

Attachment A - Current Network

ABHS FY 2018 Category 2 Request for Solutions

This document is part of the complete request for solutions. Please read all four documents and any addendums that have been posted.

Overview

Amy Biehl Charter High School (ABHS) currently has both wired and wireless connections to our network. We have a one to one program where every student has a device. We allow BYOD and open access to our wireless network from student and staff cell phones. We have an Allworx VOIP system. Currently we employ a Windows 2008r2 domain with DNS and DHCP. We have a Meraki wireless solution. We have a Dell Sonicwall firewall and content filter. We are connected by fiber to the Internet. Our ISP is Level 3. However we have a RFP for Internet access out at this time. We anticipate that there will be separate Internet access for our two buildings.

Locations

ABHS has two location in downtown Albuquerque less than a block apart. Our main building is at 123 4th ST SW and our Simm's Annex is in the Simm's Building at 400 Gold St SW suite 106. We have VOIP, wireless and wired connections at both buildings. At our main building we have Windows servers with shared network drives and a print server.

Users

ABHS has approximately 300 hundred students and about fifty staff members. All students are provided a Chromebook which are used extensively in our school. All staff have at least one Windows laptop. Very few users connect to the network with a wired connection. We do allow BYOD for students and staff. All devices are allowed access to both our wired and wireless connections. Most days we have in excess of 500 connections

User Devices

Connected to ABHS's network are several devices. We have a fleet of 15 desktop printers and four shared printers. We also have two copiers connected. We have about fifty VOIP phones in operation. ABHS has almost 300 Chromebooks and fifty Windows 7 laptops. The domain has

two virtual server hosts, one legacy file server and a NAS. We have a Dell Sonicwall firewall that also does content filtering. The servers are housed in a server room in our basement.

Wired Network

ABHS has one MDF in the main building and an IDF at the Simm's Annex. All cabling is category 5e. In our MDF we have four HP ProCurve 3500 switches, one is doing routing. We have the firewall and Allworx VOIP server. There are also two APC UPS's. Our Internet provider has some equipment in the MDF where they hand off the Internet.

At the Simm's Annex the IDF has one Cisco switch and an APC UPS. There is also the connection to the point to point connection in the IDF.

Wireless Network

We have a new Meraki wireless network with fifteen MR 32 and MR33 WAP's. Three are in the Simm's Annex and the rest are in the main building. We feel the network is meeting our needs and do not want to make any major changes. Any solution must work seamlessly with it.

Point to Point Wireless Connection

Currently our two locations are connected by a Ubiquiti point to point wireless bridge (PTP). We have an antenna on the roof of our main building and on the roof of the Simm's building. All solutions may incorporate the PTP to carry traffic between the two building and as a failover in case of Internet failure at one location. If the PTP remains the solution must work seamlessly with it.

Logical Network Configuration

In addition to the physical network the proposed solution must address issues with the logical network. Currently we have a Windows 2008r2 domain. The main DC has both a DHCP and DNS server. We replicate those to the second DC. We have three VLAN's, two for data and one for VOIP. We feel that the address pool in the VLAN's need to expand to cover anticipated growth. On the wireless network we have two broadcasted SSID's and one hidden SSID for Chromebooks.