

# Val Verde Delivers Education for the Future with New High Bandwidth Network



## The customer summary

**Customer name**  
Val Verde Unified  
School District

**Industry**  
Education

**Location**  
Riverside County, CA

**Number of schools**  
22

## Introduction

Val Verde USD is a successful, progressive school district made up of 22 schools varying from elementary to middle school and high school and is located in Riverside County, California. The mission of Val Verde USD is to create a positive environment that produces life-long learners who will become responsible, contributing citizens able to function in a culturally diverse society.

Val Verde USD network infrastructure takes advantage of the Federal E-Rate program, which enables them to address some of the poverty issues in the state by providing Internet access to all students. The Federal E-Rate program helps with about 85 percent of the local costs. Free lunches, Chromebooks, advanced placement classes and SAT assistance are just some of the many additional programs provided by Val Verde.

The district ensures that the improved telecommunications and information services technology is leveraged through hands-on applications to help students achieve college and career readiness. Teachers act as coaches to guide classroom learning with real life projects and personalized learning experiences which tie into authentic lifetime challenges.

The advanced technology also helps provide the schools with cloud services that house the online curriculum and email. This enables Val Verde to deliver top quality education for all levels that include the latest in STEAM (science, technology, engineering, arts and math) options.

## The Challenges

The 22 schools in the Val Verde district support 20,000 students. Those students commonly watch HD education videos, download classroom literature from the cloud, and work with robotics and 3D printers. All these devices share the Val Verde network, along other district services. With

students requiring more bandwidth for new applications each day, the district was pressed to keep up with the technological requirements of 21st century education, while meeting the needs and expectations of both students and staff.

Resilient Communications, Inc. is an Orange County-based Cisco partner. Val Verde has worked with the company, since they are very active in the public sector with a strong emphasis on K-12.

“I learned about the benefits of dark fiber and private optical solutions at a Dark Fiber Symposium promoted by Resilient Communications in 2015,” said Matt Penner, Director of Information and Instructional Technology, CCTO (Certified Chief Technology Officer), Val Verde.

Based on its dark fiber experience, Resilient launched a series of outreach programs to K-12 districts across the state of California. Matt immediately saw the economic and control benefits of this particular solution—financed heavily through the federal E-Rate program—and recognized the opportunity to expand and enhance the Val Verde network to provide a significant performance enhancement for students and staff.

## The Solution

Val Verde’s legacy network connected the 22 schools with a managed WAN service provided by the local service provider. Each school had its own managed uplink to the Internet. But bandwidth was limited to what was available from the provider, thus limiting extended expansions and bandwidth growth, as well as control over the entire district as a single entity.

Resilient worked in conjunction with the Cisco optical team and dark fiber providers to create a realistic roadmap for a successful implementation of a new network. Val Verde USD leased local dark fiber and Resilient provided the NCS 2006 with ROADMs (Reconfigurable Optical Add Drop Mux) as the

turnkey solution at five major core nodes. The dual ring topology provided 20G to all sites and enabled a 100G connection between the district office and the disaster recovery data center. Eight sub rings were also engineered coming off the main ROADM nodes.

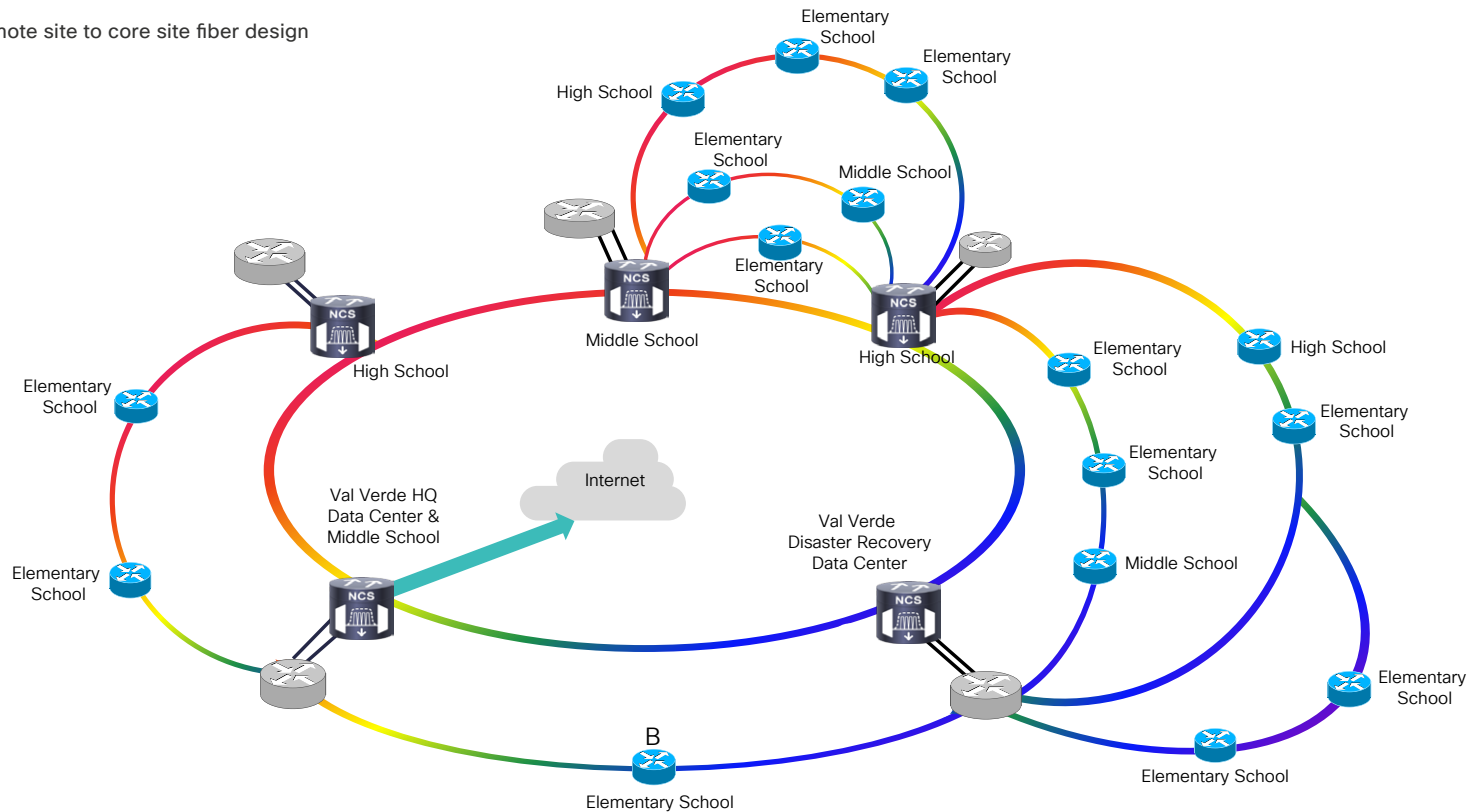
With this configuration, the district could upgrade capacity to each school node and have bandwidth control over the entire network. User and business files could now be moved to the cloud rather than being stored at each site, increasing resiliency of the data.

Increased reliability came from dual data centers and the bi-directional ring architecture, and provisioning and troubleshooting of the network was simplified with the NCS 2000 platform software.

“We now have the capacity to handle...the rapidly changing curriculum and bandwidth needs for each school in our network”

**Brian Falk**  
Network Services Manager, Val Verde

Figure 1. Val Verde remote site to core site fiber design



## The Outcome

Resilient Communications has been a Cisco partner for twelve years. “Our focus on K-12, together with our focus on the optical WAN solution, and public sector makes us an easy choice for Val Verde, and Cisco is the prime vendor we always consider,” said Gary Samaha, VP/GM, Resilient Communications.

“We now have the capacity to handle the evolving needs of digital information for classroom requirements and the rapidly changing curriculum and bandwidth needs for each school in our network,” said Brian Falk, Network Services Manager, Val Verde. The new network has been operational since June 2019.

## Products

- Cisco Network Convergence System 2006

## Learn more

- [Cisco Network Convergence System 2000 Series](#)

## Reference

- [Val Verde Unified School District](#)
- [Resilient Communications](#)