HIGH-SPEED ETHERNET-ENABLED PACS & EMR SOLUTIONS

Healthcare providers are under constant pressure to improve care while making operations more efficient and cost-effective. Today's strained healthcare system presents a variety of challenges for healthcare providers. Faced with shrinking budgets and chronic shortages of trained personnel and specialists, providers struggle to meet growing service demands. Physicians and medical staff are overwhelmed by caseloads. Patients demand increased access to services, higher-quality care, and lower fees, and payers of healthcare services constantly push for lower costs.

Providers look to information technology to enhance services, improve productivity, and cut hospital operating costs. Organizations that implement automated healthcare information systems – such as Electronic Medical Records (EMRs) and Picture Archiving Communication Systems (PACS) – enjoy lower mortality rates, fewer complications, and reduced costs. After implementing EMRs, hospitals can potentially improve efficiency and cut costs by replacing outpatient paper medical charts with electronic records.

METRO ETHERNET-ENABLED PACS & EMR SERVICES

PACS and EMR applications are no longer technologies for only the largest hospitals and clinics. These technologies are increasingly mainstream in nearly every size hospital and even smaller, offsite doctors' offices. However, PACS systems require a high-performance network connecting all of the necessary services that enable the true value of a PACS system. Figure 1 depicts what is possible when a high-bandwidth, low latency Metro Ethernet network is deployed to support a PACS application. First, a flexible, high-speed Ethernet circuit is connected at the PACS imaging location and transmits large files back to a remote location, where a specialist reviews the images in real time. The Comcast Ethernet service can deliver speeds anywhere between 1M to 10G of bandwidth; as demand grows for PACS services, the network can effortlessly adjust to add bandwidth without changing hardware.

KEY APPLICATIONS DRIVING IMPROVED HEALTHCARE:

EMR

> **Speed** – provides instant access to medical records
> **Integrity** – eliminates misplaced records, reduces errors
> **Convenience** – accesses records from any location and any time
> **Security** – tightly controls access and protects patient privacy
> **Efficiency** – eliminates manual processes, saves time
> **Compliance** – meets the requirements of legal, regulatory, or accreditation standards
> **Costs** – improves productivity and reduces healthcare delivery costs

REMOTE PACS

> **Convenience** – allows for diagnoses from remote locations at any time
> **Collaboration** – shares images across teams
> **Speed** – facilitates rapid access to medical images
> **Productivity** – allows healthcare providers to treat more patents per shift
> **Coverage** – reaches underserved locations, remote areas, and rural populations
> **Costs** – eliminates manual film processing and handling, reduces clinician travel costs
> **Outsourcing** – leverages outside radiology resources (distance radiology)
> **Security** – stores images so they are never lost

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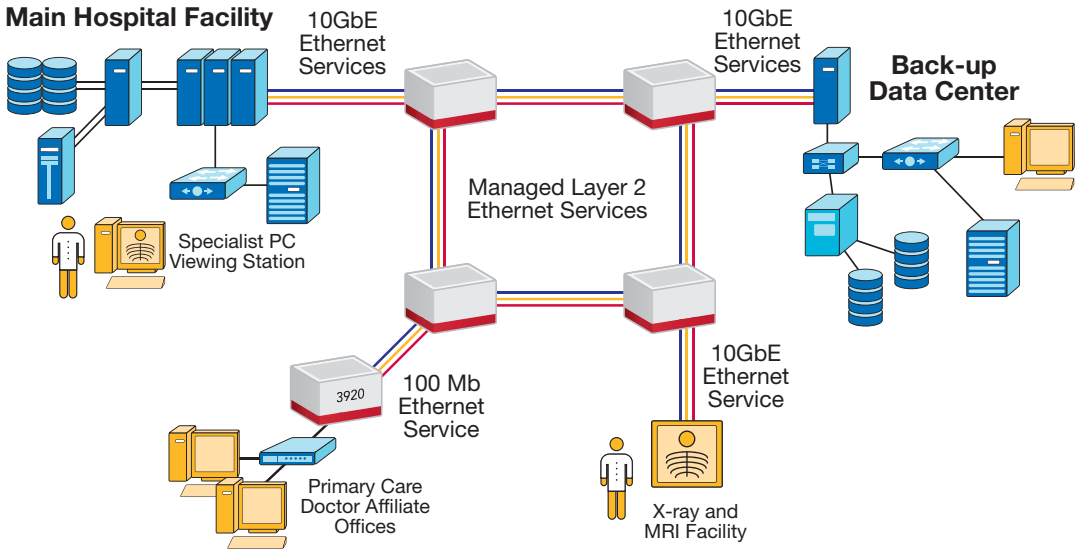
Figure 1: Metro Ethernet Network for remote PACS and EMR



Once the images have been viewed and the diagnosis is complete, a secure Ethernet connection can be made between both the PACS location and the main hospital facility to a remote data center, where the records can be stored in a safe and redundant location away from the main site. Lastly, physicians affiliated with the main hospital can take advantage of the same PACS applications that, in the past, had been far too network-intensive and expensive to extend to the remote doctors' offices. The flexibility of Comcast's Ethernet service allows doctors in remote locations to take advantage of the same PACS applications used at the main hospitals. Patients can now receive the same care without having to travel to a hospital.