

Case Study: City of Madera



Using Vyatta for Increased Router WAN Port Density and Packet Inspection

City of Madera

Challenge

Find a routing and security solution that help consolidate network and scale and segment LAN

Solution

Vyatta Open Networking Appliance

Benefits

Simplified installation
Integrated routing and security
Scalability
Cost-effective

Madera is a central California city of approximately 50,000 people. Because it's a bedroom community for much larger Fresno, nearby, expectations are high for IT services. Madera has 500 city employees, with 200 automated desktops.

As Madera's population increased and expectations for IT services grew, its network infrastructure couldn't keep up. The original Cisco routers were stacked up at central routing points, but couldn't support any additional ports. As a local government, Madera wanted to avoid paying too much for hardware. Support for an upcoming VoIP project was also critical. Originally, other city services shared a network with the police department. When it was time to separate other municipal computing from the police network, Madera IT Manager Paul Wheeler saw an opportunity.

Because staying with Cisco would have meant expensive replacement boxes to get the port density the city needed, Wheeler began to look for alternatives. Increasing WAN connectivity was the primary driver for the decision, but important secondary considerations included packet capture and debugging, and lower cost. In addition, Wheeler needed one feature Vyatta didn't yet have—high density, quad-port T1 cards to reduce the number of routers in the central network location.

"If you're looking for price-performance, which you have to do for the taxpayers, you can't beat Vyatta. I'm very wary of being cornered by a supplier. I love that Vyatta doesn't try to charge a premium for a commodity like hardware."

City of Madera Router Requirements			
Features	Cisco 1720	Cisco 2800	Vyatta
Scalable WAN Connectivity	T1 only	No T1 on 2801 - (2811 + scales to single T3)	Multiple T3
Quad Port T1	No	No	✓
Network Address Translation	✓	✓	✓
Packet capture and debugging	No	No	✓
Open source solution	No	No	✓

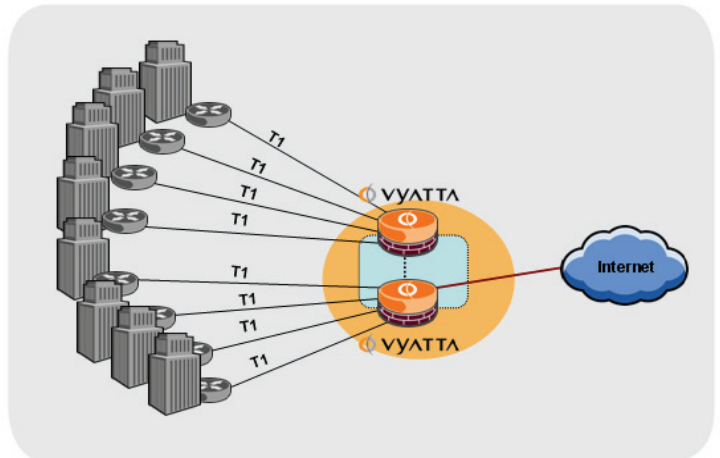
After carefully considering the alternatives, the city of Madera selected Vyatta and purchased the Enterprise Edition, including phone support. At the time, Vyatta had limited T1 fan-out capabilities. Consequently, Wheeler worked with Vyatta to test early beta code that supported quadport T1 cards, giving him the port density he needed for the new Madera network.

"It's been almost a year now, we've had no problems during that time," says Wheeler. He has had only one occasion to contact Vyatta support, for help with the unreleased product feature he was testing. "There was one minor glitch with some beta code I had requested. They were great; . . .



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they fixed it fast." Wheeler adds, "Using the quad-port T1 cards allowed me to collapse four Cisco routers into a single Vyatta system." Wheeler also likes the increased transparency in his system. "With Vyatta," he notes, "I can watch a packet trace, which I couldn't do with Cisco."

Using Vyatta has created additional savings for Wheeler, who has recycled the previous network routers, using them to bring additional remote sites online at a huge savings. Wheeler explains, "I took the displaced Ciscos and pushed them out to remote sites. Each [Vyatta system] allowed me to bring four remote sites online eight more T1s. Vyatta saved us a total of \$16,000." Wheeler adds, "I would like Cisco to go away and just have Vyatta, but somebody who worked here before me bought some Cisco boxes, so I have to use them until they die."

Vyatta's software router has brought some unanticipated benefits as well, including faster testing. Wheeler finds this a valuable advantage; "I can do a test network routing architecture in 10 minutes. Most small organizations can't afford test beds. Vyatta gives us that ability." Vyatta's open architecture and ability to run on industry-standard, x86-based hardware meant that Vyatta delivered more than proprietary solutions at a much lower price.

With Vyatta, initial system purchases, support, and upgrades cost a fraction of proprietary systems, delivering better TCO than proprietary solutions at purchase and over the life of the product. Wheeler concludes, "Vyatta is definitely the architecture that's going to change the routing industry. Vyatta is going to

remove the stagnation from the routing market. It opens the way for routing applications and more. Vyatta is important for everyone to look at."

By choosing Vyatta, the city of Madera found not only the product to expand its network at much lower cost, but also an affordable solution that will scale with its growing needs.