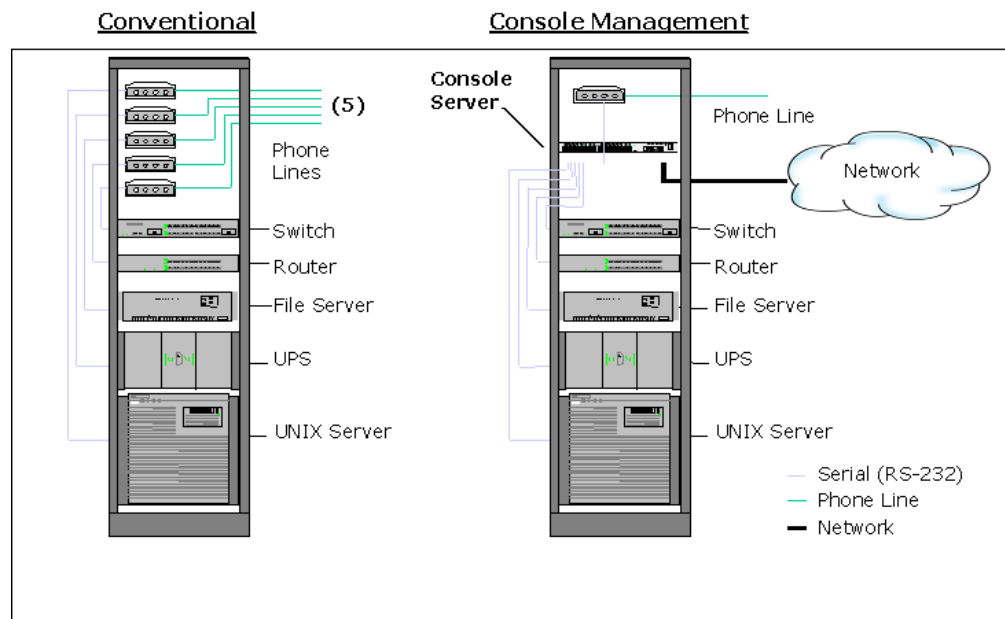


Why a Console Server?

Network and telecom equipment -- such as Unix™ servers, routers, switches, storage equipment and PBXs -- can be managed in two ways. Equipment can be managed through the network using SNMP or software tools and is referred to as in-band management. However, when the network is down or unavailable, administrators need another way to access the equipment and manage it. Most equipment has a serial or console management port that is used for direct terminal connection. This method is called out of band management because it does not require the network to be available.

Using the serial port is an effective way to locally access equipment, but an administrator may also want to access remotely by connecting a modem to this port to provide a dial-up connection. A remote connection means that the device can be managed from anywhere at any time. However, having a connection and modem for each piece of equipment in an organization can be very expensive, requires physical space in the data center, and can be complex to manage. A console server is a cost-effective solution for all of these problems. A console server can connect multiple serial ports from various types of equipment, enabling them to be accessed and monitored from a single point of contact. Console servers also enable access via the network, but can be used when it is down through dial-up connections.



Can Windows Servers™ Use Console Management?

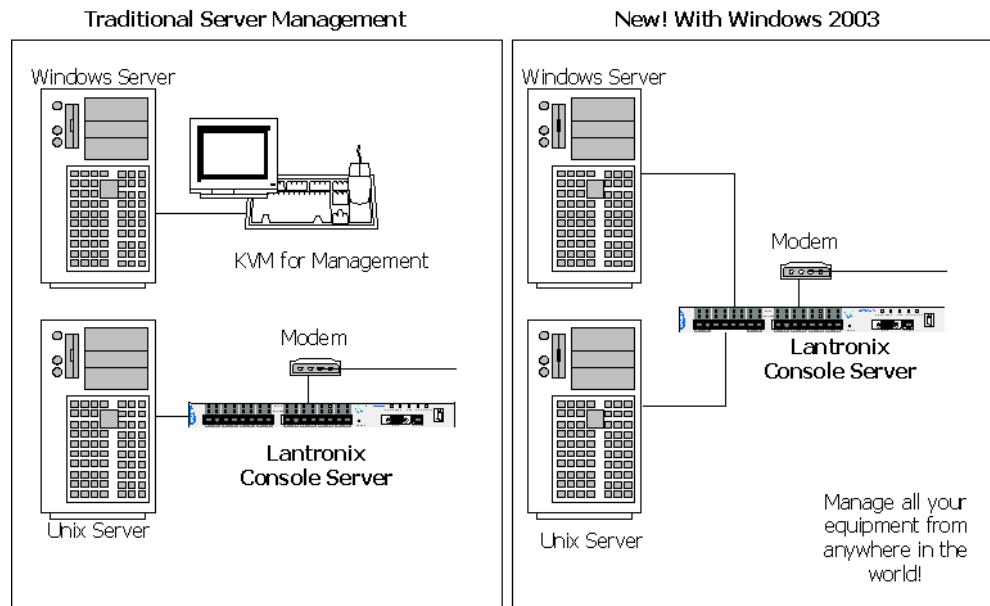
In the past, Windows servers required a keyboard, video monitor, and mouse (KVM) in order to boot. They also required a GUI for management. This requirement meant that these servers could not be managed using

the same console servers as other types of network equipment, resulting in separate solutions to manage Windows servers and everything else.

With the introduction of the new Windows Server™ 2003 operating system, Microsoft has eliminated the requirement for KVM and is now able to boot as a “headless” server. Microsoft has also added new Emergency Management Services (EMS) that enable system recovery through a serial port when the network is down. In this scenario, a Windows server can be managed through the server’s console port using a simple command-line interface. Microsoft recommends using a “terminal concentrator” such as a terminal server or console server to connect multiple servers to a single point of contact for remote management. The benefits of this scenario include being able to manage the servers without having to be physically located as the serial port, more than one administrator can access the servers, and multiple servers can be monitored from one location.

Lantronix Terminal Servers and Console Servers

Lantronix Terminal Servers and Console Servers offer the functionality that Windows 2003 EMS recommends for out-of-band management. Lantronix offers a complete line of products from Terminal Servers that provide basic console access to Secure Console Servers with added security and data encryption features. With serial port densities from eight to 48 ports, customers can now connect all of their Windows servers, network and infrastructure equipment using the same console management system. Console Servers not only reduce costs by consolidating management systems, but also eliminate the need for KVM devices.



Customers who want a single solution for all of their Windows and non-Windows network and telecom equipment can upgrade their Windows servers to take advantage of the EMS features. Using a Lantronix Terminal Server or Console Server, they can reduce equipment and operating costs, minimize network downtime, and add secure remote access to all systems for remote console management.

LANTRONIX®