

School district gears up against cyber threats



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Executive Director of Technology, Innovation and Assessment, Moreno Valley Unified School District

Business needs

When neighboring school districts were hit with cyber attacks, Moreno Valley Unified School District knew they needed to upgrade their data protection. Now PowerProtect DD series appliances and PowerProtect Cyber Recovery solution with CyberSense analytics give them peace of mind that student, employee and financial data are safe and recoverable.

Business results

- 100x average daily compression rate means more data can be stored and protected
- Air-gapped vault with CyberSense analytics means peace of mind that PII data is recoverable in event of a cyber attack

Solutions at a glance

- [Dell EMC PowerProtect Cyber Recovery solution](#)
- [Dell EMC PowerProtect DD series appliances](#)
- [Dell EMC Avamar](#)

Adaptable, collaborative and creative: three competencies the Moreno Valley (CA) Unified School District seeks to instill in its graduates – and they also describe the District’s approach to solving data protection challenges. When neighboring school districts were hit with cyber attacks, the technology leaders at Moreno Valley worked with a trusted services provider and upgraded to Dell EMC PowerProtect DD series appliances and PowerProtect Cyber Recovery solution.

To find out more about the threats to school districts and how this team met the challenge, we spoke with Glenn Alegre, Executive Director of Technology, Innovation and Assessment for the Moreno Valley Unified School District, and Tony Ocampo, the National Technical Lead for Data Protection and Senior Solutions Architect for ConvergeOne, a Dell Partner. Here’s their story.

Glenn Alegre: “Our mission is to empower students to be future-ready.”

“Our mission as a school district is to empower students to become future-ready and positively impact the world. Based on that, our department’s vision is to make sure we have students with the tools in hand to be future-ready and to be able to face anything that comes their way, both career- and college-wise.

“The new normal for many has been work-from-home, but for our kids, it’s been school-from-home. Just to give you some context, our district here at Moreno Valley is about 84% free and reduced lunch, which means we are a district with a high poverty rate. Not everybody has access to technology, access to the internet like some other districts within California.

“The challenge we had during these unprecedented times was to provide the same kind of access and equity for all the kids, to be able to have the content that the teacher is trying to teach. It was a huge challenge in terms of connectivity, in terms of devices.”

“We have a lot of personally identifiable information to protect.”

“We have our student information system on-premises as well as our financial and employee system. So right there you’re dealing with a lot of personally identifiable information, PII,



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It’s always Dell.”

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for both kids and staff and adults. And we need to keep that safe and secure. We’re talking all financials, everything from W-2s, paychecks, all that information we need to keep secure, as well as student demographics, phone numbers. That’s all on-prem, and those are all the things that we are now having backed up to the PowerProtect Cyber Recovery vault.

“We’ve been a longtime Dell customer. We’ve had Dell servers starting in the late 1990s because they’ve just so dependable. And so whenever we think, ‘What are we going to upgrade to?’ It’s always Dell.”

“Our neighboring school districts were hit with ransomware attacks. We knew we had to do something.”

“What we were using for backups was Veeam. We had a disaster recovery site which was housed at one of our elementary schools about three miles away, which was the only solution that we had available at the time. We knew that we had to do something to protect us better, especially when we started hearing about different ransomware experiences that were within some of our neighboring districts.

“In the first two months that I got into this position, there was a ransomware attack at one of our neighboring districts. And that kept me up at night. I would say, “I don’t want to be in the front page of the newspaper because our district is not prepared, and our district is not ready.” I was frightened by what I was seeing. And then several months later, another district got hit. And I said, “We need to do something to be ready for this,” but I wasn’t sure where to turn.

“We always believed in making sure that we were protected through different layers, and so we had our firewall in place, which was great. And then we had our backups. But we did not have a solution that put it all together like the Cyber Recovery solution that Dell provided. Now, we do have the Dell EMC PowerProtect Cyber Recovery solution, complete with the Cyber Vault, the CyberSense, working together to keep us safe, and we feel so much better.”

“We knew the solution ConvergeOne provided would be topnotch. They showed us PowerProtect DD, CyberSense and Avamar.”

“In all honesty, this goes back to the relationship that we have with ConvergeOne, a partner that we’ve had since 2013. I can’t tell you how much we rely on them for their expertise, their knowledge, and the mutual trust we have with them. We know that the solution that they’ll provide us is going to be topnotch, research-based and cutting edge, and it’s always going to have a Dell solution at the backend, providing us the safety, the security and the peace of mind we need for whatever situation we have moving forward.

“And so, we sat down with them and explained our concerns, and that’s when they started showing us the PowerProtect DD, CyberSense and Avamar.”

Tony Ocampo: “There’s no solution out there like PowerProtect Cyber Recovery.”

“Their storage repository with Veeam was a Dell EqualLogic Storage System. They didn’t have PowerProtect DD or any previous generation of Data Domain. When we introduced the

architecture of Cyber Recovery, the biggest value proposition of that architecture was the vaulted isolation and protection that the Cyber Recovery vault provides.

“There’s no other solution out there with that isolated vaulting capability, that extra layer of security and isolation when sending a replicated copy that can be inspected by CyberSense inside the vault. That’s the biggest reason the Moreno Valley went with this solution.”

Glenn Alegre: “We were just blown away by the PowerProtect Cyber Recovery solution.”

“We were just blown away; we didn’t even need to look at any other solution. We knew they were bringing to us the best in the industry on all levels. We said, ‘Oh, this is what we’ve been looking for, and this is the direction we need to go. How can we introduce this into our environment at our district?’

“I presented the solution to our cabinet, which consists of our superintendent, chief business official, chief academic officer and our chief human resources officer, describing to them the local threats. And in fact, when that neighboring district had the ransomware attack, one of the board members turned to the superintendent and said, ‘What are we doing to protect ourselves here at the district?’ Right there and then, that eased a lot of my fears. The cabinet said, ‘Okay, this looks like a great solution. We trust you and your team; we’re going to go for it.’ And so, we were able to get the funding we needed to put the solution into place.”

Tony Ocampo: “School districts have a lot of non-unique data to protect. Avamar is a great fit.”

“The deployment went very well. Working with a team like the one at Moreno Valley makes everything go smoothly. Everything that we talked to them about, everything that we designed, everything that we architected, they were able to absorb it in a short amount of time. In fact, they actually told us that if there are any other school districts that are going through implementation or operations issues or problems, they’d be more than glad to lend their helping hand as far as being a reference and provide lessons learned in their implementation process.

“I’ve been an Avamar fan for many years, and I’ve seen many backup solutions over the years. In fact, I’ve been using Dell EMC backup solutions for decades. And I believe Avamar’s

source-based deduplication technology makes it a very effective backup solution as far as school district data is concerned. There’s a lot of repetitive or non-unique data in school district information systems, PII and general data. Avamar is a great fit for a school district just like Moreno Valley.

“The PowerProtect DD’s compression ratio is currently averaging at least 100X daily according to their DD system manager. We expect that over time it will improve and give them more ability to store more backups, and to protect them from ransomware. They’ll be able to retain significant amounts of data on their PowerProtect DD.”

“CyberSense offers a unique way of inspecting copies of backups. It’s a big differentiator.”

“CyberSense offers a unique way of inspecting and scanning copies of the backups that are replicated inside the vault. The beauty of CyberSense is that it uses a comparison and index methodology, applying machine learning technology into its algorithm, which is very different from what you normally see in traditional malware inspection or ransomware inspection. Most anti-malware, anti-virus or anti-ransomware software that is deployed in the perimeter uses a signature-based type of scanning.



“The fact that CyberSense uses indexing and comparison technology makes it a big differentiator from any product that does malware scanning.”

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National Technical Lead for Data Protection
and Senior Solutions Architect for ConvergeOne

“That’s why CyberSense is very sensible to use inside a vault; because if you have ransomware that has penetrated your perimeter or your edge or your endpoints, it does not make sense to use that same technology inside the vault to scan that data again, making that scanning process useless. The fact that CyberSense uses indexing and comparison technology without the threat of reintroducing malware makes it a big differentiator from any product that does malware or ransomware scanning out there.”

Glenn Alegre: “With CyberSense, we’re no longer the low-hanging fruit that can be easily picked off by bad actors.”

“Prior to CyberSense, we didn’t really have any good analytics for what our backups look like, or what we were actually storing. And so, I appreciated when we were up and running and we started receiving these CyberSense emails. You just look through them; it’s a little more technical for me than normal, but I could see that it says ‘warning’ or it says ‘Hey, everything was good.’ I have a system administrator that gets all of these. It’s just one of those added layers of security that we have in place now. We can actually monitor what’s being backed up instead of just hoping and trusting that what we’re storing is good and free from malware or ransomware.

“I feel, as we like to say, we’re no longer the low-hanging fruit that can easily be picked off; that we have more layers in place that, if anything were to happen, I know that with the PowerProtect Cyber Recovery solution, we’ll be back up and running, and we won’t have to give in to the demands of the ransomware attacker. That totally puts me at ease and lets me sleep at night.”

Tony Ocampo: “PowerProtect Cyber Recovery solution had already proven itself in a nearby school district.”

“Glenn mentioned that other neighboring school districts were attacked with ransomware. We had deployed and implemented the PowerProtect Cyber Recovery vault solution for one of them. When it was time for them to validate everything inside the vault in preparation to be restored into production, everything

was there. And that’s why I believe that Moreno Valley was confident enough to go along with this solution. Because it was a proven solution. Not only as far as the day-to-day operational backup, but its ability to recover in a real-life situation, a real-life ransomware attack which happened within the same neighborhood.”

Glenn Alegre: “If you don’t have a good cyber recovery solution in place, you’re setting yourself up for a lot of heartache.”

“I totally agree. Two neighborhoods that are very similar in size and demographics were hit. And that was part of our emphasis, to make sure we had a solution in place to make sure we were protected against those same attacks.

“You know, they always say this about cyber attacks, but it is so true: It’s not a matter of if it’s going to happen, it’s a matter of when it’s going to happen. And when it does happen, you want to make sure you’re in the best position to not only protect the data of the people who are in your care, but also to be back up quickly, up and running, so that the educational environment is not lost. I’m just thinking about what happened to the other district I mentioned. When their student information system went down and all that data was down, it is so crippling. It is scary.

“You may not think that it’s much, but people can’t take attendance, people can’t look up demographics, people can’t look up this information or that information, just to run a school. And it’s so crippling. To be able to minimize that, and then get back up and running quickly, you’re talking about saving a lot of time and energy.

“My advice to other school districts is this: ‘If you don’t have a good cyber recovery solution in place, you’re setting yourself up for a lot of heartache, for a lot of work in the future, ultimately hurting the kids.’ Because we’re in the business of educating children. And you’d be surprised how the data really can affect the environment of the classroom. But we here at the district, right now we have the Dell EMC PowerProtect Cyber Recovery solution, complete with the vault and CyberSense, working together to keep our data safe.”

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