



Letter of Engagement

City of Corpus Christi

UCS Installation and VMware VDI View for 100 Desktops

Submitted By:

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Overview

This document details how Computer Solutions will meet the needs of City of Corpus Christi (Client) through the UCS Installation and VMware VDI View for 100 Desktops.

Scope of Work

Analysis and Planning

A Computer Solutions Senior Engineer will schedule a kickoff meeting and planning session with Client's Server, Network, and Storage staff to discuss the Cisco UCS B-Series installation requirements. The following items will be discussed and documented during the kickoff meeting:

UCS Requirements:

- Management Network Settings – three (3) IP addresses for the Management interfaces
- KVM Network Settings – IP Address Pool in the same network as Management
- Server host names
- DNS and NTP Settings
- Equipment location
- Fibre Channel settings – FC Switch mode or NPV, vSAN and Zoning information
- Storage array manufacturer and model
- Network settings – vLAN and 802.1q trunk information

VMware View Requirements:

- VMware View access methods
- Definition of the VMware View structure and requirements
- Definition of the VMware View 5 Client device requirements
- Storage
- User files (Locations)
- Local email (.pst) files
- User profiles
- Applications
- Printing
- Anti-Virus software
- Group Policies
- High-Availability (HA)

The Senior Engineer will proceed to create the configuration documentation for the project with implementation immediately following.



Implementation

UCS Hardware Installation

1. The Senior Engineer will perform UCS system configuration for Server Operations per the following tasks:
 - a. Work with Client's Server staff to rack mount and cable two (2) UCS Fabric Interconnects, one (1) UCS Chassis, and four (4) server blades. Cabling will include connectivity from the:
 - i. Chassis to the Fabric Interconnects
 - ii. Fabric Interconnects to the MDS Fibre Channel switches
 - iii. Fabric Interconnects to the Cisco Ethernet Network
 - b. Perform the initial boot configuration on each Fabric Interconnect and establish the UCS Manager cluster environment.
 - c. Setup the UCS system for initial discovery, power configuration, NTP settings, and SNMP settings while performing firmware upgrades as necessary.
 - d. Provision the server, network, and storage port types as well as change the system from end-host mode to switch-mode for the network and storage if necessary.
 - e. Configure the initial system pools for Client's server environment. System pools include the UUID, MAC address, fibre channel WWN (Port and Node), server management IP address pool, etc.
 - f. Configure networking parameters for the system i.e. vLANs, uplink interfaces and/or port-channels, and dynamic vNIC templates.
 - g. Configure the fibre channel fabric settings i.e. vSANs, ISLs and port-channels, and vHBA template.
 - h. Configure the server firmware and server boot policies.
 - i. Configure a Service Profile Template (Updating) for Client's servers, assign the UUID, MAC address, WWN, Server Management Pool, Firmware and Boot Policies, vNIC template, and vHBA template.
2. The Senior Engineer will work with Client's storage staff to establish communications to Client's shared storage.
 - a. Note: Client is responsible for provisioning the four (4) boot LUNs for each ESX host as 10GB LUNs with LUN masking/security for each host to LUN ID 0. Client's Storage team will provision shared storage for the Desktops and provide access for all four (4) servers to this LUN. Client it also responsible for performing the Fibre Channel Zoning for each host and the storage array.
3. The Senior Engineer will work with Client's Network staff to establish connectivity to the network, including IP address settings for each subnet(s), and vLAN(s) creation and identification.

VMware View Installation



1. The Senior Engineer will complete the tasks below to bring the project to completion.
 - a. Design and implement a highly available VMware vSphere 5 ESX cluster supporting the VMware View 5 VDI deployment.
 - b. Configure and integrate VMware View 5 into Client's existing Microsoft Windows Active Directory system for single sign-on authentication for virtual desktops.
 - c. Design and implement a highly available layer-2 VMware switching infrastructure for the VMware vSphere 5 ESX cluster.
 - d. Configure backend server and storage resources for a virtual desktop environment.
 - e. Develop up to five (5) Windows 7 virtual desktop and two (2) Windows 8 virtual desktop images for use in Client's environment. Development includes the configuration and deployment of the following:
 - i. Ten (10) VMware View 5 clients for use on specific IT computers and Library computers (desktops or laptops).
 - ii. Appropriate Quality of Service configuration supporting virtual desktop infrastructure utilizing PC over IP (PCoIP) as a transport protocol.
 - iii. VMware View 5 Remote Access through the firewall and connection broker
 - iv. Desktop Checkout if required by Client.

Closure

UCS Training Session

Computer Solutions will conduct a single hands-on knowledge transfer session with Client after implementation is complete. The training session will discuss the Cisco UCS Server system with up to four (4) Client staff members for up to six (6) hours.

VMware View Training Session

Computer Solutions will conduct a single hands-on knowledge transfer session with Client after implementation is complete. The training session will discuss the VMware View system with up to four (4) Client staff members for up to eight (8) hours.

Documentation

Computer Solutions will provide documentation detailing the configuration of the UCS system and virtual desktop infrastructure at time of deployment.



Pricing

Pricing terms within this document are valid for thirty (30) days from the date of delivery to Client.

Rate

This is a fixed bid engagement with an estimated duration of two (2) weeks for a total of \$17,305.20.

Taxes

Pricing does not reflect applicable taxes, which are the sole responsibility of Client.

Travel

Travel expenses are estimated at \$1,600.00 and are included in the rate stated above. Client will be billed only for expenses incurred.

Start Date

Upon receipt of a signed agreement, a Computer Solutions representative will contact Client's designated point of contact to discuss a tentative start date.

Work Hours

All services will be rendered between the normal business hours of Monday through Friday, 8:00 a.m. to 5:00 p.m. CST—excluding national holidays.

- For scheduled services outside these hours, Client will be charged at standard hourly billing rates.

For unscheduled services outside these hours, Client will be charged at one and one-half (1 ½) times the standard billing rate.

Computer Solutions Commitment

Computer Solutions is committed to the satisfaction of their customers. For a period of (30) days following project completion, Computer Solutions warrants all related performed professional services.



Terms and Conditions

This document will be considered as final and no other written or verbal agreements are binding. As this document contains privileged information that is critical to the success of Computer Solutions, Client will maintain the confidentiality of this document at all times.

Computer Solutions reserves the right to make certain assumptions regarding the provisions of this document and as to Client's responsibilities in regards to this project. Should Client fail to observe said responsibilities, Computer Solutions may pursue any course of action necessary to remediate the situation if Client's oversight affects the project as related to scope of work, pricing, and/or any other related Computer Solutions services. If Client requires an amendment to the assumptions as detailed below, Client must submit all desired revisions to Computer Solutions in writing, unless Client has received written permission from Computer Solutions stating otherwise; revisions may result in changes to the scope of work or pricing as outlined by this document. Any revisions must be mutually agreed to by Computer Solutions and Client; both parties acceptance of such revisions must be indicated in writing unless agreed to otherwise. The enactment of said revisions is pursuant to Computer Solutions receipt of stated acceptance.

Computer Solutions has made the following assumptions:

Assumptions

- Pricing for this project is based upon Client's information as supplied to Computer Solutions.
- Services that are not specified within this document are considered out of scope.
 - Such services may be provided by Computer Solutions for an additional fee.

Client Responsibilities

Throughout the duration of project services, Client is obligated to provide assistance to Computer Solutions. Client is accountable for all responsibilities throughout the delivery of Computer Solutions' services.

- Planning
 - If not already submitted in writing, Client will designate a point of contact (POC) by which all correspondence may be addressed to. Client will also designate a technical POC who is familiar with all areas, devices, or peripherals to be serviced by Computer Solutions. POCs will have the authority to act on behalf of Client; POC duties include but are not limited to:



- Assisting Computer Solutions personnel in the planning of services and the discovery of relevant systems and configurations as needed to develop a satisfactory project design and test plan.
- Providing relevant project information to Computer Solutions in a timely manner.
- Ensuring site and related project information and equipment is prepared 24 hours in advance of Computer Solutions services.
- Notifying the appropriate Computer Solutions resource of any project issues requiring remediation or delay of services.
- Ensuring Client personnel are available to Computer Solutions as needed for project completion
- Client must notify Computer Solutions prior to making changes to their IT environment during the course of project services. Computer Solutions will review proposed changes and inform Client if said changes will impact Computer Solutions' ability to continue project services or bring the project to a close.
- Access
 - Client will provide remote access capability for all required networks and systems.
 - Client will provide login credentials as well as other identification as needed for support services.
 - Client will provide Computer Solutions personnel with access to all project specific sites, including restricted areas, as required by this agreement.

Hardware and Software

- Client will provide all software and licensing required by this project.
 - Client may request that Computer Solutions procure software and licensing for an additional fee.

Data Backup

- Client will take all necessary precautions to secure and backup sensitive data prior to start of services.
 - In the event that data loss to Client occurs within the duration of the project, Computer Solutions will not be held liable.
 - Data loss includes but is not limited to corrupt, inaccurate, lost, or damaged data and unrecoverable media errors.

Project Closure

- Client POC will attend closeout meetings as needed and will provide signatures as requested by Computer Solutions personnel in order to verify the project is complete.



Test Plans and Validation

- Throughout the project, Computer Solutions will execute various test plans, generating test results and performing remediation as necessary. Computer Solutions will then submit a sign-off document to Client for approval. It is the Client’s responsibility to designate a POC that has the full authority of the Client to sign-off on test plans and results. Upon delivery of the sign-off document to Client, Client has three (3) working days to approve or reject sign-off. If Client does not submit a written document to Computer Solutions explaining any pending rejection during this timeframe, Computer Solutions will consider sign-off as approved.

Signature

By signing below, Client accepts this agreement in its entirety and recognizes its finality. Client acknowledges the incorporation of this agreement into the current MSA between Client and Computer Solutions.

On behalf of Client, I authorize Computer Solutions to commence services and to begin the procurement and/or delivery of necessary resources as they pertain to this agreement.

Computer Solutions	City of Corpus Christi
Signature: 	Signature:
Name: Tim Hamilton	Name:
Title: Account Executive	Title:
Date: 10/17/2012 4/18/2013 JPA	Date:

PO Number for billing, if required for accounts payable

