

SME SOLUTIONS



Solution Brief

REMOTE ACCESS SOLUTION BRIEF

With the increased number of servers located in branch offices and remote locations, along with the desire to limit spending on IT, it is becoming increasingly difficult for IT departments to manage servers in multiple locations and keep them operational.

This solution brief outlines options for IT departments to meet their needs.

Executive Summary

With the increased number of servers located in branch offices and remote locations, along with the desire to limit spending on IT, it is becoming increasingly difficult for IT departments to manage servers in multiple locations and keep them operational. Even more important is the increased dependence on these servers, which affect anything from employees receiving their email to customers buying product from the company online. Every minute a server is down could cost a company hundreds of dollars in lost resources and sales. The solution to this problem is to provide technicians remote access to all of the servers in remote locations. This allows a small number of technicians in a central location to access and troubleshoot remote servers quickly, enabling them to solve the issue in a timely manner while avoiding the expense and delay in traveling to the remote location.

What is Remote Access?

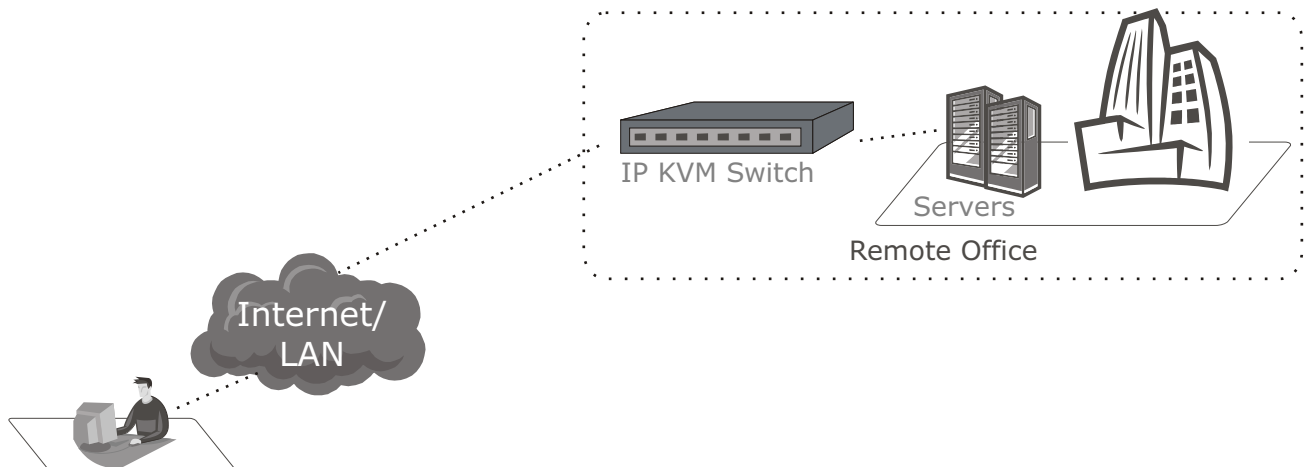
Remote access is the ability to monitor and/or control a computer or network device without being directly in front of the monitor. This includes being in an office down the hall, in another building on campus, at a home office, or in a branch office around the world. Remote access to servers allows IT staff to

access servers via the internet from anywhere in the world, at any time. This reduces MTTR (mean time to repair), response time to critical problems, reduces traveling costs for IT staff, and also eliminates the need to staff IT personnel at remote locations.

Who Can Benefit from Remote Access?

Companies with multiple locations or mission critical servers can benefit from remote access technology. Even if all of the servers are in one location, unless there are IT staff present at all times of the day, a system failure at 2 am will still involve a technician waking up and traveling to the office to fix the problem instead of being able to fix it right from home.

In addition, with a built-in KVM (keyboard, video, mouse) switch, companies with multiple computers in a rack can save space and money by eliminating the need for multiple keyboards, mice, and monitors to control multiple computers by installing a single KVM device.



Benefits of Hardware Solutions over Software Solutions

Remote server access can be implemented in two methods, via a software program installed on each server, or a hardware device (commonly referred to as an IP KVM) which connects directly to the keyboard, mouse, and video ports on each server. The points below outline the advantages of using a hardware device over a software program for remote server access.

- 1) BIOS level access - Software solutions require an operating system in order to run, so it will only work when the operating system is running, and the software is also running. Often times the reason for accessing a remote machine is because something is not working, and it is at these times that software solutions are likely to fail. A hardware solution allows the user to see what is happening and control the computer even when the operating system is not running. The most obvious benefit of this is during the boot up sequence, when the user is able to perform actions such as: access the system BIOS, view the boot-up sequence to check for memory errors and hard drive failures, dual boot into another operating system, and boot into Windows safe-mode on the fly.
- 2) Operating system independent - A hardware solution will work with any operating system as opposed to software solutions which are typically programmed to work with only one or two operating systems. With software solutions, multiple operating systems means installing different software

packages for each one.

- 3) Stability - Unlike software solutions running on a potentially unstable operating system, dedicated hardware solutions are far less likely to crash or hang, preventing access to the server.
- 4) Connect to existing KVM installation - Hardware solutions can be connected to an existing installation of KVMs, allowing access to multiple servers with the addition of just one unit. This saves the user time and money from having to purchase licenses and install the software on all of the machines, and having to access each one individually.
- 5) Save server resources - A software solution uses up precious resources on a server including network bandwidth, CPU power, hard disk space, and memory. A hardware solution operates completely independent from the server, thus frees up the resources for more important tasks.
- 6) Server compatibility - Software solutions need to be installed on the server, which may cause conflicts with the operating system or other software.
- 7) Access to non-networked computers - if the computer is not connected to the network for reasons such as security or testing, it cannot be accessed via remote access software. However, a hardware device is able to access such a machine since it has its own network connection.

Benefits of Hardware Solutions over Software Solutions

1. BIOS level access
2. Operating system independent
3. Stability
4. Connect to existing KVM installation
5. Save server resources
6. Server compatibility
7. Access to non-networked computers

In addition, some hardware solutions, including freedom9's IP KVMs, offer the following features:

- 1) Modem access - In case of network problems, hardware solutions can be configured to use an external modem for dial-in access, which is not available with software solutions.
- 2) Serial device control (Telnet) - Hardware solutions can be connected to a serial device such as a switch or firewall via RS-232 to allow Telnet access to the device, which is not available with software solutions.
- 3) Virtual media - Hardware solutions allow users to map a local drive for use on the remote device, or vice versa. This allows users to remotely install software from a CD in the remote computer's CD drive on the local machine, copy information from a CD in the local machine to the remote computer, etc.
- 4) Web-based access - Some hardware solutions have their own web server, thus any user can log into the host server using a standard web browser. Software solutions require proprietary clients to be installed on the remote client machine as well as the host server, increasing time, complexity, and cost. Another issue is that client software is also operating system dependent. For example, it is unlikely that a Mac client can connect to a Windows host if the software solution does not support both operating systems.

Conclusion

Remote access solutions allow for large reductions in server downtime, travel expenses, and employee resources. When deciding on an implementation, it is clear that hardware solutions provide many benefits over software solutions.

freedom9's freeView IP line of products provide additional features compared to standard other remote access solutions, including virtual media and modem access, for secure and convenient access to servers any time, anywhere.

freedom9 (Canada)

110 Matheson Boulevard West, Suite 400
Mississauga, Ontario L5R 4G7