

Allscripts Enterprise EHR Message Servers

Advanced Edition

Agenda

- **Message Server Functions**
- **Core Connectivity Characteristics**
- **Monitoring Message Servers**
- **Changes in 11.4**
- **AHS CSS Configuration Manager**

Agenda

- **FaxTester**
- **Tray Sync Utility**
- **TWAdmin Workspace**
- **Location-Aware Printing**
- **Delta Application**

Message Server Functions

- **Print Jobs**
- **Fax Jobs**
- **Script Jobs**
- **Eligibility Jobs**
- **CED Processing**
- **Event Bus Message Jobs**
- **Delta Process**

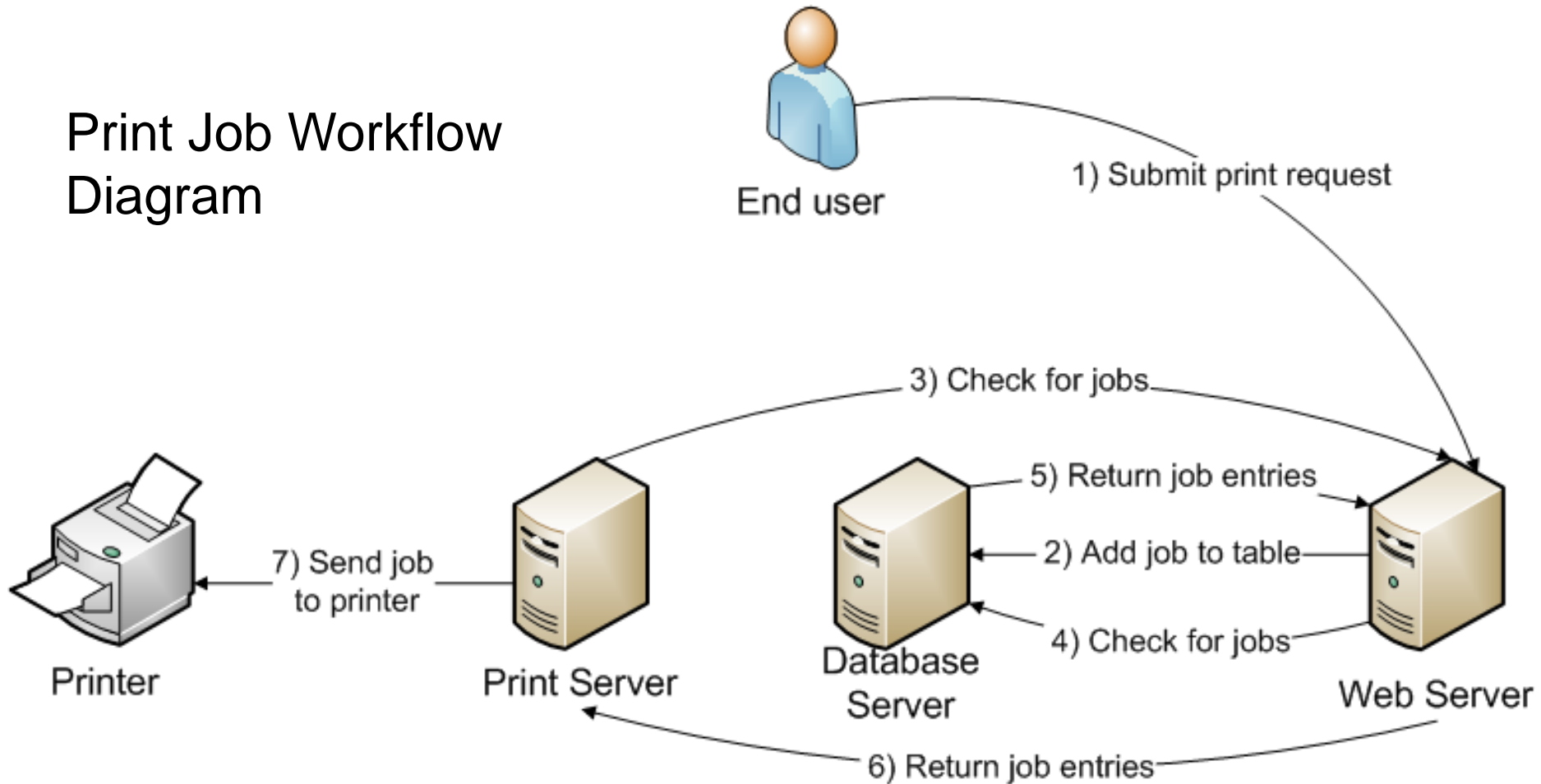
Core Connectivity Characteristics

- **Print Spoolers point at web servers**
 - Load balancer ability
- **Web Server provides database connectivity**

Core Connectivity Characteristics

- **Multiple servers can be configured for individual functions**
- **One server can handle multiple clients (MSO configuration)**
- **Uses TWCSS Spooler service**
 - Service account

Print Job Workflow Diagram

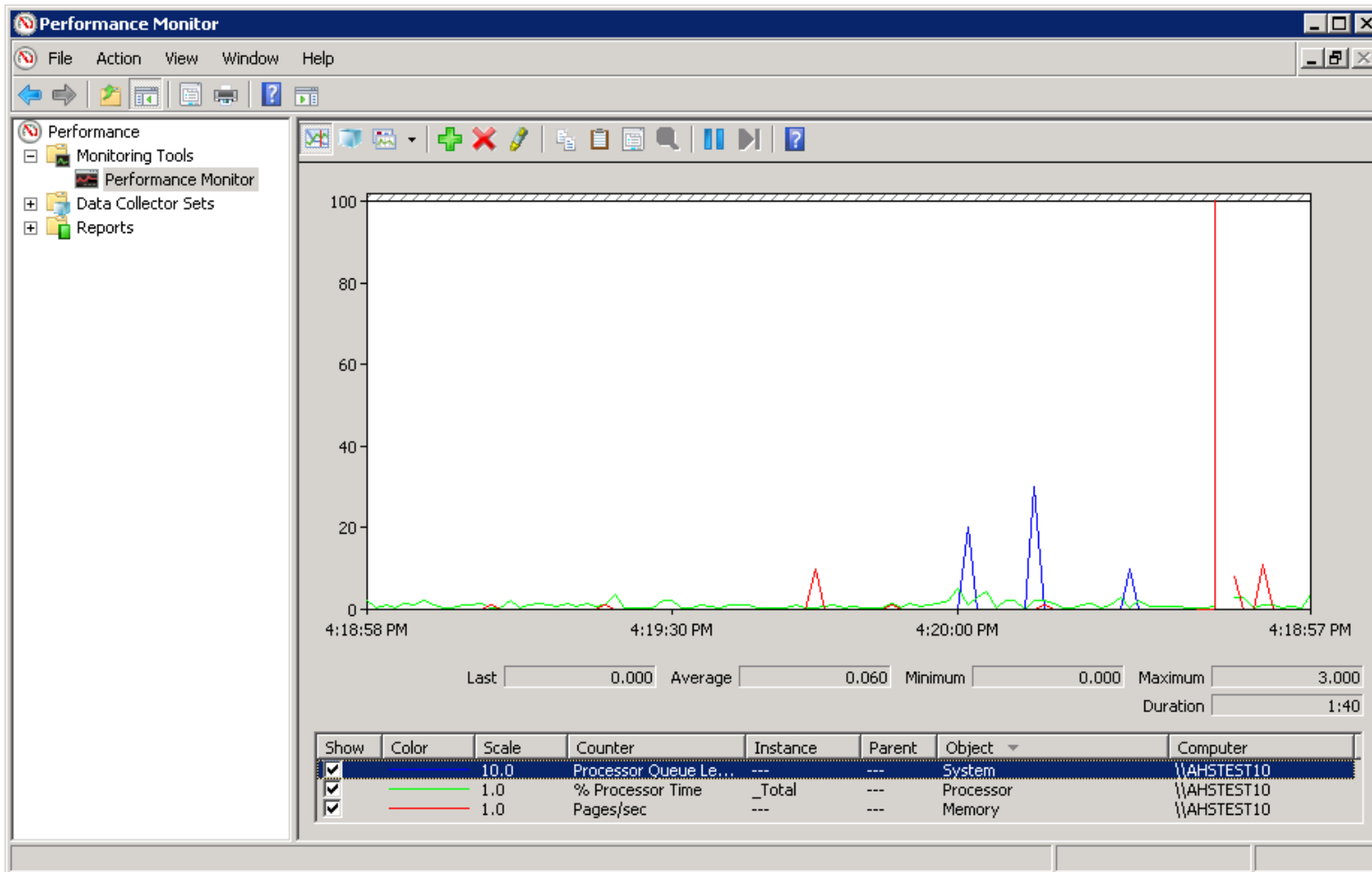


Monitoring Message Servers

- **Is my server compliant?**
 - SES document
 - System certification document
 - Windows updates

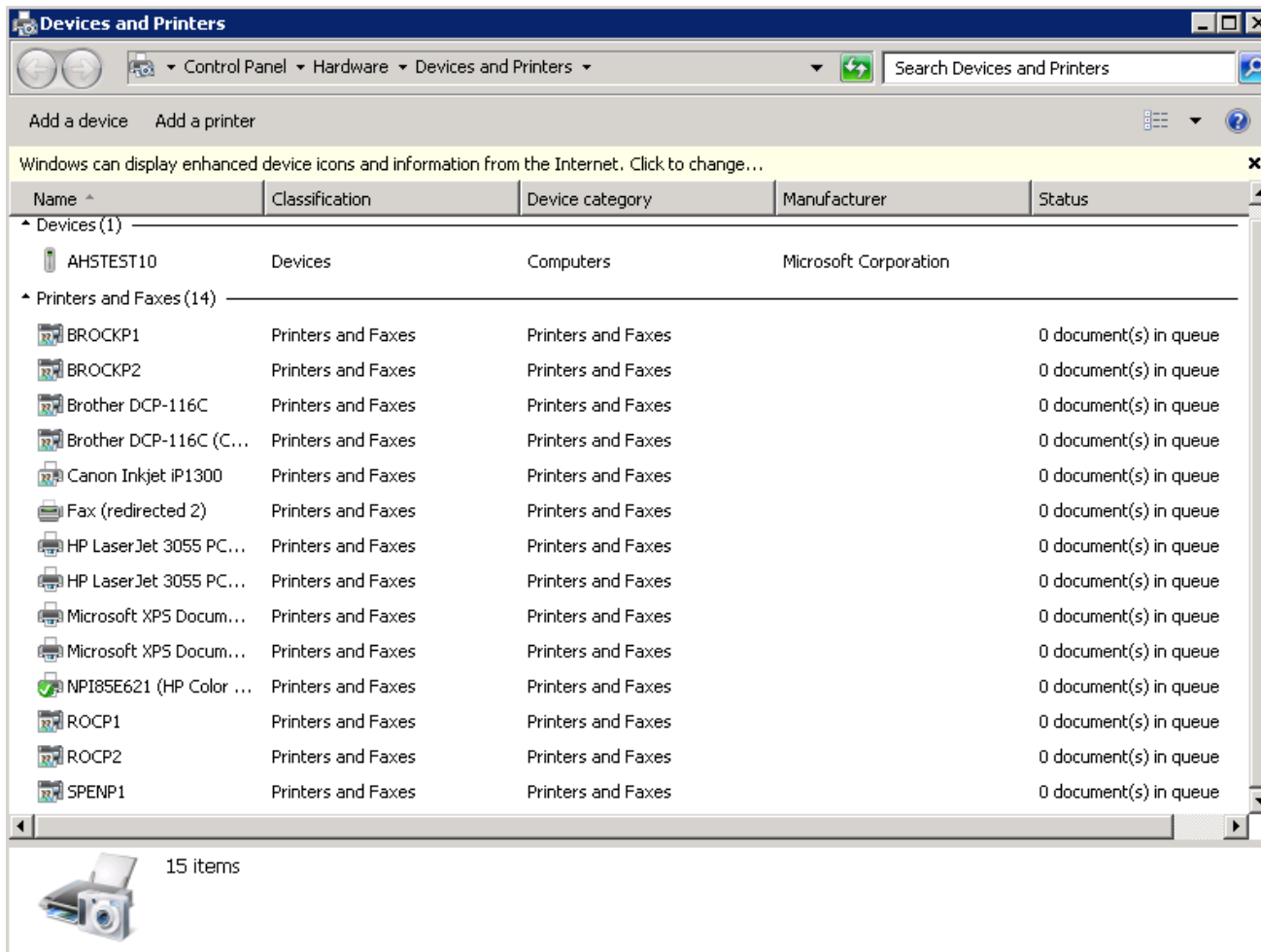
Monitoring Message Servers

- **Does my server have problems?**
 - Perfmons (used in ICP)
 - Memory\Pages/Sec < 40
 - Processor(_Total)\% Processor Time < 40% average
 - System\Processor Queue Length < 1, with no sustained spikes



Monitoring Message Servers

- **Does my server have problems?**
 - Drive space utilization
 - Event log monitoring
 - Message queue
 - Printer errors
 - 2008 won't show the "Status" column by default – View -> Choose Details...



Changes to Message Server in 11.4 SES

- **Hardware requirements unchanged**
- **OS requirements:**

11.2.3	11.4
2003 SP2 x86 with KB2641690 2008 SP2 x86	2003 SP2 x86 with KB2641690 2008 SP2 x86 or x64 2008 R2 x64

Changes to Message Server in 11.4 SES

- Software prerequisites:**

11.2.3	11.4
IIS .NET 2.0 SP2 and 3.5 SP1 MDAC 2.8 Crystal 2008 Redistributable SQL Server Client Tools	IIS .NET 4.0 Visual C++ 2010 Redistributable Package

New CCD/CED Processing Server

- **Introduced in 11.2.3 (later HFs)**
- **Used for auto-submission feature (dbMotion)**
- **Metric – one server per 1600 patient encounters per hour**
- **VM support - yes**

New CCD/CED Processing Server

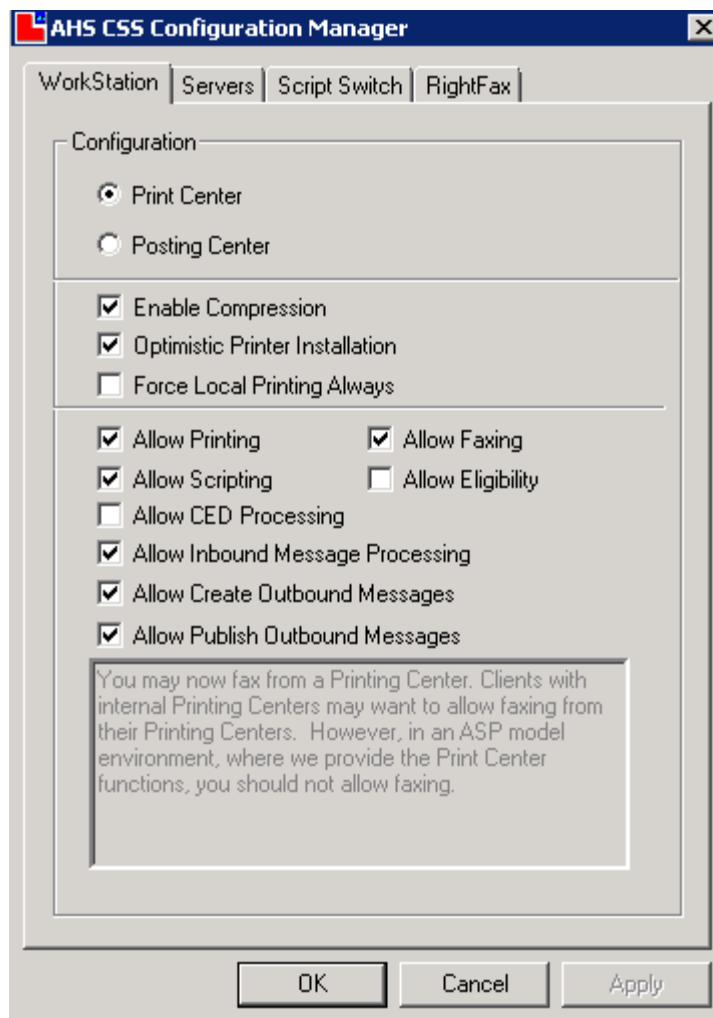
- **2 cores, 2 GB RAM**
- **2003 SP2 x86 with KB2641690 or 2008 SP2 x86 (requires 5.02 framework)**
- **IIS, IE 6.0 SP2, 7.0, or 8.0 (requires 5.02 framework), MDAC 2.8**
- **.NET 2.0 SP2, .NET 3.5 SP1**
- **Crystal 2008 redistributable, Silverlight, Windows Identity Foundation**

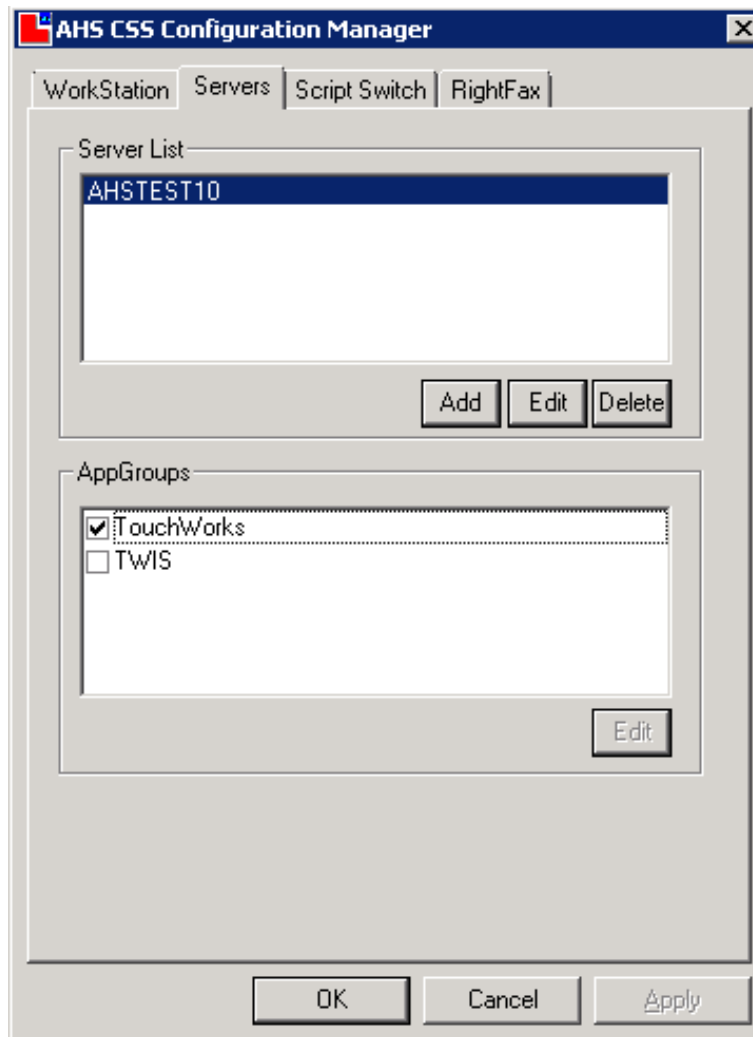
AHS CSS Configuration Manager

- **CSS - Communication SubSystem**
- **Control Panel**
- **RightFax integration possible**
- **Run as service account**
 - Used when printing scanned images

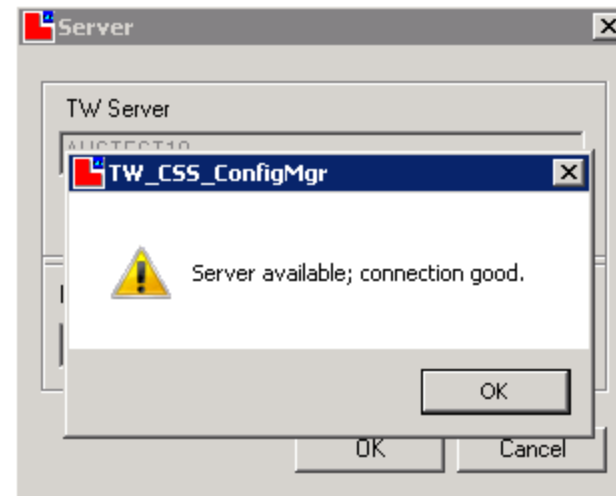
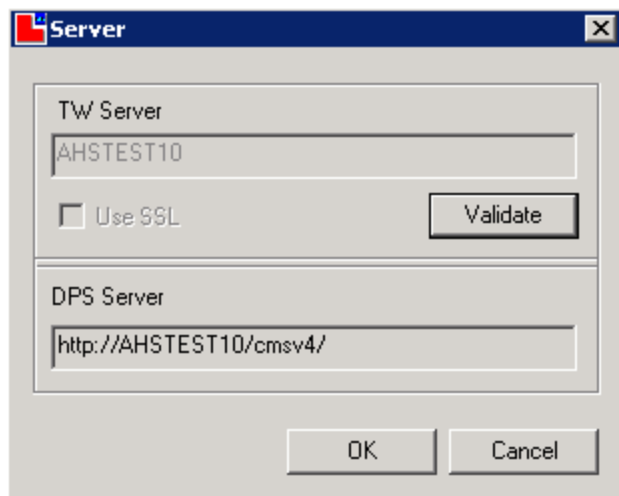
AHS CSS Configuration Manager Options

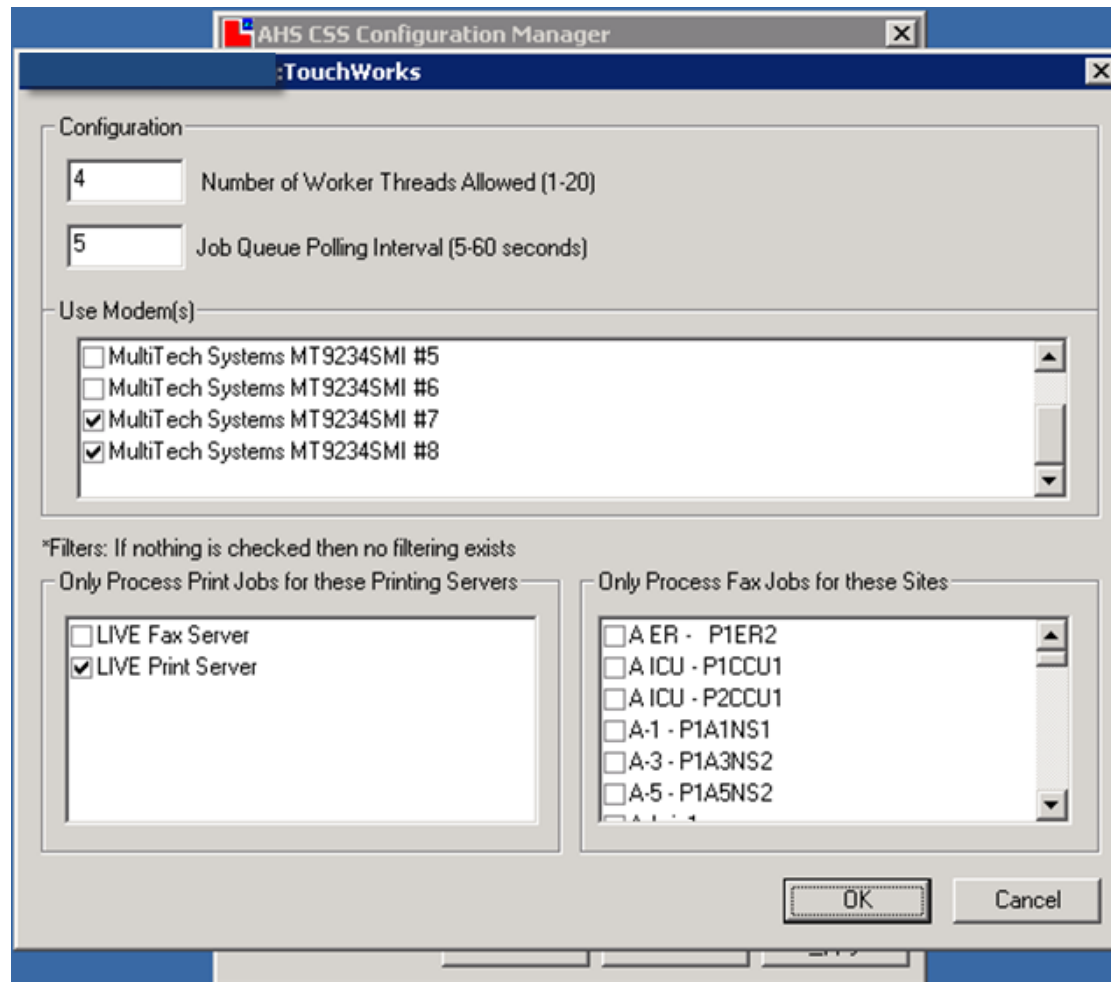
- **Compression**
 - Reduces size of messages
- **Optimistic Printer Installation**
 - Assumes every printer is connected to server
- **Force local printing**
 - Used when multiple print servers in use
 - Not used when printers spanning multiple servers not identical

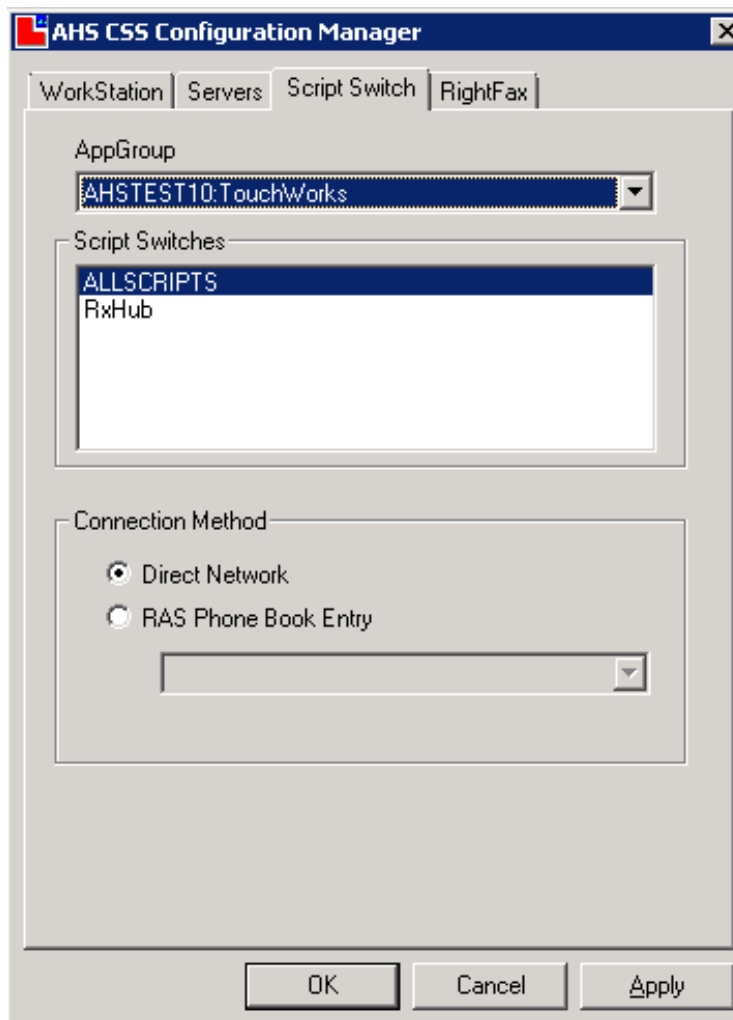


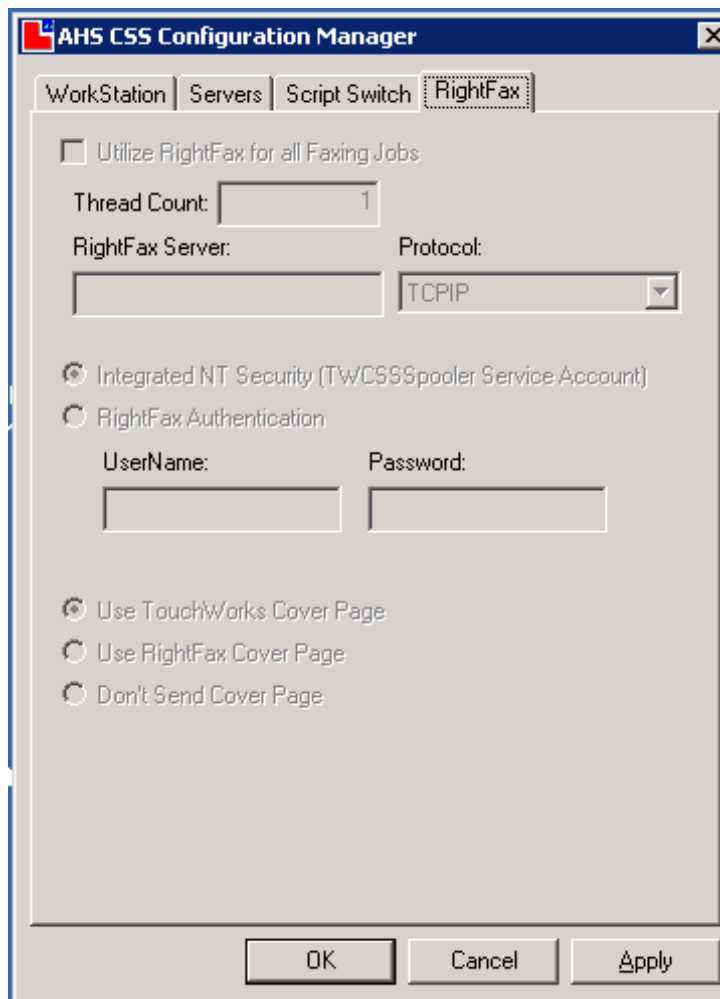


Validating Web Server









AHS CSS Configuration Manager

WorkStation | Servers | Script Switch | **RightFax**

Utilize RightFax for all Faxing Jobs

Thread Count:

RightFax Server: Protocol:

Integrated NT Security (TWCSSSpooler Service Account)

RightFax Authentication

UserName: Password:

Use TouchWorks Cover Page

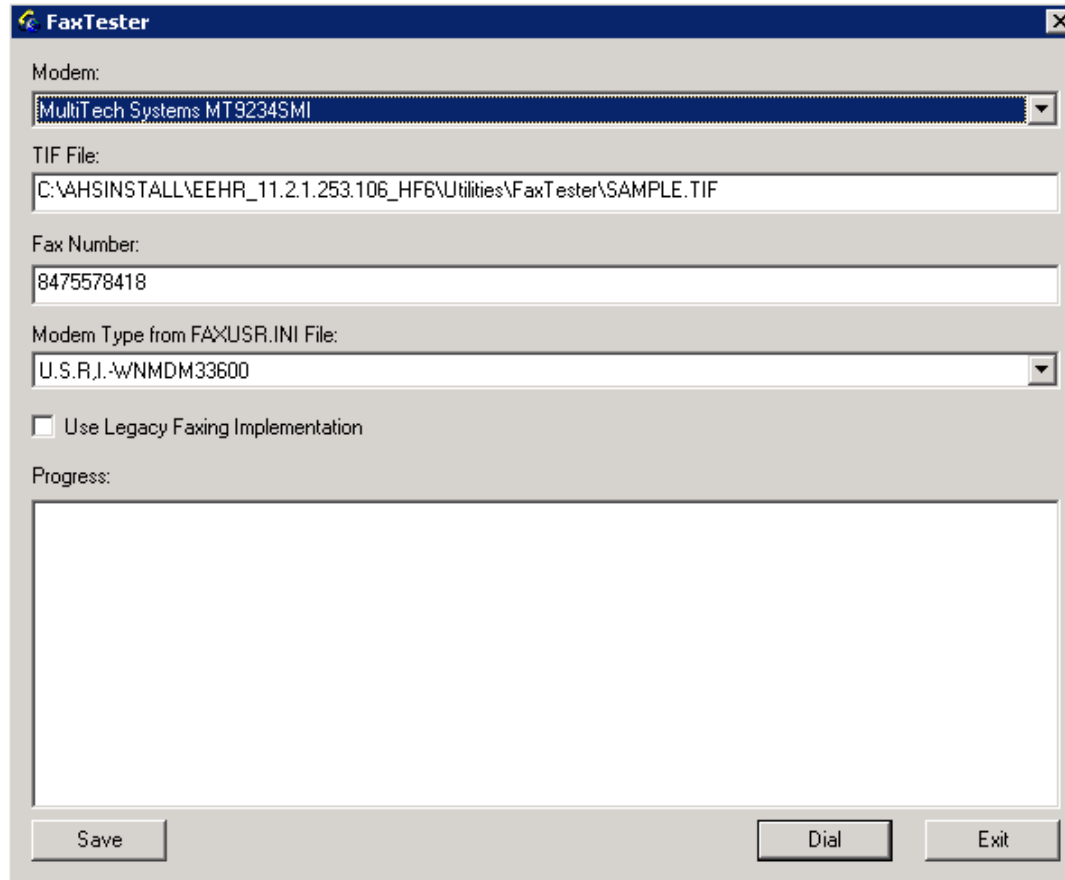
Use RightFax Cover Page

Don't Send Cover Page

OK Cancel Apply

FaxTester

- **Acquired from Galen or Allscripts**
- **Used to test fax line connectivity**
- **Also used to set the “modem type”**
 - Stores this information in the registry

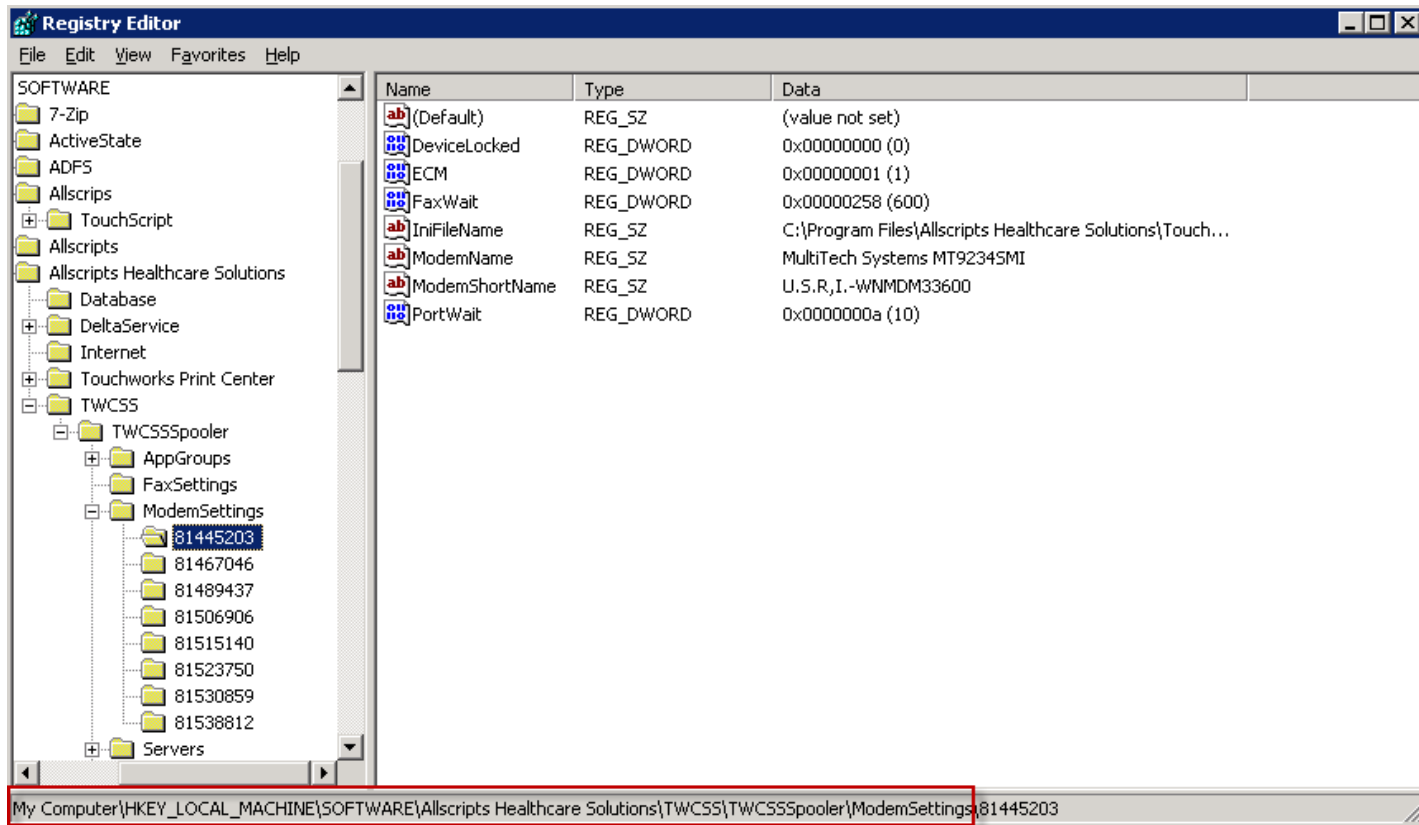


The screenshot shows a Windows application window titled "FaxTester". The window contains several input fields and a checkbox:

- Modem:** A dropdown menu with "MultiTech Systems MT9234SMI" selected.
- TIF File:** A text box containing the path "C:\AHSINSTALL\EEHR_11.2.1.253.106_HF6\Utilities\FaxTester\SAMPLE.TIF".
- Fax Number:** A text box containing the number "8475578418".
- Modem Type from FAXUSR.INI File:** A dropdown menu with "U.S.R.I.-wNMDM33600" selected.
- Use Legacy Faxing Implementation:** An unchecked checkbox.
- Progress:** A large empty rectangular area for displaying progress.

At the bottom of the window, there are three buttons: "Save", "Dial", and "Exit".

Viewing FaxTester Registry Information



Tray Sync Utility

- **Used to sync tray usage between the printer and what is stored in the EHR**
- **Part of the standard Message Server installation**

Tray Sync Utility Usage Instructions

1. Log onto print server.
2. Open the CSSPrinterTrays.exe utility (C:\Program Files\Allscripts Healthcare Solutions\TouchWorks Web\Touchworks Print Center\)
3. Ensure a valid Web Server is listed and that TouchWorks is listed as the AppGroup, and then click “Connect.”
4. Select the desired Print Server, and click “Edit.”
5. Select the desired printer, and click Synchron.

CSSPrinterTrays

Server Information

Web Server:
 SSL

AppGroup:

Print Servers

Print Server
Print Services
Fake Printer
demo
Test Site 1
Test Site 2

Edit Print Server Printers

Configured Printers

Printer Name
zzzDoNot
zzzDoNot.2

Trays in Database

Tray Name	Bin No
Automatically Selected	0

Trays Reported from Driver

Tray Name	Bin No
Automatically Select	15
Upper Paper Tray	1
Manual Paper Feed	4
Envelope, Manual Feed	6

TWAdmin Printing Workspaces

- **Print Queue**

- Shows all jobs: previewed, printed, faxed, etc.
- Filter display
 - Personalize vs. Search
- Tailored for each login

TWAdmin Printing Workspaces

- **Print Queue**
 - Jobs archive daily at 7 am
 - SQL job CH Printing Queue Purge - Works

TWAdmin - Print Queue

TW Admin Hide YTB

Queue Admin Message Queue Print Queue PRINT Servers AutoPrint Defaults Portal System Setup Portal Message Queue

CareGuide Admin Charge Admin Chart Admin Codes Admin Concept Mapping Dictionaries Document Admin Group Admin Note Admin Org Setup IHS Comp Admin IHS Sec Admin Pop Health Mgmt Preferences Queue Admin Provider Admin Results Admin RI List Admin Report Admin Security Admin Task Admin TWUser Admin Utilities Y10 Note Admin Work Def Admin

Job Queue (All) - 334 Items Personalize Sites (All) Current Queue

Queued	Type	Destination	Patient	SSN	MRN	User	Status	Progress	#'s
9/21 11:11 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/21 11:08 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:55 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:54 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/21 10:48 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:48 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:47 AM	OUT_MSG_CR					SYSTEM	Idle	Job Submitted into Queue	0
9/21 10:40 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/21 09:51 AM	PRINT	BuildTeam317	TESTING, ALDISCC		3126632		Complete	Job Completed Successfully	0
9/21 09:46 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/21 09:28 AM	SCRIPT	AHS Report	TEST, APG3		3160061		Idle	Job Submitted into Queue	0
9/21 09:28 AM	PRINT	BuildTeam317	TEST, APG3		3160061		Complete	Job Completed Successfully	0
9/21 09:26 AM	SCRIPT	AHS Report	TEST, APG3		3160061		Idle	Job Submitted into Queue	0
9/21 09:26 AM	PRINT	BuildTeam315	TEST, APG3		3160061		Complete	Job Completed Successfully	0
9/21 09:25 AM	SCRIPT	AHS Report	TEST, APG3		3160061		Idle	Job Submitted into Queue	0
9/21 09:25 AM	PRINT	BuildTeam315	TEST, APG3		3160061		Complete	Job Completed Successfully	0
9/21 08:53 AM	PVIEW		TESTELEVEN, LABPATIENT11		3158857		Complete	Job Completed Successfully	0
9/19 11:51 AM	SCRIPT	AHS Report	OCONNOR, AOB		3161621		Idle	Job Submitted into Queue	0
9/19 11:51 AM	SCRIPT	AHS Report	OCONNOR, AOB		3161621		Idle	Job Submitted into Queue	0
9/14 11:24 AM	SCRIPT	AHS Report	TEST, AGAIN		9146571		Idle	Job Submitted into Queue	0
9/2 03:44 PM	SCRIPT	AHS Report	TEST, DAVID		3146571		Idle	Job Submitted into Queue	0
9/2 03:41 PM	SCRIPT	AHS Report	TEST, DAVID		3146571		Idle	Job Submitted into Queue	0

Details... View... View Count... Requeue... Requeue... Cancel... Search

User: IDladan Done

TWAdmin Printing Workspaces (cont.)

- **Print Servers**
 - Configure print/fax servers
 - Set up “virtual” print server listings
- **AutoPrint Defaults**
 - Defines actions for distribution and printing

TWAdmin - Print Servers by Location

TW Admin Hide VTB

Queue Admin Print Queue Error Queue **Print Servers** AutoPrint Defaults Message Queue Portal System Setup Portal Message Queue

- CareGuide Admin
- Charge Admin
- Chart Admin
- Comm Admin
- Concept Mapping
- Dictate Admin
- Dictionaries
- Document Admin
- Group Admin
- Note Admin
- Org Setup
- PHB Comp Admin
- PHB Sec Admin
- Pop Health Mgmt
- Preferences
- Queue Admin**
- Provider Admin
- Results Admin
- Pt List Admin
- Report Admin
- Security Admin
- Task Admin
- TWUser Admin
- Utilities
- V10 Note Admin
- Work Def Admin
- Galen LAP

Print Servers

Display Name	Print/Fax Server Name	Posting Center IP Address	Type	Organization	ID
Spencerport Clinic	AHSTEST10		PRT		3
Lockport Clinic	AHSTEST10		PRT		4
Rochester Clinic	AHSTEST10		PRT		5
Brockport Clinic	AHSTEST10		PRT		6
Enterprise Print Server	AHSTEST10		PRT		7

TWAdmin - Print Servers by Location

Print Servers

Display Name	Print
Spencerport Clinic	AHST
Lockport Clinic	AHST
Rochester Clinic	AHST
Brockport Clinic	AHST
Enterprise Print Server	AHST

Edit Print Server -- Webpage Dialog

Spooler Settings

1 Printing Center
 2 Posting Center
 Enable Faxing

Display Name: Enterprise Print Server
Print/Fax Server Name: AHSTEST10
Organization:

Printer Settings

Active	Name	Status	Organization	Delete
<input checked="" type="checkbox"/>	BROCKP1	Idle		<input type="checkbox"/>
<input checked="" type="checkbox"/>	BROCKP2	Idle		<input type="checkbox"/>
<input checked="" type="checkbox"/>	LOCKP1	Idle		<input type="checkbox"/>
<input checked="" type="checkbox"/>	ROCP1	Idle		<input type="checkbox"/>
<input checked="" type="checkbox"/>	ROCP2	Idle		<input type="checkbox"/>
<input checked="" type="checkbox"/>	SPENP1	Idle		<input type="checkbox"/>

Buttons: Refresh Printers, OK, Cancel

TWAdmin - Print Servers

The screenshot shows the TWAdmin interface with the 'Print Servers' section selected. A table lists several print servers, with 'Lockport Clinic' highlighted. An 'Edit Print Server -- Webpage Dialog' is open, showing configuration options for 'Lockport Clinic'.

Print Servers Table:

Display Name	Print
Spencerport Clinic	AHST
Lockport Clinic	AHST
Rochester Clinic	AHST
Brockport Clinic	AHST

Edit Print Server -- Webpage Dialog:

Spooler Settings

- 1 Printing Center
- 2 Posting Center
- Enable Faxing

Display Name: Lockport Clinic

Print/Fax Server Name: AHSTEST10

Organization: [Dropdown]

Printer Settings Table:

Active	Name	Status	Organization	Delete
<input checked="" type="checkbox"/>	LOCKP1	Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	SPENP1	New: Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>		Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	ROCP2	New: Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	ROCP1	New: Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	BROCKP1	New: Idle	[Dropdown]	<input type="checkbox"/>

Buttons: New..., Edit..., Print, Refresh Printers, OK, Cancel

TWAdmin - Print Servers

The screenshot shows the TWAdmin interface with the 'Print Servers' section selected. A dialog box titled 'Edit Print Server -- Webpage Dialog' is open, showing configuration options for a printer server. The 'Display Name' field is highlighted with a red box and contains the text 'Brockport Clinic'. The 'Printer Settings' table below shows a list of printers with 'BROCKP1' and 'BROCKP2' checked.

Print Servers Table:

Display Name	Print
Spencerport Clinic	AHST
Lockport Clinic	AHST
Rochester Clinic	AHST
Brockport Clinic	AHST

Edit Print Server -- Webpage Dialog:

Spooler Settings

1 Printing Center
 2 Posting Center
 Enable Faxing

Display Name: Brockport Clinic
Print/Fax Server Name: AHSTEST10
Organization: [Dropdown]

Printer Settings Table:

Active	Name	Status	Organization	Delete
<input checked="" type="checkbox"/>	BROCKP1	Idle	[Dropdown]	<input type="checkbox"/>
<input checked="" type="checkbox"/>	BROCKP2	Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	SPENP1	New: Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	LOCKP1	New: Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	[Blank]	Idle	[Dropdown]	<input type="checkbox"/>
<input type="checkbox"/>	ROCP2	New: Idle	[Dropdown]	<input type="checkbox"/>

Buttons: Refresh Printers, OK, Cancel

TWAdmin - Print Servers

The screenshot shows the TWAdmin interface with a 'Print Dialog' window open. The background window displays patient information for Allison T. (MRN: ZZZTW01, DOB: 03/05/1973, Age: 39 Years) and a list of medications, including 'Vapor Patch External Patch; test MDD:5; Therapy: 07May2012 to (Last Rx:07May2012; Retrospective Authorization Ordered'. The 'Print Dialog' window has the following fields:

- Printer Info:**
 - Server: Brockport Clinic
 - Printer: [Empty]
 - Page 1 Tray: BROCKP1
 - Page 2+ Tray: BROCKP2
 - Save as Default Printer
- Printer Status:**
 - Type: [Empty]
 - Network: [Empty]
 - Comment: [Empty]
- Document Info:**
 - Document: Medication List
 - Save as Default Document
 - Don't show this dialog again

Buttons at the bottom of the dialog include 'Preview', 'OK', and 'Cancel'. Red boxes highlight the dropdown arrows for the 'Server' and 'Page 1 Tray' fields.

TWAdmin - AutoPrint Defaults

The screenshot shows the 'Printing Setup' window in TWAdmin. The left sidebar lists various administrative tasks, with 'Queue Admin' selected. The main area is titled 'Printing Setup' and contains the following configuration:

- Type:** Requisitions
- Copy Type:** Original
- View:** Providers Only
- Document Type:** Requisition
- @ Site:** Department of Medicine
- Print Server:** AHSTEST1V
- Printer:** BuildTeam317
- Print Template:** Lab Order Requisition
- Printer Tray for first page:** Automatically Select
- Printer Tray for remaining pages:** Automatically Select
- Number of Copies:** 1

Below these settings is a list of checkboxes for order status defaults:

- Create Print Requisition Task
- Create Requisition Print Job
- Print Requisition First time order has status of Active
- Print Requisition First time order has status of Canceled
- Print Requisition First time order has status of Discontinued
- Print Requisition First time order has status of Invalidated
- Print Requisition First time order has status of On Hold
- Print Requisition Subsequent times order has status of Active
- Print Requisition Subsequent times order has status of On Hold

At the bottom of the window, there are buttons for 'Refresh', 'Add/Edit Settings...', 'Remove Settings', 'Clone User', and 'Filter'. The status bar at the very bottom shows 'User: IDXadmin' and 'Done'.

Location-Aware Printing

- **Printing – user-based versus location-based**
- **Prevents printing sensitive patient data to wrong location**
- **Excellent for patient-centric workflows**

LAP Example

The screenshot shows the Galen LAP configuration interface. The top navigation bar includes 'TW Admin' and 'Hide VTB'. The left sidebar lists various administrative functions, with 'Galen LAP' highlighted. The main content area is titled 'Galen Location Aware Printing Configuration' and shows the following configuration details:

- Location:** A dropdown menu showing 'Locations...' with a 'Select Location' button (callout 1) and an 'Add New Location' button.
- Current Location:** 'Main St - Exam Room 1'
- Calling Point:** A dropdown menu showing 'Calling points...' with a 'Select Calling Point' button (callout 2).
- Document Type:** A dropdown menu showing 'All' with a 'Select Document Type' button (callout 3).
- Printer Settings:** A section with 'Printer Server' (Test Site 1), 'Printer' (zzzDoNot), 'Tray 1' (Automatically Select), and 'Tray 2' (Automatically Select). A '4' callout is placed near the Printer dropdown.
- Options:** 'Exclude Calling Point / Document Type' (checkbox, unchecked), 'Suppress Print Dialog' (checkbox, unchecked), and 'Active' (checkbox, checked).
- Buttons:** 'Clear', 'Save', 'Cancel', and 'Delete Location'.

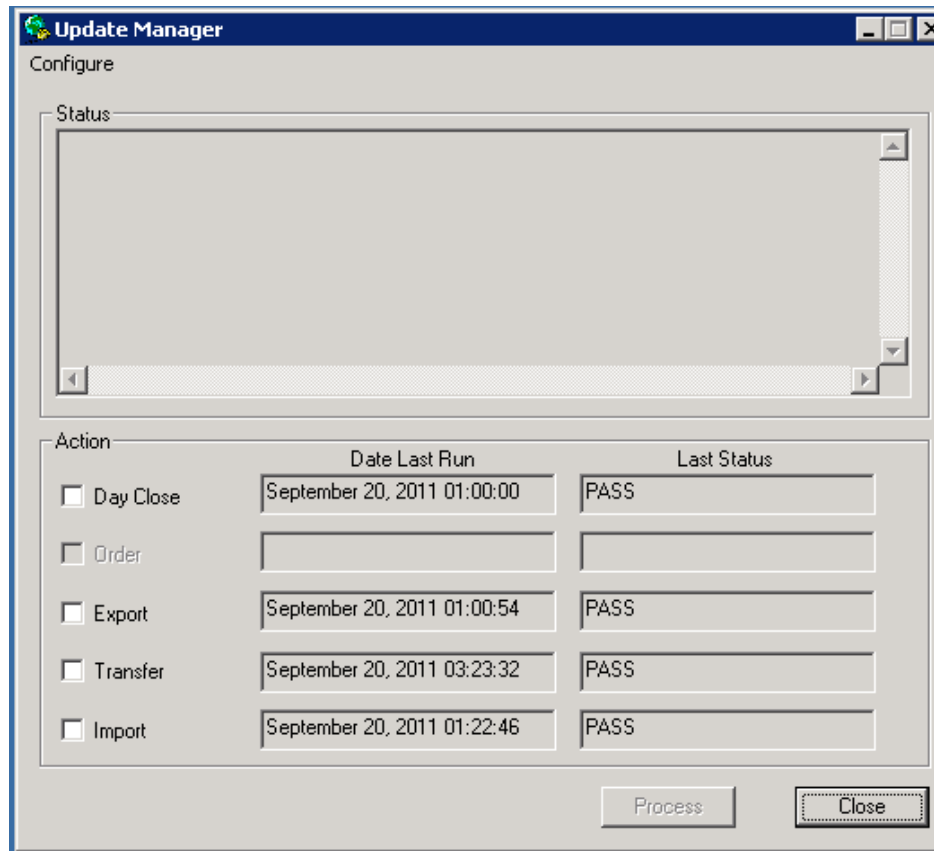
Delta Application

- **Handles transfer of information between client and Allscripts**
 - SSL
- **One Delta process per environment**
- **New Delta released in version 11.2.2**
 - Doesn't require SQL Client Tools

Delta Application

- **Verify PASS daily**
 - Day Close
 - Export (production only)
 - Transfer
 - Import
- **Manage log files**
 - Move them to a new drive
 - Auto-archive

Delta Update Manager



Delta Service Configuration Manager [X]

Database | Delta | Internet

Database Server Name: AHSTEST10

Databases:

- AHSDelta
- AHSCharge
- AHSLibrary
- CHInfoscan
- CHMedcinsearch
- CHMedispan
- Works

Set as Default Account

Database Name: AHSDelta [Add]

Username: idxadmin [Remove]

Password: ***** [Test]

Type: Clinical Library Medispan Infoscan Medcin Message Charge

OK Cancel Apply

Delta Service Configuration Manager

Database Delta Internet

Delta Server:

Start Time:

Retry Settings:

ISP Connection Retries (1-15):

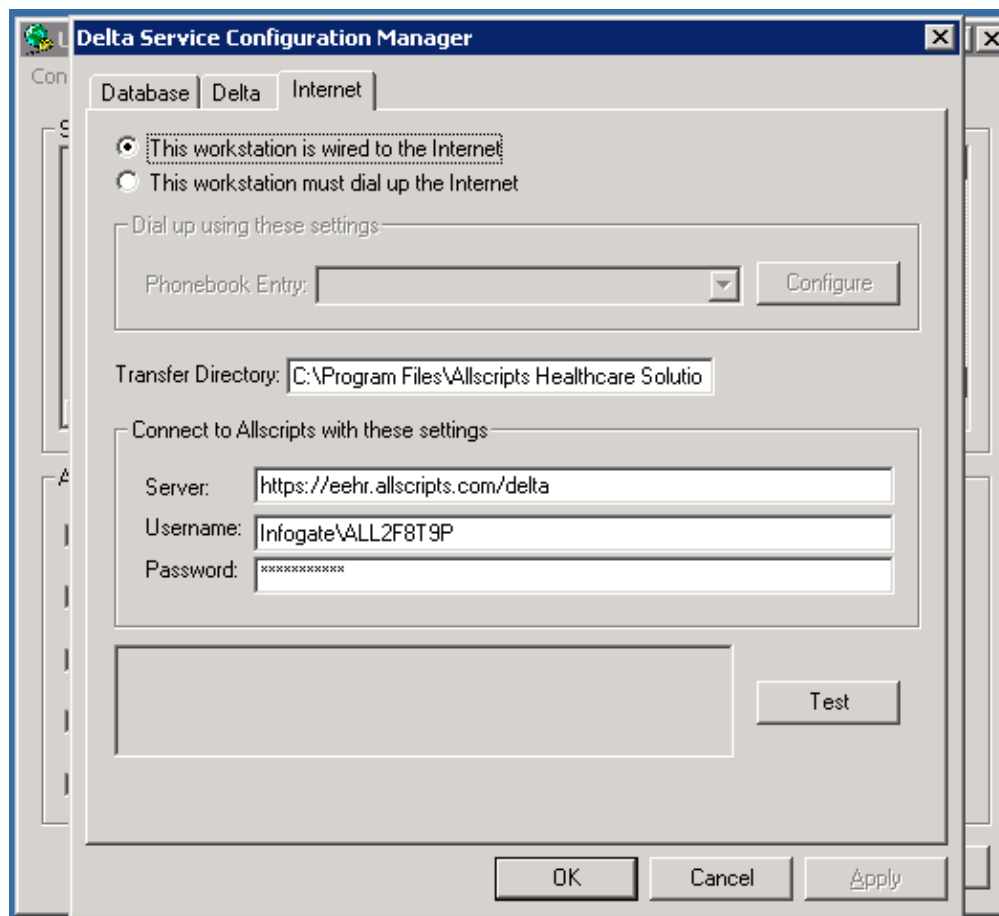
ISP Connection Interval (1-30): seconds

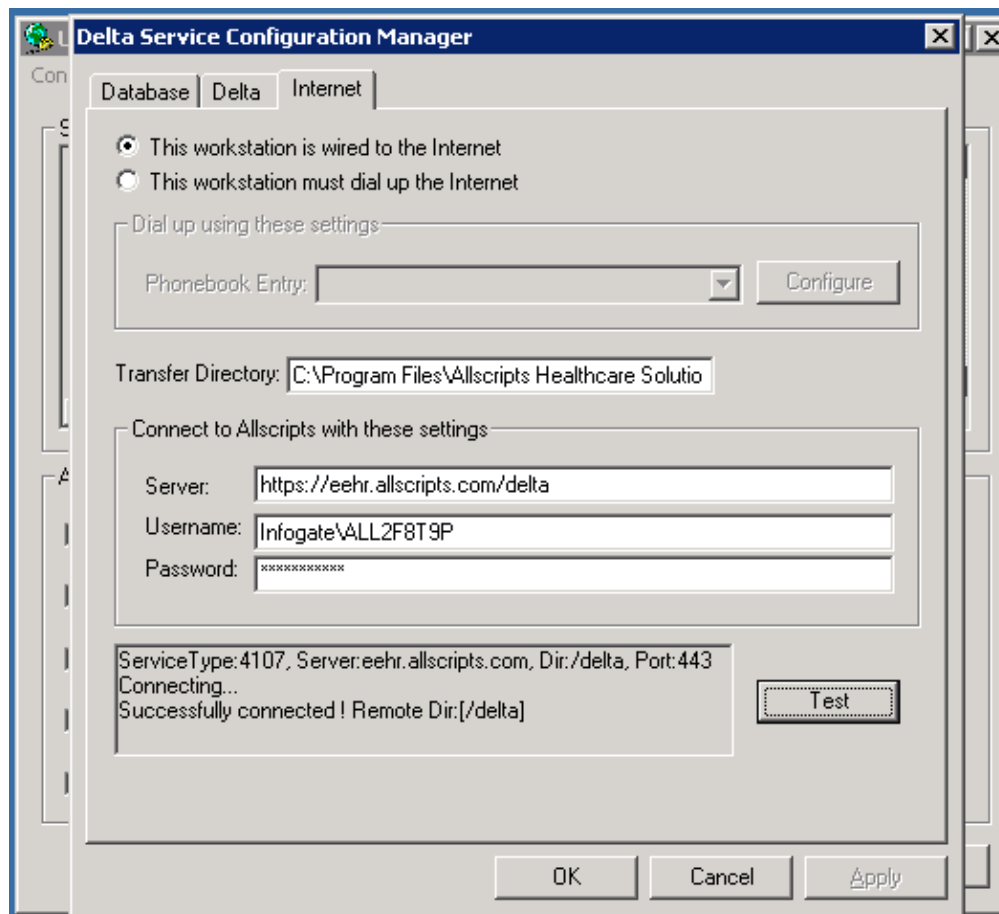
Transfer Retries (1-5):

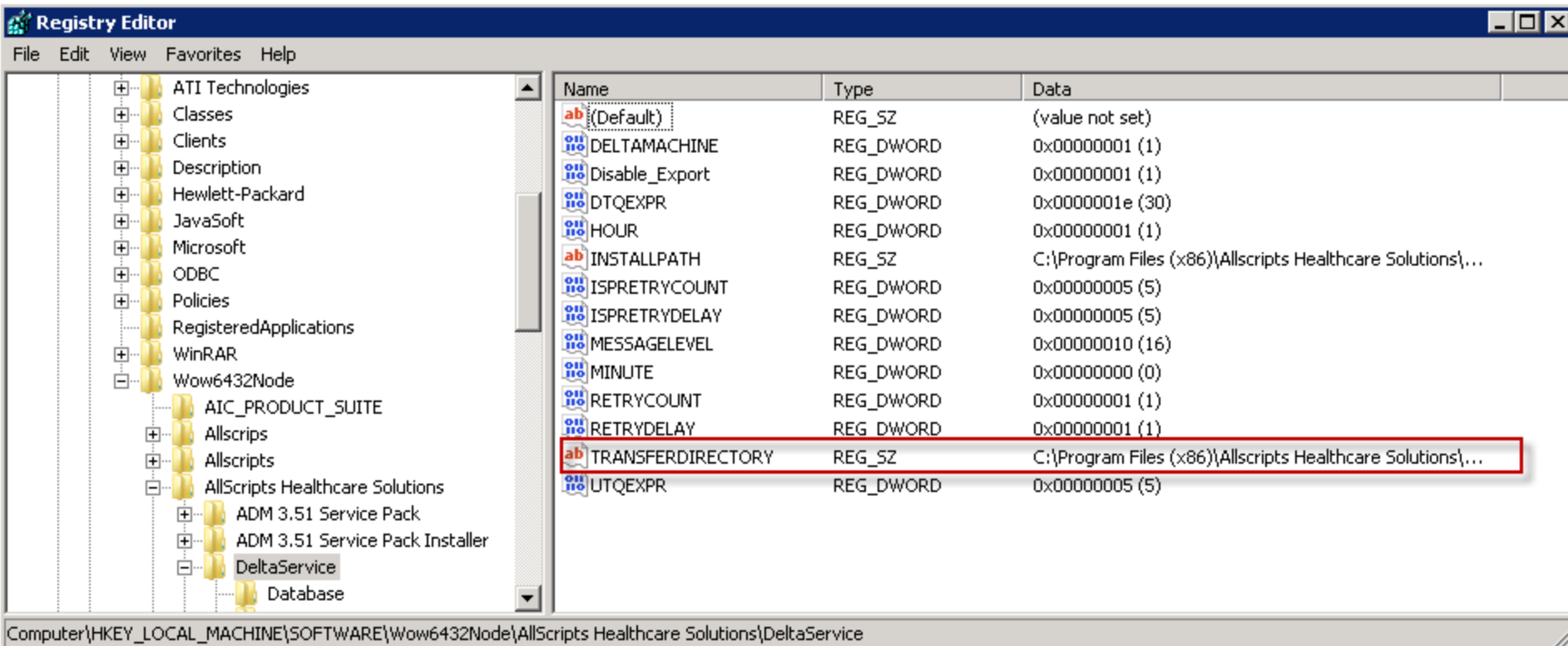
Transfer Interval (1-30): minutes

Disable EXPORT

Uncheck for LIVE systems

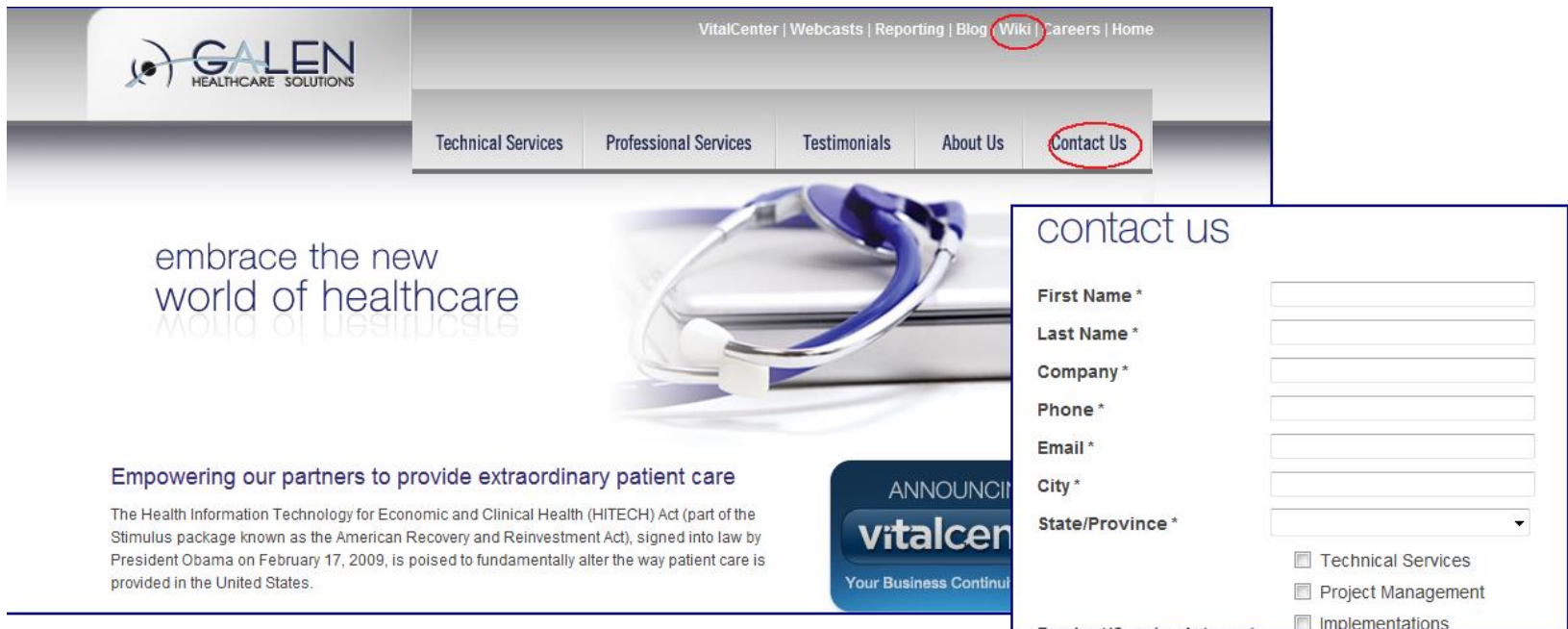






Thank you for joining us today. For additional assistance:

You can contact us through our website at www.galenhealthcare.com



The screenshot shows the Galen Healthcare Solutions website. The top navigation bar includes links for VitalCenter, Webcasts, Reporting, Blog, Wiki, Careers, and Home. A secondary navigation bar contains Technical Services, Professional Services, Testimonials, About Us, and Contact Us. The main content area features the slogan "embrace the new world of healthcare" and a section titled "Empowering our partners to provide extraordinary patient care" with text about the HITECH Act. A "vitalcenter" logo is also visible. A contact form overlay is positioned on the right side of the page, titled "contact us".

contact us

First Name *

Last Name *

Company *

Phone *

Email *

City *

State/Province *

Technical Services

Project Management

Implementations