

Aruba ClearPass Install & Controller Config Review

Santa Barbara Unified School District / Project Number: OP-103748

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Project Overview

Background

Santa Barbara Unified School District is a current user of Aruba wireless and wishes to prepare for a one to one initiative. Santa Barbara Unified School District has purchased Aruba ClearPass to help them with this goal and has asked Accuvant for assistance setting that up as well as performing a configuration review of 4 of their Aruba controllers with an emphasis on RF spectrum review in order to make sure they are prepared for their one to one initiative. This document is Accuvant's response to this request.

Goals and Objectives

Through scoping discussions and information provided by Santa Barbara Unified School District, Accuvant understands the following describe the goals and objectives for Accuvant to accomplish during this engagement:

- Review 4 Aruba controllers for best practices with an emphasis on RF spectrum
- Perform RF spectrum review in select areas
- Install and configure ClearPass Policy Manager, ClearPass Guest and ClearPass QuickConnect

Project Environment

The current project environment includes:

- All Aruba network switches and Aruba wireless controllers
- 17 locations, each has a local controller pointing to the district building where a local and a master controller reside.
- Controllers are 3600 series running 6.3.1.1 version of code
- Running AirGroup
- Running Airware with no maps imported into it and no automation set up
- Roughly 1000 APs across the 17 locations but more will be installed soon. Currently installed in every other classroom.
- Each site has at least a 100MB connection that is behind a PAN firewall
- Airwatch is in use for Mobile Device Management solution
- Roughly 2.5 devices per user should be planned for, of varying device types
- 802.11bg and 802.11n and both 2.4GHz and 5GHz RF bands are currently in use
- Devices frequently roam from AP to AP, do not require high performance or throughput from the WLAN and are mostly using web based applications and some streaming media.

- Two 25k CPPM virtual appliances, guest for 100 endpoints, quick connect 5-10k user have been purchased
- Airwatch is in use for Mobile Device Management solution

Project Scope

Project Phases

Accuvant follows a proven methodology for integrating Aruba solutions into existing client environments. The scope of the project will be to assist Santa Barbara Unified School District in configuring and deploying these products so that they can be effectively managed and truly improve the operations and security of the network. The specific tasks of this project are the following:

Project Details	
Planning Phase	
Planning & Environment Review	<p>Confirm the scope of work has been accurately captured in the project proposal and identify any significant obstacles to implementing the solution before coming on-site.</p> <p>Conduct a pre-project call to gather the detailed information about the Santa Barbara Unified School District environment necessary to perform the rest of the deployment.</p>
Kick-off Meeting	<p>Introduce team members and their role in the project.</p> <p>Review the project's success criteria.</p> <p>Conduct a short review of the project objectives and tasks, assign dates and times of deliverables, establish status reporting requirements and any change control impacts.</p> <p>Confirm the point(s) of contact within Santa Barbara Unified School District and have the necessary materials and access to begin work.</p>
Plan and Design Policy	<p>Develop a security policy that meets Santa Barbara Unified School District's requirements.</p> <p>Discuss & design appropriate authentication policy.</p> <p>Determine any required policy overrides and bypasses, and configure as needed.</p>
Installation Phase	

Project Details	
Controller Config Review and RF Spectrum Review	<p>Review the configuration of 4 Aruba controllers for best practices with an emphasis on RF</p> <p>Perform RF spectrum review in select areas</p>
ClearPass Installation	<p>Install ClearPass virtual appliances</p> <p>Patch appliances</p> <p>Install a publisher and subscriber</p> <p>Join the publisher and subscriber to Active Directory</p> <p>Create service for MSCHAPv2</p> <p>Create up to 4 derivation rules (student, faculty, administrators that all land at the same location)</p> <p>Create SSID for WPA2 Enterprise network</p> <p>Install digital certificate for WPA2 Enterprise network on all appliances</p> <p>Setup TACACS and Radius rules for ClearPass administrators</p>
Set up Guest Web Portal	<p>Setup LDAP authentication source</p> <p>Create a captive web portal with guest sponsor</p> <p>Create CPPM services for web authentication and MAC authentication</p> <p>Create user roles on the controller for guest</p> <p>Create Radius Servers</p> <p>Create Radius Server Groups</p> <p>Setup guest sponsors, translation rules and profiles</p> <p>Enable custom skin</p>
Test	<p>Validate installation and configuration.</p> <p>Route test traffic through the new system and test to ensure it is correct.</p> <p>Troubleshoot and modify configuration as needed.</p>
Cutover to Production	<p>Migrate new solution into production.</p> <p>Implement cutover plan to migrate production traffic to new solution.</p>
Closing Phase	

Project Details	
Knowledge Transfer	<p>Ensure Santa Barbara Unified School District personnel have the necessary skills to support and maintain the security solution going forward.</p> <p>Conduct an informal knowledge transfer session with Santa Barbara Unified School District on utilizing the system to increase proficiency and ensure maximum results are achieved.</p>
Documentation (Off-Site) Document Sections:	<p>Project Summary – Provide a one or two page summary of the deployment project.</p> <p>Environment Overview – Provide a listing of the key security measures in place, an overview of the systems that make up the solution and a depiction of the network environment post deployment.</p> <p>Solution Details – Provide an explanation of how the systems connect, communicate and any dependencies they may have.</p> <p>Device Configurations – Provide appropriate screenshots and text files detailing configuration of devices.</p> <p>Administration Procedures – Provide a breakdown of the key administrative procedures to support the solution.</p> <p>References – Provide a list of supporting documents and where to find them such as user guides and technical briefs.</p> <p>Work Performed – Provide a detailed listing of each deployment activity performed by phase.</p>

Required Hardware and Software Components

The following hardware and software components are required for the completion of the deployment services proposed by Accuvant. Accuvant will be unable to begin the project until these components are available.

Hardware/Software Provided by Accuvant

- None

Hardware/Software Provided by Santa Barbara Unified School District

- All required Aruba ClearPass licenses and software
- Required servers for LDAP and RADIUS authentication servers.
- VMWare infrastructure for the ClearPass virtual appliances.
- Necessary Active Directory credentials and accounts to connect ClearPass to AD

- Digital Certificate(s) used for ClearPass web portals
- Custom guest site pre-built by Aruba

Other Project Contingencies

The following components, which are the responsibility of Santa Barbara Unified School District, are required before the project may start:

- Assign a primary point of contact to work with Accuvant during this project. This contact will be responsible for helping Accuvant to identify information owners and will assist with obtaining timely responses to requests for data and information.
- Provide all Accuvant resources with any necessary building badges/passes, parking badges/passes and machine room badges/passes.
- Respond in a timely fashion to questions posed by Accuvant regarding the project.
- Provide Accuvant with documents/diagrams detailing the existing specifications.
- Provide additional documents and/or diagrams, if reasonable, as requested.
- Provide access to network support personnel to make necessary changes to accommodate new equipment.

The following questions will need to be addressed before the project may start:

Project Prerequisites
Logistics
Is a consultant background check required?
If required, has a background check been completed?
Have physical access requirements, badge requests, etc. been submitted and processed?
Will all key project stakeholders or participants be available during the requested onsite dates?
Hardware Installation or VM Configuration
Is a bill of materials available for the hardware and software?
Is a network diagram or design document available?
Was the solution designed for a virtual machine (VM) configuration, physical appliances or a combination of both?
If using VMs, have the VMs been created?
If hardware-based solution, has the hardware been received?
If not already received, what is the ETA?
If received, is hardware racked?
If Yes, have they been tested?
If No, is a burn-in period required?
Are appropriate power and network connections available?

Project Prerequisites

Have you created an account for support, content and licensing with the manufacturer?

Software and Licensing

Have you received the licenses for the product(s) being implemented?

Have you downloaded the product software?

Will the implementation take place in a lab/test or production environment?

Change Control

Have the applicable change control procedures been initiated to permit installation of the software/hardware and configuration of devices?

Is an approved change control window available during normal business hours (08:00-17:00)?

If the approved window is outside of normal business hours, coordinate scheduling as appropriate.

Are there any production freezes, blackout dates, holidays or other dates that will impact the delivery of services?

Third Party Dependencies

Are third parties involved in this project; i.e. contractors for wiring, etc.?

If yes, has the third party completed their work?

If not completed, what is the estimated date for completion?

Professional Considerations

Scheduling

Accuvant estimates this project will take approximately eight (8) person-days and will be completed over a two (2) week period. Of the estimated eight (8) days, seven (7) days is expected to be on-site and the remaining time has been allocated for work that can be completed remotely and documenting the solution, and will be conducted off-site.

Engagement Effort Breakdown	
Estimated On-Site Effort	7 Days
Estimated Off-Site Effort	1 Days
Total Estimated Effort	8 Days

Accuvant proposes using at least one of our Consultants (bios available upon request) on an as needed basis for the appropriate time necessary to perform the work outlined in this proposal. Accuvant and Santa Barbara Unified School District will agree to work together to schedule time in advance when both parties will have resources available for the project.

Project Completion

Accuvant may request that Santa Barbara Unified School District acknowledge completion of the contract in writing via a Certificate of Acceptance, which would be used to signify the successful completion of the consulting engagement.

Change in Scope of Services

In the event that unforeseen factors change this Services scope of work and/or impact the term and cost of Accuvant-provided Services, Santa Barbara Unified School District and Accuvant may mutually revise the SOW and Accuvant shall provide customer with an estimate of the impact of such revisions on the fees, payment terms, completion schedule and other applicable provisions of the SOW. If the parties mutually agree to such changes, a written description of the agreed change ("Change Order") shall be prepared, incorporating such changes to the SOW and shall be signed by both parties. The terms of a Change Order Form prevail over those of the SOW.

Project Assumptions

The ability to complete this engagement in an efficient and timely manner is critical to Accuvant. The assumptions listed below set forth the expectations of the working relationship between Santa Barbara Unified School District and Accuvant.

Accuvant

- The work is to be performed consecutively until project completion. There will be no break in services other than weekends and / or Accuvant recognized holidays
- Our consultants consider all Santa Barbara Unified School District information and documentation as sensitive and confidential and will handle appropriately
- Our consultants recognize the value of knowledge transfer and will encourage Santa Barbara Unified School District to participate in all appropriate aspects of the project
- Our consultants and/or project managers will notify Santa Barbara Unified School District of any items that may be delayed as soon as possible in order to determine ways to manage any impact (i.e., cost, timeframes, modifications, etc.)
- All deliverables will, after completion, be reviewed jointly by Santa Barbara Unified School District and Accuvant consultants
- Accuvant is not responsible for providing any services or performing any tasks not specifically set forth in this SOW
- Accuvant shall have no responsibility for other contractors or third parties engaged on the project unless expressly agreed to in writing

Santa Barbara Unified School District

- Provides a single point of contact within Santa Barbara Unified School District' organization to help Accuvant consultants coordinate access to the required project materials and personnel
- Provides documents / diagrams detailing the existing policies, specifications and/or architecture in a timely manner
- Provides a safe working environment, including a workspace, telephone and network (and Internet) access for the purpose of time entry, email and project-related efforts
- Provides any necessary building, parking and/or machine room badges/passes to Accuvant consultants
- Accuvant consultants will be reliant on Santa Barbara Unified School District staff to complete identified tasks and/or participate in interviews. Santa Barbara Unified School District' inability to provide this staff may affect the completion of tasks and/or deliverables.
- Deliverables will be reviewed by Santa Barbara Unified School District and returned with comments within ten business days of delivery. Acceptance of the deliverable will be assumed, if no comments are received from Santa Barbara Unified School District during that time.

If the Santa Barbara Unified School District assumptions listed above cannot be met, there may be a negative impact on project duration or cost. For example, time that an Accuvant consultant is prevented from working due to a delay caused by Santa Barbara Unified School District is billable, and will increase the price of a fixed fee or time-based project. If there are deviations in scope, effort or duration, a change order will be necessary and an addendum for additional effort will be created. All changes in scope or duration will be negotiated between Accuvant and Santa Barbara Unified School District.

Project Management Approach

Accuvant recognizes the importance of our client's awareness of the engagement progress and ongoing open communication throughout the project. In order to assist in this requirement, Accuvant has implemented a

number of procedures as part of our engagements to ensure that this awareness and open communication channels are maintained.

Pre-Engagement

A primary objective of the Accuvant project management services is to make the project as smooth of an experience for the client as possible. To accomplish this goal, the project coordinator engages the client during the pre-engagement call and pre-engagement validation.

This pre-engagement call allows Accuvant consultants to gather the detailed information about the client's environment necessary to perform the project. Accuvant consultants will drive this discussion by going through a pre-engagement checklist with client personnel. The primary goals are to confirm the scope of work has been accurately captured in the project proposal and to identify any significant obstacles to completion prior to beginning the engagement. Specific tasks performed in this phase include:

- Reviewing the project proposal
- Confirming basic project logistics
- Walking through the sequence of tasks to be performed
- Listing and assigning any action items necessary to complete prior to the project commencing

Following the pre-engagement call, the practice manager or managing consultant engages Accuvant's consultant(s) to provide support in meeting project assumptions and action items from the pre-engagement call. Establishing the proper environment for the first day of engagement is paramount in creating a smooth and successful Accuvant experience for the client.

Dedicated Project Management

During the engagement, the practice manager or managing consultant will employ best practices to ensure that your project is executed and monitored according to your expectations. In addition to monitoring the current tasks, Accuvant's project oversight examines the upcoming tasks to confirm that all pre-requisites have been met. This single proactive measure allows consultants to always be moving the project forward and alleviate issues before the consultant and timeline are affected.

Monitoring the project consists of scope reviews, status and performance reporting and the following:

- Help identify action items and risks to the project and, with other project members, coordinate a resolution and monitors their execution and completion
- Review regular project status reports to maintain consistent and accurate content and flow of communication and provide accountability relating to the overall progress of the project.
- Control the project deliverable documents by maintaining a central repository and assigning project document tracking numbers.

Communications

To ensure your project is completed in a timely manner, with minimum impact to both system resources and personnel, Accuvant utilizes various communication methods during each phase. The list below details the methods utilized to ensure consistent ongoing communication with our clients throughout the engagement:

- Accuvant delivers daily or weekly status report to our primary client contact detailing activities, what is planned for the following day or week, as well as any issues which have arisen that may delay the on-time completion of the engagement.

- Accuvant also utilizes informal communication including e-mails and phone calls to ensure the client is kept informed during the project.
- All communication is secured utilizing industry accepted encryption software to ensure critical information is not compromised.
- Our engagement model creates an environment in which the client, project manager and consultant are constantly communicating.

Terms

- All work will be performed subject to the terms and conditions listed at http://www.accuvant.com/sow_ts_and_cs.pdf.

Project Information

Project Logistics	
Testing Window:	Business Hours
Comments:	
Consultant Location:	<input checked="" type="checkbox"/> Onsite <input checked="" type="checkbox"/> Remote <input type="checkbox"/> Remote via Testing Appliance
Comments:	
Onsite Address(es):	720 Santa Barbara Street,Santa Barbara, CA 93101
Special Directions:	

Santa Barbara Unified School District Contacts	
Project Lead:	Todd Ryckman
Phone Number:	805.963.4338 ext. 6203
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Technical Lead:	Todd Ryckman
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Accuvant Contacts	
Account Manager:	Matt Riley
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Solutions Engineer:	Nathan Heck
Phone Number:	765.532.3904
Email:	nbheck@accuvant.com

Project Fees, Expenses, Payment Schedule

Fees

The Services shall be performed on a time and materials basis and is detailed in the table below.

Description of Services	Service Code	Effort	Fee
Aruba ClearPass Install & Controller Config Review	ACVT-TS-CON-TM	8 days (64 hours)	\$225/hour
Total		8 days (64 hours)	\$14,400

Project Service Order Information

Practice: Technology Solutions

Engagement Type: ACVT-TS-CUSTOM

Partner: Aruba

Technology/Product: ClearPass

Payment Schedule

Payment is based on the following schedule:

- Accuvant will invoice Santa Barbara Unified School District on a monthly basis, for the actual hours worked during the previous period.
- Each invoice is due and payable within 30 days of invoice date.
- In the event Santa Barbara Unified School District delays or puts the project on hold, Accuvant reserves the right to bill for the portion of work performed up to that point.

Travel & Expenses

Travel and expenses are not included in the estimate and will be billed monthly as incurred. Accuvant will make every attempt to incur reasonable expenses associated with the implementation of the. Valid expenses typically include parking, meals (unless a per diem is agreed upon), lodging, photocopying and communication costs. Travel costs include: airfare, mileage (if a personal car is used) and automobile rental. If international travel is required, additional expenses may be incurred. Accuvant assumes that any required travel will be booked a minimum of two weeks in advance of any onsite portion of the engagement.

Authorization

By the signatures of their duly authorized representatives below, Santa Barbara Unified School District and Accuvant, intending to be legally bound, agree to all of the provisions of this Statement of Work as of the Effective Date set forth below.

Executed by Santa Barbara Unified School District and Accuvant

Authorized Signature – Santa Barbara Unified School District

Authorized Signature – Accuvant

Name Printed

Name Printed

Title

Title

Date

Date



About Accuvant

Accuvant is the only research-driven information security partner delivering alignment between IT security and business objectives, clarity to complex security challenges, and confidence in complex security decisions.

Based on our clients' unique requirements, Accuvant assesses, architects and implements the policies, procedures and technologies that most efficiently and effectively protect valuable data assets.

Since 2002, more than 4,500 organizations, including half of the Fortune 100 and 800 federal, state and local entities, have trusted Accuvant with their security challenges. Headquartered in Denver, Accuvant has offices across the United States and Canada. For more information, please visit www.accuvant.com, follow us on Twitter: @Accuvant, or keep in touch via Facebook: <http://tiny.cc/facebook553>.

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