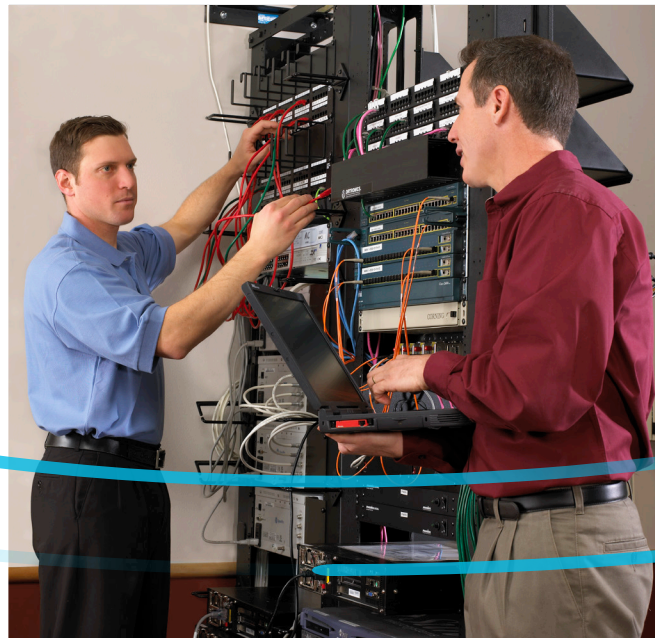# CARESCAPE Network

A real-time connection.

The backbone for real-time patient monitoring.

Not all networks are created the same. Networks that transport patient data, especially real-time data, require meticulous design and thoughtful implementation. GE's CARESCAPE™ Network implemented as a segregated network delivers a robust and expandable platform for today and in the future. Based on the Ethernet IEEE Std 802.3™-2005, IEEE Standard for Information technology and utilizing off-the-shelf networking equipment from companies like Cisco® and HP,® the CARESCAPE Network was designed to meet our customers' communication requirements.

Providing patient care.

Clinical excellence is not just an ideal; it's expected in today's healthcare enterprises. Sophisticated algorithms help prevent false alarms, and real-time patient data helps caregivers make the best care decisions. Clinicians need to have actionable alarms and the right information, right when it is needed so that they can respond to dynamic care situations as quickly as they arise.

The CARESCAPE Network, which is a standards-based Ethernet network, transmits real-time patient data. Also, relevant clinical details – including numerics, waveforms and drug interaction data – are available to caregivers on various workstations or other devices connected to the network. Many of the GE Healthcare monitors – including ApexPro™ telemetry and the CARESCAPE modular monitors, as well as other care solutions like the CARESCAPE Central Station, CARESCAPE Gateway and Mobile Care Web Viewer – connect via the CARESCAPE Network.
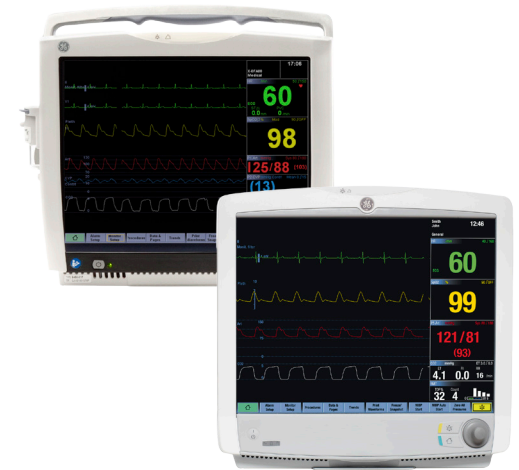
Mobile Care Web Viewer provides remote access to waveforms, numerics, visual alarms and trends, so you can remotely monitor a patient while you are away from the bedside or hospital.

CARESCAPE Central Station transforms an ordinary central monitoring station into a clinician-centric workstation designed to help increase workflow productivity and optimize workspace.

ApexPro is a WMTS-based telemetry system that provides dependable communication of vital patient information.
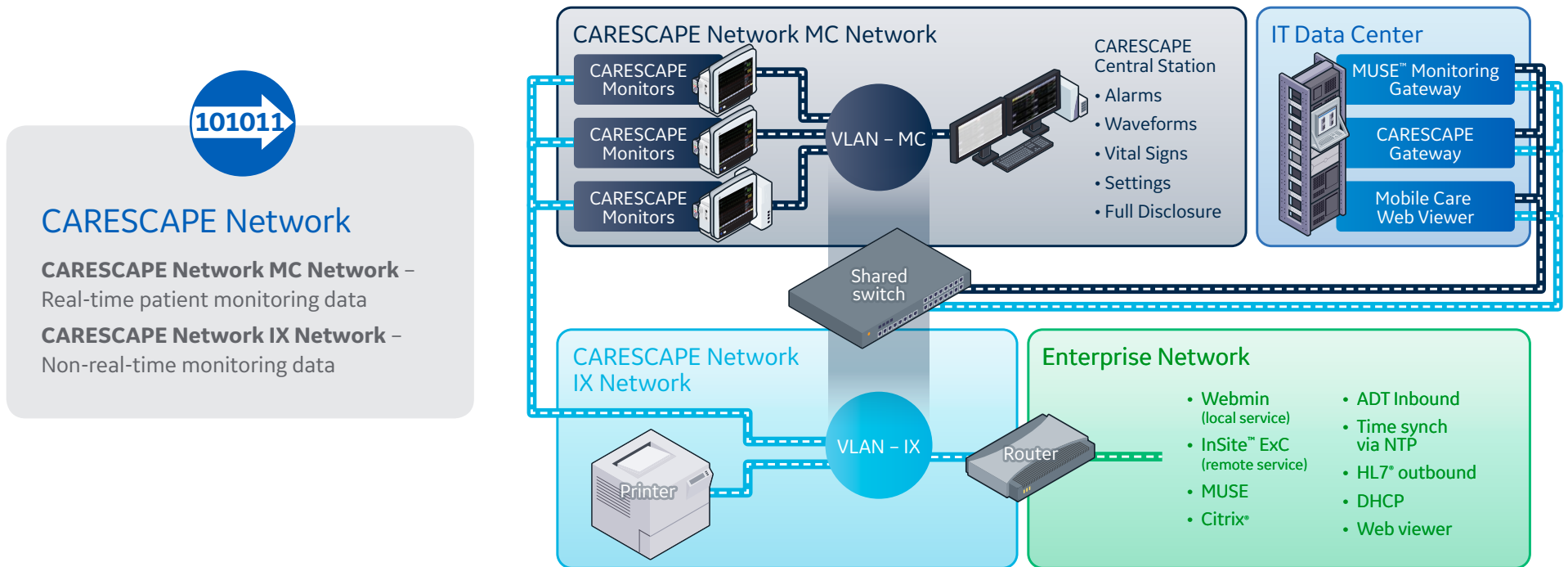
CARESCAPE Monitors B650 and B450 are versatile, portable, and optionally wireless so you can adapt to each patient's monitoring needs in many high-acuity situations.

Flexible and secure network performance.

For more than 15 years, GE's real-time and near-real-time information exchange networks have provided reliable communication for critical patient data. The CARESCAPE Network supports a variety of configurations so that the specific needs of each facility are addressed.
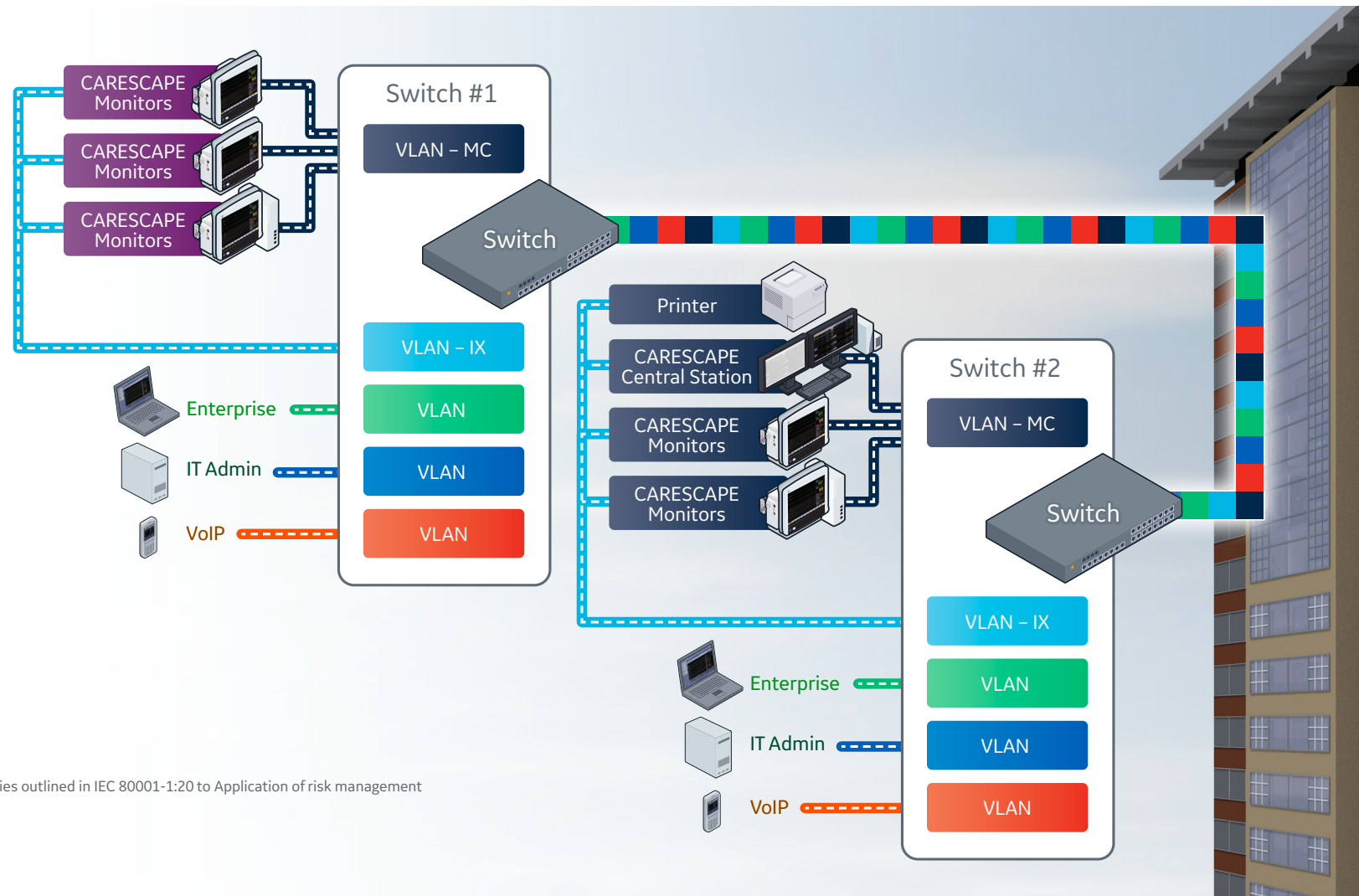
The CARESCAPE Network is a GE designed and commissioned network infrastructure hosting GE monitoring devices and has dedicated equipment separate from the hospital network infrastructure.

101011

CARESCAPE Network

CARESCAPE Network MC Network – Real-time patient monitoring data

CARESCAPE Network IX Network – Non-real-time monitoring data

CARESCAPE Network MC Network

CARESCAPE Monitors

CARESCAPE Monitors

CARESCAPE Monitors

VLAN – MC

CARESCAPE Central Station
• Alarms
• Waveforms
• Vital Signs
• Settings
• Full Disclosure

IT Data Center

MUSE™ Monitoring Gateway

CARESCAPE Gateway

Mobile Care Web Viewer

Shared switch

CARESCAPE Network IX Network

Printer

VLAN – IX

Router

Enterprise Network

• Webmin (local service)
• InSite™ ExC (remote service)
• MUSE
• Citrix®

• ADT Inbound
• Time synch via NTP
• HL7® outbound
• DHCP
• Web viewer

Patient monitoring network.

The Design Consultation service for the patient monitoring network implemented by the hospital as an enterprise VLAN, or as a segregated network, helps meet the communication requirements of GE patient monitoring devices. The Commiss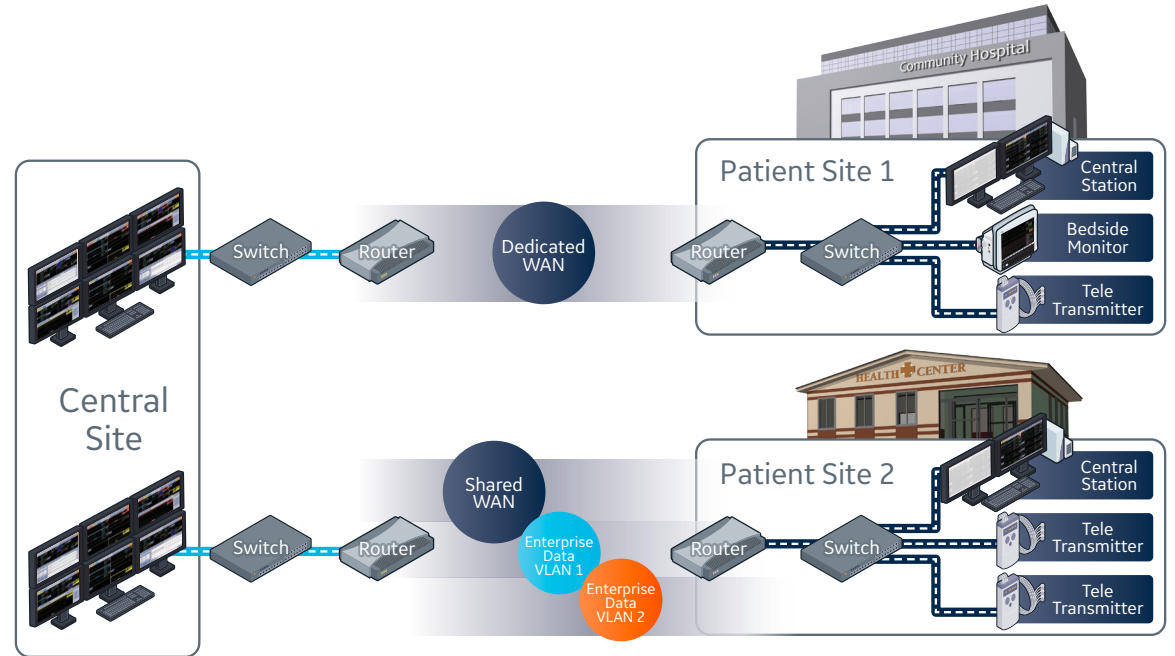ioning service includes the installation checkout to ensure the connectivity requirements of GE monitoring devices are met. The patient monitoring network by the hospital reduces costs by allowing the sharing of resources with IT and providing a consistent way to remotely manage the hospital's network.

Note: GE recommends following the responsibilities outlined in IEC 80001-1:20 to Application of risk management for IT Network incorporating medical devices.

Remote monitoring.

CARESCAPE SiteLink[1] is a wide area network (WAN) extension of a CARESCAPE Network that allows patient monitoring beyond the physical walls of a point-of-care facility. By implementing a CARESCAPE SiteLink connection, a primary facility can provide remote 24-hour surveillance of patients through a connected GE Healthcare network, and it can enable remote central station review of multiple-location patient monitors.

Caregivers need the right patient information in their hands wherever and whenever they make decisions about care. The GE CARESCAPE Network can be implemented according to the specific needs of your facility, it supports GE Healthcare's monitors and devices and it is backed by an experienced team of Network Design and Installation consultants.

1. Not qualified for use with Inter VLAN routing configuration enabled.

Backed by a range of services.

An experienced GE service team can provide full turnkey or customer-assisted installations.

Network Design & Consulting

Our Network Design and Integration (ND&I) team provides the design for a segregated CARESCAPE Network. ND&I also provides design consultation to the hospital that designs its own patient monitoring network.

CARESCAPE Network deliverables

- Fully documented design
- Networking equipment bill of materials

Hospital designed network deliverables

- Design consultation
- Design checkout

Qualified Networking Equipment

With any CARESCAPE Network, GE Healthcare can provide validated and tested networking equipment that meets the performance requirements of the network. The latest Cisco or HP networking equipment is provided based on the customer's requirements.

Deliverables

- HP access switches[†]
- HP fiber distribution switches[†] (as needed)
- Equipment racks
- Patch panels and cables
- Cable concealment hardware and shelves

Network Installation

The GE field service team provides skilled installation of the CARESCAPE Network networking gear as well as a switch configuration download and design change documentation.

Deliverables

- Final network documentation of switch and router configurations
- As-built documentation changes to original design

Network Drop Installation

GE Healthcare servers, monitors, central stations and review stations require Ethernet connections anywhere network access is required. The GE installation team can provide any network drops and associated network wiring to create the CARESCAPE Network.

Deliverables

- As-built documentation changes to original design
- Test data documentation

Network Commissioning

The GE field service team performs Network Commissioning on all CARESCAPE Networks installed. For a network designed by a hospital, Network Commissioning service is available and is provided by the GE ND&I team. The Network Commissioning process tests the network to ensure it meets functional and performance requirements and documents all results.

CARESCAPE Network deliverables

- CARESCAPE Network completed results form
- As-built documentation changes to original design

Hospital designed network deliverable

- Completed Commissioning test results

[†]**Note:** Cisco option available.

GE Healthcare provides transformational medical technologies and services to meet the demand for increase access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter – great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

Imagination at work

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