

# Statement of Work for Proposal #7900, 8088, 7957, 7993, 8037, 8047

## Project Work Summary

Development Group has been contracted by Solano Community College District for an Infrastructure Upgrade.

## Project Business Objectives

- Enabling State-of-the-Art 21st-Century Teaching & Learning
  - This objective is near and dear to us. As the education vertical is our primary focus, ensuring that the solutions we provide manifest themselves in impactful ways into the classroom is of paramount importance to us. This starts with the network. Cabling, switching, routing, and wireless provide the foundation for nearly every objective associated with providing next-generation learning.
  - The network we've built is ready for collaborative technologies, explosive mobility growth, video consumption, and next-generation teaching tools that will consume more bandwidth and resources. Whether these solutions live in the cloud or in your data center, this network will serve you well for years to come.
- Sustainability: This is a green project in every sense
  - The network we've provided consists of some of the most energy-efficient switching platforms in the industry. And not only are they green in their own consumption, your network will be an active participant in the campus' energy management solution. We're providing Cisco Energy Manager to maximize IT's contribution to this initiative.
- Ubiquitous Access to Technology & Financial Planning Tools
  - A fundamental component in establishing this goal is a solid network infrastructure that is robust but easy to manage. It must be resilient, nimble, and secure while serving the ever-growing demands that the future will require. Our solution meets these needs.
- Bring-Your-Own-Device capability
  - The solution we're proposing will serve SCCD in this regard very well. The proposed solution is extremely versatile and scalable. The integration of Cisco Identity Services Engine's advanced functionality with the switching and wireless provide SCCD with a solid foundation to move towards a BYOD environment.
- Virtualization, Digital Library Capability & Notepad Device Checkout
  - Once again, the network foundation plays a key role in ensuring these objectives are achievable and sustainable. Furthermore, Cisco and DGI both specialize in data center technologies as well as offer a variety of cloud services that will play a big part in the way design solutions for these objectives.
- Distance Education Programs, Online Education Resources, Online Education Management, & Rich Library Media
  - DGI and Cisco will be able to significantly contribute to these objectives. Common solution components will be TelePresence, Unified Communications, Lecture-Capture, LMS/IMS integration, web-based attendance, synchronous/asynchronous video consumption, cloud, storage, network security, and system management – all of which are strengths of DGI & Cisco. ...and all of which require a solid network foundation.

## Project Milestones and Payment Schedule

	Milestone	% Complete	Estimated Completion Date	Invoice Amount
1	Invoice Equipment	As Equipment Ships	TBD	\$1,287,185.93
2	Route Switch Invoice Labor: Templates complete and validated; Staging complete for core and access layer	13.85%	TBD	\$ 54,121.14
2	Route Switch Invoice Labor: Installation and cutover	13.85%	TBD	\$ 54,121.14
3	Route Switch Invoice Labor: Day-2 support complete Admin & end user training completed All punch list items completed	3.08%	TBD	\$ 12,026.92
4	Wireless Invoice Labor: Templates complete and validated; Staging complete for wireless	13.85%	TBD	\$ 54,121.14
5	Wireless Invoice Labor: Installation and cutover	13.85%	TBD	\$ 54,121.14
6	Wireless Invoice Labor: Day-2 support complete Admin & end user training completed All punch list items completed	3.08%	TBD	\$ 12,026.92
8	Network Management Invoice Labor: Templates complete and validated; Staging complete for LiveAction, Prime, Energy Management, and ISE	13.85%	TBD	\$ 54,121.14
9	Network Management Invoice Labor: Installation and cutover	13.85%	TBD	\$ 54,121.14
10	Network Management Invoice Labor: Day-2 support complete Admin & end user training completed All punch list items completed	3.08%	TBD	\$ 12,026.92
11	Collaboration Invoice Labor: Templates complete and validated; Staging complete for collaboration	3.45%	TBD	\$ 13,500.00
12	Collaboration Invoice Labor: Installation and cutover	3.45%	TBD	\$ 13,500.00
13	Collaboration Invoice Labor: Day-2 support complete Admin & end user training completed All punch list items completed	0.77%	TBD	\$ 3,000.00

## Installation Site Address(es)

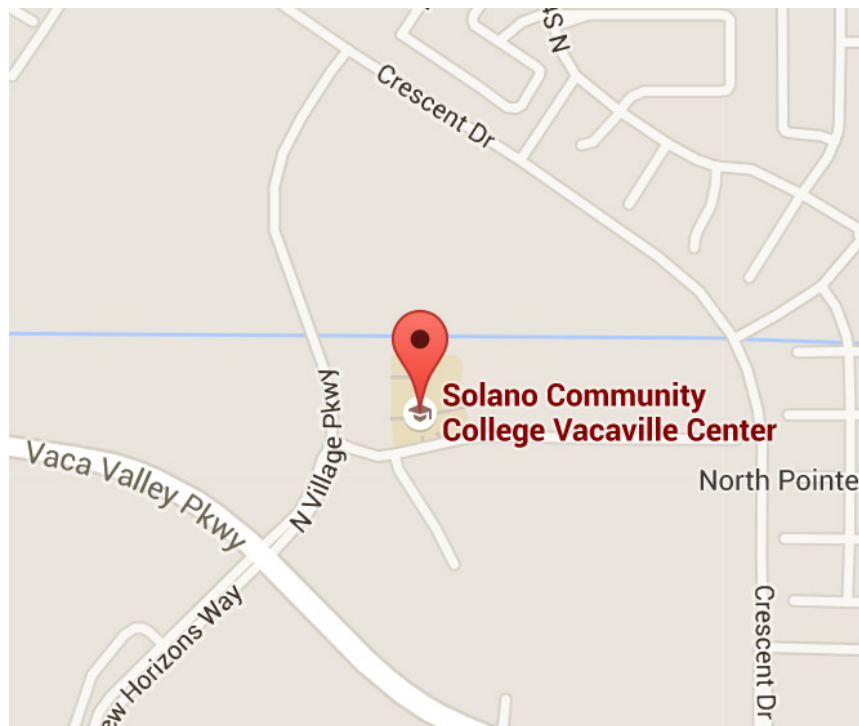
Solano Community College

FAIRFIELD CAMPUS  
4000 Suisan Valley Rd,  
Fairfield, CA 94534  
(707) 864-7000



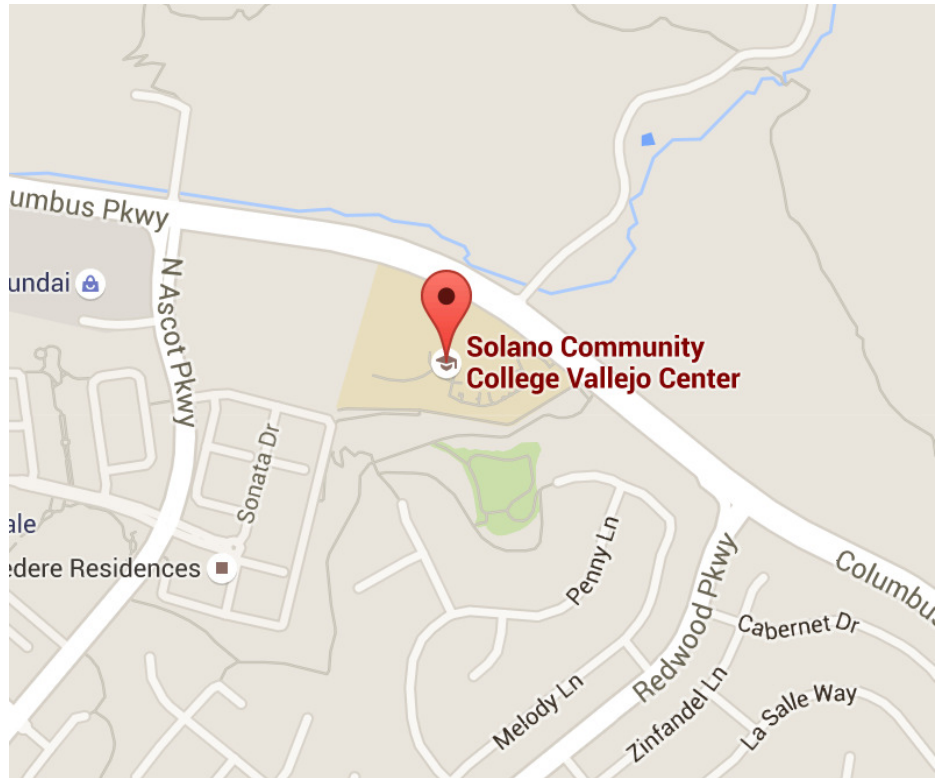
VACAVILLE CENTER

2001 North Village Parkway  
Vacaville, CA 95688  
(707) 864-7171



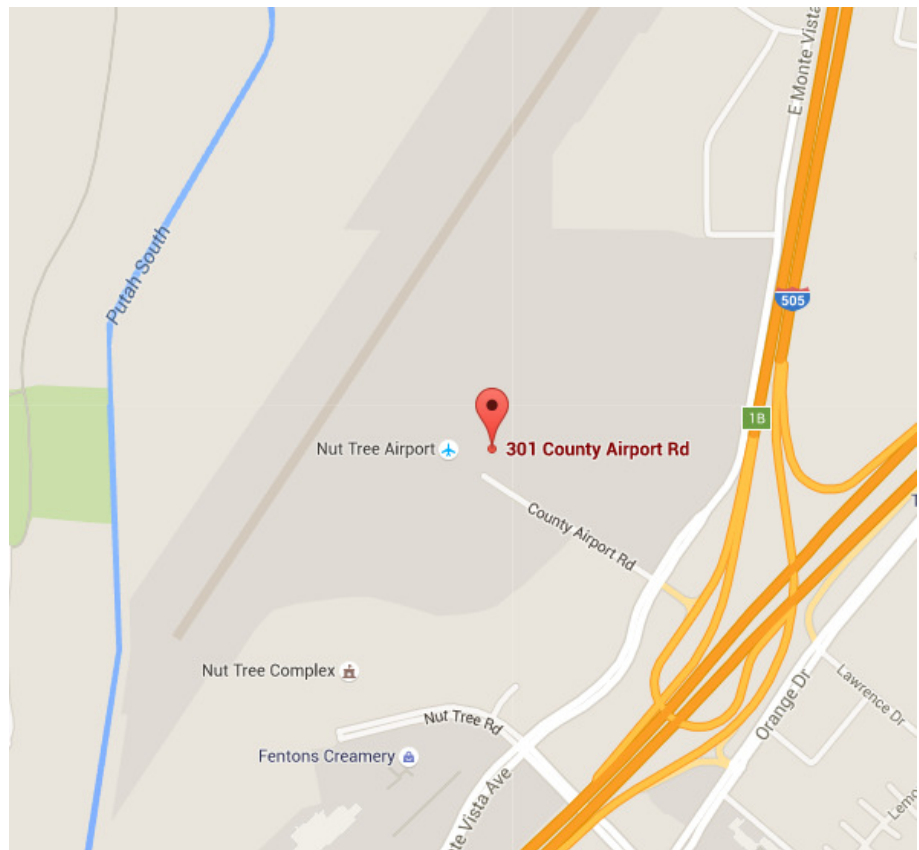
**VALLEJO CENTER**

545 Columbus Parkway  
Vallejo, CA 94591  
(707) 642-8188



**NUT TREE HANGAR**

301 County Airport Road  
Vacaville, CA 95688  
(707) 469-4600



## Project Stakeholders

Name	Project Role	Contact Information
Lee Forsythe	Director of Engineering	<a href="mailto:lforsythe@development-group.net">lforsythe@development-group.net</a> Office: 530-510-4317
Jason Eatmon	Account Manager	<a href="mailto:jeatmon@development-group.net">jeatmon@development-group.net</a> Office: 530-510-4303
Joe Jenkins	K-12 Business Advisor	<a href="mailto:jjenkins@development-group.net">jjenkins@development-group.net</a> Office: 530-646-3557
Tony Jenkins	PMO Practice Manager	<a href="mailto:tjenkins@development-group.net">tjenkins@development-group.net</a> Office: 530-510-4307
Curtis Hauptman	Project Manager	<a href="mailto:chauptman@development-group.net">chauptman@development-group.net</a> Office: 530-646-3560
Eric Stoxen	Lead Field Engineer – Route/Switch	<a href="mailto:estoxen@development-group.net">estoxen@development-group.net</a> Office: 530-510-4304
Greg Drake	Lead Field Engineer – Collaboration	<a href="mailto:gdrake@development-group.net">gdrake@development-group.net</a> Office: 530-510-4308
Pete Van De Koolwyk	Solutions Architect	<a href="mailto:petev@development-group.net">petev@development-group.net</a> Office: 530-510-4307
Scott Winsick	Design Architect	<a href="mailto:swinsick@development-group.net">swinsick@development-group.net</a> Office: 530-510-4302
Eric Berger	Project Manager	<a href="mailto:eric.berger@solano.edu">eric.berger@solano.edu</a> Office: 707-863-7847
James “Kimo” Calilan	Director Technology Services & Support	<a href="mailto:james.calilan@solano.edu">james.calilan@solano.edu</a> Office: 707-864-7104
Justin Howell	Telecommunications Network Technician	<a href="mailto:justin.howell@solano.edu">justin.howell@solano.edu</a> Office: 707-864-7205

## Development Group, Inc. (the “Company”) Responsibilities

### Company will install the following equipment:

- Four (4) WS-4500X-16SFP+ (2 at VALLEJO CENTER, 2 at VACAVILLE CENTER) each in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All cables will be neatly connected to the switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.
- One (1) AIR-CT8510-100-K9 (FAIRFIELD CAMPUS) in a standard server cabinet as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.
- One (1) AIR-CT8510-HA-K9 (FAIRFIELD CAMPUS) in a standard server cabinet. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be

included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.

- Two (2) C6807-XL switches (2 at FAIRFIELD CAMPUS), each in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.
- Two hundred seventy-one (271) AIR-CAP3702I-A-K9 Wireless Access Points (WAP) (218 at FAIRFIELD CAMPUS, 33 at VACAVILLE CENTER, 16 at VALLEJO CENTER, 4 at NUT TREE). Each WAP will be mounted on a horizontal surface in the Customer specified location. Company will supply the appropriate wall anchors and fasteners to mount each WAP to either a hard-lid ceiling or suspended ceiling (t-bar) using the included WAP mounting plate and/or t-bar clip. Each WAP will be connected to existing Category 5 (or better) low-voltage cabling.
- Twenty (20) AIR-CAP3702E-A-K9 Wireless Access Points (WAP) (9 at FAIRFIELD CAMPUS, 7 at VACAVILLE, 1 at VALLEJO, 3 EXTRA). Each WAP will be mounted on a horizontal surface in the Customer specified location. Company will supply the appropriate wall anchors and fasteners to mount each WAP to either a hard-lid ceiling or suspended ceiling (t-bar) using the included WAP mounting plate and/or t-bar clip. Each WAP will be connected to existing Category 5 (or better) low-voltage cabling.
- Forty-two (42) SMART2200RML2U SmartPro units (32 at FAIRFIELD CAMPUS, 5 at VACAVILLE CENTER, 4 at VALLEJO CENTER, 1 at NUT TREE). Company will inspect the equipment to ensure there are no signs of damage, the environment is suitable for operation and that there will be sufficient clearance around the system for service. Company will install each UPS in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required and connect the UPS to the existing electrical service.
- Three (3) UCS-SPR-C220M4-E1 servers (2 at VACAVILLE CENTER, 1 at VALLEJO CENTER). Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. The server will not include a monitor, keyboard or mouse and will be managed using a web interface from other Customer supplied computers. All cabling will be neatly connected to the server(s) making the best use of existing horizontal and vertical cable management hardware.
- Eighty-nine (89) WS-C3850-48P-S (55 at FAIRFIELD CAMPUS, 18 at VACAVILLE CENTER, 15 at VALLEJO CENTER, 1 at NUT TREE) each in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.
- Fifty-four (54) WS-C3850-48PW-S (54 at FAIRFIELD CAMPUS) each in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.
- Twenty-five (25) WS-C3850-24P-S (19 at FAIRFIELD CAMPUS, 4 at VACAVILLE CENTER, 2 at VALLEJO CENTER) each in a standard, existing two post rack, server cabinet, wall mounted rack or wall mounted enclosure as required. Company will connect the power supply (or power supplies) to a UPS and/or PDU using the included power cord(s); the standard power cord included is a 5-15P to C13, 6ft, 18AWG, black, male to female cord. Power connections requiring a different power cord will either be included elsewhere in this Statement of Work or supplied by the Customer. All Ethernet cables will be neatly connected to the Ethernet switch(es) making the best use of existing horizontal and

vertical cable management hardware. Connection(s) to the network will be in accordance with the network topology drawing(s) for this project.

**Company will perform the following configuration:**

**GENERAL**

- All equipment will be upgraded to the most recent, recommended software prior to delivery and installation. In some cases the software which is recommended by the Company may not be the most current version available from the manufacturer.
- DGI will reference the associated visio drawing of the topology for the planned installation and configuration.

**ROUTE/SWITCH TECHNOLOGIES**

- Management network (VLAN) and configuration of new and existing switches including the BVI, SVI and an IPv4 subnet which is compatible with the Customer's existing IPv4 addressing plan.
- Unicast and multicast (if supported by equipment) reachability to/from all IPv4 subnets. Company will execute connectivity scripts at the conclusion of the project and provide the results to the Customer to verify full IPv4 reachability.
- VLAN Trunking Protocol (VTP) version 2; configure the Cisco 6807 as the VTP server, all other switches will be configured as VTP clients. All switches will be integrated into the Customer's existing VTP configuration. VTP pruning will be enabled to restrict flooded traffic to those trunk links that the traffic must use to reach the destination device(s). All VLANs within each VTP domain will have a name configured in the slash notation format for the corresponding IPv4 subnet; E.g. 10.4.1.0/24.
- Rapid Per-VLAN Spanning-tree Protocol (RPVST+). Configure the root-bridge, and a backup root-bridge if appropriate, for all VLANs. Configure spanning-tree enhancements portfast, BPDU guard and root guard as necessary.
- Etherchannel will be configured on all segments that are connected using more than one physical connection; refer to the solution diagrams.
- IEEE 802.1Q Ethernet trunking standard will be configured for all inter-switch connections. DTP will be disabled on all trunked ports. No untagged frames will be allowed on trunked ports.
- Routers configured to run OSPF will have a reference value of 100,000 configured. All OSPF neighbors will be configured for MD5 authentication. All OSPF processes will use a process ID of 1 and will have a router ID specified which is consistent with the management IPv4 address specified on the Loopback0 (or management SVI) interface. All IPv4 interfaces will be set as passive interfaces by default and will not form neighbor relationships.
- The following IOS services will be configured on each device as necessary and supported: nagle, TCP keepalives in/out, timestamps, CEF and password encryption.
- The following IOS services will be disabled on each device as appropriate: DHCP, TCL scripting, PAD, source-route, finger, BOOTP, DNS, HTTP and HTTPS.
- Configuration of Quality of Service throughout the network as necessary. The configuration will be based on Medianet Campus QoS Design v4.0 ([http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/WAN\\_and\\_MAN/QoS\\_SRND\\_40/QoS\\_Campus\\_40.html](http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/WAN_and_MAN/QoS_SRND_40/QoS_Campus_40.html)) and implemented using the following guidelines:
  - Perform QoS in hardware rather than software when a choice exists. Cisco IOS routers perform QoS in software. This places additional demands on the CPU, depending on the complexity and functionality of the policy. Cisco Catalyst switches, on the other hand, perform QoS in dedicated hardware Application-Specific Integrated Circuits (ASICs) and as such do not tax their main CPUs to administer QoS policies. You can therefore apply complex QoS policies at Gigabit/Ten Gigabit line rates in these switches.
  - Classify and mark applications as close to their sources as technically and administratively feasible. This principle promotes end-to-end Differentiated Services/Per-Hop Behaviors. Sometimes endpoints can be trusted to set Class of Service (CoS) or Differentiated Services Code Point (DSCP) markings correctly, but this

is not always recommended as users could easily abuse provisioned QoS policies if permitted to mark their own traffic.

- Police unwanted traffic flows as close to their sources as possible. There is little sense in forwarding unwanted traffic only to police and drop it at a subsequent node. This is especially the case when the unwanted traffic is the result of Denial of Service (DoS) or worm attacks. Such attacks can cause network outages by overwhelming network device processors with traffic.
- Enable queuing policies at every node where the potential for congestion exists, regardless of how rarely this in fact may occur. This principle applies to campus edge and interswitch links, where oversubscription ratios create the potential for congestion.
- Protect the control plane and data plane by enabling control plane policing (on platforms supporting this feature) as well as data plane policing (scavenger class QoS) on campus network switches to mitigate and constrain network attacks.
- Configure DHCP snooping on each VLAN configured for DHCP per Customer specifications. Each device will be configured to verify that the client source MAC address and the DHCP client hardware address of DHCP requests match. Only ports connected directly to DHCP servers and/or ports connected to VMWare hosts running DHCP servers (if in a virtual environment) and uplink ports will be configured as trusted. All other ports will be configured as untrusted with a rate limit of 10 packets per second.
- Configure VSS in accordance with the with the network topology drawing(s) for this project.
- The internal clocks on all devices will be configured for the PST time zone. NTP will be used to update the internal device clock using existing Customer provided NTP server(s). NTP authentication will be configured.
- Remote management access to each device will be limited to SSH and the source address of management connections will be restricted to specific IP addresses and/or IP subnets specified by the Customer.
- SNMP read-only device management will be configured on each device. Access will be restricted to specific IP addresses and/or IP subnets specified by the Customer.
- Configure Traffic Storm Control for broadcast and multicast traffic; set the affected port to error-disable if the multicast or broadcast traffic level exceeds 10% of the port capacity.

#### **WIRELESS TECHNOLOGIES**

- Two 8510 WLC controllers will be configured as HA pair to allow stateful failover in the event of a WLC being disabled.
  - AP SSO will be configured.
- AP radio mandatory data rates will be configured per DGI recommendations.
- All APs will be placed in appropriate map location in Cisco Prime if appropriate to scale maps are provided.
- Up to four SSIDs will be configured as desired by customer. Generally in ISE/802.1X deployments there will often be two SSIDs, customer requirements will dictate total amount of configured SSIDs.
- SSIDs will be configured for 802.1X and integration with ISE as required by design.
  - SSIDs will be tested in coordination with customer and cutover process will be defined using customer provided devices. Client configuration will be the responsibility of the customer. Centralized methods to push out configuration (IE Microsoft Group Policy, etc) are strongly recommended to provide ease of transition for IT staff and users.

#### **SECURITY TECHNOLOGIES**

- Identity Services Engine 2.0 (ISE) will be installed in new UCS C-Series implementation.
  - Three policy node servers will be installed at the two remote sites to provide resiliency in the event of wan failure.
  - ISE policies will be configured to provide 802.1X authentication for Wired and Wireless environments

- ISE deployment will take place in two separate phases:
  - Phase 1 will encompass the onboarding for wired and wireless 802.1X access
    - Company will facilitate a design meeting to cover the desired phase 1 deployment for ISE.
    - Following design meeting, company will facilitate a 3 day labbing session to test the integration of ISE with Customer owned devices (IE iPads, Chromebooks, Windows machines, etc). Deployment process to clients will be discussed and all end user documentation will be produced during this meeting.
    - Customer will be responsible for any client-side changes required to support ISE.
    - Customer device portal will be configured as desired to provide simple registration process for company owned devices.
    - Guest and Sponsor portals will be configured as desired in customer environment.
    - ISE will be integrated with customer provided SMTP server to email credentials to users if desired.
    - ISE will be integrated with customer provided SMS server to text credentials to users if desired.
  - Phase 2 will encompass the integration of Posture Assessment services into ISE.
    - Policy will be developed to provide access to network based on presence of anti-virus software on customer Mac OSX and Windows machines.
    - Antivirus provisioning flow through ISE will be configured as desired.
    - Remediation VLAN will be developed if desired by customer.
    - Policies providing network access to mobile devices will be configured in accordance with customer objectives.

## **NETWORK CONTROL TECHNOLOGIES**

- LiveAction
  - LiveAction Server will be deployed in existing customer environment
    - All netflow capable devices, up to the twenty-five (25) device licensed limit, will be configured to export Netflow data to LiveAction server
    - Sites will be logically organized within LiveAction so that flows are easy to follow throughout the environment.
    - Custom filtering policies will be configured within LiveAction for key customer applications.
    - Integration with Customer provided SMTP server will be configured for alerting if desired.
    - All routed devices will be configured to support QOS changes through the LiveAction software, as supported by LiveAction software.
- Prime Infrastructure
  - Prime Infrastructure 2.2 will be installed
  - Prime Infrastructure will be configured to monitor all network devices associated with the proposal.
  - Prime Infrastructure will be integrated with customer provided SMTP for alerting if desired.
  - Prime Infrastructure alerts will be configured to provide up/down notifications for key equipment. DGI recommended alert tunings will be configured. Alerting tuning will be covered in admin training so that customer can choose alerts that are most relevant for the environment.

- Prime Infrastructure CLI templates will be configured for interface templates.
- Prime Infrastructure will be configured to gather configuration backups for all network devices associated with this proposal.
- Heat maps will be created in Cisco Prime for each location where to scale maps are provided.
- All Access Points associated with this proposal will be placed on associated heat maps
- MSE will be integrated into Cisco Prime to provide additional location and interference analytics for the environment.
- Cisco Energy Manager (CEM)
  - CEM will be configured to monitor the energy consumed for networks devices.
  - CEM will be configured to run “what-if” type scenario reports to allow the district to see potential savings.

### **COLLABORATION TECHNOLOGIES**

- Migration of existing databases to new virtual machines on customer existing VMWARE infrastructure.
  - Call Manager using Disaster Recovery tool
  - Unity Connection using Disaster Recovery tool.
  - Cisco Emergency Responder using Disaster Recovery tool.
  - Cisco Contact Center Express using Disaster Recovery tool.
- A separate VLAN (or VLANs as required) and IPv4 subnet for all IP phones and Cisco Unified Communications servers and devices (e.g. SRST routers, CUBEs, voice gateways, etc.). The IPv4 subnet (or subnets) will be compatible with the Customer’s existing IPv4 addressing plan.
- Company will migrate customer’s existing collaboration servers to customer provided servers running VMWare.
- Configuration of two (2) Cisco Unified Communications Manager Business Edition virtual machines including IPv4 address(es), DNS and randomly generated passwords as necessary.
- Configuration of two (2) Cisco Unity Connections virtual machines including IPv4 address(es), DNS and randomly generated passwords as necessary.
- Configuration of two (2) Cisco Emergency Responder virtual machines including IPv4 address(es), DNS and randomly generated passwords as necessary.
- Configuration of two (2) Cisco Unified Contact Center Express virtual machines including IPv4 address(es), DNS and randomly generated passwords as necessary.
- Adjustment of Enterprise and Service parameters as necessary.
- Activation of all CUWL, UCSS, Device License Units and/or other Cisco Unified Communications licensing.
- Configuration of Media Termination Points (MTPs) and Transcoders as necessary.
- Application of Customer supplied SSL certificate(s) as required for each server and/or application.
- Configuration of two (2) Cisco Jabber Instant Message and Cisco Presence virtual machines including IPv4 address(es), DNS and randomly generated passwords as necessary.
- Installation of the Cisco softphone software (and configuration) for up twenty (20) end-users as specified by the Customer. End user devices may include an Apple or Android tablet.
- Singlewire Informacast.
  - Configuration of OEM Basic version of Single Wire Informacast.
  - Configuration of up to 10 page broadcast groups with no greater than 50 phones in each group.
  - Page groups will be configured to be activated by dialcast.

- Bridge Operator console on customer provided Windows 2008 R2 VM.
  - Configuration of 3 console clients.

**Company will provide the following training:**

- Up to thirty-eight (38) hours of system administration training.

**Company will provide the following administration and documentation:**

- Provide detailed as-built drawings and documentation which describe the system installation. As-built drawing will include documentation of logical network connections, IP addressing, routing protocols, WAN/telecom circuit information, device serial numbers and/or VLAN information as may be required.
- Test all installed hardware and software for proper operation using a detailed test plan that will be developed jointly by both parties.
- Company will clear all work areas of shipping cartons, packaging and debris created by the Company at the conclusion of each work day.
- Company will register all hardware devices and/or software licenses to any Cisco SMARTnet (or other) maintenance contracts which are included in this project using the CCO IDs which are provided by the Customer.
- Company will uninstall and return to the manufacturer all items that have been identified as “trade-in” equipment per the terms of the sales agreement. The Company will not be responsible for removing any low voltage cabling, station cabling, Ethernet patch cords, power cords, PDU(s) or any furniture or fixtures. The Company will invoice the Customer for the difference in the purchase price of the project for any equipment which has not been returned to the Company within thirty (30) days of the end of the project.
- Company will maintain a master task list and schedule of all project milestones and work items. Customer understands and agrees that the master task list and schedule maintained by the Company will be the definitive document set by which the project will be managed.
- Company will conduct regular project status meetings with appropriate project stakeholders, and other interested third-parties, weekly or as otherwise agreed to by both parties. The Company will record meeting minutes, maintain an issues list and list action items for subsequent meetings. Meeting minutes and supporting documentation will be distributed to attendees, project stakeholders and third-parties at the conclusion of each meeting.

## **Customer Responsibilities**

- Customer is required to meet specs based support for collaboration servers as outlined in proposal.
- Customer responsible for providing accurate data in the telephone spreadsheet and call flow. It is the customer’s responsibility to provide this data back in a timely manner.
- The migration of existing non Cisco Collaboration servers and applications are not included in this scope of work, unless otherwise specified.
- Provide a Customer representative that will be the primary point of contact for this project and which will be available, at a minimum, to meet weekly with all project stakeholders. The Customer representative must have authorization to facilitate changes in accordance with district policies, procedures, and bylaws, and make decisions which will affect the successful implementation of the project, and must be able to provide or arrange physical access to all areas of the facility(ies) which will receive installed equipment as part of this project.
- Provide accurate scale drawings and/or “blueprints” of the Customer’s facility(ies) as may be required for the execution of this Statement of Work.
- Provide all station cabling, Ethernet patch cords, additional necessary power cords and any other necessary cables unless specified explicitly elsewhere in this statement of work or associated proposal(s).
- Security Certificates for Collaboration Servers. Wild card certificates will not be sufficient for video edge servers.
- Deployment of certificate to clients necessary for ISE or CWS content filtering as needed.

- Provide any SSL private and public key if using SSL optimization with WAAS. Without certificate(s), datacenter service(s) cannot be optimized.
- Procurement of any SSL certificate needed to support installation.
- Cisco Energy Manager and LiveAction applications are installed on Windows and will require a valid Windows Server 2008R2 or 2012R2 license.
- Provide laborers to move furniture and fixtures that may be required as part of this project; Company will not move any furniture or fixtures.
- Provide a meeting place appropriate to the size of the audience and content presented (room, furniture, seating, etc.) for all training sessions and/or other presentations which are to be made by the Company.
- Provide all server hardware, storage and operating system licensing not specifically included in this Statement of Work or associated proposal(s).
- Provide any necessary cross connects and/or demarc extensions for all telecom services that may be necessary for this project. The Customer will be responsible for any additional fees resulting therefrom. Customer may optionally request Company to act as the Customer's authorized agent to complete this work at an additional cost.
- Order and/or activate any necessary telecom services and/or features that may be necessary for this project. Customer understands and agrees that they will be solely and completely responsible for the order and/or activation of any telecom services. Customer may optionally request Company to act as the Customer's authorized agent to complete this work at an additional cost.
- Customer understands and agrees to be solely and completely responsible to verify the correctness and proper operation of all emergency telecom services including 911, E911 or CAMA trunks whether or not the services were installed and/or configured by the Company.
- Provide telecommunications relay rack equipment, including but not limited to two-post relay racks, four-post relay racks and/or wall-mounted relay racks or cabinets. Such relay rack equipment will be installed in accordance with applicable local building codes prior to the Company engaging in this Statement of Work.
- If a height exceeding twelve (12) feet is required to install any equipment, a lift will be provided by the Customer.
- All roof and/or exterior wall penetrations are the responsibility of the Customer.
- Provide all electrical circuits, UPS(es), PDU(s) and HVAC required to support active electronic equipment being installed by the Company as part of this project.
- Ensure the relay rack (or racks) in each location is/are engineered to support the weight of all installed equipment.
- Provide an on-site authorized Customer representative at all times when Company staff is engaged in work at a Customer's facility and/or co-located datacenter space. The on-site Customer representative must be able to provide physical access to all areas of the facility(ies) which will receive installed equipment as part of this project.
- Participate in a per-site and/or per IDF/MDF quality acceptance process with the Company's Project Manager or Program Manager at the conclusion of the project, or in the case of a multi-phase project, at the conclusion of each phase.
- Provide copies of all existing network and related documentation including but not limited to diagrams, templates, documents, spreadsheets, invoices, licenses and databases.
- Provide a list of all IT services and/or applications that will be included in the project test plan including the following information for each:
  - What is the application or service?
  - How is it used by the organization (or users)?
  - What is the business impact of the application or service? Customer will provide a list of all applications and services in the environment; items will be listed in order of the greatest business impact.
  - Who is the application or service owner? What is their contact information?

- How is the application or service tested? E.g. using a web browser, FTP, login credentials, special software required, etc.
  - What is the expected result of the application tests? E.g. run a report, command output, execute payment transaction, etc.; provide a sample for each expected result.
  - Does the application or service have any dependencies on other IT services or applications? E.g. Active Directory, storage subsystem(s), VMWare, RADIUS, database server(s), etc.
  - Does the application or service have any special network infrastructure requirements? E.g. jumbo frames, MTU, ALCs, firewall configuration, etc.?
- Schedule, coordinate and notify end users of any planned network or facility service interruptions required during the execution of this Statement of Work.
- The Customer shall, at its own cost and expense, obtain all federal, state and local governmental permits, licenses, approvals and other authorizations required with respect to or for the performance of any of the work at its facilities. At such time as the Company begins work on any computer or other system of the Customer, the Customer shall provide the Company all applicable passwords and other information required for the Company to access such systems and perform services thereon or with respect thereto. The furnishing of any such password or other information shall be conclusively deemed to include the authorization and approval of any federal, state or local governmental agency or authority for the Company to access and work on the systems.
- Notify the Company of any defects with the installation services described herein within thirty (30) days after the date of the system cutover. In the event of multiple cutover dates (e.g. multi-site deployment), a thirty (30) day period will apply to the services provided during each individual cutover. Any defects reported by the Customer to the Company beyond thirty (30) days after the conclusion of this project will be deemed to be a separate work effort outside of this SoW and will be undertaken at the direction of the Customer for additional cost.
- Execute changes to any existing IT or facility system which is not specifically included in this Statement of Work but which may be necessary for the successful implementation thereof.

## General

## Change Request Form (Sample)

March 16, 2016

In reference to the "Master Service Agreement" executed between Development Group, Inc., the ("Company"), and \_\_\_\_\_ the ("Customer"), both parties hereby certify, by the signature of an authorized representative, this Change Request Form will amend and be fully incorporated into the existing Statement of Work (SoW).

1. Change request number for this project:
2. Reason for Change Request:
3. Changes to the SoW:
4. Schedule impact:
5. Cost impact:

SoW / Change Request	Product(s)	Services and/or T&E	Total
Original value of SoW	\$	\$	\$
Value of Change Request #	\$	\$	\$
New value of SoW	\$	\$	\$

6. Purchase order issuance (if applicable): Customer shall issue a written Purchase Order to Company, or shall issue an amendment to its original Purchase Order issued under this SoW, for the total amount of \$ .

Except as changed herein, all terms and conditions of the SoW remain in full force and effect.

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have caused this Change Request to be fully executed.

**"CUSTOMER"**

**"COMPANY"**

Development Group, Inc.

\_\_\_\_\_  
Daniel Lockwood  
President

## Work Acceptance Certification (Sample)

6/12/2015

Project name: \_\_\_\_\_

Project number: #####

Project manager: Curtis Hauptman

Customer: \_\_\_\_\_

Description of the work completed:

<input type="checkbox"/> Project complete	<input type="checkbox"/> Phase complete	<input type="checkbox"/> Major deliverable complete
-------------------------------------------	-----------------------------------------	-----------------------------------------------------

In reference to the "Master Service Agreement" executed between Development Group, Inc., the ("Company"), and \_\_\_\_\_ the ("Customer"), both parties hereby certify, by the signature of an authorized representative, that this project, project phase, or major deliverable meets or exceeds the agreed-upon performance standards for scope, quality, schedule and cost. The Customer further agrees that documentation for all relevant security, legal and regulatory requirements have been furnished by the Company and/or have been reviewed by the Customer.

Additional remarks:

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have caused this Work Acceptance Certification to be fully executed.

**"CUSTOMER"**

**"COMPANY"**

Development Group, Inc.

\_\_\_\_\_

\_\_\_\_\_  
Daniel Lockwood  
President