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Good day Faster Computing and thank you for taking the time out of your busy day to hear why migrating to the Red Hat distribution is the best solution for your needs!

I am glad you were convinced enough through my presentation to move forward in improving your operation. As stated in my presentation, Red Hat would be prime choice for an industry like this. Since its birth, it has already thought steps ahead of what it was then to what it is now. Because it runs its system on an enterprise level for businesses, it just clearly makes sense. You will have all the necessities to have your network, equipment, services and software run smoother and prepare you for future ideas like cloud computing. Plus, you will not have to worry about reliability, sustainability, security and ease of use as the main highlights of Linux are all of those. To conclude, it's a valid case why so many big industries use Red Hat specifically when it comes to IT and computer operating systems because they know they get a premiere system on their side! Below are some questions asked and I've answered them in hopes to ease your mind on your decision.

- **How will you implement security in the Linux systems?**
    - To have the most efficient operation, sometimes the best way is the simplified way. We will migrate all hardware to the Linux system. To start, we will take whatever servers you have and convert them to the Red Hat servers, this will be the foundation for your infrastructure. There will be one additional hardware needed for each workstation, which is a token reader. We'll have all personnel accounts transferred over to the new system and add a new way of login and authenticating them. We will assign each account with a certificate for authentication. Thereafter, the process will start by issuing tokens (or cards) to each user and having each one create an 8 digit pin as they're assigned. They insert their token in the reader at their workstation and type in their 8-digit pin, verifying the 2-step verification. This is called the certificate authority method.
    - To continue, we will incorporate VPN, or virtual private networking, to protect intruders from locating you on the network and stealing vital data. This method allows you to connect directly to your networks VPN through a login process and "mask" your identity from any intruders. As some users travel, mobility can create an issue with trying to access work. To solve this, we will add Secure Shell, or SSH. This will allow protection for all users who are away from the work center to use their company issued laptop to access the server

to continue their work. SSH will create an encrypted tunnel once logged in so they can continue any work with confidence knowing attackers can't infiltrate.
    - Among your servers, we will setup virtual database and file servers to host all files, software and other assets within the organization. With the file server, it will act as a share drive for all users to store all files rather than saving it on their local drive at the workstation. This prevents from possible file corruptness, accidental deletion of files and gives you the open space to access it when needed wherever you are. And because you will be accessing it from an authorized device, you will have the continued protection with SSH and/or VPN to transfer the data.

- **End users have expressed some concern about completing their day-to-day tasks on Linux. How would activities such as email/web browsing work? How would they work with their previous Microsoft Office files?**

    - One of the major day-to-day activities are web browsing. Almost everyone is familiar with the major browsers such as Google Chrome, Microsoft Edge, Firefox and Safari, and because of that Red Hat tests against the current versions of each browser and when its approved, will be allowed to use on all workstations. The biggest requirement to ensure security defense is having 256-bit encryption in the SSL, or secure sockets layer, protection.
    - There are different ways to have e-mails working within the network. As long as the Mail Server is setup on Red Hat with the following parameters: Mail Transfer Agent (MTA), Mail Delivery Agent (MDA) and Mail User Agent (MUA), you can use mail programs such as Claws Mail to send/receive e-mails. You can also setup IMAP and POP3 protocols to not only access e-mail remotely, but to access your e-mail on Windows workstations. Also, Windows can use Claws Mail as its software works on all three major Operating Systems: Windows, Mac and Linux.
    - Microsoft has made it easy to integrate its Office programs such as Word, Power Point, Excel and Access to other operating systems, including Linux distributions. Installation of the software should be seamless, and all users should continue working on each program as normal.

- **The current Windows administrators are unsure about administering Linux systems. How are common tasks, such as process monitoring and management, handled in Linux? How does logging work? Do we have event logs like we do in Windows?**

    - Logging will not be an unfamiliar thing with administrators. The only understanding when learning the syslog protocol from Linux is the number codes and what they mean. Admins would use the rsyslogd program to monitor and log events as directed and uses the /etc/rsyslog.conf file to set parameters of events to listen for and handle. To make log entries, you can utilize the logger command-line tool for this process. But most log files are stored in the /var/log directory.
    - Viewing and managing processes is still manageable in Red Hat. Admins will use the ps command-line to view processes on a system. Learning the new commands will execute the same as if it were done in Windows. When you want to terminate a process, executing a certain command will do so. This is all of course if the traditional command-line typed in the terminal is the way they run it. The modern way, similar to Windows Event Viewer, would be the

Red Hat Process Automation Manager that gives real-time monitoring allowing Admins to monitor any errors and have a fix for them.

- **Some folks in IT raised questions about the Linux flavor that was recommended. They would like to see comparisons between your recommendation and a couple of other popular options. What makes your recommendation the best option?**

    - Red Hat is the premium choice for professional settings as it promotes higher and tighter security features, in my research. Not to say others don't work well, Red Hat has been around since the beginning, so it has a head start in perfecting its system. CentOS, which is similar to Red Hat, is a more of an introduction into the enterprise level of the Linux system; and it's free. With Red Hat, there are subscriptions, but it is well worth it long term. You also have Ubuntu, which is also free, but it is more of a novice user who just likes to tinker with the system and learn. There is also Fedora, which is sponsored by Red Hat, but its greatest feature is the willingness to grab the newest software to test out, like a beta tester. But in your operation, I believe having the polished structure of Red Hat will ensure a no fail policy for your business.

- **How does software installation work on Linux? Can we use existing Windows software?**

    - Updating Linux with any patches will be acquired with your subscription. The servers will be linked with the Red Hat satellite servers and if any updating is needed, it will automatically send it to all subscribed servers and then pushed to all machines within the servers' networks.
    - The concern of having to learn new software arises when they have to move over to a new system. Thankfully, companies such as Microsoft have allowed their software to play nice with the Linux distribution. We will install all Microsoft Office software onto each workstation so they may continue their work with familiar software. This is just one example, a lot of digital companies have acknowledged Linux as the new age OS for working, so they have arranged their software to play nice, such as Adobe or IBM.

- **How can Linux work together with the systems that will continue to run Windows? How will we share files between the different system types?**

    - If there are some systems still running on Microsoft Windows, they will still have the ability to connect with the network. In order to access the file servers for instance, the Samba software package would need to be installed on the servers, allowing the Windows workstation to use the System Message Block protocol (SMB), which was originally created by Microsoft, to communicate with the server's, given parameters are set correctly. With the ability of using CUPS software, or Common Unix Printing System, you are able to setup printers on your server and if the parameters are set correctly, i.e., using DNS to identify the printers, then the Windows workstations can ultimately connect and print documents.

I hope all of this made sense in the most simplest form. There are a lot of curiosities that I want to ensure a solution for and will ease your mind. In closing, I would like to thank you for reading this memo and I hope I was able to answer some questions that tend to be considered high priority, especially with a major move such as this.

Thank you!

Warm regards,

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