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Managing Multiple Hypervisors – A Look at a Few Tools

Two years ago I hosted a session at a conference in Chicago that had the topic of managing multiple hypervisors in the datacenter. At that time, it was a topic that really no one wanted to talk about, and was what that the "evangelists" believed was the wrong road for I.T. to go down. Well, today that ideological thinking has all changed and now the former naysayers are now jumping on the bandwagon to say that having multiple hypervisors is actually a good thing. Some 65% of respondent organizations to a recent ESG survey said that they are actively using more than one hypervisor in their environments. Now that almost everyone agrees, what about the management aspect of that situation? What tools are available out there to help the vAdmin manage multiple hypervisors in their datacenters and clouds?

You'll notice in the last sentence of the preceding paragraph I mention "clouds" and not just datacenters. The reason for this is because now, having a private or even public cloud that is virtualized with multiple hypervisors is pretty common. In fact, in some public cloud offerings, do you really know what hypervisor you're running on? Or should you even care? If it is not a managed service, then you should care and should have the right tools to administrate it effectively.

Let us first be clear on what I mean by "management". In this context, I will be talking about tools that are able to perform actual administrative tasks, such as creating a VM, editing settings, power on & off, etc. These tools may or may not have the "other" management features that some folks tout as a full solution, which they really are not, such as capacity planning, performance monitoring, chargeback, etc. Some of these tools are not part of this discussion since they don't perform the basic administrative tasks I mentioned earlier.

In the past year or so, there has been a big push from management vendors to support multiple hypervisors. This is evident in the feature releases and service packs, and even all new versions, of their products that showcase that they can do it all, regardless of the hypervisor backend. Let's take a look a sampling of four tools, some good and some not so good ones, that you might consider when figuring out how to manage multiple hypervisors. Here are just a few:

PowerShell – First and foremost, you *should* learn PowerShell. I say *should*, but it really is a *must*. The "Big 5" hypervisors (Hyper-V, vSphere, Virtual Box, KVM, and XenServer) all support it in one way or another, and Hyper-V pretty much relies on it for everything. VMware even has a dedicated development team that does PowerCLI (their PowerShell interface) work. The speed at which you can execute administrative tasks with PowerShell is really quite amazing, and it is a very flexible and scalable task based command language that could be adapted for just about any platform. Another aspect of this is that many of the hypervisor management

products on the market today actually use PowerShell behind almost every button push in their software.

System Center Virtual Machine Manager 2012 SP1 (SCVMM) – Hands down, this is really an awesome product. It has evolved from being strictly Hyper-V centric to being able to manage XenServer and vSphere, by using PowerShell and API's. It is a fully featured product, and it has some years of maturity around it. It works hand in hand with the other System Center products (especially SCCM) and is a very good all-around hypervisor management tool.

VMware vCenter Multi-Hypervisor Manager – When I heard about this product being introduced at VMworld 2012, I just about fell off my couch and dropped my ping pong paddle (in the "Hang Space" at Mascone)! VMware was actually using the words "heterogeneous hypervisors" in the same sentence as one of their products. This has never happened before, ever. This product is a module in vCenter that allows for third-party add-ons to manage other hypervisors. Now, what that means is, that VMware isn't actually creating the tools for you to manage multiple hypervisors, they are just giving you the means which to add them to their management product, vCenter. Not really a solid tool, but rather one that relies on other folk's software to have it work with the other kids in the sandbox. Nice try VMware.

HotLink SuperVISOR – Winner of Best of Show at VMworld 2012, this product is a pretty cool implementation of technologies. It can manage vSphere, XenServer, Hyper-V, and KVM hypervisors and can perform many quick administrative tasks with ease. The biggest drawback to the product, in my opinion, is that it requires VMware vCenter to run. So that means that you must have vSphere in your environment to use the product. Try again HotLink, and use a standardized platform instead of a vendor specific one next time around. You will get more customers, I guarantee you.

As you can see, this is no way is an exhaustive list of available software to manage multiple hypervisor environments, but rather just something to get your team started on if you're going to venture down that path. The facts are pretty clear and they say that having multiple hypervisors in your own datacenter or in your public clouds is the future we face.