Segra Solutions, Services and Programs for Healthcare Providers

Network connectivity is a critical element of IT infrastructures for hospitals, clinics and care providers, and even before the impacts of COVID-19, many healthcare networks had reached their limits, hindering technology adoption and exposing weaknesses in security. Network connectivity touches almost every aspect of healthcare today, from how doctors interact with patients, to the way medical data is accessed and used, to the role of medical devices in patient monitoring. The success of these innovations relies on a resilient network and communications infrastructure that can support high performance connectivity, scale to meet influxes in demand, support efficient care delivery to patients, and deliver real-time, secure access to data.

Segra provides services to over **900 HEALTHCARE CUSTOMERS** across their footprint, ranging from large hospitals to private physician offices.

Efficient, high-performing data and communication networks are at the heart of most innovations in the medical and healthcare arena.

- Healthcare providers have moved to electronic medical records (EMRs), enabling quick, secure and anywhere access to patient data.

- Connected medical devices automate routine patient monitoring, freeing up staff for higher value tasks, while robotic tools help ensure precision in surgery.

- Telehealth consultations promote virtual contact between patients and clinicians and enable online collaboration between medical professionals, which are both critical ways to maintain safe healthcare practices during the pandemic.

- Cloud-based services allow providers to have anywhere, anytime access to clinical and administrative applications and other resources while keeping data and patient

information secure. Healthcare is critically dependent on data privacy, so any underlying connectivity network must meet stringent HIPAA requirements.

Many of the advances in healthcare delivery and support rely on robust fiber-optic cable to deliver high-performance connectivity. More than ever before, healthcare facilities need an affordable, resilient, high performance network that can scale with demand while meeting strict data privacy and compliance requirements.

As one of the largest independent fiber network companies in the eastern U.S., Segra offers state-of-the-art connectivity, voice and data technology solutions to businesses of all sizes, with a number of solutions tailored for healthcare. Segra's suite of solutions can be configured to your healthcare organization and its core IT, communication and security requirements, offering a customized fiber-optic network for healthcare facilities that keeps patients, providers and other stakeholders connected.

But if a healthcare facility is in a rural community not served with fast connectivity, many of these innovations may not be possible without substantial new investments in fiber-optic cabling. What's needed is a network services provider that can help secure the funding to link these outlying healthcare facilities to fast, reliable fiber-optic network infrastructure and help bring cutting-edge medical treatments and services to rural communities.

Segra offers the following network solutions and services tailored to the needs of hospitals, clinics and other healthcare

facilities, in addition to programs that help eligible, rural not-for-profit healthcare providers receive discounted broadband connectivity services.

Ethernet WAN

Segra's premier connectivity product is Ethernet WAN (Wide Area Network), which provides the configuration flexibility to connect multiple clinics and medical facilities, the bandwidth scalability to meet the increasing demands of medical applications and devices, and access to reach the internet and private VPNs at business speeds. Our Ethernet WAN provides the proven service resiliency that medical and healthcare facilities require to keep the central network and associated systems up and running at all times.

Medical and healthcare facilities can utilize Ethernet WAN to connect clinics and/or hospitals over a secure, HIPAA-complaint private network. This bandwidth can be utilized for many purposes, including VoIP telephony between offices, connectivity for video telehealth consultations, and patient EMR storage and retrieval.

> Segra Ethernet WAN provides the proven service resiliency that medical and healthcare facilities require to keep the central network and associated systems up and running at all times.

Segra Ethernet WAN can be deployed either as a switched or routed service:

- **Switched:** Ethernet WAN switched is a Layer 2 service transparent to your existing network, which simplifies administration and preserves local control. Segra Ethernet WAN connects your sites without any impact to your existing IP routing; your locations operate as if they were simply connected by an Ethernet cable.
- **Routed:** Routed Ethernet WAN is a Layer 3 service, using routing to send data between your organization's hospitals or clinics. The information is routed from your organization's LAN from one location to another, via the Segra WAN. Segra is responsible for the IP routing necessary to move the data across the WAN, freeing your IT team from this work.

	Switched	Routed
Topologies	MEF Certified Designs	Fully Meshed
QoS	Multiple end-to-end options	Multiple end-to-end options
Access Ports	Type 1 (on-net) and type 2 (off-net)	Type 1 (on-net) and type 2 (off-net)
Speeds	1 Gbps, 10 Gbps	1 Gbps, 10 Gbps
SLAs	20 Mbps to 10 Gbps	20 Mbps to 10 Gbps
	Carrier-class for service availability	Carrier-class for service availability

Our premium fiber network reaches major markets throughout the Mid-Atlantic and Southeast, as well as outlying areas in the region not typically served by other providers.

Key features:

- **Flexible and scalable.** Ethernet WAN service supports multiple topologies and a range of speeds to connect sites in the manner that best suits your application needs.
- **Cost efficient.** With Segra Ethernet WAN, you pay only for the bandwidth you need, and you can increase bandwidth without expensive equipment upgrades.
- **Resiliency.** Ethernet WAN includes resiliency mechanisms to ensure traffic delivery, as well as end-to-end Quality of Service (QoS) options for traffic prioritization across the Segra WAN.

Segra Dedicated Internet Access

Segra Dedicated Internet Access (DIA) provides a dedicated, secure, reliable connection to the internet with guaranteed bandwidth to help ensure that your hospitals and clinics are always online, at the speed you need, with carrier-class SLAs. Your site is connected to the Segra Internet POP by a local access loop. The bandwidth on the loop is dedicated, not shared across many users, which preserves your internet connection speed since there is no competition for the bandwidth.

Key features:

- **Synchronous Upload and Download Speeds.** With Segra DIA, Internet upload and download speeds are the same, enabling the consistent access performance needed for online transactions to complete quickly.

- **Bandwidth Scalability.** DIA bandwidth can be increased to up to 10Gbps, so there is plenty of room to increase bandwidth as your internet access needs grow.

- **Multi-Service Support.** The DIA connection can support other network services, providing a single network for your telecommunication needs. If the connection includes Segra IP Voice services, QoS prioritizes bandwidth for the voice traffic. In addition, interoffice traffic can be separated from internet traffic for security purposes.

- **Multi-Site Support.** DIA can connect multiple sites to bring current and future healthcare locations online.

- **Distributed-denial-of-service (DDoS) protection available.** Operates with Segra DIA service, using a high-efficiency configuration; see the Security section below.

Segra SD-WAN

Segra SD-WAN (Software-Defined Wide Area Network) Services enable network administrators to orchestrate connectivity throughout your organization via a convenient web portal, simplifying multiple clinic or facility networking by providing security, fail-over, application prioritization, and diverse connectivity options. At each location, a Segra SD-WAN Edge device is installed and WAN delivery devices are connected
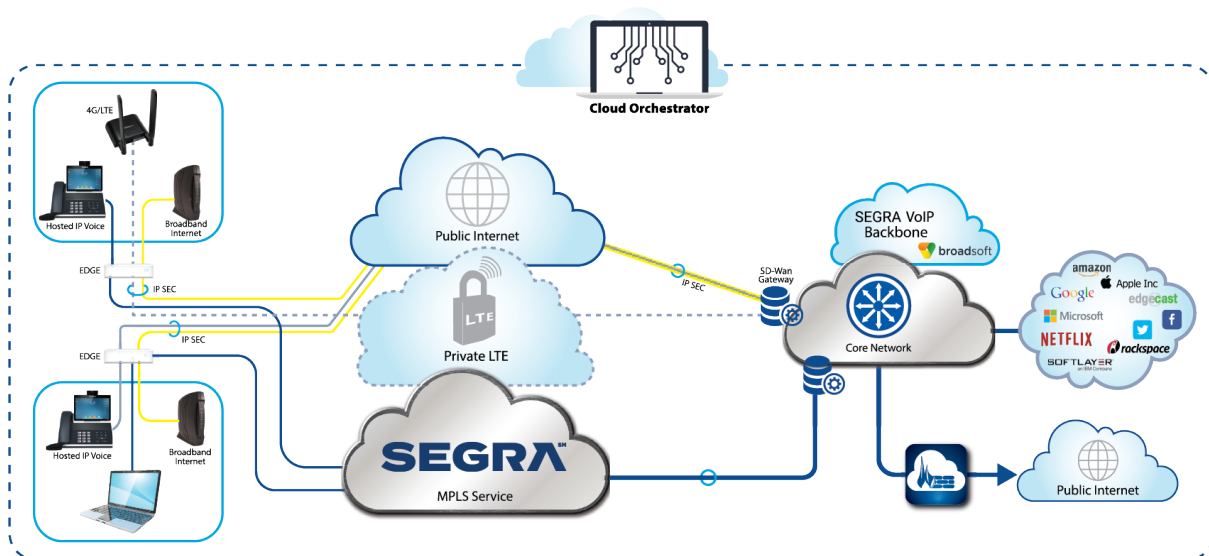
(usually combined with Segra Ethernet WAN). This device then allows you to view the location's ISP connections via one single pane of glass in the Segra SD-WAN portal, with access to robust metrics and reporting. The orchestrator ensures that your policies and procedures are being correctly applied across your network, as well as allowing granular control over which network traffic gets priority.

Key features:

- **Simple Secure Network.** Quickly deploy a simplified network design that includes security, orchestration, monitoring, and centralized troubleshooting tools.

- **Reduce cost.** Deliver robust and secure enterprise-grade WAN at and between branch clinics regardless of connection type or carrier. Installing Segra's turnkey SD-WAN solution saves on expensive hardware installations and helps to control costs associated with various ISPs serving difference branch clinics or medical facilities.

- **Optimize application performance.** Deploy dedicated, hybrid, or internet links with direct, secure access to enterprise and cloud applications.

Hosted Firewall

Segra Hosted Firewall services provide a comprehensive, multi-layered, approach to security that eliminates or reduces the risks associated with blended attacks while coordinating security alerting, logging, reporting, compliance and response. Data protection is especially critical for regulated industries like healthcare, and our Hosted Firewall service provides comprehensive protection to Ethernet WAN and LAN in clinics and hospitals. Segra configures the service for the protection level required by your facility or applications and then activates, monitors and manages it. Because the service is cloud-based, deployment is quick and threat updates updated in near real time. Because this is a hosted service, it allows rural healthcare clients to forgo acquiring and maintaining redundant firewalls and the IT personnel required to configure and maintain them.

Key features:

- Unified threat management functions include advanced firewall; intrusion prevention service; anti-virus/anti-malware; content/web filtering; security information management.

- Safeguards your business 24/7/365 with next-generation protection.

- Saves capital costs and operating expenses associated with a premise firewall.

- Improves operational efficiency and effectiveness by providing a one-stop-shop solution for firewall protection and WAN connectivity.

- Scales easily with network growth as you add bandwidth and add sites to the Segra network.

Segra Distributed Denial of Service (DDoS) Protection

A distributed denial-of-service (DDoS) attack is when multiple computer systems attack a target, such as a server or website, and cause a denial of service for users. At a minimum, these assaults compromise your staff's productivity and your patients' ability to reach your website. Segra's DDoS Protection Service employs a multi-layered approach to DDoS defense to ensure

your healthcare organization is safeguarded from both complex, stealthy DDoS attacks, and the very large attacks that can quickly saturate internet connectivity, without causing interruptions to your network.

ATTACK MITIGATED
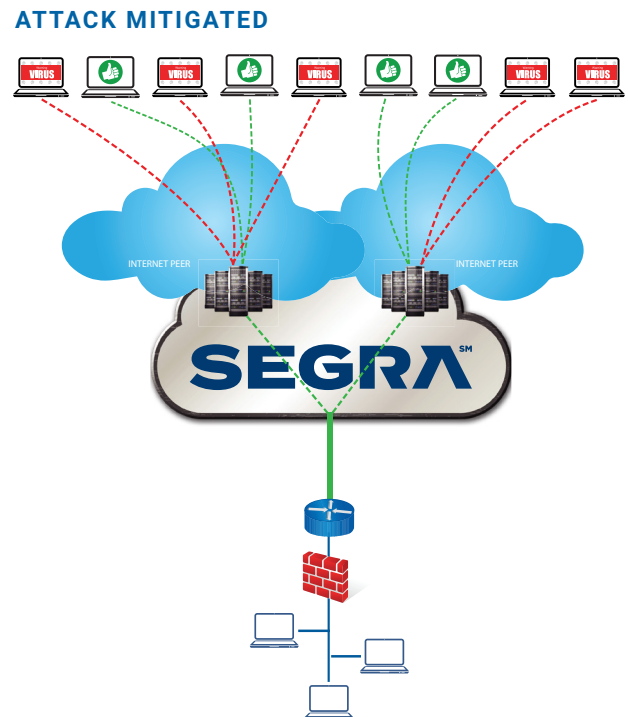
DDoS protection appliances are located at high-volume entry points on the Segra core network where attacks are most likely to occur. The appliances automatically inspect all traffic as it arrives at an entry point, immediately discarding malicious packets while sending legitimate packets to their destination. During this process, other network services continue to operate without interruption, even latency-sensitive applications like voice and video.

Key features:

- **Effective.** The protection is comprehensive, identifying both existing and newly discovered attack types, preventing direct attacks on healthcare web sites.

- **Automatic processing.** All filtering functions are performed automatically, without the requirement for regular human intervention and/or delay.

- **Builds on existing systems.** Operates with Segra DIA Service (see above), using a high-efficiency configuration.

Segra SIP Trunks

Replace clunky traditional TDM equipment with virtual SIP trunking that integrates both voice and data traffic to radically streamline your facility's communications operations. Segra's versatile and cost-effective SIP trunking solution delivers the benefits of Voice over Internet Protocol (VoIP) with your existing phone system, and scales easily with minimal hardware so that you can effortlessly expand your call capacity as your healthcare organization grows.

Key features:

- **Cost Savings.** Dramatic savings on local and long-distance calls.
- **Transition Seamlessly.** Maintain existing phone numbers, and add additional numbers as needed; maintain all the features of existing PBX/IP BX phone systems and gain the benefits of VoIP.
- **Stay Connected Always.** No matter where your clinics or hospitals are located, your healthcare facilities are fully connected – virtually.

Segra Hosted Voice with Webex

The demands on healthcare organizations today require fast, flexible, cost-effective and easy-to-use communication solutions. Segra Hosted Voice with Webex Services make it simple to access to the latest calling and conference features with turnkey solutions designed for the healthcare industry and bundled in a way that's affordable and easy to understand. Relieve clinics and hospitals of the expense of purchasing and maintaining IP-enabled PBX for facilities that require advance feature sets with a cloud-based implementation that offers over 100 IP calling features, including Find Me/Follow Me, unified messaging, shared-call appearance and a web-based management portal.

Key features:

- **Increased Performance.** Ultra-fast fiber speeds take Hosted Voice with Webex above and beyond to take your business communications to a whole new level. Having your most business-critical solution on our fiber network provides you peace of mind and a quality experience for your employees and guests.

- **Communicate from anywhere**. With Hosted Voice with Webex, voice and data travel over the Internet, just as email does, so you can stay in contact with your employees, clients and vendors however, wherever you are. Conference calls, video conferences, emails, faxes – Take the office with you. Conduct 'business as usual' at the airport, on the road, client site…anywhere.

- **Easy integration for uninterrupted workflow.** Hosted Voice with Webex offers pre-built bots for third-party applications from vendors such as Microsoft, Google, Slack, Zendesk and many more. You can bring content into your space from other applications, as well as enable access to business information and alerts.

- **Secure & Reliable**. The Segra private network ensures that you stay connected and protected – always. Your messages, files, meeting data, and whiteboard drawings are protected with end-to-end encryption. But what about working with other companies? Your policies are in force even when employees collaborate with others outside of your company, through integration with your Data Loss Prevention (DLP) solution. Keeping your user identities and access protected.

DISRUPTIONS HAPPEN

UNPLANNED | PLANNED

USER ERRORS | INFRASTRUCTURE FAILURES | SECURITY & RANSOMWARE | NATURAL DISASTERS | MERGERS & ACQUISITIONS | MOVE TO CLOUD | DATACENTER CONSOLIDATION | MAINTENANCE & UPGRADES

Disaster Recovery as a Service (DRaaS)

Protecting medical and patient data from unplanned disruption has never been more complex or important. Segra's DRaaS solution uses cloud resources to protect applications and data in the event of system failure caused by a natural or human disaster. This service provides a total system backup that allows healthcare organizations to regain operations by enabling a full recovery in the cloud. Segra's DRaaS provides a robust feature set, long-term retention and continuous replication at the virtualization/hypervisor layer, which results in a high-performance disaster recovery and archival solution. In addition, the solution is storage agnostic and customizable to your organization's IT architecture, ensuring replication of any data center or site including private cloud, public cloud, service providers, or branch clinics and facilities.

Key features:

- **Compliant**. Meets HIPAA's "Security Guidelines."
- **Aggressive standard service levels**. Recovery Point Objectives (RPO) of seconds and Recovery Time Objectives (RTO) of minutes.
- **Easy management**. Simplified UI with3 click fail-over.

Segra Data Centers

Non-compliance and data breaches can cripple a hospital or healthcare organization, and Segra's Data Centers meet all standards set by HIPAA to ensure full compliance and data storage security requirements for healthcare providers, healthcare clearinghouses, and health insurance companies. Segra's nine data centers connect with a 30,000-mile fiber network and serve Virginia, West Virginia, South Carolina, North Carolina, Pennsylvania and Georgia.

Key features:

- All facilities are SSAE 16 SOC 2 Type II-certified and are monitored around the clock, 365 days of the year.
- Cloud-based services include Colocation, Infrastructure as a Service (IaaS), Storage as a Service, Security as a Service, and Backup as a Service (BaaS).

Healthcare Connect Fund

The Healthcare Connect Fund is a national program funded by the federal government through the Universal Service Administration Company (USAC). The fund provides support for high-capacity broadband connectivity to eligible healthcare providers (HCPs) and encourages the formation of state and regional broadband HCP networks. Under the program, eligible rural HCPs, and those non-rural providers that are members of a consortium that has a majority of rural HCP sites, can receive up to a 65% discount from the fund on all eligible expenses for high-capacity broadband connectivity. HCPs are required to contribute the remaining 35% to participate in the program. HCPs can use the Healthcare Connect Fund to purchase high-capacity broadband connectivity services and equipment, as well as construct their own broadband infrastructure where it is shown to be the most cost effective option. The Healthcare Connect Fund is a nationwide program and not specific to certain regions.

Healthcare facilities often have both rural and urban locations. Being part of a consortium allows for both rural and urban locations to secure funding as long as the consortium they are a part of is over 51% rural in its total site count. In other words, if a HCP is not located in a rural area, it still may be eligible to apply to the Healthcare Connect Fund program as part of a consortium.

Palmetto State Providers Network

As noted above, a consortium is a group of HCPs that apply for funding as one entity. Segra partners with a non-profit organization called Palmetto Care Connections that acts as the facilitator for the Palmetto State Providers Network (PSPN) consortium when filing for the funding on a HCP's behalf.

Although HCPs can apply for the Healthcare Connect Fund on their own, there are distinct advantages to filing for the fund through Segra and Palmetto Care Connections.

The PSPN consortium has an evergreen contract with USAC through 2033. The participants in this consortium do not have to pursue competitive bids to add sites or upgrade services. Both urban and rural HCPs are eligible to qualify for the funds, as well as healthcare administrative offices and data centers.

Segra maintains a dedicated team to assist in procuring the funds and filing all of the paper work for the Healthcare Connect Fund. If the funds are awarded, we bill the HCPs only their 35% portion of the total costs for the eligible services.

Segra Healthcare Network

Segra Healthcare Network (SHN) is a private, exclusive, fiber-optic network that was built to connect key healthcare facilities to the Internet, and each other. Dedicated specifically to healthcare providers, it serves as a common platform for the secure, fast exchange of information between healthcare-related applications, providers, and academic institutions. SHN works with eligible HCPs and consortiums to help these healthcare organizations generate funding for Segra's qualifying services.

For more information about Segra's services, solutions and programs for healthcare, contact us at https://www.segra.com or contact Segra at 833.GO.SEGRA or businesssolutions@segra.com.

SEGRA®

833.GO.SEGRA
businesssolutions@segra.com
www.segra.com