# RTI in Healthcare

Securely Connecting the Medical Technology of Tomorrow



Systems of interoperable medical devices communicating seamlessly and securely will improve patient outcome, reduce medical errors and lower the cost to our healthcare system. To realize its full potential, the healthcare industry needs to transport and analyze unprecedented amounts of data in real time. RTI helps make that vision a reality by enabling the development of data-aware products and systems based on the Connext<sup>®</sup> Databus.

## Proven Readiness for Time Critical Technology

Innovative data-centric connectivity that delivers full visibility into data in-motion

A single solution to address the wide range of demanding data-connectivity requirements

Plug-and-play interoperability between systems and system components

Scalability for increasingly large and complex systems

Self-forming and self-healing resilient systems with no single point of failure

Low latency with real-time Quality of Service (QoS)

Proven integration of a fast local control loop with secure connectivity over long distances and with cloud infrastructure

Reliable systems operation over lowbandwidth communication links with long transmission delays

Fully interoperable DDS Security support for confidentiality, integrity and access control

## How RTI Customers Use Connext DDS

### **Connecting medical instruments**

Connecting medical devices into intelligent systems has the potential to deliver better quality of care, lower costs and improve patient outcomes. GE Healthcare Life Care Solutions division needed a system to deliver data reliably and securely with split-second speed, covering large hospitals with more than 200,000 devices connected over wired and wireless networks. GE uses Connext DDS as a common connectivity platform across many classes of intelligent machines, from simple oximeters to huge CT imaging systems. It delivers both performance and functionality to make GE's connected care vision a reality.

"GE Healthcare connects medical devices, cloud-based analytics, and mobile and wearable instruments. The future communication fabric of our monitoring technology is based on RTI's data-centric Connext DDS platform."

Matt Grubis, Chief Engineer for Life Care Solutions, GE Healthcare

"GE Healthcare chose the DDS standard because it can handle many classes of intelligent machines. RTI Connext DDS satisfies the demanding requirements of our devices and supports standardization on a single communications platform across product lines."

J. Gustavo Perez, General Manager for MI&CT Engineering, GE Healthcare

#### Enabling faster emergency response to save lives

When a critical health event occurs, faster response times lead to better outcomes. The Physio-Control System of Care helps to improve survival for STEMI patients by linking field and hospital care teams to speed the care cycle. Stroke patients and many others also benefit from the comprehensive information delivery the system provides. Hospitals know exactly what to expect before patients reach their doors, which means care teams can be assembled and briefed in advance. This gives hospitals the opportunity to prepare for the patient's arrival, which can potentially shorten time to definitive therapy.

#### Lowering the cost of care through interoperability

DocBox is developing an innovative clinical process management solution for hospitals that promises to help clinicians eliminate medical mistakes, improve clinical workflow and processes, and free up much of the time spent on administrative duties so that they, and particularly nurses, can focus on providing care. RTI's Connext DDS is used to provide secure, interoperable device connectivity allowing PoC consolidation of device alarms, health, and status. Additionally, it allows decision support to utilize data from a variety of medical devices. "Physio-Control is utilizing RTI Connext DDS to exchange critical patient care information throughout the system of care." Dale Pearson, VP Data Solutions, Physio-Control

"RTI Connext DDS met all our initial needs, and continues to grow with us – whether we're handling expanding amounts of data for 12 patients, or 200." Tracy Rausch, DocBox Founder

#### Using Connext DDS in Healthcare



#### About RTI

Real-Time Innovations (RTI) is the Industrial Internet of Things (IIoT) connectivity company. The RTI Connext® databus is a software framework that shares information in real time, making applications work together as one, integrated system. It connects across field, fog and cloud. Its reliability, security, performance and scalability are proven in the most demanding industrial systems. Deployed systems include medical devices and imaging; wind, hydro and solar power; autonomous planes, trains and cars; traffic control; Oil and Gas; robotics, ships and defense.

RTI lives at the intersection of functional artificial intelligence and pervasive networkingsm.

RTI is the largest vendor of products based on the Object Management Group (OMG) Data Distribution Service™ (DDS) standard. RTI is privately held and headquartered in Sunnyvale, Calif.



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