NITRO Classroom Network Configurations

Rack 0 – Ghost Server Configurations (Support)			
Computer Name:	Ghost_Srv		
UserName:		**Password:**	
IP Address:	192.168.0.2	**Subnet Mask:**	255.255.0.0
Gateway:		**DNS:**	
LAN Connection:	Gigabit Switch		
Services/Apps:	RIS, DHCP, Norton Ghost		
Notes:	This server will be used for storing and maintaining configurations and documentation for the NITRO classroom setup. This server will host Norton Ghost to create and restore images to student workstations when necessary.		

Rack 0 - VMware Server Configurations			
Computer Name:	VM_Srv		
UserName:		**Password:**	
IP Address:	10.15.4.2	**Subnet Mask:**	255.255.255.0
Gateway:	10.15.4.1	**DNS:**	
LAN Connection:	Hub		
Applications:	VMware Workstation /w VMware images for practical exercises.		
Notes:	This server will be used for the Instructor to walk through the exercise along with the students. This Server is setup with the same configurations as the servers the students will be utilizing. This server should also have a baseline Windows XP Pro VMware image configured for DHCP that the instructor can use to walk through the exercises with the students.		

Rack 0 – Firewall Configurations			
UserName:		**Password:**	
Ext. IP Address:	192.168.**0**.1	**Subnet Mask:**	255.255.0.0
Int. IP Address:	10.15.4.1	**Subnet Mask:**	255.255.255.0
Gateway:			
Ext. Connection:	Gigabit Switch		
Services:	Port forwarding – port 3389 > 10.15.4.2 DHCP: 50 clients, starting address 10.15.4.100		
Notes:	Each firewall can be configured to forward port 3389 (RDP) to the internal server so the Instructor has the ability to use remote desktop to connect to the server so they can monitor and start the correct VMware image and choose the correct snapshot when necessary from the support server. DHCP will be used to deliver IP addresses to the student workstations.		

Rack 0 – Wireless Access Point Configurations			
UserName:		**Password:**	
Ext. IP Address:	10.15.4.3	**Subnet Mask:**	255.255.255.0
Int. IP Address:	192.168.1.1	**Subnet Mask:**	255.255.255.0
Gateway:		**SSID:**	WAP_**0**
LAN Connection:	Hub		
Notes:	Each wireless access point will be configured with the SSID representing the Rack number it's associated with. These WAP's can be utilized in the lessons when necessary.		

Classroom Installation:
Correctly and successfully setup and configure the Ghost Server. This will include installing and configuring RIS and DHCP services and installing Norton Ghost. RIS should be configured for the network adaptors that are installed in the servers. DHCP can be configured with minimal settings: Class Range & subnet mask.

Setup a VM_Srv machine, including computer name, network settings, updates, and disable automatic updates. Install VMware workstation. Copy all VMware images to the server and open up each one to test and make sure its working. Select "Copy" when asked when an image is opened for the first time.

Create an image of VM_Srv to push out to all the other machines.

Configuration Notes:
The classroom is setup into different IP networks. Groups of 4 students will all be connected to one rack that is configured as a stand alone LAN. Each of those LAN's will be configured identically with a 10.15.4.0/24 network. They will all be connected to the classroom LAN with the firewall. Each firewall will have a unique External IP address determined by its Rack Number, 192.168.x.1/16.

Norton Ghost Notes:
When pushing out ghost images to servers or workstations, connect the Ethernet cables to the Belkin 8-port gigabit switches. This is so they can retrieve and IP address by DHCP from the Ghost Server. Once ghosting has been completed, the network cables can be reconnected to the hubs. This allows the systems to bypass the firewalls that are installed each rack and allow for much faster imaging.

Recommendation: It would be recommended that these configurations are placed in a protector and mounted to the side of each rack, or at least somewhere very accessible.