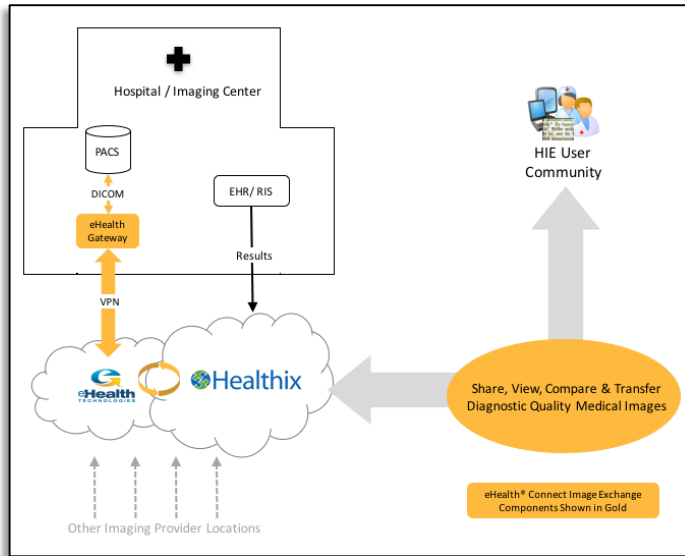


# Healthix Image Exchange

## Project Overview

### Image Exchange Solution Overview



Sign up for the *Healthix Image Exchange*, and in a few short weeks you will be able to share and access medical images with caregivers and other imaging provider locations across the community. All authorized HIE users, including your Radiologists, Cardiologists, and imaging department staff, will have “one-click” access to diagnostic quality medical images through the *Healthix* clinical portal, when and where needed. By simply signing up as a *Healthix* participant, users will gain the ability to access, view and transfer diagnostic quality medical images seamlessly as a part of their everyday HIE user experience, including one or more of the following workflows:

- ✓ **Image-Enabled Results Reporting (IERR):** View any imaging study in conjunction with a results report. Launch any study of interest with a single click on *eHealthViewer*® ZF - a zero-footprint, web-based viewing platform that is also a fully diagnostic-quality FDA 510(k) Class II medical device.
  - ✓ **Community-Wide Patient Worklist:** Launch a *Community-Wide Patient Worklist* for any patient, enabling image-intensive care providers to manipulate, sort and view one or multiple imaging studies from different imaging provider locations in a common *eHealthViewer*® ZF viewing session.
  - ✓ **Real-Time Image Collaboration:** With a single click from the *eHealthViewer*® ZF, initiate an immediate real-time screen sharing consultation session with any other authorized care provider in the community.
  - ✓ **Image-Enabled Results Delivery (IERD):** Access imaging studies in the context of the results that have been delivered to 3<sup>rd</sup> party EMR locations by the HIE in a variety of ways including HL-7 results delivery and Direct Secure Messaging.
  - ✓ **Transfer-to-PACS:** Your Radiologists, Cardiologists and their staff can seamlessly access and transfer relevant prior imaging studies into their local PACS, in order to properly diagnose and treat more complex medical conditions – all with just a few clicks from the *Healthix* clinical portal. Key image attributes in the DICOM header such as patient ID (MRN) and accession number are automatically updated prior to transferring the images, saving additional time and effort.
  - **Emergent Workflow:** With *Emergent Workflow* enabled, the staff at an imaging provider location can share imaging studies with other users immediately after an imaging exam has been completed, and prior to the generation of a results report. This allows them to initiate real-time, potentially life-saving live imaging consultations with specialists anywhere in the world, in situations when a quick 2<sup>nd</sup> opinion is needed, a specialist is not available or on staff, or in preparation for transferring a critical emergency patient to an advanced care facility.
- 
- ✓ *Currently available functionality*
  - *Potential future functionality*

# Healthix Image Exchange

## Project Overview

### Project Overview

*Healthix Image Exchange* services will be enabled as a managed service by eHealth Technologies, our Image Exchange services partner, and hosted at their secure data center in Rochester, NY. They will configure and install an *eHealth Gateway* at your facility, for the purpose of managing the image access and workflow with your PACS or image archive. *eHealth Gateways* are configured as hardware appliances, and reside on your network, connected to your PACS or image archive using standard DICOM QRU. We will work with your network team to configure a secure VPN connection between the eHealth Gateway and the eHealth Technologies data center, which will enable your imaging studies to be accessible by authorized HIE users in the context of each patient's longitudinal patient record. Image access will be managed in accordance with the existing *Healthix* user authentication, consent, security and access controls.

### Implementation Steps

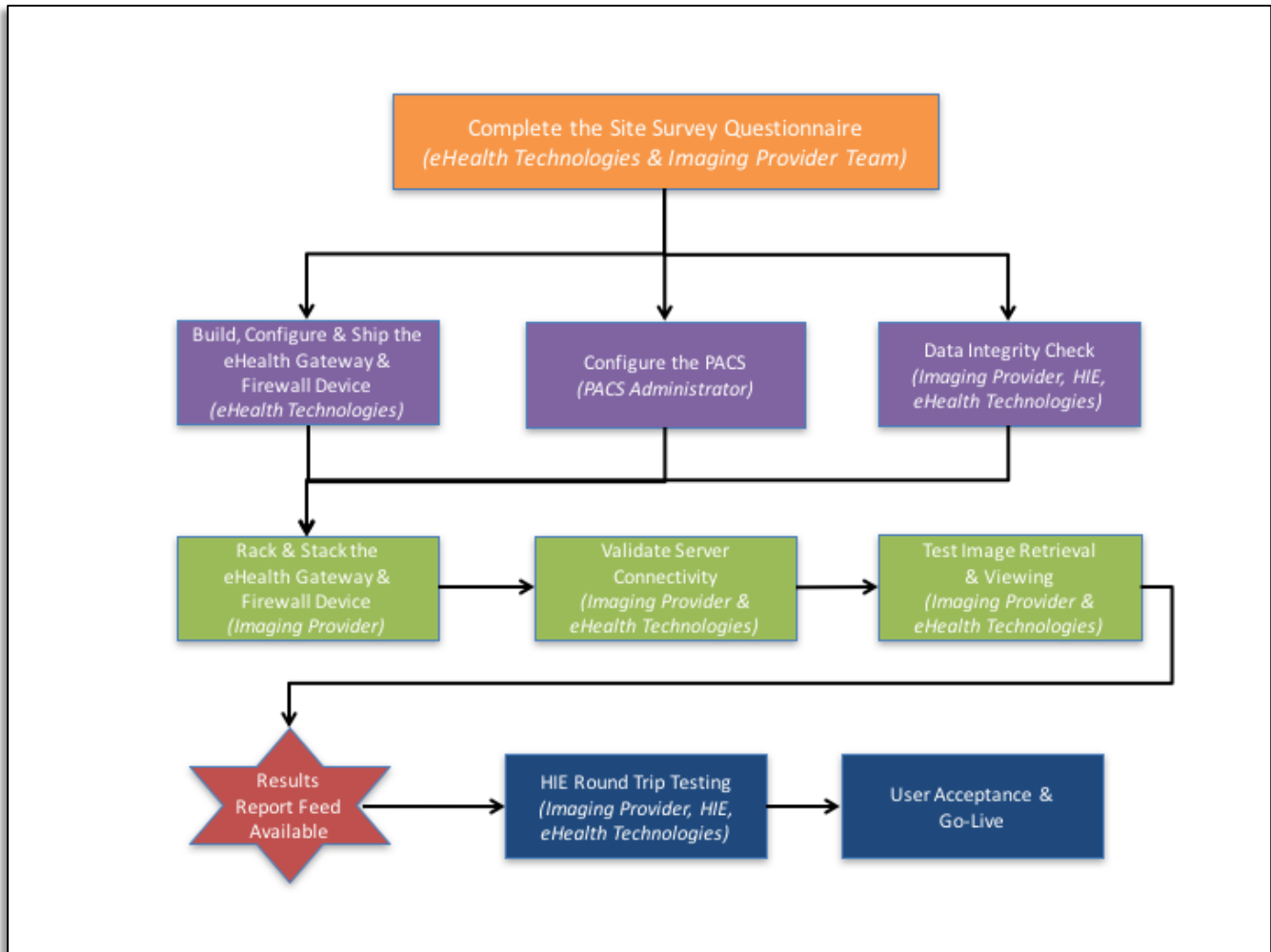
eHealth Technologies and *Healthix* will assign Project Managers who will work with your team to assure a successful and efficient implementation project. Our first order of business will be to conduct a project kick-off meeting, which should include your PACS Administrator and IT/Networking personnel. During this 1-hour meeting we will work with your team to map out a plan to complete the key activities shown in the diagram on the following page. Although a typical implementation will consume 6-8 weeks of calendar time, it should require but a few hours from your hospital / imaging center staff time, as most of the work is performed by the eHealth Technologies team. Below are the key tasks that will need to be completed by members of your team:

1. **Participate in a 1-hour kickoff meeting**, including your Network/IT Administrator and PACS Administrator.
2. **Complete a *Site Survey Questionnaire***, which provides your organization and eHealth Technologies with the information needed establish a connection with your PACS.
3. **Configure your PACS to support a new local QRU location**, which will reside on the *eHealth Gateway*.
4. **Complete a *Data Validity Questionnaire***, with the assistance of eHealth Technologies. If there are Accession Number or MRN discrepancies between your results report feed and PACS, some corrective action may be required.
5. **Rack and connect the *eHealth Gateway* and VPN appliances** to your local network once they arrive.
6. **Assist eHealth Technologies and *Healthix* personnel with testing the connection** to assure that the eHealth Gateway can be accessed through the VPN, imaging studies can be retrieved from your PACS, successfully cached on the *eHealth Gateway*, and viewed by the HIE user community.

# Healthix Image Exchange

## Project Overview

### Typical Healthix Image Exchange Project Plan



The following pages provides additional detail on each of the tasks in the diagram above. Time estimates are also included, but may vary depending of the specifics of each situation, including availability of your personnel.

**Week 1 – Project Kickoff & Site Survey Completion**

Complete the *Site Survey Questionnaire*

1. The eHealth Technologies team will assist you in completing a *Site Survey Questionnaire*. This document will serve as the foundation for most of the remaining project tasks, including building the *eHealth Gateway* appliance, configuring your PACS, and configuring the VPN connection between your facility and the eHealth Technologies data center.

**Weeks 2-5 – Site & eHealth Gateway Preparation**

***(Steps 2-5 can occur in parallel)***

Build, Configure & Ship the *eHealth Gateway & Firewall Device*

2. eHealth Technologies will build and configure an *eHealth Gateway* appliance based on the information provided in the *Site Survey Questionnaire*. IP addresses that have been provided by your team in the *Site Survey Questionnaire* will be pre-configured so that when it arrives it can be “racked & stacked” and operational out-of-the-box. eHealth Technologies will also provide you with a pre-configured *Cisco ASA 5500 Series* firewall device for terminating the VPN tunnel at the imaging provider side of the network. This device will eliminate the need to terminate the VPN tunnel on your local managed firewall. Additional device and network configuration information are available from eHealth Technologies or your *Healthix* representative.

Configure the PACS

3. Prior to the *eHealth Gateway* and firewall device arriving on-site, your PACS administrator should configure the PACS by entering its IP Address, Port and AE title into your PACS. This will enable the required DICOM QRU (C-Find and C-Move) services needed to communicate with the *eHealth Gateway*.

Data Integrity Check

4. In parallel with the above 3 activities, eHealth Technologies will assist you in completing a data integrity check. A *Data Validity Questionnaire* will be provided to guide the teams in this process. The primary objective of this step is to assure that HL-7 results reports can be matched with their corresponding imaging studies in the PACS. This matching is accomplished by extracting the location code, Accession Number and local MRN from your HL-7 message to query your PACS.

# Healthix Image Exchange

## Project Overview

### Weeks 6-8 – Connecting, Testing and Go-Live

Rack & Stack the  
*eHealth Gateway*

Server  
Connectivity  
Validation

Image Retrieval &  
Viewer Testing

Results  
Report Feed  
Available

HIE Round Trip  
Testing

User Acceptance &  
Go-Live

5. Once the eHealth Gateway and ASA 5500 Series firewall device are received, your IT staff will simply need to rack the server, and connect it with power and network cables, and connect the firewall device. Instructions will be provided with the shipment.
6. eHealth Technologies will remotely activate the VPN and confirm the connection is operational. In most cases this will occur “out-of-the-box” with little or no involvement from your team.
7. eHealth Technologies, supported by your PACS Administrator, will conduct testing to assure that imaging studies can be successfully retrieved from the PACS, stored in image cache, and viewed on *eHealthViewer*® ZF.
8. All of the tasks in the project up to this point can be accomplished prior to the HL-7 results feed being in place. However, in order to complete the final few steps, starting with round trip testing, this feed needs to be in place from this point forward.
9. eHealth Technologies, with some assistance from the *Healthix* staff and your team, will conduct round trip testing to assure every step of the workflow performs as designed. MRNs and Accession Numbers will be extracted from report feeds, corresponding imaging studies retrieved from your PACS, placed in cache, and viewed on the HIE clinical portal.
10. User Acceptance Testing will be conducted to assure that the connection meets the requirements of all constituents, including your imaging provider facility, the HIE, and HIE user community. This activity often involves little more than a demonstration of the previous round trip testing for all to observe. An *eHealth Viewer*® ZF *Quick Start Guide* will be provided to assist new users. *Healthix* and eHealth Technologies will continue to monitor the system for approximately 2 more weeks after go-live for any unexpected behaviors. If everything performs as expected, your site will be moved to support/maintenance, and the project will be considered complete.