



# CLINIC-IN-A-BOX

## THE ISSUE

Hospitals everywhere are expanding their reach to accommodate the needs of our aging population. Sometimes this is strictly a business transaction while other times it is to put a new regulatory framework into place for groups such as accountable care organizations. The acquisition of specialty services – such as imaging centers, rehab, urgent care, and assisted living – or physician practices by hospitals, is an attractive decision for the hospital’s board of directors.

However, for the people tasked with integrating these new, formerly independent organizations and businesses into the IT infrastructure of the hospital, the challenges can be daunting. The typical needs of a recently acquired physician practice or specialty facility include:

- Secure access to internal hospital data and applications
- Enterprise voice services integrated with the hospital dialing plan
- Wireless network access to support mobile carts and tablets as well as guest Internet access

And of course, it has to be done “yesterday”, with no IT staff in the newly acquired practice.

Add to this the desire for doctors and other healthcare professionals to work from a home office with all the same access to services and applications they are accustomed to when sitting inside the physical facility, and you have a recipe for major headaches, both for the end user as well as those tasked with keeping the infrastructure running.

Hospitals need to be able to rapidly get new sub-acute facilities on-line with minimal hassle. This is the idea behind Alcatel-Lucent’s Clinic-in-a-Box solution.

**Figure 1. Concept of Clinic-in-a-box**

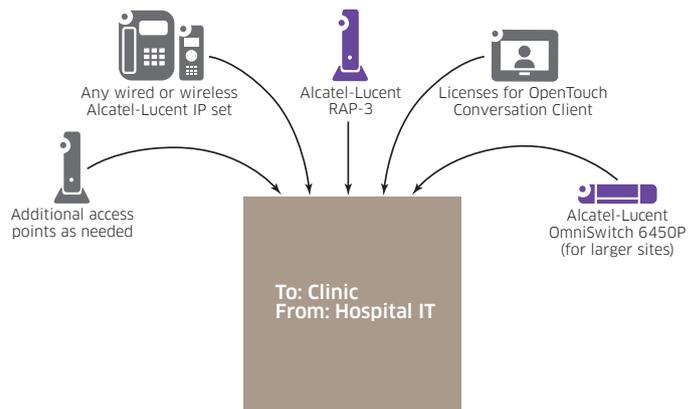
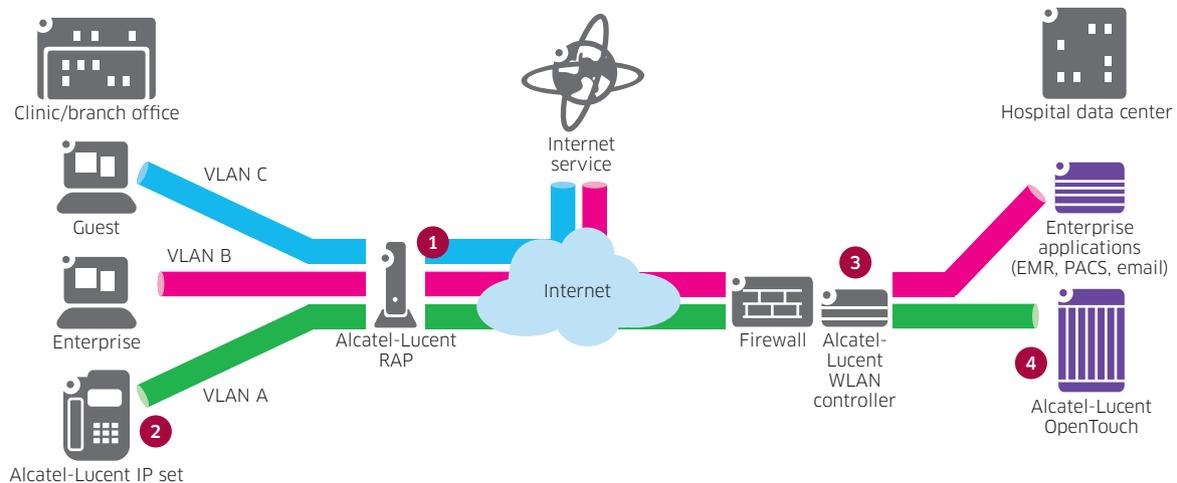


Figure 2. Clinic-in-a-Box Architecture



## HOW IT WORKS

For example, in a data center there would be two main components: A wireless controller and an OpenTouch. This data center could be hosted in the hospital or it could be provided by an Alcatel-Lucent business partner.

It is assumed that the remote facility has some kind of network connectivity. This could be through carrier Internet services, owned fibre, or 4G wireless. The data center then ships “the box”, which contains all the equipment necessary to provide full connectivity back to the main site:

- A RAP-3 which provides the secure tunnel back to the hospital and wireless access for SOHO users. This AP is managed from the hospital data center and appears as an extension of the in-house hospital wireless network
- Wired, wireless or softphone endpoints that are extensions of the in-hospital voice network
- Additional access points for better coverage or capacity
- Licenses for OpenTouch Conversation clients: This allows users to install OpenTouch conversation on their own iPads, giving them messaging, voice and video capabilities.
- Alcatel-Lucent LAN switching (for example, OmniSwitch 6450P) if needed

The receiving clinic needs to plug the RAP into the outside network connection, (refer to (1) in Figure 2) and plug the phone into the RAP (refer to (2) in Figure 2). That’s it. The installation is complete as no specialized knowledge is needed by the clinic staff. It is an activity that could be handled by almost any employee. Thanks to the pre-configuration efforts on the part of the data center staff, the RAP automatically establishes the required tunnels back to the hospital. And, since the RAP is voice-aware, it automatically prioritizes voice over other kinds of traffic

using the RAP. As shown in the diagram, multiple tunnels can be established providing not only voice, but guest and employee network access as well.

This kind of plug-and-play deployment is made possible by hosting the wireless controller (refer to (3) in Figure 2) and the OpenTouch platform (refer to (4) in Figure 2) back in the data center.

## The Benefits

The Clinic-in-a-Box is a solution that permits the hospital to provide the newly acquired clinic:

- A plug-and-play means to establish one or more secure QoS-aware tunnels to the hospital using public internet services
- A wireless network that is a true extension of the hospital wireless network, with the same services, same security and same management visibility as any other access point
- iPad client
  - Inexpensive BYOD strategy to provide telephony services leveraging devices many people have
  - Permits rich enterprise collaboration services (video, audio, messaging) in one intuitive interface
- Telephony services: Fixed, mobile or soft client options (including iPad client) all available.
- The solution can be deployed as an overlay. There is no need to impact existing wireless or collaboration services inside the hospital. However, this solution could also support local APs and local collaboration services if desired.

## RESOURCES

For more information about Clinic-in-a-Box solutions, visit [www.alcatel-lucent.com/healthcare](http://www.alcatel-lucent.com/healthcare).