2017-41

Uptime Project

Keith County Nebraska

[redacted]

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FIVE NINES

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Professional Services

Stage ESXi Hosts
- Update BIOS, Configure BIOS and Update Firmware
- Configure RAID, Configure DRAC and Install ESXi
- Set root password, Install license keys and Create local accounts
- Set IP address, Configure time and Performance tune
- Configure DNS and default route and Configure vSwitches
- Configure iSCSI round robin best practices
- Install Open Manage and Install PowerChute Agent

Stage SAN
- Update firmware, Configure group settings and Configure time
- Configure group name, Configure group IP and Configure admin accounts
- Configure notifications, Configure CHAP and Configure volume settings
- Configure management network and Configure Volumes
- Configure snapshot schedule and Configure iSCSI best practices

Onsite Installation
- Box equipment and ready it for transport and Unbox equipment
- Install rails and rack equipment and Cable equipment to network switches
- Perform cable management and Power on equipment
- Verify all equipment comes online properly

Install & Configure vCenter Appliance
- Create virtual machine, Name server and Install License key
- Specify SMTP server and Configure from email address
- Set Database retention settings and Configure vCenter alarms
- Configure snapshot report script and Install VMware Update Manage
- Create datacenter, Configure High Availability and Configure vMotion
- Test and verify High Availability and vMotion

Configure SAN Management Tools
- Install & configure Group Manager & SAN, or InfoSight
- Configure snapshot alerting and Configure iSCSI round robin

Perform P2V Operations
- Install VMware converter, Disable backups and Transfer FSMO roles (domain controller)
- Demote server (domain controller) and Shutdown database services
- Create conversion task, Monitor progress of task and Power on virtual machine
- Configure networking and Run remove hardware script
- Install VMware tools, Restart server and Promote server (domain controller)
- Transfer FSMO roles back (domain controller) and Verify volumes are in tact
- Start database services and Enable backups

Configure 1 NAS appliance
- Add hard drives to appliance, Update software and Configure IP address
- Configure users and Configure shared folder

Configure Spam Filter Account
- Create new company account and Configure default filter policies
- Configure disaster recovery settings and Create user accounts
- Configure outbound destination to Exchange server public IP address

Switch Staging and Configuration (4)
- Upgrade software image to the latest recommended version for each switch
- Apply best-practices base configuration and Configure VLANs and VLAN interfaces
- Configure trunks and port-channels and Configure access ports
- Create and configure switch stack and Configure best-practices for SAN stack
- Configure Layer 3 switch features

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Professional Services

Switch Installation

Mount and install new switch(es) and Migrate cabling and uplinks
Test and verify LAN connectivity and Remove old switch(es)
Complete rack re-cable/cleanup

Firewall Staging and Configuration

Upgrade software image to the latest recommended version for each firewall
Apply best-practices base configuration and Configure interfaces and IP addresses
Configure static routes and Configure NAT and ACL for port forwards
Configure IPsec L2L VPN(s) and Configure dynamic routing
Non-Cisco Firewall Migration, Configure DHCP and Configure additional VPN

Firewall Installation

Mount and install new firewall(s) and Test and verify LAN and Internet connectivity
Test and verify external NAT and Remove old firewall(s)
Test and verify WAN/VPN connectivity

Wireless Staging and Configuration

Configure organization and install licensing in dashboard
Configure network and up to two SSIDs and Customize and map each access point

Wireless Installation, Testing and Verification

Mount wirless access points (10) and Test and verify connectivity

PROJECT NOTES & ASSUMPTIONS

Down time will be required for hardware installation
Down time will be required for virtualization of physical servers
Project assumes 3 onsite trips
Daily management and maintenance is included with Five Nines' Backups, but all restore requests are handled at current T&M rate
Project assumes that there is sufficient bandwidth to support offsite backup replication
Project assumes network cabling for each wireless access point will be run and terminated by a 3rd party cable installation company
Project assumes adequate power and cooling will be available for new equipment. Additional power strips may be needed to accommodate PoE injectors
Project assumes existing patch cables are in good enough condition and length to be reused for new equipment. Inadequate cabling will be replaced
Additional wireless access points may be required if wireless coverage is determined to be inadequate

Subtotal **$20,868.75**

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Summary

Professional Services	$20,868.75
Total	**$20,868.75**

Signature, Client — Chairman

Caleb W. Johnson
Print, Client

Nov 1, 2017
Date