Interview series

Targeting cost, complexity, and data by bringing enterprise imaging to the cloud

Change Healthcare is working to inspire a better healthcare system with innovative clinical, financial, and engagement solutions that help improve patient outcomes, regulatory compliance, operational efficiency, decision making, and the consumer experience.

The Google Cloud Healthcare and Life Sciences team spoke with Tomer Levy, VP of Engineering for Enterprise Imaging at Change Healthcare, and Aaron Green, Chief Growth Officer for Enterprise Imaging at Change Healthcare, about building a cloud-native infrastructure for allowing secure, controlled access to data worldwide.

Can you give us a big-picture perspective on Change Healthcare's solutions and how your partnership with Google Cloud helps shape them?

Tomer Levy: Our end goal is to support enterprise imaging fully on a cloud-native platform so we can deliver the full potential of what the cloud can offer healthcare providers around the world. We're ensuring proper management of enterprise imaging, and we're getting the right images to the right stakeholders at the right time.

Early in our process, we understood that this would require not only a technological transformation, but also a cultural transformation and a mindset shift. Google Cloud helped us from the beginning, by contributing to the base design and architecture of the system, designing some of the processes we needed for cloud operations and DevOps, and building the infrastructure that will allow us to support cloud-native enterprise imaging. We're taking it step by step, first launching Vendor Neutral Archive (VNA) with an enterprise viewer and analytic systems. As we advance a roadmap, we'll release more and more tools related to enterprise imaging, based on our cloud-native platform, which we call Enterprise Imaging Network, or EIN.

What are the main challenges your customers face in enterprise imaging, and what are the benefits of moving their data to a cloud environment?

Tomer Levy: The main problems we're targeting are cost, complexity, and the leveraging of data that's constantly increasing in size. We know that cost is a huge problem in healthcare today, specifically for medical imaging. It has become very expensive to manage huge amounts of data that moves around in rapidly growing organizations.

Let's get solving.

Change Healthcare and Google Cloud are...

"...solving for the big problems of enterprise imaging: costs, complexity, and leverage of data."

Tomer Levy
VP of Engineering for Enterprise Imaging, Change Healthcare

"...partnering to put the patient first by ensuring that the right physician reads a patient's studies and exams at the right time, thus delivering faster results."

Aaron Green
Chief Growth Officer for Enterprise Imaging, Change Healthcare

These organizations are looking for ways to drastically reduce costs. In addition, healthcare environments are becoming increasingly distributed and complex, with many end stations. Managing new cybersecurity requirements has become very complicated, and hospitals are looking for ways to reduce this complexity.

Finally, upgrades take a long time. Hospitals often schedule upgrades annually, and staff find it challenging to consume new innovation.

We're getting more and more demand for allowing patients to access data, and hospital infrastructures just don't support that. They can't allow VPN access to images for every patient. As archaic as it sounds, the best practice in our industry today is to burn a CD. Patients leave hospitals with CDs full of images, but they aren't sure what to do with them. By moving to the cloud, we can allow secure, controlled access to data, wherever the stakeholder is.

Aaron Green: When you look at imaging from a cost perspective, an IT department is either number one or number two in a hospital's annual budget, because images are large, there are a lot of storage requirements, and it takes a lot of people to keep a data center up and running. Hospitals are locked into annual stages of recycling and renewing different aspects of their storage infrastructure. Our work with customers involves phasing them out of this capital-intensive environment where they have to either buy additional storage every year or refresh the same storage they just bought five and a half years ago. To simplify this transition, we collaborate with Google Cloud to bring the customer into a fully operational model that removes the capital barrier. We move customers' data into the cloud very rapidly, using the transfer solution that Google Cloud has developed over many years.

Google Cloud and Change Healthcare have teamed up to remove two of the largest enterprise imaging barriers: the capital cost and the movement of data. Since images comprise about 80 percent of what's housed in a hospital data center, it can take a year or more to move all the data using traditional methods.

We shrink that time to a few months, max. When we're talking to new customers about taking this journey and moving everything into the cloud, we emphasize that it makes sense from both a financial and a timeline perspective.

Tell us about a customer that successfully took this journey. How did the process go, and how is your customer doing today?

Tomer Levy: One customer was facing a huge upgrade of their VNA system, which was very complicated, in a distributed environment. The upgrade would have involved a burdensome capital investment. By moving to the cloud, our customer avoided this capital expense and reduced overall operational costs: they won't need to address future storage upgrades or to worry about cybersecurity. We're modernizing the entire organization by replacing its imaging infrastructure.

Tomer Levy,
VP of Engineering for
Enterprise Imaging,
Change Healthcare

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It sounds like your solution simplified business for the customer, in addition to reducing their long-term costs. But do your customers need to be aware of any risks involved in moving to a cloud system? What advice would you offer to organizations considering this transition?

Tomer Levy: We're seeing increasing openness to the cloud in the healthcare market today, but organizations do need more education and maturity. Many technology vendors in enterprise imaging offer what I call shortcuts to the cloud—lift-and-shift solutions that leave customers with essentially the same system they had before. At Change Healthcare, we made the hard commitment to cloud-native architecture and strategy, which are now leading the way we develop our solutions. We believe this is the only way to realize the full potential of what the cloud can offer.

My recommendation to anyone who's considering a cloud solution is to ask four basic questions. First, does the solution have HITRUST and SOC 2 certifications? Any solution that you choose must be HITRUST certified. Second, how frequently will I get updates to the system? You should expect weekly or monthly updates so that you can consume new innovation very quickly—another important indicator for a cloud-native system. Third, if there's a critical problem, related to either patient safety or cybersecurity, how quickly will I get an update? Updates should occur within hours, if not faster. Lastly, ask about cost predictability and ROI. When you're moving to the cloud, you should expect a very quick ROI. You should see paybacks and improvements to your bottom line on the operational side within a year.

Aaron Green, Chief Growth Officer for Enterprise Imaging, Change Healthcare

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To learn more about
Google Cloud Healthcare and Life Sciences visit:

https://cloud.google.com/solutions/healthcare-life-sciences

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