



Phoenix Children's Hospital: transforming patient care with data

Find out how Phoenix Children's implemented the Dell PowerProtect portfolio to secure virtual machines, protect patient and staff data, streamline infrastructure and achieve huge data deduplication ratios.

Business needs

- Secured critical corporate data including research and patient data
- Implement AI and ML for intelligent data analytics and task automation
- Mitigate the risk of cyberattacks with 24/7 resilience
- Support staff and patients with telemedicine and remote working

Business results

- Achieved a 65:1 data deduplication ratio
- Successfully backed up over 800 virtual machines
- Became 95% virtualized
- Automated simple tasks for improved customer experiences
- Secured petabytes of crucial patient and research data across more than 100 endpoints

Customer Profile



**Phoenix
Children's®**



“I really see Dell Technologies as a true partner for us, and we have a great account team that is helping us every step of the way.”

Theodore Fotias

Vice President, IT Infrastructure
Information Technology
Phoenix Children's Hospital

Solutions at a glance

- Dell PowerProtect DD series appliances
- Dell Data Protection Suite with Avamar
- VMware

Modernizing cybersecurity and data storage helps Phoenix Children's deliver even better care

Phoenix Children's Hospital began operating in the Phoenix metro area in 1983 and today has pediatric clinics all over Arizona. Bringing together leading physicians, world-class programs and state of the art facilities, the Hospital aims to provide hope, healing and the best healthcare for all children and their families.

Phoenix Children's focuses solely on providing healthcare for children from zero days all the way through to 17-year-olds. It has earned national rankings in 10 out of 10 specialties from the U.S. News and World Report's "Best Children's Hospital" survey, including treatments for cancer, neonatology as well as cardiology and heart surgery.

Aside from pediatrics, the Hospital engages in philanthropy and research with its dedicated Phoenix Children's Hospital Foundation and Phoenix Children's Research Institute. Its three key areas of strategic focus are expanding service lines, driving cost-efficiencies, improving clinical quality, patient safety and customer service.



Driving new results with powerful data backup and cybersecurity

To meet its growth goals, Phoenix Children's needed to transform its data environment and cybersecurity to improve staff efficiencies and get the most from its patient data, virtual machines (VMs) and servers.

The Hospital wanted to make telemedicine a priority, so patients could communicate directly with doctors, specialists, and nurses without having to come into an office or clinic. With the outbreak of the pandemic and disruption to physical appointments, the need for telemedicine and remote healthcare became a critical requirement to maintain standards of patient care.

Prioritizing telemedicine in this way meant the Hospital needed to significantly upgrade its data handling capabilities to cope with the digital transmission of medical imaging, remote diagnoses and video consultations with specialists.

Given that the Hospital offers more than just pediatrics, and was expanding to support children in different areas within Arizona, it required a storage solution that could securely handle large quantities of patient, research and staff data across its clinics.



“PowerProtect DD series appliances’ ease of management is number one for us. We set it up and forgot about it. It’s very reliable and we can recover data very easily from any location.”

Theodore Fotias
Vice President, IT Infrastructure
Information Technology
Phoenix Children's Hospital

Phoenix Children's backs up petabytes of patient, staff, and research data across its clinics every single day. This was beyond what the prior system could comfortably handle, with each backup taking 24 hours to complete and requiring full-time support from a highly-paid engineer. Fast and regular backups were critical for the Hospital, so staff could access the most recent patient and research data quickly and easily.

Another critical requirement was robust security. Following the pandemic, healthcare institutions are increasingly becoming targets for cyberattacks. Therefore, these backups required high levels of cybersecurity and resiliency so data could be recovered quickly in the event of an attack or downtime

Phoenix Children's engaged with Dell Technologies to find a backup solution that could provide them with security, resiliency and scalability, together with operational and cost efficiencies.

After considering the Hospital's requirements, it became clear that Dell PowerProtect DD series appliances and Dell Data Protection Suite with Avamar provided the speed, efficiency and security to deliver the transformation the Hospital needed to achieve its goals.



“Avamar just works — it’s a set it and forget it environment, and that is so key to me, to have an engineer that spends 5 minutes making sure everything ran well the night before”

Theodore Fotias
Vice President, IT Infrastructure
Information Technology
Phoenix Children's Hospital



Securing key medical data and opening the door to game-changing efficiencies

By implementing the DD series, Phoenix Children's was able to cut backup times down from 24 to a maximum of 7 hours — an improvement of over 340%. In addition to faster backup times, the 65:1 data deduplication ratio enabled the Hospital to improve data utilization for lean backups and recoveries.

Once Phoenix Children's had reached storage capacity on its initial DD series, they decided to upgrade to the DD9400. Upgrading the appliance was easy for the Hospital — it was as simple as pointing out backup policies from one appliance to another and the upgrade was deployed.

Thanks to the DD series' scalability, when the pandemic hit, the Hospital was able to scale from 300 remote workers to supporting nearly 4000 within one week. On top of that, Dell Technologies and VMware helped the Hospital to scale up its software licenses to enable the new influx of remote staff to work remotely with the tools they needed.

Securing critical patient data with world-class resiliency

To drive its data replication and backups, Phoenix Children's implemented the Avamar solution. Avamar is optimized for rapid, easy to manage full backups of heterogeneous physical and virtual environments, so it was the ideal solution to simplify the Hospital's storage.

As a result, the Hospital can rely on successful backups each and every night. Furthermore, remote staff can now easily recover any data, from any location, at any time they need to. Together, the DD series and Avamar have been a huge success and enabled the engineers at the Hospital to focus on other value-driven activities.

Today, the Hospital backs up everything from VMware environments to client information and doctors' specialized research data. The Hospital's servers are now 95% virtualized and it runs over 800 VMs in its current environment.

Cybersecurity is another area where Dell Technologies is helping the Hospital to enhance its capabilities. To counter the growing threat to healthcare organizations, the Hospital is now working to set up an isolated environment to protect against ransomware and is considering adding Dell PowerProtect Cyber Recovery as an additional defense against malicious actors.

Phoenix Children's is impressed with how easy it is to work with Dell Technologies as a partner. The Hospital found the scalable, cost-effective and easy-to-use storage and cybersecurity solutions it needed to continue to expand its exceptional pediatric treatment and research capabilities — all working with Dell Technologies.



“Since we went to PowerProtect DD series appliances and Avamar, our longest backup time went down from 24 hours to 7 hours, and we're backing up a lot of data”

Theodore Fotias

Vice President, IT Infrastructure
Information Technology
Phoenix Children's Hospital

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