

Jim Hauenstein, CIO Enloe Medical Center Agenda

- Enloe Medical Center
 - Enloe's Information Technology History
 - Enloe's Current Technology Platform
- Front & Back Office Technology
- Back Office Challenges
- Front Office Technology
- Today's Healthcare Technology
- Hottest Technology Skills
- Strategies for Seeking Technology Positions

Enloe Medical Center



Enloe Medical Center is a 382 bed hospital – Level II Trauma Center. Serving more than 400,000 residents in a six-county region in Northern California.

Enloe Medical Center is an independent, non-for-profit, health care organization governed by a community based Board.

Enloe's Information Technology History

1986 Three Servers – 4 applications: Accounting, Financials, Pharmacy, Lab

1997 The Hospital Board committed to a Hospital Information System and **the Information Services Department was established**. Over the next 8 years the systems grew to the following:

140 servers were implemented

1500 workstations purchased

46 additional applications installed

The Organization went live with the following applications – McKesson, Radiation Therapy, Internet and Email.

2005 The Organization moved from McKesson to the Meditech platform.

A new data center was built.

40 new servers purchased for a total of 180 Servers

200 additional workstations installed for a total of 1700 workstations

22 additional applications installed

Citrix was installed to manage the 180 servers.

2010 Enloe's current Information System consists of the following:

250 Servers installed

1500 workstations installed

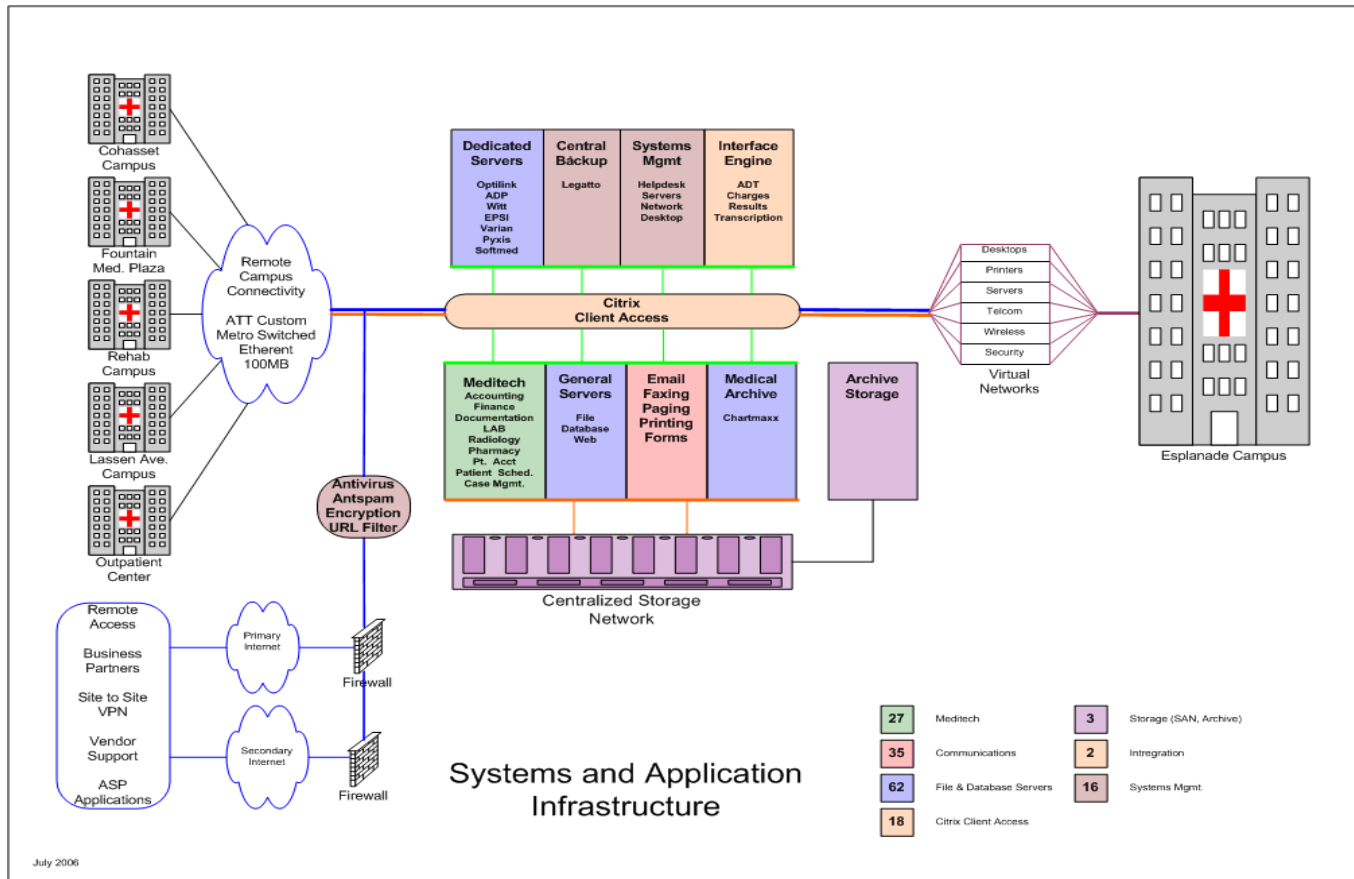
90 applications installed

VMWare was purchased and Enloe began to **virtualize** the 250 servers.

Migration from standard servers to **Blade Servers** has started.

2011 Scheduled to reduce servers by **100** with the new Blade Servers and VMWare.

Enloe's Current Technology Platform



Maximizing Front & Back Office Technologies Healthcare

- I will begin with Back Office Systems, as this is where computer systems and technology began.
 - Financial Systems
 - Accounts Payable
 - General Ledger
 - Accounts Receivable
 - Fixed Assets
 - Billing
- The back office systems were created to address the business focus of billing, payment collection and performing the general accounting functions listed above.
- Software vendors were aware in order to sell their system it was necessary to respond to the CEO & CFO's needs, which were the Back Office Systems.

Back Office Challenges



Back Office Challenges Healthcare

- No Front Office System to drive the Back Office System, which created the following challenges.
 - Increased staff in order to enter the Front Office paperwork.
 - Delays in bill creation.
 - Delays in cash collections.
 - Delays in bill payment due to untimely cash collection.
 - Manual data entry allowed for inaccurate information.

Front Office Technology



Front Office Technology Healthcare

- Vendors were pushed into creating Front Office Systems to address customers' complaints regarding the manual process in the back office.
 - Customer information was captured at the time of service.
 - Patient information was entered at the time of service providing more accurate data in the system.
 - Staff roles changed from a manual process to an automated process.
 - Payments received at the time of service.
 - The return on billing was quicker and payments were received from customers on a more timely basis.

Today's Healthcare



Today's Healthcare Technology

- Healthcare Technology today is one of the most complex and regulated environments in the business world.
- Why would I say this? Healthcare is a business that deals with Life and Death on a daily basis.
- The technology needs to support the end users' workflow processes designed around patient centered care.
- When a patient arrives at the hospital the number of applications that a patient activates is driven by their symptoms (i.e. Admitting, Laboratory, Radiology, Pharmacy, Nursing/Physician Assessment and Documentation).

Currently, Enloe and Healthcare Organizations' Biggest Technology Challenge is:

- ARRA – American Recovery and Reinvestment Act
 - Meaningful Use Timeframe

Meaningful Use Timeframe

Project Initiatives	2010	2011	2012
Clinician Adoption Activities	11/2010 Ongoing		
Needs, Process & Workflow Analysis	12/10-02/11		
Physician/Clinician Work Groups Governance	01/11 Ongoing		
Needs & Process Changes for System Build	01/11-03/11		
Upgrade Current System – 5.65 Software Upgrade	11/10 — 03/11		
Pharmacy and RX Management Optimization	12/10 – 03/11		
Electronic Medication Administration Record (eMAR)	11/10 — 06/11		
Bedside Medication Verification Implementation	11/10 — 06/11		
Optimize & Standardize Electronic Documentation	01/11 — 06/11		
Emergency Dept Documentation Optimization	01/11 — 06/11		
Surgical Services Documentation Optimization	01/11 — 06/11		
Critical Care Documentation Implementation	01/11 — 06/11		
Evidence Based Content Program	01/11 Ongoing		
Order Entry to Provider Order Management (POM)	05/11 — 11/11		
Physician Desktop Software Implementation	09/11 — 05/12		
Computerized Provider Order Entry (CPOE)	09/11 — 05/12		
Computerized Provider Documentation	09/11 — 05/12		
OR Integration – MM , BAR, PICIS	07/11 — 03/12		

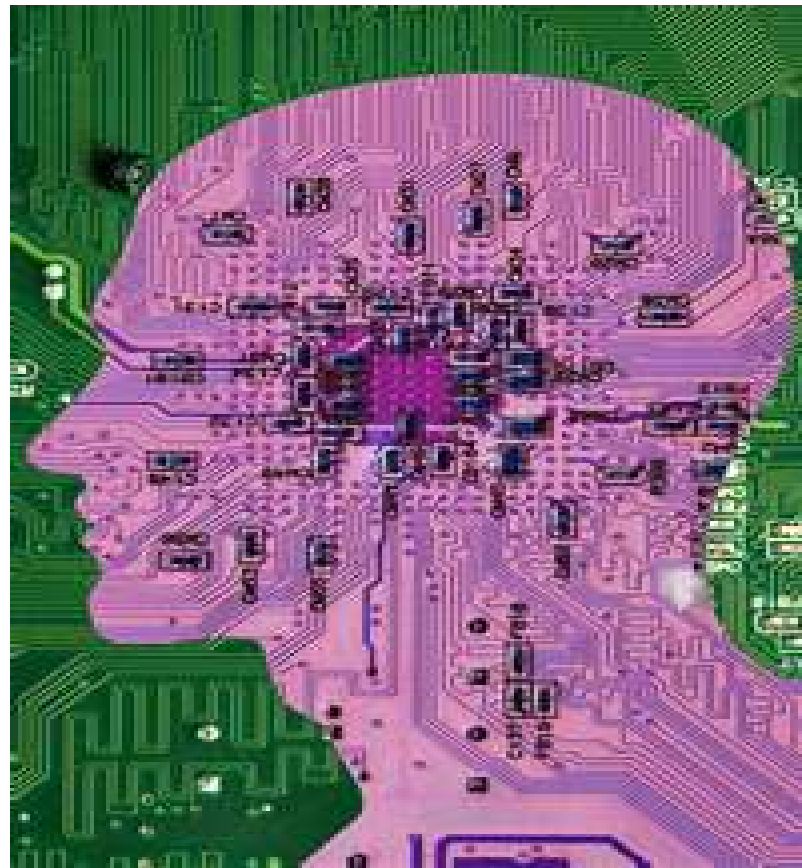
Hottest Technology Skills



13 of Today's Hottest Technology Skills

<u>Type of Position</u>	<u>Nov. 2009 Posted Positions</u>	<u>Nov. 2010 Posted Positions</u>	<u>Percentage of Increase</u>
Cloud Computing - Analyst and Implementer	378	1,354	258%
Accounting Software – Implementer	912	2,070	127%
Informatics – Implementer	969	1,694	98%
Billing & Posting Skills – Analyst	672	1,238	96%
Managing Customer Data – Implementer	1,332	2,321	96%
Java Script (programming) – Implementer	4,144	7,182	95%
Complex Enterprise Software – Implementer	32,59	6,314	94%
E-Commerce – Implementer	1,339	2,372	94%
Information Security – Implementer	764	1,290	94%
VM Ware – Implementer	1,228	2,102	94%
Change Management – Implementer	1,646	2,781	92%
Virtualization – Implementer	838	1,592	90%
Project Management – Implementer - software hardware system	<u>1,028</u>	<u>1,887</u>	<u>84%</u>
Total	18,509	34,197	97%

Strategies For Seeking Technology Positions



Six Strategies for a Technical Professional Seeking a new Technical position

- Job Wanted – Declare Your Intentions
- Take Advantage of Your Existing Network
- Stay Current and Up to Date on Your Resume
- Know Your Audience
- Have a Thirst for Knowledge
- Keep a 'What Can I do for you' Attitude

Front & Back Office Technology

Questions