

# Security and Compliance in the Medical Industry with McAfee

## Comprehensive security for networked medical devices

Demand for networked medical devices is skyrocketing. By 2018, it's expected that sales will exceed 14 million units—more than five times the sales of 2012.<sup>1</sup> Device connectivity has become a fact of life in the medical sector. According to Parks Associates, “Networked medical devices, such as weight scales, glucometers, and ECGs [electrocardiograms] will use a variety of networking protocols, such as Wi-Fi, Bluetooth, and ANT+, to enable patient self-care and point-of-care diagnosis.”<sup>2</sup> Healthcare organizations also use the cloud to aggregate and transmit data and test results. While connectivity creates efficiencies and streamlines processes, it also opens up opportunities for serious security threats and data breaches. In the first quarter of 2015, for example, 100 million pieces of healthcare data were breached.<sup>3</sup> McAfee® Medical Suite can help medical device manufacturers and OEMs ensure that their devices are both secure and compliant with strict regulatory mandates. This integrated set of solutions protects networked medical systems and data, detects threats, and corrects damage.

With valuable healthcare data increasingly in the crosshairs of attackers, medical device manufacturers and OEMs need to ensure that the devices they build are secure, tamperproof, and compliant. In addition to providing protection against internal and external data breaches, ransomware, and other advanced attacks, medical devices need to conform to strict compliance mandates dictated by the Health Insurance Portability and Accountability Act (HIPAA) and requirements

for medical devices issued by the US Food and Drug Administration (FDA).

### Built-In Comprehensive Protection

McAfee Medical Suite provides comprehensive security for networked medical devices, including data protection and encryption, application control with centrally managed whitelisting, and device control to maintain the integrity of embedded systems. These capabilities

### Key Advantages

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- Enables manufacturers to offer comprehensive security for networked medical devices
- Helps manufacturers meet HIPAA data protection requirements and FDA device integrity recommendations
- Protects against breaches, advanced persistent threats, and healthcare-specific malware like ransomware
- Advanced data protection and encryption helps prevent data theft and helps manufacturers achieve compliance
- Intelligent and adaptive whitelisting blocks use of unauthorized applications and executables across servers, corporate desktops, and fixed-function medical devices
- The McAfee ePO™ console simplifies management, policy creation, and reporting to demonstrate proof of compliance

## DATA SHEET

are integrated into the McAfee ePolicy Orchestrator® (McAfee ePO™) platform for convenient, single-pane-of-glass visibility and management and customizable compliance reporting. The solution comprises McAfee Data Protection Suite, McAfee Application Control, and McAfee Device Control.

### McAfee Complete Data Protection Suite

Healthcare is highly prized in the cybercrime underground. While credit card information typically fetches \$1 USD per record, a protected health information (PHI) record with a Social Security number is worth 20 to 50 times as much.

McAfee Medical Suite includes McAfee Complete Data Protection Suite, which helps medical device manufacturers protect customers from data theft. McAfee Complete Data Protection Suite also helps both manufacturers and their customers meet HIPAA patient privacy compliance regulations and recommendations for data encryption.

Powerful enterprise-grade encryption, which is FIPS 140-2 and Common Criteria EAL2+ certified and accelerated by the Intel® Advanced Encryption Standard–New Instructions, also supports OPAL drives. McAfee Complete Data Protection Suite automatically encrypts files and folders on the fly for mobile storage devices and cloud storage.

McAfee ePO Deep Command, which is included in the McAfee Complete Data Protection Suite, uses Intel® vPro Active Management Technology to allow PC-based

medical device manufacturers to update security patches and manage remote remediation.

McAfee Complete Data Protection Suite is managed by McAfee ePO software, which simplifies policy management and enables compliance with advance reporting.

### McAfee Application Control with McAfee ePO Software

Medical personnel need to have the flexibility to access the latest applications to deliver optimal care to patients and maintain detailed records, but this can be risky. Today, there are more malware-ridden unknown and unwanted applications than ever before.

McAfee Application Control with McAfee ePO software, another powerful component of McAfee Medical Suite, is an intelligent and adaptive whitelisting solution that protects against zero-day and advanced persistent threats (APTs). It efficiently and automatically blocks unauthorized applications and executables on servers, corporate desktops, and fixed-function medical devices without labor-intensive signature updates or application list management.

McAfee Application Control with McAfee ePO also leverages McAfee Global Threat Intelligence for global reputation threat intelligence on files and applications, real-time behavioral analytics, and automatic immunization of endpoints, including medical devices, from new malware.

## DATA SHEET

### McAfee Device Control

McAfee Device Control provides an additional layer of protection for medical data that device manufacturers can build into their products. It monitors and specifies what data can be transferred from PCs and laptops to removable media, such as USB drives, Apple iPods, Bluetooth devices, and recordable CDs and DVDs. McAfee Device Control provides comprehensive device management capabilities to control and allow or block copying of certain types of data to removable storage devices to help maintain compliance without hindering the flow of vital patient information. Manufacturers can

incorporate capabilities that define specific parameters, such as product ID, vendor ID, serial number, device class, and device name. Depending on the content that is being loaded onto devices, policies like block or encrypt can be set up and enforced.

McAfee Device Control is fully integrated with the McAfee ePO management console, simplifying collection of critical-usage information, such as sender, recipient, timestamp, and data evidence. It also automatically notifies users of violations, allows for role-based access control, and provides detailed audit reporting.

1. <https://www.parksassociates.com/blog/article/dec2013-medical-devices>
2. Ibid.
3. <http://www.csoonline.com/article/2931474/data-breach/attackers-targeting-medical-devices-to-bypass-hospital-security.html>



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