



# Santa Clara County Library District

## Aerohive Wireless Solution Enables Santa Clara County Library District to Offer Enhanced Services and Superior Guest Wi-Fi

### Challenges

- Without an enterprise-class network in place, network architecture was minimal and limited
- Poor connectivity and signal strength generated unhappy patrons
- Essential community services required a wireless network supporting video and voice capabilities
- Controller-less network solution needed to align with library technology plan, goals and budget needs

### Results

- Cloud-enabled wireless platform in place for superior connectivity and user experience
- Enterprise-class features enable Library to establish both guest and staff networks to provide flexible remote office network solution
- Improved reputation in the community and satisfied library patrons using variety of wireless services
- Unique technology programs in place to give access to variety of devices, services and learning opportunities

### About Santa Clara County Library District

The Santa Clara County Library District is located in the Silicon Valley and serves nine cities and the unincorporated areas of Santa Clara County, consisting of seven community libraries and one branch library. The Library District also operates two bookmobiles and offers comprehensive online library services.

With a budget of over \$34 million and a staff exceeding 250 full time employees, the Library serves more than 3 million annual visitors and boasts a collection of almost 2 million items. The Library sponsors many classes and programs, as well as hosting many community events and activities.

The Library has received national recognition 11 years in a row and is ranked as one of the best in the nation for its size by Hennen's American Public Library Ratings. The Library Journal also awarded the Library as one of America's 2013 Five Star Libraries.

The Library provides free access to informational, educational, and recreational materials and services. In response to community needs, the Library provides diverse resources on a wide variety of subjects and viewpoints and helps people effectively utilize these resources.

### Challenge

Being in the heart of Silicon Valley, it is not surprising that the Library District has had Wi-Fi in place since 2007, even upgrading its initial consumer-class technology several years ago.

The Library began to receive numerous complaints from its patrons about slow connection speeds, as well as problems with dropping off the network completely. The network was on a central controller that routed back to the headquarters office location, and the problems with the speed of the network urgently needed to be addressed.

The Library was facing backlash in public review forums like Yelp with complaints about the network. With over 600 devices connected to the network at all times, the Library needed to upgrade to an enterprise-class wireless network with robust features for centralized management. In addition, the library headquarters has recently relocated to Campbell, California and with remote management, the IT team needed better reporting capabilities that were not available through its current solution, as well as troubleshooting abilities to solve network issues quickly and easily.

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—Sanjeev Singla

Information Systems Manager

In addition, a robust network architecture was needed to support new initiatives at the library, including a tech toolbar where staff demonstrate how to use various tablets and e-readers and download library resources to these devices, as well as video phone services for deaf individuals. With increased digital services at the library such as e-books, the Wi-Fi network was becoming an essential part of library operations.

## Solution

Sanjeev Singla, Information Systems Manager for the Santa Clara County Library District evaluated a new wireless solution for the libraries and headquarters office. The Library chose Aerohive for its performance and superior bandwidth during a pilot program staged at the Cupertino community library location. The pilot tested library connectivity for a month using a limited number of access points, and the Library received positive feedback from patrons. The Library worked with Aerohive sales representatives as well as Aerohive reseller Dicar Networks to deploy Aerohive access points in every library and its headquarters location. After attending two Aerohive training classes, the IT team was ready and well prepared to architect its wireless network.

The Library chose Aerohive AP350 access points and used Aerohive survey tools for mapping out optimum locations. The Library doubled its access points and also set up plans for two networks, one for staff and one for public access. The Library could also allow VPN access and while previously many devices were not compatible with the wireless network, Aerohive offered a seamless and superior user experience.

With Aerohive's mesh technology, if one AP goes down, another access point will automatically pick up clients for seamless backup operations without interruption for patrons.

Sanjeev and his team use HiveManager Online for remote network management and configuration. Captive web portal is used to welcome guests to the public network and agree to the Library policy before connecting. Enterprise-class features have enabled the Library to establish limits on the number of patrons that can connect to the network at one time, as well as establishing time limits if needed for session time tracking. Aerohive features allow the Library to set the network to automatically disconnect users after 10 minutes of inactivity to allow for the maximum number of patrons to connect at one time to the wireless network.

## Results

The Library is pleased to now offer Wi-Fi without worry about bandwidth and connectivity issues it experienced in the past. While the Library doubled its access points, it was able to support five times the number of users on the Aerohive network due to superior connectivity and powerful signal strength, even supporting 10 times the number of users at its two largest library locations. By now having a complete picture of its network through HiveManager Online, the IT team can make adjustments for spikes in users or usage during different days and times, giving flexibility and control at each location.

The Library can also now offer many new features and opportunities to the community that it previously could not effectively support without a robust wireless architecture in place.

The Cupertino library branch with support from the Cupertino Library Foundation recently introduced Tech Toolbar, a 'genius bar on wheels', offering library users a chance to try out a large number of mobile and wireless devices, including iPads, e-readers like Kindle and Nook, and a variety of tablet devices. Library patrons can sign up for tutorials with librarians to learn how to use the devices as well as how to access digital library materials via the Wi-Fi network. The Library District offers OverDrive Media Console to check out e-books and audio books, available directly from an app in smartphones or mobile devices without need for special e-reader software to enjoy books.

All libraries now offer videophone services for deaf patrons, using Sorenson videophone software and services, previously not supported on the wireless network due to poor signal strength. Now individuals can bring their own devices and use an application to dial a number from the app to connect to a sign language translator in order to conduct business or talk with friends and family.

"I was personally thrilled to offer this particular service across all of our library locations," explained Sanjeev Singla. "Having a robust Wi-Fi network in place has provided so many options for increased services for our library patrons. Without having network connectivity concerns, we can focus on providing the best materials and services to the community."

Library training rooms now offer computer classes where students can bring laptops and have a richer experience by connecting directly to Wi-Fi. Other services the libraries can now offer include tax prep help during the spring tax season, inviting participants to bring their laptops and connecting directly to online documents and services.

Five libraries partner with the Pro Bono Project to offer 'Virtual Lawyers in the Library' clinics held on a monthly basis. Participants use laptops, a printer and scanner, as well as Skype to videoconference with an attorney for legal advice, consultation and referrals. With the Aerohive network in place, libraries are better able to offer a superior Skype and video conferencing experience.

The Los Altos community library has purchased 10 iPads for patrons to use for up to two hours in the library. The iPads are loaded with educational apps and can easily connect to the guest network. iPad Art Workshops have also been offered at the library. The Los Altos library is also using iPad apps to incorporate both digital devices and traditional children's books into weekly story times for families. In addition, the Los Altos community library offers Early Literacy eLearning Kits for children, which includes a suite of learning apps using an electronic device at the library.

## Wi-Fi Benefits the Community

The Santa Clara County Library District has a three-year technology plan, and is currently in the first year. After implementing the Aerohive wireless network, the Library will begin its plans for future services, including the expansion of iPad dispensing stations at additional library locations that will automatically connect to the Wi-Fi network.

Further plans will include broadening the wireless staff network at its office headquarters location in the next several months, enabling greater efficiency for employees across the organization. Moreover, the Library will better utilize TVs that reside in lobbies and other community locations, now with the ability to connect wirelessly to stream promotions and advertise events, and allow interactive content and feedback from patrons.

With Aerohive, scalability is cost-effective and the Library can adjust and add to its network as it grows its programs and services. The Library may consider adding APs to its bookmobiles for VPN connectivity and to provide greater mobile services to preschools, retirement communities, migrant farmworker camps and rural communities without easy access to library materials.

"Aerohive has been instrumental in our ability to meet our diverse patron needs, as well as providing outstanding customer support to meet our specific organizational requirements," explains Sanjeev Singla, Information Systems Manager. "With Aerohive enterprise features, we have a complete view of our network and can easily manage and configure the network to best meet the needs at all of our library locations. The response has been outstanding."

Now, Yelp reviews are more favorable. The Library District reached out to many patrons and members of the community for feedback and their efforts have been noticed since deploying Aerohive. The Aerohive network has provided flexibility, control and resiliency in order to best serve library patrons and the greater community at large.



Contact us today to learn how your organization can benefit from Aerohive wireless LAN architecture.

Aerohive Networks, Inc.  
330 Gibraltar Drive  
Sunnyvale, CA 94089

toll free 1-866-918-9918  
phone 408-510-6100  
fax 408-510-6199

[www.aerohive.com](http://www.aerohive.com)  
[info@aerohive.com](mailto:info@aerohive.com)  
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