SSV Article

Automation Orchestrators Everywhere!

Not too long ago, Microsoft (quietly) released its latest offering for the System Center Operations Manager Suite of products and called it System Center Orchestrator. VMware has had their Orchestrator product out since late 2011 - early 2012, and Citrix has had their Workflow Studio out for years. There are other software vendors choices out there in the automation space, but let's focus on the core three, Microsoft, VMware, and Citrix. Let's have a quick look at the three and how they may or may not help you in your environment.

In my opinion, the software title of Orchestrator is really just another term for automation management. Sure, it may include a bunch of other pieces and parts such as workflow management, version control, application integration, and more, but in the end, it's still all about designing, implementing, and enabling automation in the data center. Of these three products, they all do things pretty much the same, but with different terminology (of course), processes, and some limiting factors in scalability and use.

[Citrix Workflow Studio](#) has been around publicly since 2010. It really started out as a very difficult to use and obscure offering from Citrix that really only the development side of the I.T. house took notice of. Citrix did not really market it to the Administrator at first, but more quietly pushed it onto the folks who were scripting and using the SDK to perform some small automated processes. With the advent of more infrastructure administrators learning and using PowerShell more, it quickly became something that those folks wanted to have a look at and see if it provided some use in their environments. I remember attending a SBC conference in Chicago in early 2010 and watching as a presenter who was using a pre-release version of this product fumble through its installation and integration with his programming tools. It was quite a bit of work to get it integrated and was apparently frustrating to even the programmer type folks that were in attendance. That said, the product has evolved to a much more integrated and useful offering within the Citrix Delivery architecture, but it is still limited in overall flexibility as compared to Microsoft's Orchestrator. And that may be on purpose, as it is my belief that Citrix never really wanted to make this application offering a complete "Orchestrator" type product, but rather a more targeted offering for Citrix Administrators to automate their XenApp, XenDesktop, XenServer, and Netscaler platforms and environments and to basically stay within those boundaries.

VMware introduced their Orchestrator product as an automation platform for vCenter, calling it "[VMware vCenter Orchestrator](#)". The product naming infers that the product is directly tied to the vCenter management software and it is a requirement for it to function. This type of integration basically blocks the small I.T. shops that do not have vCenter from using it, which is a huge mistake in my opinion. The product has been updated along the way to have even tighter integration with the vCenter client, specifically the proposed final client roadmap destination of the vCenter Web Client. They have recently expanded the product to focus more on the "cloud" aspect of their product offering, and by adding a rather large library f pre-defined workflows. As with the Citrix product, this offering is solely focused on VMware technologies and their third-party integration partners. It can be installed as a virtual appliance (a delivery model which Microsoft nor Citrix has really grasped onto and I do not know why) or on a standard server install. As a note on competitor interoperability, VMware states that they have "an open and flexible plug-in architecture", but they still do not allow you to manage other competitors' workflows or infrastructures. I believe that this is a critical mistake on their part moving

forward to the multi-hypervisor datacenters of tomorrow. I would encourage you to read a book on the Orchestrator product titled "Automating vSphere with VMware vCenter Orchestrator" that was written by a well know VMware contributor, Cody Bunch, as it contains a wealth of helpful information and excellent tutorials on how to effectively use the product to its maximum potential.

The new Microsoft Orchestrator was introduced with the System Center 2012 product line launch last year, and Microsoft was seemed very low-key about it. While during their launch events, they focused on the new versions of their Virtual Machine Manager and Configuration manager product lines, and kept the Orchestrator product peeking out from the shadows. It has since become a strong selling point of the System Center Suite, with everything moving to automated scripting with the focus being on using PowerShell, the Orchestrator product embraces that and even adds multi-vendor interoperability, with being able to handle VMware and Citrix workflows, and also multi Operating System, which allows for the automation of other OS's beside Windows (a huge step for Microsoft). VMware and Citrix have already embraced PowerShell as the defacto standard in scripting automation for their products, and since it is a Microsoft created language, the 'Softies are taking advantage of that completely and integrating it all into a single product. In my initial testing, it really has the potential to be a single pane of glass for all your automation needs. For more technical information, I highly encourage you to visit the TechNet Center on the topic, as well as take a quick run through a Virtual Lab at the TechNet Virtual Labs site. Without question, the best resource for in-depth technical training on this and all the System Center technologies can be found at the Microsoft Virtual Academy site. Why Citrix and VMware do not offer this type of virtual hand-on labs service to promote their products really makes no sense to me.

I am sold on automating just about everything in the data center, as it only makes my life easier and leaves me time to try out and learn about new things. Some I.T. folks feel that this type of automation is taking away from their Administrative jobs and eliminating the need for hands-on manual intervention, which they feel reduces the need or the want for their skills. I think of it as just the opposite, that in fact, more highly skilled people will be needed to design and implement these complex workflows to ensure more error-free and self-healing automation in the future. Don't think of using products such as these as a bad thing in terms of your profession or career. Rather, think outside the box and imagine the opportunities.