Mike Nelson – SV article

Making the vAdmin's Life Easier with vCenter Orchestrator

The vCenter Orchestrator product from VMware hasn't really gotten a lot of airtime in the past couple of years (yes, years) it has been available, but this is quickly turning around and it is now one of the premier value-add products for vSphere 5. It's all about automation, and coupled with PowerCLI scripting and powerful Plug-in's, this is truly becoming a tool that every vAdmin should learn and no vAdmin should do without.

I have to start this article with a word of caution though. The Orchestrator product has a learning curve, and for some, a steep one at that. Understanding how workflows, tasks, actions, parameters, and more come together to create an automated solution enabler is crucial to having a complete understanding of the capabilities of what Orchestrator can do. In other words, if you want to dig deeper than just using pre-defined included or downloaded workflows, you will need to do some reading (more on that later), some searching, and some trial and error experimentation to fully grasp how things work on the inside of Orchestrator. I personally think that in the end, when you're running your own workflows and tasks, it really was time well spent.

Orchestrator is delivered as a virtual appliance by VMware, a standalone installer for a Windows server installation, or as an add-on install to an existing vCenter installation. I personally prefer to use the standalone "vCO" Appliance since you don't have to worry about setting up a separate database or adding more services to your vCenter installation, or creating a new Windows Server instance just for Orchestrator. The vCenter add-on and standalone installer are really good options for larger environments, but really unnecessary for small to medium deployments. The installation of the appliance itself could not be easier, just download the OVF and VMDK disk file and import it into your vCenter. I won't go deep into the installation itself or the different options available as I would suggest reading the official VMware documentation or doing a Google search and you will find many tutorials, videos, and posts on it.

Once you have the appliance fired up, go to the web page of the appliance and download the Client Installable. The optional Web Client is mainly for creating and modifying workflows and administrative tasks on the Orchestrator, while the Client Installable will give you more complete control in your tasks, workflows, and all the aspects of Orchestrator. Think of it in the same way you think of the vCenter Client – the Web Client is good, but the Local client is much better. Also, don't forget to run the Orchestrator Configuration, as you'll need to do all the general configuration before you can connect via the client. Again, I would refer you to the documentation or a good Google search to get through that.

I'm not going to get into how to do specific things in Orchestrator, as that would take quite a long article (or perhaps a book? Read a bit further to find it), but rather offer up some information on a few cool add-on's and workflows that should make your life easier when it comes to performing routine (and not so routine) administrative tasks and troubleshooting in your vSphere environment. At this point, I would be doing you a grave injustice if I didn't take a moment to mention a fantastic new book that has been put out by Cody Bunch called Automating vSphere: using VMware vCenter Orchestrator, which is now available. It is a terrific book that highlights some of the best configurations, scripts, and tips for using Orchestrator in your environment, and highly I recommend getting yourself a copy. Cody's blog contains a wealth of information on Orchestrator, as well as other VMware topics. Not only does his book have some great tips and tricks in it, but it also gives you a much needed complete overview and detail into using the Orchestrator client.

For Plug-ins, there are several offered for download from the Orchestrator site at VMware, with documentation for each. You'll definitely want to install the PowerShell, Active Directory, Update Manager, SNMP, and even the SQL (if you use SQL DB's) Plug-in's and see what the uses and capabilities are. In the Plug-in documentation are some good workflow and task examples to get you started. Try the VIX Plug-in also available from VMware Labs. There are a few third-party vendors that have also created some plug-in's that are worth checking out if they apply to your environment:
NetApp (still in beta)
Infoblox
EMC Compute-as-a-Service
Radware

Workflows are the next step. There are several included in the Orchestrator installation, with each Plug-in, and already created and compiled ones on the Internet. One site that collects such workflows is VMware Scripting, and you can download them ready-to-run in your environment. The VMware Orchestrator Communities site is also a great spot for workflow downloads and general information. Automating tasks such as shutting down a VM, adding RAM or extra vCPU's to it, and then having it start back up, is really the core of Orchestrator. But it can be expanded to so much more than that, including branched workflows, integrating scripting, automatic deployments, and much, much more. I highly encourage you to visit the vCO Blog, which is the defacto center of the Orchestrator Universe at VMware, for more information, tips, and tricks on Orchestrator. Finally, I found this workflow example from virtuallyGhetto which integrates an Orchestrator workflow into a product called Wavemaker (acquired by VMware and now Open-Source!), which produces a simple web application to the end user for the automation. A really cool idea, and just seeing the possibilities makes a vSphere "Self-Service" web application come to mind. Hmmm, time to get coding!
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