

Enterprise EHR Imaging Servers

System Architecture

Embrace the new world of healthcare

Agenda

- History and Nomenclature
- Enterprise EHR Imaging Components
- Initial Configuration
- Imaging Server Topology/Data Flow
- File Shares
- Features and Functions
- Server Specifications
- Frequently Asked Questions

History and Nomenclature

- **Product Names**
 - TouchChart
 - ImpactMD
 - TouchWorks Scan
 - Allscripts Document Management
- **Originally a separate product, integrated with Enterprise**
- **TIF – Image File**
- **ANN – Annotation File**

Enterprise EHR Imaging Components

- **Imaging Server:** used for creation and filing of images. Can be standalone. Warehouses (aka filing cabinets) can exist without access to EEHR
- **Database Server:**
 - Impact database: pointers to Scanned Images
 - Impact_Audit
- **Web Server:**
 - ScanWeb virtual directory: requires use of Service Account for users to see scanned images (and annotations) in EEHR
- **Client components:** 3 ways for Clients to connect

Initial Configuration

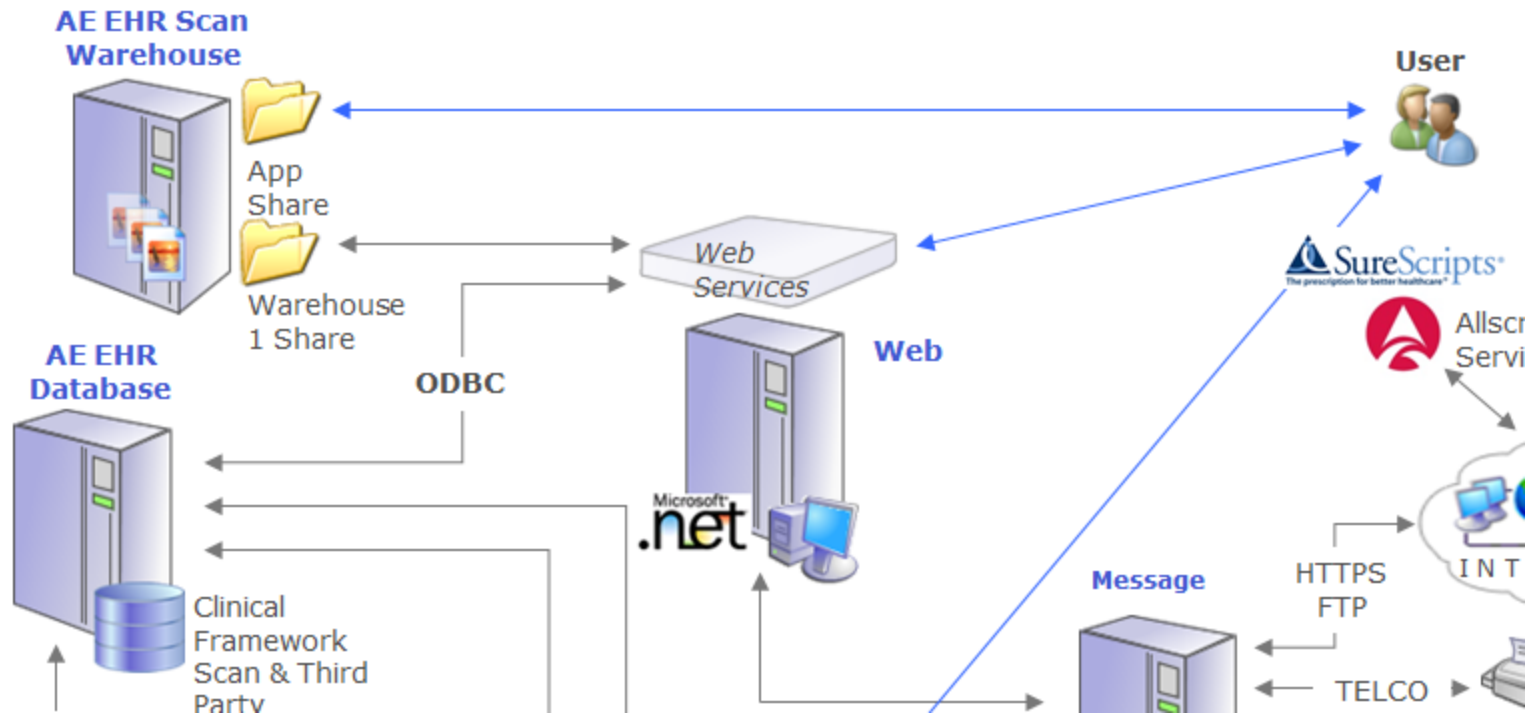
1. ConProps.exe
2. Manual Editing of IMPACT.CFG

```
[1-Data Access]
IMPACT Driver={SQL Server}
IMPACT Database=Impact
IMPACT Provider=SQLOLEDB
IMPACT ServerName=AHSTEST2
IMPACT ServerIP=10.1.0.154
IMPACT UserID={qweux|www
IMPACT Password={qweux|www
```

Enterprise EHR Imaging Components (continued)

- ImpactS.exe – shortcut to .exe on Imaging Server
- Fat Client: Imaging Server Client Software on Workstation. Config files stored locally.
- Citrix- Requires CRS (Citrix Remote Scan)
- Publish Primary Application (ImpactS.exe)
- Publish RDQHost
- Installation of CRS on Client Workstation

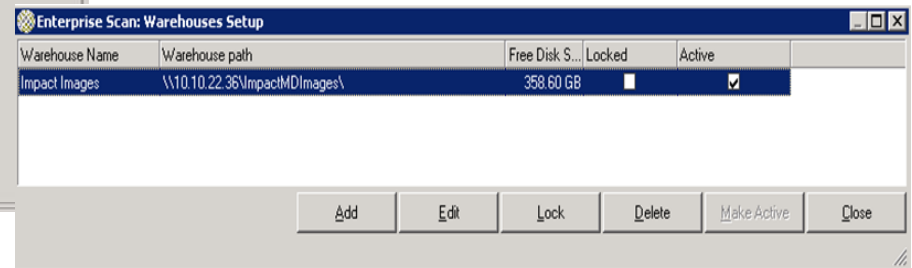
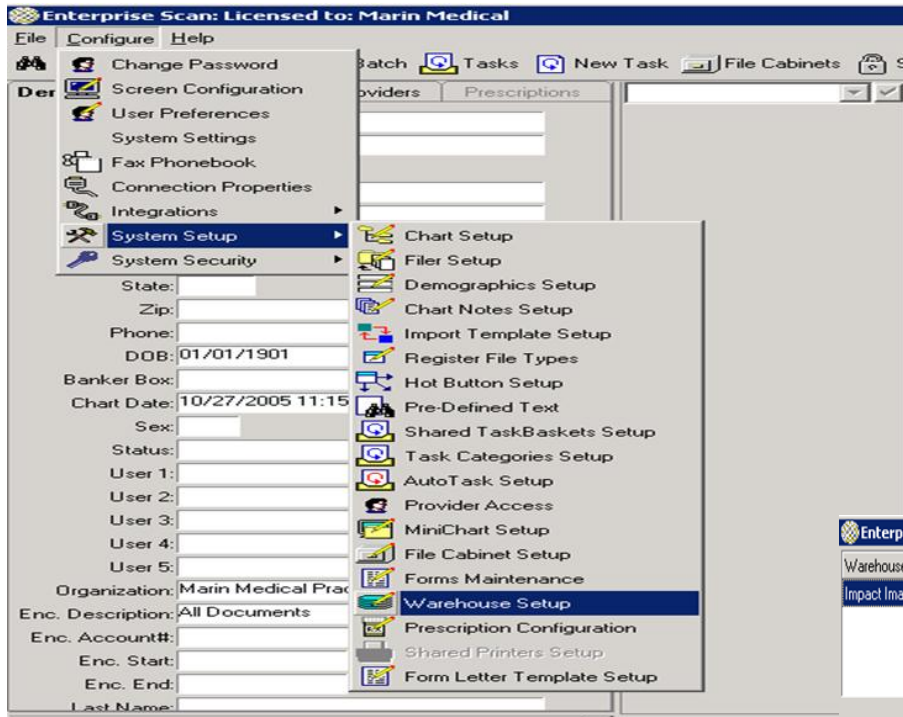
Imaging Server Topology/Data Flow



File Shares

- Scanned images (typically .TIFs) live in Scan Warehouses. Can technically be on any Server
- Can have as many Warehouses as disk space allows
- Only one Warehouse is active for writing
- Must be shared relatively open; typical names are:
 - \WareHouse01
 - \WareHouse02 etc.
 - Or
 - ImpactMDImages

File Shares – Scan Warehouse Setup



Features and Functions

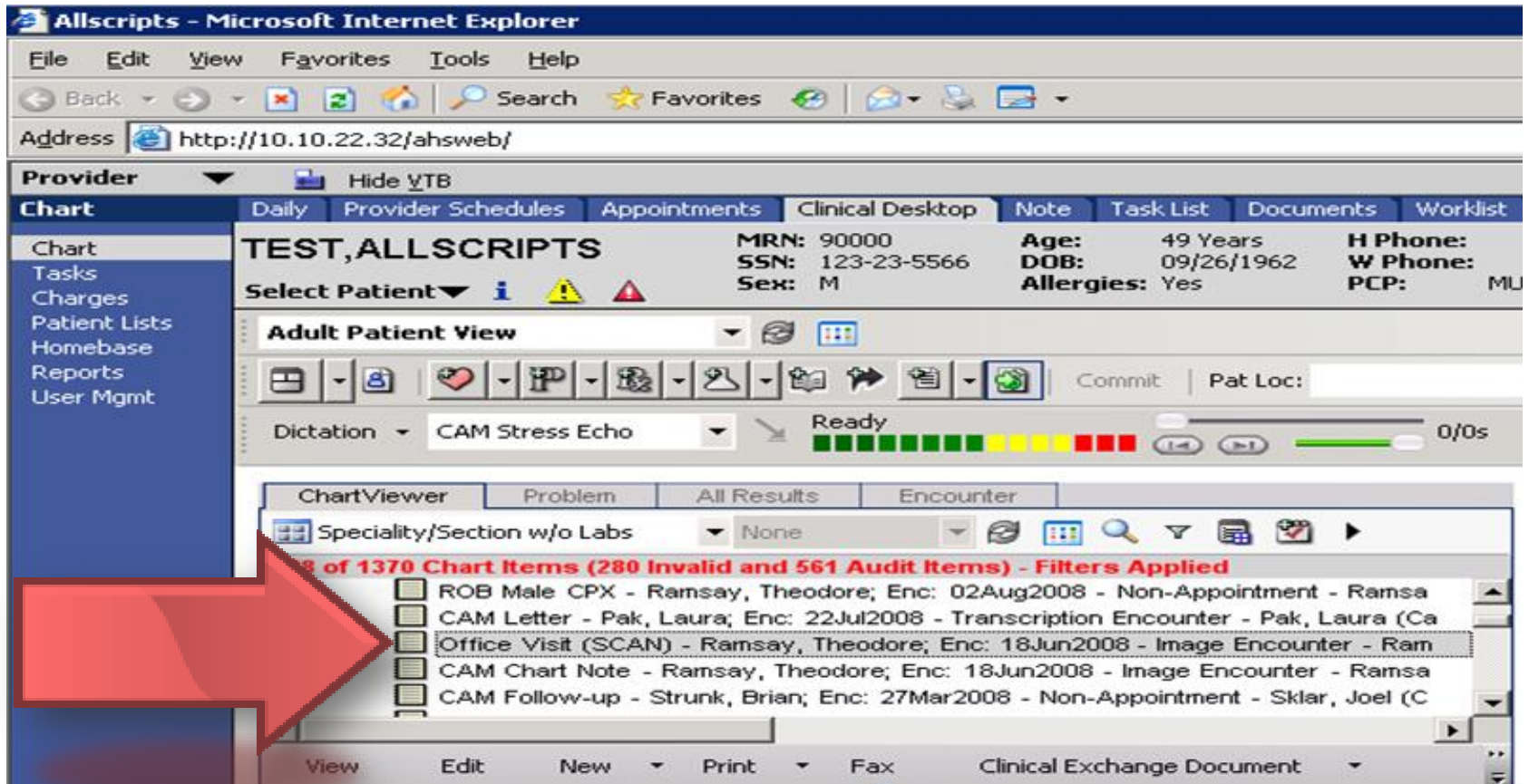
- **AIC/HDR**– used to modify how and when bandwidth is used to send files into warehouse
- **FORMS**
 - Server defined input like note, but the structure is par of what is displaed
 - Often used to replace intake forms
- **IEX** - import / export process runs as a System Service; Template based filing system
- Used for importing images - equivalent to automated batch basket

Features and Functions

- **OCR Capable** – used to make text searchable
- **ISIS Drivers**
 - Required for Scanners
 - Only ISIS drivers
 - not TWAIN or any other driver

Features and Functions (continued)

Scan Integrates into AE-EHR Via Chartviewer



The screenshot displays the Allscripts EHR interface within a Microsoft Internet Explorer browser window. The address bar shows the URL `http://10.10.22.32/ahsweb/`. The interface includes a navigation menu on the left with options like Chart, Tasks, Charges, Patient Lists, Homebase, Reports, and User Mgmt. The main content area shows patient information for 'TEST, ALLSCRIPTS' with MRN: 90000, SSN: 123-23-5566, Sex: M, Age: 49 Years, DOB: 09/26/1962, Allergies: Yes, H Phone, W Phone, and PCP: MU. Below this, there is a 'Dictation' section for 'CAM Stress Echo' with a 'Ready' status and a progress bar. A 'ChartViewer' window is open, displaying a list of chart items with a red arrow pointing to the 'Office Visit (SCAN)' entry. The list includes items like 'ROB Male CPX - Ramsay, Theodore; Enc: 02Aug2008 - Non-Appointment - Ramsa', 'CAM Letter - Pak, Laura; Enc: 22Jul2008 - Transcription Encounter - Pak, Laura (Ca', 'Office Visit (SCAN) - Ramsay, Theodore; Enc: 18Jun2008 - Image Encounter - Ram', 'CAM Chart Note - Ramsay, Theodore; Enc: 18Jun2008 - Image Encounter - Ramsa', and 'CAM Follow-up - Strunk, Brian; Enc: 27Mar2008 - Non-Appointment - Sklar, Joel (C'. The interface also features a toolbar with various icons and a status bar at the bottom with options like View, Edit, New, Print, Fax, and Clinical Exchange Document.

Features and Functions (continued)

- Creating user in EEHR automatically creates Scan user
- Patients + Users Loaded from AE EHR
- Chartviewer inherits Scan for Chart Folder structure: Insurance cards, labs, radiology stored in defined Scan structure. Chartviewer duplicates this structure
- Passwords NOT in Synch (as above)
- **Reiterate Data Path:** Web requests chart; DB server locates filename on Warehouse; Web serves located image to EEHR client workstation.

Server Specifications - 11.2.x DB Server

- **OS:** Windows 2003 Server Enterprise x64-bit Edition SP2
 - Or
- Windows 2008 Server Enterprise x64-bit Edition
 - Or
- Windows 2008 Server Enterprise R2 x64-bit Edition
- **SQL Version:** Microsoft SQL Server 2005 x64-bit Edition with SQL SP3 (9.00.4035.00)
 - Or
- Microsoft SQL Server 2008 R2 x64-bit Edition with SQL CU1 (10.50.1702)

Server Specifications - 11.2.x Scan Server

- **OS**: Windows 2003 Server SP2 (x86 only) with Hotfix KB968370
 - Or
- Windows 2008 Server SP2 (x86 only)

Server Specifications - 11.4 DB Server (Draft)

- **OS:** Windows 2003 Server Enterprise x64-bit Edition SP2
 - Or
- Windows 2008 Server Enterprise x64-bit Edition
 - Or
- Windows 2008 Server Enterprise R2 x64-bit Edition
- **SQL Version:** Microsoft SQL Server 2008 R2 x64-bit Edition with SQL SP1

Server Specifications - 11.4 Scan Server (Draft)

- **OS:** Windows 2003 Server SP2 (x86 only) with Hotfix KB968370
 - Or
- Windows 2008 Server SP2 (x86 or x64)
- Windows 2008 Server R2 is not supported on the ADM Imaging Server.

Frequently Asked Questions

- Scan and EEHR passwords start in sync if Scan account is created through EEHR. If Scan or EEHR password changes then passwords will be out of sync
- LDAP does not work – Scan uses its own login info
- Client Upgrade: Workstation user requires Local Admin rights
- Large installation can leverage a push to Client Workstations for Upgrade

Questions?