MACROSTAFF PROJECTS GROUP

This Month's Projects Group Expert Advice:

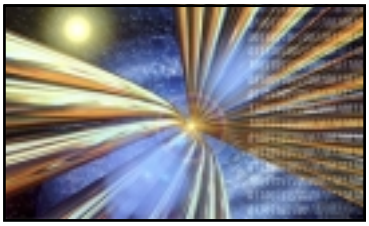
Improve your IT fuel economy

Information Technology consulting you can Trust.

Welcome to the Projects Group February newsletter!

FEBRUARY 2006

If you have a short term project, a migration or need on-going emergency support, give us a call: 425-373-1394 / x131



Call us today:**425-373-1394 x131**

Improve your IT "fuel economy"

Being able to control your servers remotely even if they are powered off means you won't be getting in the car and rushing to the datacenter.

We've all had it happen. A call comes in about a system we manage which is located in a remote location and our first thought is, "I sure hope I can fix this remotely because my day is shot if I have to drive to the datacenter". We attempt to connect to the remote system only to find our worst fears realized - we can't connect.

What's the problem? Did the OS implode? Was it a blue screen or a driver error? Or did a disk controller or Ethernet card fail? It could be almost anything, even the notorious problem: the server was off. So, we hop in the car, drive 45 minutes through traffic to get to the datacenter, find parking, sign in, go through the security hoops, open the server cage and use that highly trained IT expert finger to press the power button. Then drive all the way back. Over 2 hours wasted for 30 seconds of actual work.

One would think that there would be a more efficient way to deal with this problem. Fortunately, there is. **The answer is OOBI: out-of-band infrastructure server management**. Out-of-band infrastructure management refers to the ability to remotely manage a server outside of the normal communication path and completely separately from the host OS.

We would normally connect using a remote desktop or ssh connection over TCP/IP to the local Ethernet interface to the host OS. OOBI uses a web-based or command line connection to connect to a separate interface (either serial or Ethernet) without any interaction with the host OS. This allows us to view the current state of the system as if we were standing in front of the console. We can watch and interact with the bios load and boot cycle, which allows us to troubleshoot all through the boot process. The other great feature of OOBI server management is the ability to connect to the server even if it is powered off! Just connect through the OOBI interface and we can view the status of the server and implement several options that previously were only available if you were standing in front of the machine. We can send a command to the server that emulates pressing the power button. We can even press and hold the power button to turn it completely off. Then we can click to press the power button link again to power the server on. We set this up in our test lab and were excited to hear our HP Proliant server with Ilo (Integrated Lights Out) roar to life when we `pressed the power button' from another room using the out-band-management connection.

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Newsletter Spotlight

Set up new Windows Virtual Servers using SYSPREP

If you need to set up a lot of Windows based Virtual Servers and ensure that they have unique UIDs, use SYSPREP to create a new virtual server installer but don't start it. When you need to create a new Virtual Machine (VM), make a copy of the virtual server installer VM file and HD file and start it. It will run through the setup using the option you configured and create a new server with a unique UID.

How would our scenario play out if we had OOBI management on our failed server? After our attempt to connect to the server with remote desktop and/or ssh failed, instead of getting in the car, we get on our browser and connect to the server via a secure SSL connection, supply the appropriate credentials and from the initial status page we would know that the server status was powered off.

We'd then click over the power management section and click to press the power button, we'd click back to the status page and note that the status had changed to powered-on. We could then click the remote control section and view the server boot up all the way to and, depending on the type of OOBI management system we have, through the loading of the OS. We just trouble-shot, powered-on and monitored a remote system without leaving our desk! Amount of time for this method? Less than 10 minutes.

Ready to get started with OOBI management? Wondering if you already have it? There are two main types of OOBI management solutions: Built-in hardware vendor provided, and KVM+PM (Keyboard, Video, Mouse+ Power Management) provided. Let's explore the two solutions.

All of the main server hardware vendors (HP, Dell, IBM and Sun) offer an OOBI server management system. This usually consists of an extra dedicated Ethernet port and a special chip or card on the motherboard that controls all of the remote control and power switch management functions. Some, like HP, offer the basic OOBI solution as a standard feature. Most vendors offer OOBI as an extra charge option.

The other option is a combination of a KVM and a Power Management system. This solution consists of external hardware devices that connect to the Keyboard, Video and Mouse ports. The servers plug their power cords into the Power Management system which plugs into a management system to control power to the server. You can see that pretty quickly this adds up to a lot of extra hardware.

If you choose to go with the vendor based solution you'll need to plan ahead when making new server purchases as it is not something you can realistically add-on later. If you already have a solid hardware infrastructure in place then you may want to look at a KVM+PM solution for your OOBI needs. **Just keep in mind that you won't be able to remotely press the power button with the KVM solution only**. You'll need to add extra hardware to get the full OOBI experience. If you can plan ahead, definitely go for the built in solution from the vendor. You'll save a lot of money and save time on configuration.

Here's a quick list of some vendors and the OOBI solutions they offer. **Built in solutions**: HP: Integrated Lights Out, Dell: Remote Access Controller, IBM: Remote Supervisor Adapter, Sun: Remote System Control. **KVM over IP solutions**: Cyclades: AlterPath KVM/net (KVM over IP) and AlterPath PM and AlterPath Manager, Raritan: Dominion KSX or Dominion KX and Remote Power Control, Avocent Outlook: DSR Series and SPC.

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