

VDI and Hyperconvergence in Action at Covenant Health





Interview with Adam Sherwood, Enterprise Infrastructure Architect for Covenant Health, Tewksbury, Mass.


In today's value-based care environment, virtual desktop infrastructure (VDI) propels positive experiences for patients, clinicians and IT staff. In this interview, Adam Sherwood discusses the benefits and lessons learned from his experiences working on the design and rollout of VDI on hyperconverged infrastructure.


Lenovo Health: You've helmed VDI initiatives at both Covenant Health and your former healthcare organization. Why did you decide to virtualize?

Adam: There were really four main drivers behind our decision to implement VDI:

 **Cost.** We aimed to reduce PC capital expenses by converting to thin clients to get out of the three- to five-year PC refresh cycle. Choosing thin clients over PCs allowed us to lower unit costs and increase the life of our devices. We saw fewer hardware break-fix calls and less need for "at the elbow" end-user IT support, too, which also helped to cut IT operational costs.

 **Security.** Changing from a conventional desktop to a hosted desktop paradigm enabled us to move data off the desktop and into the data center. In doing so, we increased control over data, reduced the attack surface, and simplified security, auditing and protection.

 **Modernization.** We're always striving for innovation and modern approaches to care delivery. In the past, we were bound to legacy technologies and couldn't readily support upgrades. VDI allowed us to modernize our infrastructure and meet the requirements of our Epic implementation.

 **Manageability.** To deliver faster performance and meet ever-increasing user demand, we had to be more efficient. That meant making everything as automated as possible, including operational management, capacity planning, incident identification and resolution, and end-user support. VDI helped us meet these needs via a modern hyperconverged infrastructure.

Lenovo Health: Tell us a bit more about your decision to incorporate hyperconvergence into your VDI strategy.

Adam: Once we decided to implement VDI, one of our first discussions was around the best approach to take for the infrastructure. The decision to use hyperconvergence became an easy one. Its main differentiators are manageability, cost reduction, performance and scale. In the end, with hyperconvergence, you get components that work together in a predictable way and scalability to meet your needs. I'm not just talking about the capacity you can reach in a given cluster. When you need to add capacity to an existing cluster, hyperconvergence lets you add as little as one node, with the right mix of performance and storage capacity to meet your needs quickly and easily.

Lenovo Health: Did you meet your original goals with your VDI and hyperconvergence solutions?

Adam: Our Covenant Health VDI rollout is still in progress. At my former healthcare organization, with that rollout we realized significant cost and time savings, as well as an improved experience for both clinicians and patients. By buying thin clients instead of PCs, and repurposing existing PCs with a thin client OS versus buying new hardware, we were able to achieve \$800,000 in annual cost avoidance.

Also, by modernizing our infrastructure, we increased clinician productivity by 20% at our largest hospital due to faster log-ins, swifter application launches and the ability to more quickly reconnect to a disconnected session. For example, typical log-in times at the start of a shift are now only 30 seconds from the time a doctor or nurse taps their badge on the proximity reader to the time they're at a usable desktop and can run their first app. Session reconnect times and roam room-to-room times are down to 10 seconds or less. This ultimately means that clinicians can spend more time interacting with patients — a win-win for everyone.

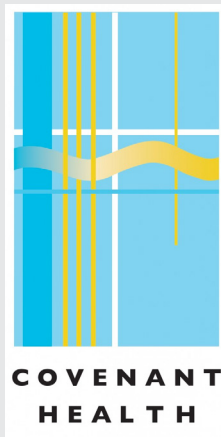


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Lenovo Health: What are some of your biggest best practices or lessons learned from virtualization?

Adam: I'd like to pass along six key tips I've learned from VDI rollouts over the years:

- 1. Put in the pre-work when it comes to workflows, apps and data.** It's one thing to do VDI and get the infrastructure right. But if you don't deliver apps the right way, in the way that works for your users, you haven't gone far enough. We did a workflow study as well as a complete device and app inventory to get the whole picture of what our clinicians would require.
- 2. Agonize over endpoint devices.** Thin clients are a commodity, just like PCs. But unlike PCs, there's a huge amount of variation among thin clients in terms of compatibility, number and type of ports, ease of management, hardware quality and cost. So do your due diligence to match the needs and preferences of your users.
- 3. Do "guerrilla modernization."** If you do VDI right, you'll find opportunities to modernize as an outcome of VDI that you might not expect. For example, one of the advantages of VDI is delivering desktops and applications in a user-focused, device-agnostic way, which allows you to leverage BYOD to boost user satisfaction and reduce the PC count for IT to support.
- 4. Use VDI during mergers and acquisitions.** Don't reimage or replace those existing PCs you've acquired. Instead, use thin clients or repurpose them with a thin client OS, and achieve faster on-boarding with a simpler, repeatable and less costly approach.
- 5. Integrate single sign-on (SSO).** SSO — ideally with proximity readers for a badge tap or smart cards and the ability to do session roaming — will take seconds, minutes, sometimes even hours off a clinician's day.
- 6. Use a partner that specializes in VDI.** This includes getting advice on the design and implementation of the infrastructure, but also on the app inventory and strategies for app delivery, performance monitoring and optimization, change management and communication.



About Covenant Health

Covenant Health is an innovative Catholic regional health delivery network and a leader in values-based, not-for-profit health and elder care.

Covenant Health was founded in 1983 under the sponsorship of the Sisters of Charity of Montreal, "Grey Nuns." Today, Covenant Health consists of hospitals, nursing homes, assisted living residences, and other health and elder care organizations from Pennsylvania to Maine. For more information about Covenant Health, visit www.covenanthealth.net.

Learn more about the benefits of VDI and hyperconvergence by contacting your Lenovo Health Account Representative, visiting us at www.Lenovo.com/Health or connecting with us on Twitter [@LenovoHealthUS](https://twitter.com/LenovoHealthUS).

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