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Citrix XenServer Administration for VMware Admins -- Part 2

In my previous article on XenServer Administration for VMware Administrators, I touched on some of the differences between the two products and covered some basic functional differences. In this article, I'll give some more information on the XenServer CLI (Command Line Interface), the XenServer Powershell Cmdlets, and some other administrative functionality built into XenServer and the XenCenter Client.

The XenServer CLI should be familiar to anyone that has used a Linux command prompt in the past. Even VMware administrators are now getting into more CLI operations with the advent of the vSphere Management Assistant (vMA) for ESX and ESXi, as well as scripting with the PowerCLI. Of course, the XenServer CLI has it's own command language, as with any of the others I mentioned, and it will require some consistent looks at the reference documentation to get a good handle on it. The XenServer Administrators Guide Appendix A provides rather complete information on the use of the "xe", as it is called in the Xen World.

It should also be noted that not only is the "xe" CLI installed on each XenServer host, but it is also installed on the Windows client when the XenCenter Client is installed. The command "xe.exe" is used identically to its Linux counterpart, without having to login to the XenServer host itself. With this CLI, you can manage all of your hosts, gusts, networks, storage, etc. all right from the command line of your local workstation. You should also download the XenServer Cmdlet Setup to obtain the Powershell cmdlets for XenServer and install them in your local management workstation (you will also need to run a .NET install utility to get it registered, as noted on the download page). Similar to VMware's PowerCLI, it will provide with some core cmdlets for managing the environment within Powershell. There is still work that needs to be done on these, however, as there are only a few cmdlets so far and their naming is a bit confusing, but I am hopeful it will get better over time. If you use the Powershell cmdlets, I highly suggest referencing The Circle Of Expertise Dev.com site for much more information and samples.

The basic syntax of the CLI is in the form of "xe <command-name> <argument value> <argument value>". In other words, whenever you are creating a CLI command to do something, it always starts with "xe" and then the command you wish to do. As an example, "xe cd-list" will list all the CD's and/or ISO's on the current XenServer host or pool. Another example would be to list out all of your virtual guests (XenServer doesn't call them "guests" like VMware does, they refer to them just as virtual "machines"), which is done by issuing a "xe vm-list" command. In order to get any real useful information from that command though, you must pass parameters to it to get the detail of information you want, and these parameters can create some very long command lines. As with very long command

lines comes the inherent fat-fingering of syntax, creating scripts is a much better solution.

Another important thing to note about the CLI is that XenServer uses some terminology in their commands that could cause you some confusion as compared to VMware. For instance, they use the term "VDI" to reference the Virtual Disk Images" and not the common SBC industry term for "Virtual Desktop Infrastructure". A xe command that creates a virtual disk may seem misleading since it uses a "VDI-Create" syntax, which some VMware folks might interpret as creating a virtual desktop. I've had more than a few of VMware Admin folks ask questions on that and admit their confusion. Other terms that are similarly confusing are the VBD (Virtual Block Device), which is the connector object between the VDI and the virtual machine and the VIF (Virtual Network Interfaces). Read up on all of these in the XenServer Administration Guide linked above or visit the [Xen.org documentation site](#) for more information.

And, let's not forget about the XenCenter Client either. The client will allow you to do some administrative tasks, but not all. It is a very "thin" piece of software that gives you the basics of administration and management of XenServer hosts and pools. There are a couple of things worth noting with the client, specifically the use of "Tags" and its alerting capability. Tags, as they are called, are simply an avenue into the API inside XenServer. By creating Tags, you can enable plugin-ins, similar to vCenter Plug-ins, and other functionality only available via the API. The alerting capability inside the XenCenter client is meant to be supplemental to what alerting is built into XenServer. Remember, XenServer was built from the ground up to be run without a management console or client, so all of the functionality is built-in to the hypervisor itself. The XenCenter alerting expands that alerting to more metrics and makes them easier to configure than via the command line.

All in all, it is I believe that some VMware Administrators will have an easy transition to administrating XenServer, if they are comfortable with using the CLI and the limitations of the Powershell cmdlets that are available, and the XenCenter Client tool. Most will have more of a learning curve ahead of them if they have been born and raised on the GUI for administration and for some, have never even seen a command line. In those cases, those folks need to come up to speed quickly as their hallowed VMware is heading in the same direction with ESXi and the vMA, and you always want to have the broadest knowledge set for any career opportunity that comes along.