

Hospital Launches Healthcare IT Center of Excellence



City Clinic steps closer to realizing vision of becoming reference center of excellence for south-east Europe

EXECUTIVE SUMMARY

Customer Name: City Clinic

Industry: Healthcare

Location: Bulgaria

Number of Employees: 400

Challenge

- Deliver leading healthcare practice to patients
- Enhance physician mobility
- Improve collaboration, information sharing, and decision-making

Solution

- Cisco Collaboration architecture including Cisco Jabber, running on a Cisco Medical-Grade Network foundation

Results

- Information exchange and communications follows medical staff and patients as they move around hospital
- Access to medical records anytime and from any device
- Reduced network latency to less than one millisecond for advanced telemetry system

Challenge

City Clinic is a private healthcare provider in Bulgaria. It operates two medical facilities: one outpatient center in Varna, in the east of the country, which opened in 2010, and a hospital in the capital, Sofia, which opened in 2012. The company prides itself on offering access to some of the region's best professionals, services, methods, and technologies for healthcare.

When City Clinic was designing its Sofia facility, which specializes in cardiology, the founders were eager to create a technology showcase that could set the hospital apart from its rivals in the healthcare sector. "This was to be our flagship," says Ilian Grigorov, co-founder and chief executive officer at City Clinic.

"We wanted to have one of the most advanced hospitals in eastern Europe, making a difference not just for Bulgarian healthcare but for citizens across the whole region. Access to information was going to be extremely important. We deal with handoffs, moments of uncertainty, and patients moving from one ward to the other, so we wanted an agile infrastructure that allowed effective transfer of information throughout the hospital."

Solution

City Clinic had decided to outsource most of its IT infrastructure to Aossia, a Bulgarian technology provider specializing in cloud computing and virtualization. Aossia favors Cisco® equipment because of its stability and trouble-free operations, and suggested this should form the foundation of the network and collaboration systems at City Clinic in Sofia.

"We selected Cisco because it's offering represented an integrated solution for both network infrastructure and telephony," says Grigorov.

City Clinic is equipped with a Cisco Medical-Grade Network that delivers full, secured wired and wireless access around the hospital. Two engineers deployed the IP platform well in time for the hospital's inauguration in December 2012. City Clinic also deployed a range of Cisco Collaboration technologies that are hosted and managed by Aossia, and delivered as components of a cloud-based virtual desktop infrastructure.



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Ilian Grigorov
Co-founder and Chief Executive Officer
City Clinic

Built upon a Cisco Unified Communications Manager platform, the solution enables staff and clinicians to communicate quickly and effectively via Cisco Unified Wireless IP Phones, without needing to rely on public mobile networks. The addition of Cisco Extension Mobility allows users to access their phone settings, including line appearances, services, and speed dials, from any phone in the hospital.

The feature is activated through staff RFID cards, so users can instantly turn any hospital handset into their own phone. The same practice applies to patient medical screens, which can be used by any clinician to access their desktop. City Clinic clinicians also use Cisco Unified Wireless IP phones in place of pagers, with paging applications delivered by IPcelerate.

Outpatients visiting the hospital, meanwhile, are given a Cisco IP Wireless phone that serves as a pager for when they need to be called into a consultation, helping to preserve patient confidentiality. Outside the hospital, communications are complemented through Cisco Jabber™, which City Clinic expects can ultimately be used by about 100 doctors. Cisco WebEx®, used for meetings and sharing of desktop applications, completes the lineup of collaboration technologies.

Results

The hospital’s collaboration platform allows clinicians to access files using mobile devices from anywhere in the hospital. Doctors working offsite can also see files as long as they have clearance to do so, in order to make sure patient data confidentiality is not breached. Offsite access restriction also helps improve the quality of clinical care, for example, by preventing doctors from carrying out invasive procedures remotely.

The Cisco Medical-Grade Network incorporates AeroScout location-based sensor tracking end points that are used to track patients who are at risk of falling, so nurse stations are alerted when patients leave their beds. And the hospital has implemented group messaging to particular response teams, such as tachycardia consultants, which can help with emergency situations. “As we say here, time is tissue,” says Grigorov.

Information is not only being provided to physicians, though. City Clinic is able to provide patients with videos and information about their care and about regulatory or compliance issues such as informed consent. However, says Grigorov: “Primarily the benefits are for the medical teams. They have free access to patient records and all supporting documentation, including images and lab results, anywhere in the hospital or from home.”

He adds: “The technology has allowed us to improve clinical collaboration because our clinicians and referring doctors have easier access to patient’s medical records. Everybody shares the same information, which follows the physical movement of the patient. It improves collaboration and the collegiality amongst the physicians involved in providing coordinated, complex care.”

For the City Clinic IT team, one of the benefits is that back-end systems can be managed from anywhere. It is also easy to deliver information while maintaining exacting security and compliance standards. “In terms of security, we have to adhere to very strict European Union personal data protection laws,” says Grigorov. “Patient confidentiality is absolutely important, and we have to be compliant at all times.”

Finally, City Clinic is relying on its Cisco infrastructure to deliver continued innovation in healthcare. It has recently, for example, become the first European hospital to deploy a Philips advanced telemetry system on a customer-provided Cisco network, achieving less than one millisecond latencies across a 15 kilometer (9.3 mile) connection between virtual machines.



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Next Steps

City Clinic currently only uses video in a limited way but is looking to introduce it more widely for applications such as telemedicine. As part of this initiative it is adding Cisco TelePresence® EX Series endpoints to its suite of Cisco Collaboration products.

The hospital is also looking to deploy WebEx for consultations. This plan could begin with sharing voice and video content between operating and conference rooms, so consultants can view procedures via WebEx. Decision-makers, meanwhile, may rely on Jabber’s superior video capabilities for remote consulting. Meanwhile, to enhance mobility, City Clinic is planning to give consultants iPads equipped with virtual desktops, delivered via VMware View, featuring Jabber and WebEx for off-site work.

For More Information

To learn more about the Cisco architectures and solutions featured in this case study, please go to:

www.cisco.com/go/collaboration

For more information on Cisco Medical-Grade Networks, please go to:

www.cisco.com/go/mgn

Product List

Collaboration

- Cisco Unified Communications Manager
- Cisco Unified Wireless IP Phones
- Cisco Jabber
- Cisco WebEx
- Cisco TelePresence System EX Series End Point

Cisco Medical-Grade Network

- Cisco Catalyst 3750X and 6500 Series Switches
- Cisco Catalyst 6500 Series Wireless Services Module
- Cisco Aeronet 3600 Series Access Points
- Cisco Nexus 5000 Series Switches
- Cisco 2900 Series Integrated Services Routers
- Cisco ASR 1002 Series Routers
- Cisco ASA 5540 Series Firewalls with IPS modules



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