John Worthington, **ITSM Academy Instructor and Independent Consultant**

Q: When you say virtualization, what are you talking about? Are you talking about virtual technologies like VMware, Java Enterprise Application software, etc.?

A: Virtualization is not just one technology; it combines a number of technologies. When I talk about virtualization, I'm talking about the tipping point -- a combination of technologies. (ref. *The Tipping Point: How Little Things Can Make a Big Difference*, by Malcolm Gladwell) There's virtualization of applications and servers and desktops, for example, and there are opportunities for cost savings in each of those areas. As suppliers beat the drum over all of these (potential) savings, it increases the pressure from the business to do more with less. We have to take this opportunity to explain to the business that there are lots of things virtualization can do, and we need their help to figure out what virtualization can do <u>for us</u>. It's a golden opportunity to engage the business in a strategic discussion.

Q: I would have liked more focus on the requirements or impact to Service Level Management, Financial Management, and Service Design in general. That is where the focus should be shifting with Virtualization and Cloud Computing.

A: Virtualization will impact all ITIL processes. I have been working in this area for several years, and it has revolutionized the way look at IT service management. Service Level Management is a good example. Virtualization and the complexity associated with virtualization can dramatically accelerate things like provisioning; you're able to move servers around at will. Even if virtualization did not add more complexity to an already complex IT infrastructure (it does), without things like change management, capacity management, and demand management, virtualization can cause your service levels to go right out the window. You might be able to keep one service running well, but in the course of doing that will degrade other services.

As for financial management, if you're at the point now where you have cost models associated with the physical environment, the natural question for the business to ask is, "What will the cost of our service look like once we move to virtual? In many companies, the current definitions of services don't include some applications, or some key business transactions. You will need to have that business service well defined in order to do financial management, capacity management, and demand management in a virtual environment.

ITSM remains a package deal.

Q: Any hints on how to get management (both business and service) to produce key service objectives they both can agree upon?

A: This is an opportunity to engage the business in a strategic dialog and talk with them about service management concepts. The business is already at the table. One challenge we often have is that our services have been defined bottom up, and we don't necessarily have a good understanding of what the business process is. You can say, "We need you to help us understand what the business process is." You need the business to help in order to get to the top-down service definition. Don't miss this golden opportunity to wrap IT service management around virtualization. Say, "I can't give you what you're asking in the timeframe you're asking for without your involvement." (or more realistically, "I need your help to do this right.")

Q: I'm part of an off-site helpdesk with multiple clients. How could virtualization help sell our services to our existing clients?

A: From a sales and service perspective, the return on investment for you will most likely come from a reduced cost of service delivery. Whether you choose to pass those savings along to your clients or not is a different topic. Depending on how you implement virtualization, it's also possible you might see improved performance. If the help desk itself is virtualized, its continuity and availability will increase. In fact it should be significantly improved because the virtual environment makes it so much easier to have redundancy.

Q: What are your thoughts on the effects of virtualization as it relates to Change Management, process change, change frequencies etc?

A: Virtualization will speed things up because we no longer have physical constraints. We need to do a good job of defining things like when it is appropriate and possible to move a server without breaking something else. You can use change models to give you some control instead of just moving things around at will. This may require greater maturity in capacity management.

Q: What is a realistic target for VM adoption? I have heard 60% of all services.

A: I'm not sure that a percentage is the right way to look at it. You need to look at what kinds of applications are appropriate for virtualization in your environment, and what risks are associated with it. Be sure to do testing before you move anything into production, and focus on figuring out what the percentage will be for you.

Q: Are best practice targets, e.g. number of virtual machines per server, available in the public domain yet?

A: My answer to that question would be "it depends" on what's running on the servers.

Q: Is there a decision engine that helps define whether a service is able to be virtualized?

A: There are services provided that allow you to bring tools in-house, perhaps on a rental basis. That allows you to do some modeling in the QA environment, test to determine what bottlenecks there are, and then determine the viability and whether changes need to be made.

Q: With regard to integrating virtual system information into the CMDB, do you find companies are federating into the native tool sources (for example in VMware) or using specialized solutions/

A: Integration will definitely be useful, especially for large environments, but you will never have the data all in one place. My burning need right now is to be able to identify performance anomalies. If you can use the monitor to help with discovery and to populate a CMDB, that's great. But what we really need is to identify performance. I'm not a big fan of making things harder than they have to be – they're hard enough already! You need to understand if federation's helping you --- or your vendor.

Q: What do you mean by silos in event monitoring and reinforcing tribal values?

A: We have created culturally distinct organizations, each with its own tools and silo-oriented monitors. So we have, for example, a server tribe, a network tribe, an application tribe, a desktop tribe, etc., and we also have tribal warfare. By having separate tools we're missing out on intelligence that allows these silos to work in a collaborative way. When we take the collaborative approach, we've now changed the behavior of people. It's not senior management and it's not front line staff that usually resist these changes -- it's mid-management, because we're communicating between environments and thereby threatening their roles.

How do you get mid-managers on board, to buy in and see what's in it for them? You need senior management support. If you don't have that, you can take one business area or one service and get a little grass roots effort going. But more often than not, the monitor gets siloed and that dilutes its value. The real value of monitoring is across environments. It also helps to be very opportunistic – when we have a major outage, we bring those services into the fold and monitor them end-to-end so it doesn't happen again

Q: What are your thoughts around a tool for a proper chargeback model in a virtualized environment and its impact to Financial Management in an ITIL model? I am finding that the primary limitation factor in customizing a proper chargeback model for an organization is the information that can be collected.

Although I haven't had a lot of detailed exposure to chargeback tools, do have exposure in collecting data. It can be very complex. Even without virtualization, the number of metrics that can be collected even in a small environment is in the tens of thousands. Knowing which ones you want to collect is key. Your cost model will be based on those. You need a tool that can do discovery and your metrics in order to have a good costing model.

Q: In reality is not VM capital intensive on start up?

A: Again, this presentation was not intended to be a primer on the nuances of virtualization technologies, but yes there are some virtualization technologies that are going to require some analysis and business case (in fact they ALL should). For example, if you're going to a virtual desktop, won't you need capacity in the data center where all those desktops will now run? And perhaps network changes? Of course you will!

Q: You mentioned that virtualization will require better service monitoring tools. What tools do you recommend for enterprise management, specifically for virtualization? Any tools that you like/prefer for medium-sized/enterprise organizations?

A: (Note: this answer departs momentarily from our normal guidelines. Since these questions deal with tools, John was given the okay to mention specifics for this one.) There is a tool from EG Innovations called Expert Assist which you can rent. It can help you determine which things we can virtualize and which we can't. It's primarily for smaller organizations that may not have the bench strength needed, and comes with a certain number of hours of assistance. This tool won best of show at VM World. They don't spend a lot of time marketing around ITIL, to my dismay. I keep telling them they should. This can help you move from silo-based monitoring environment to one of collaboration. I've really seen this work well. In my consulting engagements I tell EG customers and prospects that, in addition to using the tool, they need to be sure they don't miss out on the opportunity to change the culture of the organization.

The only other thing I'll say about monitoring tools is beware of product 'visions' and 'road maps'; make sure you can easily get it in-house and see it work first. Incrementally automating Event Management makes no more sense than incrementally deploying virtualization. As the guy in the white vest in Apollo 13 said, "work the problem, gentlemen."