

## Connected Health Transformation

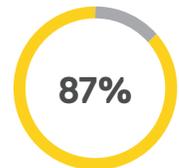
Connected Health—a web of intelligent communication and actionable information sharing with the intention of improving patient outcomes (medical, social, financial, and environmental overall well-being)—is transforming the way healthcare is delivered. A fabric of underlying technology brings together people, processes, and devices to enable a seamless working environment. Dell EMC plays a critical role in helping organizations build this connected health ecosystem, one that helps to inform medical professionals, patients, and public health without compromising individual privacy.

### Addressing Healthcare Data Challenges

As healthcare becomes more interconnected with the increasing adoption of telehealth, mHealth, and enabling technologies from IoT to digital sensors, familiar data challenges must be addressed to realize the full promise of Connected Health. These include:

- **The data gap:** Being able to get patient data from all healthcare services to the right people at the right time remains a challenge. Three quarters of all caregivers, specialists, clinical departments, and healthcare systems still have their own disparate systems and are unable to effectively share data, some even from the same patient for the same episodic event.<sup>1</sup> Even within the same acute care facility, there are still multiple silos of data from different departments and from standalone medical devices, including respirators, pumps, and other bedside devices.
- **Lack of interoperability:** The lack of interoperability between devices and systems including certain EMRs exists either because these remain closed systems and/or because they contain non-standardized data. New technology vendors entering the healthcare space continue to build closed IoT devices, making it difficult to share data generated from these devices.
- **Data growth:** Healthcare data is reaching the zettabyte and even yottabyte scale, often overwhelming systems with the sheer gravity, volume, variety and velocity of data exchange. Questions remain as to what needs to be analyzed and what should be ignored?

Overcoming these data challenges requires a holistic approach. From the point of care to the data center to the cloud, Dell EMC is transforming the way we communicate and connect with patients and between care providers, helping to make Connected Health a reality through an intelligent ecosystem that effectively captures, stores and analyzes data in an effort to improve patient outcomes.



**87%**  
of healthcare organizations will have adopted IoT technology by 2019.<sup>1</sup>

Less than



**30%**  
of health system EHRs are fully interoperable, and less than 20% use data from another provider.<sup>2</sup>



**\$158B**  
is the projected healthcare market size for IoT by 2022<sup>3</sup>

1. <https://www.i-scoop.eu/internet-of-things-guide/internet-things-healthcare/>  
 2. <http://content.healthaffairs.org/content/36/10/1820>  
 3. Markets and Markets. "IoT Healthcare Market by Component...Global Forecast to 2022." April 2017.

# An Interconnected Healthcare Ecosystem

With Dell EMC, you can take a unified approach to connected health to improve outcomes—ingesting data from connected devices and sensors in real time, analyzing data in real time to provide meaningful insights, retaining data for deeper analysis, and further sharing data with collaborators, patients, payers, and partner healthcare organizations.

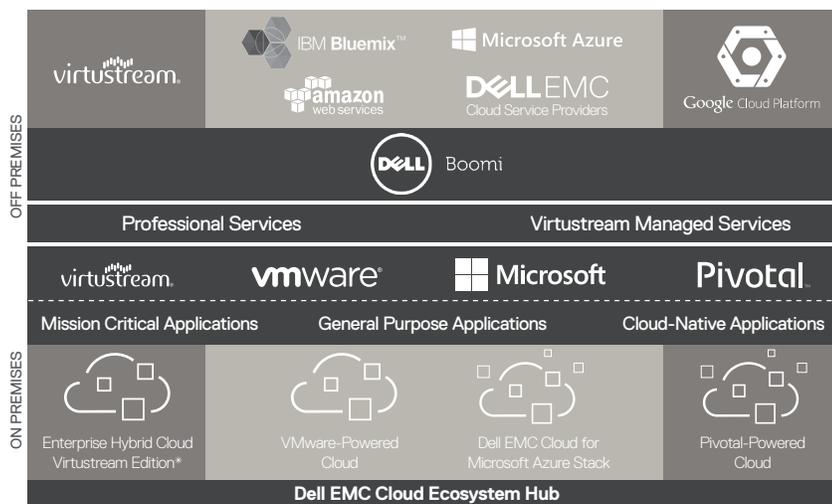
## Dell EMC Solutions from the Point of Care to the Data Center to the Cloud

- 1. POINT OF CARE:** Connect at the point of care with [Dell end-user devices](#) from desktops to smartphones to tablets and 2-in-1's to remote monitoring, IoT gateways and IoT-embedded PCs to telehealth solutions. Readily ingest and analyze data in real time, improving the patient-caregiver experience whether at the bedside or virtually through remote patient engagement solutions.
- 2. DATA CENTER:** Capture critical data across the healthcare facility securely and efficiently with a modern data center outfitted with industry-leading [Dell EMC Hyper-Converged Infrastructure](#) and [Dell Boomi](#), a cloud integration platform for bringing together patient and vendor data across silos. For more specialized compute involving cognitive workloads like genomics or clinical research, incorporate [Dell Gateway](#) with AI/machine learning. [The Dell EMC Healthcare Elastic Data Platform](#) ties it all together, bringing data, applications, and analytics into one accessible platform.
- 3. CLOUD:** Cut costs, complexity and risks with the most comprehensive, integrated multi-cloud portfolio and industry-leading security solutions, spanning mission-critical applications to business workloads to cloud-native applications. [The Virtustream Healthcare Cloud](#) is a critical component to the [Dell EMC multi-cloud portfolio](#), featuring a HIPAA/HITECH-compliant cloud for mission critical healthcare applications such as EHR and PACS systems. These solutions along with [Dell analytics](#) running in an elastic data platform can help turn once-siloed organizations into a collaborative, connected healthcare organization.

## Making Connected Health a Reality

Dell EMC helps healthcare organizations realize the promise of Connected Health and advance in the digital era, transforming the way they work so that they can transform the lives of the people they serve. We uniquely power this digital transformation by delivering best-in-class technology for applications, data, infrastructure, and security—from the point of care to the data center to the cloud.

## THE DELL EMC MULTI-CLOUD PORTFOLIO



## WHY DELL EMC FOR CONNECTED HEALTH

- 1 Seamless customer experience with a single partner, ease of ordering, and optimized solutions
- 2 World-class professional services with a global team of healthcare experts
- 3 Holistic approach to interoperability, combining the best of Dell EMC with partner solutions and connected devices, including IoT and IoMT.
- 4 \$1 billion investment in a new IoT Strategy Division to accelerate adoption
- 5 Commitment to innovation to build joint solutions with a network of partners to meet the demands of a connected health environment

**The Dell EMC multi-cloud portfolio** offers an integrated portfolio that delivers ultimate cloud flexibility, balancing business and clinical workloads with software-defined, scalable offerings. We develop multi-cloud operating models to manage complexity across the organization (including legacy and SaaS applications).



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