POD 9

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* + 1. This assignment was important because we got a hands on experience configuring, troubleshooting, and maintaing a network. We were able to see and understand first hand how a network is setup and how it functions. It is important to take the concepts that we learn in the classroom and apply them in a real life atmosphere.
    2. Basically, we were given three barebone computers in which we had to setup and configure the operating systems and network. Our first step, was to install Ubuntu 10.10 Maverick Meerkat on the first workstation. Then, we proceeded to install Windows XP and Windows Server 2003 on the next two workstations. We then were required to connect all three workstations via ethernet to the breakout box which was connected to the patch panel. We had to install the drivers on all three computers after which we started to configure the network settings on the machines. We had to set the internet protocol addresses of each workstation and the subnet mask as well as the DNS address. We then had to ensure than the windows firewall was turned off on the two Windows machines.   
         
       After the machines were configured properly we had to setup the router. We used the hyper terminal from the Windows XP machine to access and configure the router. We had to set the IP addresses of the two ethernet interfaces and enable RIP2 and run it on the networks. We also had to set the default route for the packets to reach the internet. We had to set up the Active Directory Domain Controller on the Windows Server 2003 computer and then we had to set up the DNS.   
         
       We had the XP machine join the domain and then we had to check our network for connectivity. To do so, we each sat at a different machine and via terminal, began pinging the other machines, the router, and the network backbone. After we confirmed network connectivity, we then completed the task to share a folder from the Windows 2003 server. We then installed AdminPak on the XP machine and created the non-admin users.  
         
       We then established a remote connection to the Server 2003 machine from the XP machine.  
         
       **Electives completed:**We setup a mail server and clients, via Outlook as clients.  
         
       We also enabled SSH and were able to access the Linux machine via Putty on the XP machine.  
       We then used the smbclient command via the Linux machine to access a shared directory.  
         
       We also added the application server role to the 2003 server machine.  
         
       We configured terminal services on the 2003 server machine.   
         
       We also Established an Organizational Unit within the domain.
    3. As a team we learned many valuable lessons. We learned that it is always necessary to test your cables to make sure that all of them work before configuring the network so that you do not have to go back through and find the bad cable after the network is configured. We also learned many great troubleshooting techniques by reading the lab guide for possible errors but only after we tried to figure out what we did wrong without the guide. We believe that looking at the lab assignment with only using the lab guide for reference was a great idea. We learned how to find problems by ourselves and if we could not figure something out we referred to the lab guide. We learned not only about the physical properties of a network but we also learned about the internals of the network. When setting up the mail server for some reason we could send but not receive messages. We learned that sometimes it is best to just start over rather than spending more time troubleshooting things when it is as simple as setting up a mail server. Now we understand how a network works in and out.   
         
       We learned that we have to communicate well with the group so that if one person did something on their own the next person did not come in and repeat what had already been done. Another lesson learned over the course of this assignment was that team dynamics do not always work because everyone has different schedules and sometimes group members don’t make a very valiant effort in communicating with the rest of the group.  
         
       Overall we learned a lot from this assignment, everything from good communication to getting a great hands-on experience with a network. This assignment was one of our favorite assignments that we have had at Radford University due to the hands on experience. We would love to expand and do more assignments similar to this.
    4. The only suggestion that we have is to make the lab guide a reference. We feel that most groups followed the lab guide step by step, which made the assignment easier. If you encourage students to only use the lab guide when they are stuck on a problem we feel as if there is more to learn that way because not only do you learn.
    5. All in all, this lab has been a great learning experience for all of us. We got to work as a team in what felt like a real life situation which is exactly what we need for when we graduate. We got to troubleshoot and learn what things can go wrong and how to go about fixing those issues. Also, our pod got a first hand look at dealing with team dynamics and how we need to work to have everyone work cooperatively together. Would look forward to another experience like this.