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Proof of Concept Plans

Travis Vanos

Local Access and Distribution Infrastructure and Management:

Local Area Network (LAN)

- Demonstrate failover and Hot Standby Router Protocol (HSRP) by removing networking cables that interconnect the networking equipment
- Show Quality of Service (QoS) in action by saturating the network, and then make a VoIP phone call, without any perceived call quality impact

Local Wireless Architecture and Authentication:

Wireless Network

- Demonstrate a wireless network with two SSIDs and RADIUS authentication for a laptop user

Secure Corporate Client Internet Access:

Firewalls

- Demonstrate firewall failover
- Active Directory integration
- Traffic filtering (i.e. blocking access to websites/ports)

Centralized System Management:

SolarWinds

- Demonstrate SolarWinds monitoring the IT infrastructure, and simulate a failover to see the alerts generated

Chris Lageer

Corporate WAN Infrastructure, Security, and Management:

Wide Area Network (WAN)

- Demonstrate failover at the router and Internet level

Corporate Telephony Design and Deployment:

Telephony

- Demonstrate Private Line Automatic Ringdown (PLAR) by having two phones setup, with one being in the office, and the other being at the emergency services office for 000
- Show intra and inter-site dialing
- Showcase core phone functionality such as leaving a voicemail, call parking, intercom, and hunt group

Justin Waelz

Storage Management and File Management:

Demonstration of a Configured SAN

- StarWind SAN configured with iSCSI volumes for application data (SharePoint Foundation 2010 data, logs, and the search index, and mailbox databases) using Raw Device Mapping (RDM) to the ESXi-hosted virtual machines
- Demonstration of the resiliency of RAID 6 for the SAN (removing two hard drives without any impact to the SAN)

Demonstration of Virtual Machine Backups and Restores

- Using Veeam to launch a backup of a virtual machine, and then showing restoring a virtual machine from one ESXi host to another

Demonstration of Document Management

- With SharePoint Foundation 2010, show uploading a document, checking it out to edit it, uploading it with version information, and content search
- Demonstrate a Domain-based DFS share with access control based on Active Directory groups, showing User 1 being able to create and modify files, and User 2 being restricted to Read-Only permissions

Server Infrastructure Security:

Demonstration of Service Management

- Demonstrate creating a new user in Active Directory by using the Microsoft Management Console (MMC), and show that same user being denied the permission to use Remote Desktop to the Domain Controller

Local Device and Remote Access Security:

Demonstration of Antivirus Software

- Simulate a virus infection by plugging in a USB drive that has malicious software, and show Kaspersky antivirus blocking the malicious software

Demonstration of Secure Remote Access

- Show connecting, from a simulated Internet, to the internal network, and then accessing the internal shared folder and SharePoint site
- Demonstrate OpenVPN seamless failover by turning off one of the OpenVPN Access Servers while pinging an internal IP address

Serge Trunkin

Virtualization:

Virtual Machine Management

- Demonstrate vCenter management and migrating a powered on virtual machine from one host to another with vMotion

Daemon Services such as DHCP and DNS:

Domain Name System

- Demonstrate DNS failover by turning off one of the DNS servers
- Show creating a new A Record in DNS via Webmin

Dynamic Host Configuration Protocol

- Demonstrate a client obtaining an IP address from a DHCP scope based on the host's VLAN

Data Center Infrastructure and Management:

Remote Server Management

- Demonstration of server management via iDRAC

Anton Shylo

Active Directory Architecture and Implementation:

Active Directory Objects and Group Policies

- Show the Organization Unit structure, import the Active Directory objects from the old domain, and demonstrate network logon from a Windows client
- Demonstrate the creation of a Group Policy to change the desktop background and limit the use of the Run dialogue box for certain users, based on their Active Directory group membership

Mobile Communications:

Mobile Device Communication

- Show sending an email via an iPhone to a BlackBerry device that is on the BES server

Mail Servers:

Exchange Database Redundancy

- Demonstrate configured DAG redundancy by powering off a mailbox server and still being able to send and receive email via OWA

Patch Management and Instant Messaging:

Centralized Patch Management

- Demonstrate approving and applying a Windows update to a client

Lync 2013 Team Communication

- Show instant messaging between two clients, in different offices