

THE HEALTHCARE IT CHALLENGE:

LEVERAGING TECHNOLOGY TO MEET
GROWING PATIENT & BUSINESS NEEDS

Q&A

WITH HITORRA'S LEADERSHIP

KEVIN BROWN, PRESIDENT AND CEO
SUNIL RAO, CHIEF TECHNOLOGY OFFICER

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HIGH IMPACT TECHNOLOGY





The past several years have put an enormous strain on healthcare systems. The pandemic, ransomware, growing compliance initiatives, and the desire to improve patient care are straining limited resources and pushing aging infrastructures to the brink.

Since 2010, Hitorra Technologies has been a trusted partner to its clients — providing the highest level of service, value, and advanced technology to power its strategic goals. The growth of telehealth and the ever-important need to secure private health information are transforming the healthcare industry. Hitorra focuses on creating technology solutions that help healthcare providers deliver higher-quality care to more patients at a lower cost.



SUNIL RAO
Chief Technology Officer
Hitorra Technologies

Q: What do you see as the greatest technology challenge in healthcare today?

KEVIN BROWN: In my opinion, the greatest technology challenge in healthcare today is developing ways to balance patient privacy protections with the need to quickly access healthcare information.

Q: How is Hitorra helping healthcare organizations meet that challenge, specifically as it relates to their digital transformation journeys?

KEVIN BROWN: I've been involved in the healthcare field for almost 25 years. Partnering with large healthcare organizations during this time, I've worked with many different technologies, different levels of technologists, doctors, nurses, and administrative staff. The key to helping these organizations is to apply the right technology where it's needed. We strive to understand the needs of our customer base, which includes everyone across the organization, not just the administrative staff. Most importantly, our customer base includes any patients who come into a hospital or healthcare setting. We try to understand these patients' needs and apply technology, so those patients have the best possible care and experience at all times.

Q: Over the past year with the pandemic, everything has been turned upside down, especially in healthcare. How are you helping healthcare organizations update their IT infrastructure to support some of the things that have come to the forefront, such as telemedicine and mobile medicine?

KEVIN BROWN: As one example, when COVID-19 hit, a large healthcare organization in the Northeast reached out to us for support in addressing their critical challenges. We were able to help them modernize their security infrastructure and local infrastructure, including their LAN and WAN. We also worked with them to put policies and procedures in place to ensure maximum uptime for their entire IT infrastructure.

In addition, we helped a large public healthcare system with over 100 different clinics and hospitals move to the cloud using the full suite of Microsoft products, including Office 365. We worked with different products, including their email and their proxy system, and implemented a full security system to protect them from cyber attacks.

Q: Speaking of cybersecurity, healthcare organizations have been targeted specifically for cyber theft because of the value of patients' personal information. What are you doing to help secure their infrastructure?

SUNIL RAO: I've been in the technology industry for over 25 years, working in manufacturing, the pharmaceutical industry, for service providers, and for vendors like Cisco and Juniper completing multiple projects for healthcare organizations. My focus in the last 10 to 15 years has been architecting and designing infrastructures, making sure they are secure while also making them robust and responsive for end-users. That's what Hitorra has provided to customers in the healthcare industry for many years.

Ensuring a secure environment requires a multi-fold approach that begins with designing and building the proper architecture. IT security used to be about simply securing the network — put up a firewall and everything is protected. However, IT infrastructures have now expanded beyond the four walls of the data center. Security with a cloud-based infrastructure is totally different. As boundaries have expanded and the use of end point devices has become more prevalent, an attack can come from almost anywhere.

We help organizations implement distributed firewalls so that they are protected not only within the enterprise boundary but also outside the data center at the IoT boundary and at the cloud boundary. Ransomware attacks can punch holes in an organization's security wall or leave gaps that attackers can exploit — whether at the compute level, the storage level, or the network level. We come in and help organizations protect each layer of their infrastructure. Many of these

network infrastructure protections can be implemented from a design perspective. One method is through micro-segmentation of the network infrastructure. This can be done using the latest technology in software-defined networking through the use of a network layer segmentation protocol like VXLAN.

Many organizations are storing huge amounts of data but fail to encrypt it. We partner with both converged vendors and hyper-converged vendors. One of the hyper-converged vendors we deal with quite frequently is Nutanix. Nutanix works with organizations to make their data more secure and more efficient in the way it is accessed. It's all about ensuring that the infrastructure is secure for the next generation of technology.

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Q: An increasing number of healthcare organizations are looking to the cloud to solve their technology challenges. How do you help with that transition?

SUNIL RAO: Kevin spoke about our large public health system client. That organization has a huge infrastructure with databases in two main data centers. One critical aspect that has become obvious to organizations during the COVID-19 pandemic is the importance of patient data. That's where we have worked extensively with many organizations. Databases can be structured and unstructured, but the challenge is to secure and manage this data and expand the infrastructure to handle it all efficiently. With our experience in software-defined networking, Hitorra is assisting organizations in successfully building out their infrastructure.



Every organization wants to move workloads to the cloud, but it may not be possible to transition everything immediately. Some of that is due to the way healthcare applications are built. Some of these applications were written in the 1970s and 1980s, are still running on mainframes, and don't understand domain naming system (DNS) hierarchy. Other applications were written in the last decade and are up-to-date.

We analyze an organization's infrastructure from a hospital perspective, keeping HIPAA in mind. We often let them know that they may have 2,000 applications but only about 1,500 that can be put into the cloud. From an application perspective, there would be no value-added ROI to achieve in transitioning these legacy apps — even if it were possible.

Conducting that kind of analysis is something we do very well. We outline the network, security, compute, and storage infrastructure requirements necessary to move to the cloud. We leverage our expertise in this area to provide healthcare organizations with guidance on how they can best build, architect, design, and then implement these infrastructures to enable a transition to the cloud.

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Q: The healthcare industry continues to experience significant consolidation. Have you been involved with companies going through M&A, and how have you helped merge multiple IT structures while avoiding blind spots?

KEVIN BROWN: One of the most important aspects of a healthcare M&A is effectively merging EMR systems. We have extensive experience with healthcare organizations migrating data from various EMR systems into a corporate Epic system.

Q: The Internet of Things (IoT) is expanding all around us, including in the healthcare industry. How have you helped support initiatives related to IoT?

SUNIL RAO: Once again, the key is finding the best way to secure the infrastructure. Our strategy is to remain vendor-agnostic, so we have partnerships with multiple vendors. Our first few meetings with a customer are focused on understanding their pain points. With COVID-19, the past year has brought much of the IoT technology to the forefront. More employees work remotely using assigned computers or laptops, personal computers, smartphones, and tablets. That is where attacks on a healthcare organization's infrastructure often happen, since these endpoint devices connected through a VPN are not always secure.

We partner with companies like Zscaler, and others that have solutions to ensure that traffic from these devices is protected and secure. These solutions screen for the latest viruses and

can isolate devices when threats are detected. We have helped many healthcare organizations secure their IoT devices, which are becoming more prevalent as more organizations realize that not everyone can or must come back and work on-premises.

Q: When we talk about Hitorra working with the healthcare industry, does that encompass more than just hospitals?

SUNIL RAO: Yes, we are also working closely with many pharmaceutical organizations, which involve a mix of manufacturing and healthcare. These are massive enterprises with infrastructures that could spread across as many as 200 locations worldwide and have multiple technology requirements. An automated manufacturing facility has an additional set of security challenges. We have worked with many of these large pharmaceutical enterprises to secure their networks and ensure their production is never interrupted. This requires a different type of technology infrastructure and architecture.

Having multiple locations requires a significant investment in WAN bandwidth. Many enterprises are interested in moving to a software-defined WAN to reduce costs, but they don't know how to get there. We have assisted several pharmaceutical companies in making this conversion by architecting, planning, and designing the SD-WAN infrastructure in their data centers as well as their remote locations. We have also improved their security profiles by micro-segmenting their infrastructure from a security perspective.

Q: Any final thoughts?

KEVIN BROWN: The healthcare industry is constantly evolving, and its technology needs to continue to change as well. Demands for seamless integrations put organizations at risk to staff sufficient, effective resources that meet new build requirements and to respond to change within their existing infrastructure. Change in a single, simple element of an integrated infrastructure can have unforeseen impacts on performance and/or interoperability.

Hitorra Technologies has been built on a foundation of strength based on trust — trust in the competence of our technical resources and in our business culture of doing what we say and saying what we mean. It's our commitment to do what is right for our client's situation. That is the promise we bring to the healthcare organizations that rely on us.

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