Mike Nelson - SSV Part 1 article

[Optional title] Setting Priorities for Virtualization Success

A question that I get asked almost every time I walk into a shop that is either starting to or has already begun to virtualize servers and applications is "So, what do applications do you recommend moving to virtual"? Even as an I.T. Administrator, upper management and business folks have asked the same question. The generic answer I give almost never satisfies anyone who asks, but in my experience, there really are no hard and fast rules for what you could or should virtualize in your environment.

Setting your priorities for what you will be virtualizing isn't as daunting of a task that some would have you believe. In my experience or the last few years, I have formulated four classifications for applications that could be hosted in a virtualized server environment. I know the names are unconventional, but because I'm an unconventional kind of guy and I don't like using the latest cliché technology terms for most anything I do, I get to pick my own.

1. Heavy Hitters – This category includes the applications that most define as "Tier 1", but also any applications that clearly are on the consistent high end of the speedometer dial for resource utilization. This includes some SAP Landscapes, financial, highly transactional databases, etc. This category also includes any mission-critical redundancy candidate aplications.
2. Hills & Valleys – These are the ones that are all over the board. Most of the time they are utilizing medium to high levels of resources, but they also have their slow periods of barely a blip, although these periods do not last long. Month-end financial and sales applications are my favorites for this category.
3. Smooth & Steady – These are steady apps that may have a spike in certain resource usage, but for a very brief time, and they may coincide with an event such as backups, anti-virus scans, etc.
4. Hardware Lockers – Although very few still exist, some much older applications still demand hardware dependencies for things like license compliance, direct console access, etc. Most of these application versions are no longer produced or even supported, but some shops I have interacted with just cannot part with them for one reason or another, however weak those reasons may be. 99% of these applications cannot or should not be virtualized.

If you are in a situation where getting the most immediate ROI or "bang for your buck" is the visibility you want or need to your virtualization environment, I always suggest going with the quick wins – the Smooth & Steady category. License servers, monitoring applications, patching services, and even most file and print should be considered. Just about anything that has lower-end utilization of any combination of the four cores (RAM, CPU, Disk, and Network).

The top two categories of Hills & Valleys and Heavy Hitters will require more resources, testing, and legwork than the prior ones for obvious reasons. Now some I.T. folks would say that you should not or cannot virtualize this or that, but I don't believe in such a blanket statement when working with this technology. I believe that almost all applications are possibilities and should at least be tried to see what the outcome would be. There may be, however, some things like vendor support issues or licensing issues that may stand in your way of success, which there isn't much you can do anything about. It's best to make sure you find that information out before you invest a lot of time and energy into the process.

One final thing to remember when making the leap to virtualize servers is to cover all your bases, whether you're doing the Heavy Hitters or just the Smooth & Steady, or a mix of all of them. Do your homework and run performance testing and baselines on the physical server and compare them to a test virtual server. Make sure that the application owners or users are kept informed and part of the

process. And most of all, don't be afraid to push back on the application vendors, as they sometimes offer more resistance and offer up more word-of-mouth bad publicity to virtualization than most users do.

Go forth and Virtualize!

In these situations, I do recommend that ample time be given for some performance testing and baselines to occur for these, and actually I highly recommend it if it's feasible to do it for any of your prospected conversions, before they are moved from physical servers to ensure that performance and user expectations are met.

As an I.T. or Virtualization Administrator, you need to consider what types of applications you will be virtualizing in your infrastructure. There have been quite a few articles, podcasts, whitepapers and presentations on what could and should be virtualized and what should not. But, in the end, you need to make the decisions based on your environment and all of the factors that encompass server virtualization like "Green" initiatives, space consolidation, etc.