

The Linux Leap of Faith

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It is easy to sit on the Linux bandwagon and shout about how running Linux could solve all your problems. It's also easy to see that this just isn't really true. Sure, in the hands of a Linux savvy tech, the Linux operating system can seem to be just as functional as it's Microsoft counterpart. However, talking the talk is one thing but walking the walk is a whole different story. Linux is not for the faint of heart. There have been loads of advancements when it comes to the ease of use argument but there is still a long way to go for Linux to be considered as a major player on the Desktop.

Deploying Linux based desktops across a small business could prove to be a logical direction to take. Typically, small business IT needs could be met using a Linux based solution like Ubuntu. Say you have 5 client machines and a server. You could setup network shares on the server and configure the clients to automatically mount them with NFS or whatever. Printers could be configured on each machine along with application sets that would include office based software. This network would be easy to maintain based on the ease of system updates when it comes to Ubuntu. This system would also be fairly easy to migrate users onto with a minimal amount of training. This setup would run nicely for both the business and the network administrator and would require minimal system administration. That's great for the small business but there is a problem with scaling this solution to larger deployments.

When you try to apply this same strategy on a larger scale it starts to fall apart. The small businesses will have each user owning thier own computer so all the authentication would be local through password files. Imagine if that 5 node network now needs to be 100 nodes. The installation and configuration is now more time consuming for the initial setup. Touching each of the 100 machines isn't really that great of an idea. Now you could go and create a bootable image with your configuration that would easily deploy to all 100 machines. Then you've got the desktops setup and ready to roll. There is now another problem and that is with user authentication. The small network used local machine passwords but the larger network will require the centralization of user information in order to ease the burden of administration. You could use NIS or some other LDAP server like The Fedora Directory Server

This situation starts to introduce the problems you will find when attempting to deploy larger linux based networks. Now you have an LDAP server you will have to setup network shares and everything else that users need. Applications are still controlled on a per machine basis. This means you will have to rely on users to perform updates or apply them yourself to all 100 desktops. You could probably setup some script like clustershell to run ssh commands on all your systems at once. Now you have Desktops, LDAP, and home brewed workarounds to manage your network of Linux computers. You can see this is starting to get ugly. On the small network it wasn't that big of deal to touch every machine. On the larger network it is becoming more difficult to manage the machines, users, and configurations. Sure there are tools that exist such as cfengine and puppet which can be used to avoid developing something from scratch to fit your needs but these tools don't quite solve all the administration needs.

I recently wrote an article about the lack of centralized management tools for Linux and what some of the features should be if one was developed. After reading some of the posts users were submitting regarding discussion on the subject I was introduced to the Ubuntu Landscape Project. Landscape looks like an attempt to overcome some of the distributed administration problems encountered by larger organisations. Landscape provides a centralized management console to monitor users, machine performance, and software packages among other things. While this service will cost you about \$150.00 per server per year it does look like it provides quite a few features. I am somewhat skeptikal at the robustness of features that Landscape can provide but it looks like a step in the right direction when it comes to managing large scale Linux deployments. Landscape looks to be pretty young and I'm sure it will grow in features and usefulness in the days to come.

The key to mass adoption of Linux desktops relies upon the ease of deployment and administration. The administration overhead for a Linux based computer is generally much lower than that of it's Windows counterpart. Virus, Malware, and the end users ability to crash a system have historically plagued the Windows desktop. However, most programs are designed to run on x86 based Windows operating systems. Specifically, mission critical applications which businesses use to conduct business. Regardless of the number of open source equivalent programs, companies typically have a few applications that keep them tied to Windows based operating systems. These limitations might be overcome with emulation programs such as wine but that isn't always the case.

The economic downturn has brought us more stories about organizations taking the Linux leap of faith. The fact that IT spending is down means that companies have to make the most of what they have and stretch the dollar as far as possible to keep that competitive edge. The spending slowdowns are impacting hardware purchasing which means that

in some cases minimum requirements cannot be met when considering the latest offerings from Microsoft. These older machines aren't going to be phased out any time soon so the need to get the most out of existing hardware is greater now than ever before. Linux in theory could be a drop in replacement for companies looking to cut back on software licensing costs.

Linux adoption is greeted with resistance from all angles of the organization. The end users will always complain about change regardless of the benefits gained or lost. The system administrators will also be opposed to Linux deployments due to lack of understanding or lack of wanting to understand. The decision makers of the IT department might also be afraid of the percentage of savings associated with switching to Linux based solutions. This could come in any number of forms. The skeptical view of "If it's too good to be true then it probably is..." or maybe the fear of loosing large operating budgets for the IT department due to no longer needing as much revenue to operate as it used to. There are usually a few knowledgeable techs that understand the benefits that could be leveraged by utilizing such a tool as Linux and Open Source. The old theory "Fear of what one doesn't understand" reigns true throughout IT departments everywhere. Without the constant break, fix, repeat scenarios the work load decreases which in turn makes people worry about job security and creates the anti-Linux mentality. I can understand this view of not wanting to switch from what is familiar to you over to a whole new world that is not understood. I mean I wouldn't want to switch over and have to support Windows computers so I can see why they would feel the same way about Linux.

I recently read an article about the French police adopting Ubuntu and saving millions of dollars in the process. Stories like these seem to pop up all the time but sadly the majority of these seem to come from outside the united states. Countries like India, Japan, China, and others seem to be ahead of the United States when it comes to Linux adoption. The Chinese have mandated the use of Red Flag Linux in Internet Cafe's. The Cuban government has also been looking at Linux as a way to free itself from reliance upon US based Microsoft operating systems. It's not just the communists that have been taking the Linux leap of faith. Brazil has even taken the Linux Leap in large numbers within thier schools. German universities have been embracing the Linux desktop for a while now. The United States also have educational organizations which have taken the Linux leap. Sadly though, Linux leaping can have some consequences .

Alot of open source suporters were excited about the direction the government would take under the new president when it came to software. The Obama camp ran LAMP systems to host thier website during the campaign. Now it seems, with the appointment of an ex-Microsoft executive to be the Department of Homeland Security CIO most of those thoughts have passed. The Linux leap can begin with a few steps which can then turn into a full out run. Regardless of your business, ignoring the wide range of benefits which Linux can deliver should no longer be an option. Create a strategy for taking the Linux Leap of Faith or find yourself even futher behind once your peers inform you that they already jumped.

Linux..... It's not just for geeks anymore

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