

Exhibit A:
City of San Leandro
Firewall and Internet Upgrade

a business proposal



extrateam

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February 9, 2016

Introduction

The City of San Leandro is currently operating separate Internet connections at various locations with the main purpose of providing Internet access to those locations. The City would like to consolidate these separate Internet connections into a single 10Gig connection located at City Hall. The new 10Gig Internet connection will also operate with the BGP routing protocol for the sole purpose of failover to a secondary service provider (also running BGP) on a 100Mb link also at City Hall. BGP will provide active/standby failover as both service providers will share the same Internet IP addresses (BGP announced prefix(es)) and the “secondary line” will not be usable when the primary is up.

The City will purchase new firewalls for this connectivity, a primary ASA5585-X-SSP20 for the 10G link and an ASA5515-X for the 100Mb backup link. The configuration of these two firewalls will be manually synchronized. The main “inside” connection will be to City Hall networks (via a full 1Gig connection); the Police Department will receive its Internet via a new DMZ (also a full 1Gig connection); and 3 other locations (2 wireless service locations and “library public”) will receive internet via new DMZs (full 1Gig); and 3 existing DMZs will be trunked from a 1Gig DMZ. **The 5585-X-SSP20 has a maximum total throughput of 10G with “real-world throughput” at 5G.** Failover between service providers and 5585/5515 will be automatic for City Hall and Police Department (as both are capable of a dynamic routing protocol, expected EIGRP). Failover between service providers and 5585/5515 for all other DMZs shall be done as a manual process.

This statement of work shall provide professional services to the City for the implementation of the new firewalls, planning and executing of a migration to the new firewall/Internet design, and an onsite production cut-over.

ExtraTeam is pleased to provide the following proposal for professional services.

Project Proposal

All tasks in the below sections (with except of cutover) shall be performed remotely using collaborative technology (phone and web conferencing, etc) during standard business hours. There is a single cutover event for the new firewalls and Internet. ExtraTeam will provide an onsite engineer for the cutover event which is assumed during an afterhours time period. Day-1 post cutover support shall be performed remotely.

ExtraTeam will be responsible for the following tasks and deliverables associated with this project.

Phase 1: Firewall and Internet Migration Planning

- Develop a migration plan to migrate existing Cisco ASA5520 configurations to Cisco ASA5585. Configuration will migrate like-for-like except the following:
 - Public IP Addresses will change as the ISP is changing. A new IP subnet will be allocated by the ISP and routed in BGP. Firewall configurations must change to accommodate the IP address change.
 - IPSEC site-to-site VPNs at remote City locations: ExtraTeam will change/reconfigure upto 3 remote City owned devices to accommodate new IP addresses: ASA firewalls (5505 or similar) or SOHO Cisco Routers (IOS based).
 - The City will be responsible for DNS changes or changes needed outside of City owned Cisco network equipment to accommodate the IP address change.
 - EIGRP routing will be enabled on the “inside” interface to enable automatic failover of City Hall networks to backup 5515 or backup 100Mb ISP.
 - A new DMZ will be provisioned to provide Internet access to the Police Department, connected to a new 3850 IP-Services switch stack.
 - EIGRP routing will be enabled on this “Police Internet DMZ” to enable automatic failover of Police networks to backup 5515 or backup 100Mb ISP.
 - The 3850 IP-Services switch stack will make routing decisions and provide a new fiber connection to the PD for Internet.
 - 3 new DMZs will be provisioned to provide Internet access to remote locations who’s networks are currently trunked back to City Hall via fiber optic cable:
 - 2 separate wireless networks (connected as 1G Ethernet to the ASA firewalls).
 - The “library public” network (connect as 1G Ethernet to the ASA firewalls).
 - A new 2960-X switch stack will be provisioned to provide Layer-2 VLANs for the DMZs and 1G connectivity.
 - NOTE: VLANs are assumed trunked via fiber optic cables to the remote sites, shall exist as Layer-2 only VLANs on City Hall switching equipment, connected as 1G access ports to the ASA firewalls.
- BGP Planning:
 - Teleconference with ISPs (Internet Service Providers) to assist with the provisioning and related planning with turn-up of BGP routing.
 - The design will require the service providers to announce (via BGP) a single default route (0.0.0.0/0) for the entire Internet. The 10G provider’s 0.0.0.0/0 will always be preferred. NOTE: there are rare conditions such that a service provider may been having problems with their own network or peering connections, yet that provider still announces a route for 0.0.0.0/0 to us. In this case, we are unable to automatically failover to the backup provider because the primary provider must first stop announcing 0.0.0.0/0 route to indicate that their Internet is down. This caveat is commonly accepted by customers if they trust the reliability of their service provider’s network. The only “perfect failover” requires dedicated ASR routers to accept full Internet routing tables (nearly 1 million IP routes, which the ASA firewall cannot handle).
 - The primary 10G service provider will assign 1 or more IP Address blocks for use on the Internet. This IP address block will be shared by both providers, with the primary provider having a higher preference.

- Develop a testplan to include a handful of core test cases to validate like-to-like functionality as well configurations which have changed. Define simulated failure scenario with targeted hosts for validation of fail-over.
- Review and get approval from City of San Leandro IT team prior to actual migration.

Phase 2: Configuration Staging and Preparation

- Stage and prepare configurations of the following equipment prior to migration/cut-over:
 - (1) 5585-X primary firewall.
 - (1) 5515 backup firewall.
 - Upto (3) ASA firewalls (5505 or similar) or SOHO Cisco Routers (IOS based) at City locations which make a site-to-site IPSEC VPN connection back to the main City Hall firewall.
 - (2) 3850 12-Port 1GE and 4 Port 1G Fiber switches in single stack configuration to perform routing decisions in PD for the new internet connection.
 - (2) 2960-X 24-Port 1GE switches in a single stack configuration to provide Layer-2 VLANs and connectivity for the DMZs.
 - Configurations on existing switching/routing equipment needed to support the new Internet connectivity and failover at City Hall, Police Department, and other affected locations.

Phase 3: Cutover

- Provide onsite engineering for cutover:
 - New 10Gig Primary Internet.
 - BGP routing with 10G primary and 100Mb backup link.
 - New 5585-X primary firewall.
 - New 5515 backup firewall.
 - New 3850 switch stack at PD.
 - New 2960-X switch stack for DMZ at City Hall.
 - As required, changes to existing network equipment on the City network.
- Provide remote post go-live support.

Training

- There is no formal training for end users or administrators included in this proposal. ExtraTeam will include knowledge transfer to Exhibit A: City of San Leandro IT staff throughout the project.

Documentation

- ExtraTeam will provide as-built configuration files for devices which have changed as part of this project.
- ExtraTeam will provide updates to the existing Visio diagram of the City network for changes that were made as part of this project. The existing City network Visio diagram which has been provided to ExtraTeam.

Project Coordination

The ExtraTeam Project Coordinator shall work with the customer to manage the project timeline and all ExtraTeam resources. The Project Coordinator shall be the single point of contact for all non-technical communications including changes in project scope, timelines, and deliverables.

Project Management (additional services, not included)

ExtraTeam offers PMP-certified project management services “above and beyond” the project coordination services included in this proposal. These services are offered for an additional fee, and may include deliverables such as:

- Onsite project meetings
- Project Plan that includes customer resource allocation
- Equipment inventory and facilities readiness inventory, if appropriate
- Third-party vendor coordination
- End User Communication (may include Communication Plan, Adoption Plan, and Training Plan)

Project Change Management

During the course of the project, Exhibit A: _____ City of San Leandro may request significant feature or functionality changes that are beyond the scope of the original Statement of Work, and/or are not specified in the customer-approved Design Documentation. In the event that Exhibit A: City of San Leandro requests such a change, the ExtraTeam Project Coordinator will submit a Change Order for this request. No work will commence on the change until the Change Order is approved by both ExtraTeam and Exhibit A: _____ City of San Leandro.

Project Completion

ExtraTeam will make commercially reasonable efforts to complete the activities described in the Project Proposal section as limited by the assumptions described in this document and the Customer’s performance of responsibilities pursuant to the *Customer Responsibilities* section below.

Exhibit A: _____ City of San Leandro will be responsible for acknowledging delivery of the project by signing a Project Acceptance document at the conclusion of this engagement. If ExtraTeam is not notified of any problems with the work within 30 days of the completion of the engagement, the services delivered will be deemed accepted.

Assumptions

This proposal assumes the following:

- All work will be scheduled in advance. This consulting engagement does not include on-call or emergency support services. ExtraTeam provides a separate 24x7 priority support contract for emergency service.
- Desktop level configuration changes and software deployments by ExtraTeam engineers are out of scope for this engagement. This includes software client installations, GPO, and registry settings. These changes must be implemented by Exhibit A: City of San Leandro staff with direction and assistance from the Project Team.

Customer Sites

This engagement will involve the following customer sites: City of San Leandro

ExtraTeam will deliver engineering services for this project onsite at City of San Leandro and via remote access, such as secure VPN.

Customer Responsibilities

Exhibit A: City of San Leandro or its designated partners shall perform the following:

- Exhibit A: City of San Leandro will designate a person to whom ExtraTeam can address all communications and who has the authority to act on all aspects of the Services. Such person shall be identified as the Customer Project Manager.
- Exhibit A: City of San Leandro will designate a back up to the primary Customer Project Manager who has the same authority when the primary Customer Project Manager is not available.
- Exhibit A: City of San Leandro will provide access to Customer facilities associated with this engagement, including equipment rooms and data centers. For all onsite service engagements, Exhibit A: City of San Leandro will provide ExtraTeam with a dedicated and suitable workspace such as a dedicated desk, cubicle, or office.
- Exhibit A: City of San Leandro will provide ExtraTeam with remote access to networks and systems associated with this project using VPN or other technologies agreed upon by both parties.
- Exhibit A: City of San Leandro will provide full administrative-level account access privileges when recommended or required by vendor documentation for all devices and domains directly related to the project. Any additional costs incurred by Exhibit A: City of San Leandro or ExtraTeam as a result of delays or inability to provide such access will be the sole responsibility of the Exhibit A: City of San Leandro.

- Unless otherwise noted in the *Project Proposal* section above, Exhibit A:
City of San Leandro is responsible for the installation, configuration, and testing of all external communication equipment and materials not provided by ExtraTeam. This includes, but is not limited to, circuits provided by telecommunications service providers. Likewise, Exhibit A:
City of San Leandro is responsible for all physical equipment installations, including: rack mounts, cabling, station-area wiring, and connectivity to power.
- If requested, Exhibit A: City of San Leandro will provide comprehensive documentation for existing network and system deployments not installed or maintained by ExtraTeam, including physical and logical schematics, prior to service commencement.
- Unless otherwise agreed to by the parties, Exhibit A: City of San Leandro will respond within two business days of ExtraTeam's request for documentation or information needed for the project.
- Delays caused by the lack of site readiness or the Customer's failure to meet any responsibilities specified in this Statement of Work shall be billed at ExtraTeam time-and-materials rates, including travel and other expenses. Any additional costs incurred by Exhibit A:
City of San Leandro as a result of delays shall be the sole responsibility of the Exhibit A:
City of San Leandro.
- Once a project timeline is agreed upon by both parties, Exhibit A: City of San Leandro will provide ExtraTeam with written advanced notice of schedule changes. Unless otherwise agreed to by both parties, failure to notify ExtraTeam of schedule changes in writing (email, fax, etc) within 2 business days will result in a project change order. Delays necessitated by Exhibit A: City of San Leandro totaling more than 30 business days may result in a project change order.

Summary

ExtraTeam sincerely appreciates the opportunity to work with Exhibit A: City of San Leandro. Our technical expertise, proven track record, and our unwavering commitment to customer success will ensure we meet and exceed your expectations in all areas.

Acceptance

If the terms of this engagement are acceptable to Exhibit A: City of San Leandro, please initial all pages, sign below, and email this document along with a company purchase order to orders@extrateam.com. Alternatively, you may fax the documents to (925) 398-4450.

Name/Title

Date



ABOUT EXTRATEAM

WE DON'T USE THE WORD "TEAM" LIGHTLY

Let's face it, the team concept is often spoken and seldom executed. Not here. We honor your vision with our experience – from planning through support. The result is a successful outcome worthy of the word "team."

(YOUR) EXTRATEAM

We live to serve. You. It's no wonder we're excited. There has never been a greater time to bring the powerful gift of advanced technologies to the world at large. They move the universes of business, culture and humanity forward. Which is exactly why we feel honored to be a critical part of this reality. Day to day. Project to project. Success to success.