

# FDA Medication Guides Project Java Component

# **INSTALLATION GUIDE**

XU\*8\*566 PSN\*4\*264 PSO\*7\*367 PSX\*2\*70

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Department of Veterans Affairs Product Development

# **Revision History**

Date	Revision	Description	Author
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# 1. Introduction

This Installation Guide provides a description of the installation and deployment procedures for the Department of Veterans Affairs (VA) Food and Drug Administration (FDA) Medication Guides Increment 3 project. This section focuses on the project's Java FDA Med Guides Printer Tool. The FDA Med Guides Printer Tool is a Java-based program that automatically prints a copy of an FDA medication guide document when one exists for a requested prescription. The program retrieves copies from original med guides found in a local repository on the host server. If a requested med guide is not found locally, then an attempt is made to download the med guide from the <u>Consolidated Mail Outpatient Pharmacy (CMOP) Portal</u> on the VA's network.

Important:	To successfully deploy this software it is critical that proper access
	permissions are set correctly. The host server, the assigned user account, and the deployed software must all have access to either local or remote printers, and have the ability to download med guide files from the <u>CMOP</u> <u>Portal</u> .

The intended audience for this document is the Information Resources Management Service (IRMS) staff responsible for installing and configuring software on VA Windows servers. Some of the procedures listed below may require System Administrator privileges on target systems.

The installation procedure, including installing the third-party products listed in the pre-installation procedures, should take about an hour or less to complete.

After installation is complete, the host server should be rebooted. Any logged-on users should be advised to log off.

# 2. Pre-installation Considerations

The FDA Med Guides Printer Tool depends on third-party components to process and print Portable Document Format (PDF) documents. These components are the Windows Server 2008, the Java Runtime Environment (JRE) and Adobe Reader. These components must be properly installed and configured prior to installing and running the FDA Med Guides Printer Tool.

# 2.1. Deployment scenarios

There are a number of scenarios in which the FDA Med Guides Printer Tool can be deployed successfully. The recommended scenario is to deploy the FDA Med Guides Printer Tool, the Java JRE and Adobe Reader on a print server near the target service area. However, identifying and selecting the best scenario for a particular site is left to the discretion of individual local system administrators who are tasked with installing this package.

## 2.2. Destination printers

Any printer used to print med guides must be defined as a local printer on the Windows server hosting the software. That is, the printer spooler must be hosted on the same server where the FDA Med Guides Printer Tool software is running.

If you need to access a remote printer, you must still define it as a local printer spooler, but you can point to the remote printer by associating the port property to the remote printer's UNC (Universal Naming Convention) path. For instance, port=\\serverName\printerName.

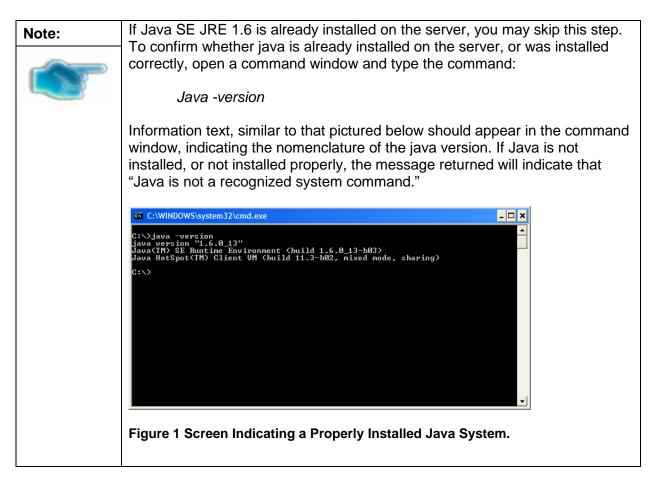
## 2.3. Third-party software pre-requisites

## 2.3.1.Windows Server 2008

Microsoft's Windows Server 2008 software must be properly installed and configured on the server hardware. Consult the vendor's documentation for instructions on installing Server 2008, if not already installed.

According to the Technical Reference Model (TRM) forecast, Windows Server 2008 is supported as of this writing: <u>http://trm.oit.va.gov/ToolPage.asp?tid=35&lob=1#</u>. Therefore, instructions provided here are based on Windows Server 2008 only. While similar procedures might work for setting up on Windows Server 2003, this is discouraged.

# 2.3.2. Java Runtime Environment version 1.6, Standard Edition (SE) for Windows



The FDA Med Guides project requires that the Java JRE be installed on the host server. Either one of the x86 or x64 Windows platforms will work. The JRE is not distributed as part of this package and must be downloaded separately from the Oracle website

(<u>http://www.oracle.com/technetwork/java/javase/downloads/jre-6u27-download-440425.html</u> .) Java SE 1.6 for Windows, or later, is required. To install the Java JRE, simply follow the instructions posted on the Oracle/Java website.

Important:	Be sure that you install the Java Runtime Environment (JRE) and not the
	Java Development Kit (JDK.) These are two distinct and separate installation packages.

Note:	As of the date of this writing, the Technical Reference Model (TRM) officially
	approves Java Standard Edition (SE) version 1.6.

### 2.3.3. Adobe Reader version 10 for Windows

The FDA Med Guides Printer Tool requires that Adobe Reader software be installed on the host server. Adobe Reader is used to print chosen med guides. Adobe Reader is not distributed as part of this package and must be separately downloaded from the Adobe website.

Note:	Reader version 10.x is recommended, although newer versions might work
	too. If a Reader version other than 10 is chosen, then path adjustments must be made in the contents of all install, configuration and batch files.

Important:	DO NOT DOWNLOAD THE STANDARD READER VERSION FROM
	<b>WWW.ADOBE.COM</b> . Instead, download the custom version found on the Adobe FTP site, at the link location below. Download the file named AdbeRdr1000_en_US.exe.

#### 2.3.3.1. Access Adobe Reader installer from the Adobe FTP site.

Download this file and save it to your C:\temp folder: <u>ftp://ftp.adobe.com/pub/adobe/reader/win/10.x/10.0/en\_US/AdbeRdr1000\_en\_US.exe</u>

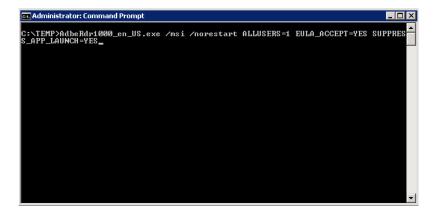
Save As					×
G 🕞 🗸 - Computer	Local Disk (C:)	<b>▼</b> 🛃	Search TEMP		<b>P</b>
Organize 🔻 New folder				-	0
🕀 🌓 Music 📃	Name *		Date modified	Туре	
		No items match your	search.		
Computer  Computer  Computer  Computer  FDAMedGuidesPr  PortLogs  Program Files  Forgram Files  Computer  Computer Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer  Computer					
E 😨 C on ISL-FELDMAN	•				•
File name: AdbeR	dr1000_en_U5				•
Save as type: Applica	tion				•
			Save	Cancel	

Figure 2 Save Adobe Reader Installer to c:\temp

#### 2.3.3.2. Install Adobe Reader using the command console.

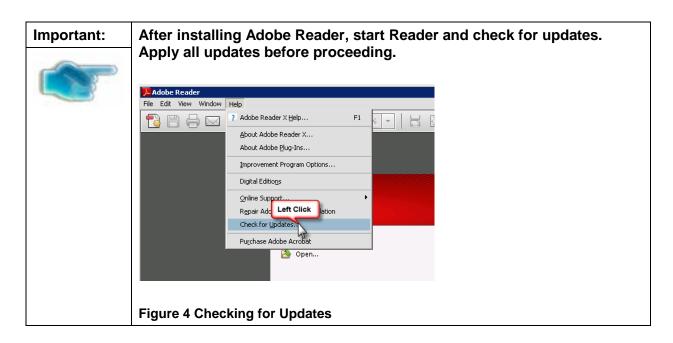
- Open a command window and navigate to C:\temp
- Install Adobe Reader using the downloaded file and special command-line switches. Enter the following command:

AdbeRdr1000\_en\_US.exe /msi /norestart ALLUSERS=1 EULA\_ACCEPT=YES SUPPRESS\_APP\_LAUNCH=YES



#### Figure 3 Example of Installing Adobe Reader from Command Line

• Complete Adobe Reader installation by responding to displayed prompts. Using default responses is recommended.



# 3. Deployment package contents

The FDA Med Guides Printer Tool deployment package consists of a single archive (ZIP) file that contains a number of folders, each containing a number of files. All the needed components, and file paths, are stored in this archive. A listing and description of these folders and files is found in the <u>Appendix</u>.

# 4. Installation Procedure

The installation steps listed below are specific to the FDA Med Guides Printer Tool Java component.

# 4.1. Obtain ZIP distribution file

Download the file from an official source site and save it to the c:\temp folder.

The files listed below may be obtained via FTP. The preferred method is to access the files from: download.vista.med.va.gov.

This transmits the files from the first available FTP server. Sites may also elect to retrieve software directly from a specific server as follows:

CIO FIELD OFFICE	FTP ADDRESS	DIRECTORY
Albany Hines Salt Lake City	ftp.fo-albany.med.va.gov ftp.fo-hines.med.va.gov ftp.fo-slc.med.va.gov	[anonymous.software] [anonymous.software] [anonymous.software]
File Name	Retrieval Format	
PSO_7_367.ZIP	BINARY	

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# 4.2. Deploy files from the distribution file

## 4.2.1. Extract ZIP file contents into C:\

Extract the contents of the distribution ZIP file into the root folder of the C drive (C:\). The embedded file structure will be recreated and the files placed in the proper folders.



The file name of the downloaded distribution ZIP file may be a variation from that shown in the following screen captures.

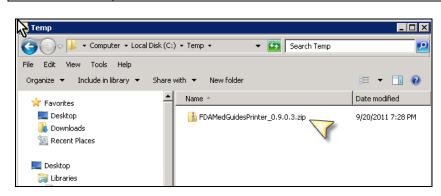


Figure 5 Navigate to c:\temp and Select the Distribution File

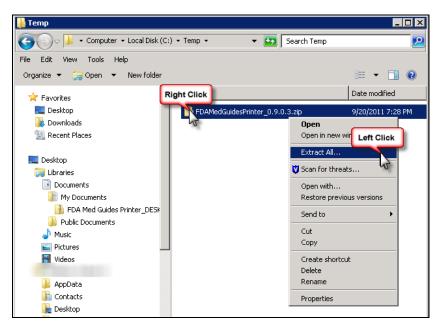


Figure 6 Initiate the Extract All Wizard

🖁 Extract Compressed (Zipped) Folders	×
🕞 👍 Extract Compressed (Zipped) Folders	
Select a Destination and Extract Files	
Files will be extracted to this folder:	
C:\Temp\FDAMedGuidesPrinter_0.9.0.3	Browse
Show extracted file Select and clear default path	
	Extract Cancel

Figure 7 Clear the Text for Default Path to Destination Folder

Ktract Compressed (Zipped) Folders	×
🕞 🔒 Extract Compressed (Zipped) Folders	
Sele Enter C:\ I Extract Files Files will be extract of to this folder:	
c/	Browse
Show extracted files when complete Check this box	
	Extract Cancel

Figure 8 Enter the New Destination Path, toggle the Checkbox on and click "Extract" Button

📥 Local Disk (C:)		
Computer 👻 Computer 🗸 Local Disk (C:)	• 🕶 🖸	arch Local Disk (C:)
File Edit View Tools Help		
Organize 🔻 😭 Open 🛛 Include in library 🔻	Share Double-click,	III 👻 🛄 🔞
Pavorites	Name to open folder	Date modified 👻
🗽 Links	ipimpore	6/23/2011 10:44 AM
My Documents	222	
🚺 My Music	HPDIU.log	2/9/2011 12:15 PM
E My Pictures	📕 FDAMedGuidesPrinter 💥	9/22/2011 5:31 PM
My Videos	🐌 Temp 🦷 🖓	9/22/2011 5:19 PM

Figure 9 Windows Explorer Opens on C:\ folder

## 4.3. Edit the properties configuration file

The FDA Med Guides Printer Tool needs to locate the Adobe Reader executable so that it can instruct Reader to print a med guide. The path to Adobe Reader is stored in a properties file named "fda\_med\_guides.properties". This entry is set with a default value assuming an Adobe Reader version 10 installation on a Server 2008 host. However, the path must be confirmed to be valid, or adjusted if necessary.

## 4.3.1. Verify path to Adobe Reader program

Confirm that the path indicated in the following property file is correct.

File	Element	Description
C:\FDAMedGuidesPrinter\fda_med_guides. properties	AcrobatReaderPath	The path to the Adobe Reader executable file

- Open file C:\FDAMedGuidesPrinter\fda\_med\_guides.properties for editing. This is a text file and using a text editor like Notepad will be adequate.
- Locate the AcrobatReaderPath element in the list. For example:



#### Figure 10 Sample Contents of Properties File

• Confirm that the path to AcroRd32.exe is correct, for your version of Adobe Reader. If not, make proper adjustments and save your changes.

### 4.3.2. Confirm DailyPurgeTime

The DailyPurgeTime element in the properties file represents the time of a 24-hour day when the folder containing temporary work files is cleared of all files. This is an automatic clean-up process performed at the indicated time. Adjust this entry as needed to list the most convenient time to perform this operation, based on the time when system use is at a minimal.



Figure 11 DailyPurgeTime Setting in Properties File

## 4.4. Create a new FDAMedGuidePrinterTask task

The FDA Med Guides Printer Tool is deployed to run as a non-interactive background process (Windows Scheduled Task) and is listed on the server's list of scheduled tasks. This program runs in the background, and is therefore not evident to end-users, logged on or not. There is no user interface associated with the FDA Med Guides Printer Tool; therefore there is no user interactivity.

The following characteristics apply to the task configuration:

- The name of the scheduled task is FDAMedGuidePrinterTask.
- A domain user or system account will be assigned to this task. The account must have capability to download files from the <u>CMOP portal</u> as well as access the required local or network destination printers. By default, the NT AUTHORITY\NETWORKSERVICE system account is selected. This account may or may not be adequate, based on your system's settings and permissions. You may need to adjust, as necessary. In some cases, a domain account may be needed.
- The C:\FDAMedGuidesPrinter\START\_fda\_med\_guides\_automatic\_printing.bat batch file will be run by the task.
- The task starts in the C:\FDAMedGuidesPrinter (application) folder.
- The task is configured to run whether the assigned user is logged in or not. Typically, no user is logged in.

### 4.4.1. Import a new Scheduler Task configuration file

A predefined task configuration XML file is distributed as part of this installation package. The file is named FDAMedGuidePrinterTask.xml, and it is located in the C:\FDAMedGuidesPrinter\installation folder. Importing this file into Task Scheduler automatically configures the FDAMedGuidePrinterTask with default settings. After importing the settings file, saving the task creates the new task in Task Scheduler. Follow the steps in the screenshots below to create the FDAMedGuidePrinterTask task.

📕 Server Manager				
File Action View Help				
🗢 🔿 🙍 🖬 🚺				
🛓 Server Manager	Task Scheduler			
<ul> <li></li></ul>	Task Scheduler Summary (Last refreshe	d: 9/22/2011 12:4	49:50 PM)	
Diagnost     Diagnost     Right Click     Task Schedule	Status of tasks that have started in the following time period:			
Task Schel, er Library     Mindows Firewall with Adva     Services     WMI Control	Summary: 49 total - 1 running, 47 s	ucceeded, 1 sto;	oped, O failed	
	Task Name	Run Result	Run Start	Run End
🕀 🔄 Storage	🗄 AitAgent (last run succeeded at			
	🗄 🗄 Consolidator (last run succeede			
	🗄 FDAMedGuidePrinterTask (last			
	🗄 🗄 KernelCeipTask (last run succes			
	🗄 🗄 LPRemove (last run succeeded			

Figure 12 Task Scheduler Shown within Server Manager

Server Manager									
File Action View H	lelp								
🗢 🔿   📶 🛛 🚺									
Server Manager (	Task So	heduler						Ac	tie
<ul> <li></li></ul>	Task Sch	neduler Summai	ry (Last refreshed: §	9/22/2011 12:4	49:50 PM)			Ta	sl
	Stat	us of tasks that	have started in the	following tim	ne period:	Last 24 hours	•	▲ (⊕ 100	
⊡  ⊡  Task Schedule	Creat Left Click	)	1 running, 47 suc	ceeded, 1 stop	oped, O failed				
Services	Import Task								
	Display All Run <b>hi</b> ug T Disable All Tasks Hist			Run Result	Run Start	Run End	Trig 🔺		_
🕀 🔄 Storage	AT Service Account (	Ionfiguration	in succeeded at st run succeede						
	View	•	rinterTask (last					Q	1
	Refresh		(last run succee					?	-
	Help		run succeeded						
		e Tasks ive tasks are tas	ks that are current	y enabled and	d have not expir	ed.	•		

Figure 13 Import an Existing Task Configuration File

E. Server Manager		
🖳 Open		×
GOV 🍌 🔹 FDAMedGuidesPrinter 🔹 inst	allation 👻 🔂	Search installation
Organize 🔻 New folder		III 🕶 🗔 🔞
Eloppy Disk Drive (A:)  Floppy Disk Drive (A:)  Local Disk (C:)  BullZipOutput	FDAMedGuidePrinterTask.xml	Date modified Type 9/22/2011 4:58 PM XML I
FDAMedGuidesPrinter     installation	13	
ib workspace III HP LJ4200-4300 Series PC		
HP Universal Print Driver F HP Universal Print Driver F		
HP_CLJ_CP4020_CP4520		
MyService PerfLogs Program Files		
Program Files (x86)		
File name: FDAMedG	uidePrinterTask.xml	Xh Left Click Open Cancel

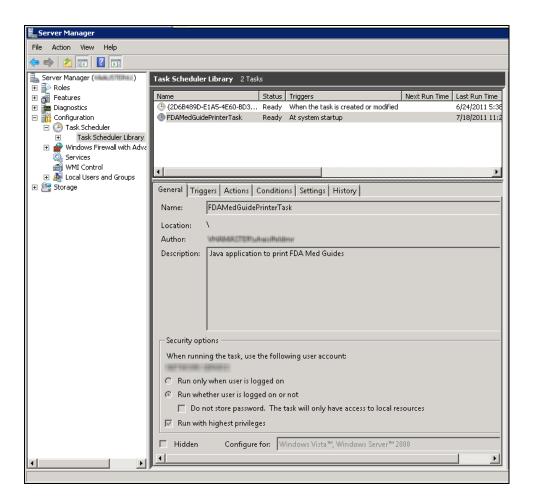
Figure 14 Select and Open FDAMedGuidePrinterTask XML File

Create Task
General Triggers Actions Conditions Settings
Name: FDAMedGuidePrinterTask
Location: V
Author:
Description: Java application to print FDA Med Guides
Security options
When running the task, use the following user account:           NETWORK SERVICE           Change User or Group
O Run only when user is logged on
Run whether user is logged on or not
Do not store password. The task will only have access to local computer resources.
Run with highest privileges
☐ Hidden Configure for: Windows Vista™, Windows Server™ 2008 Left Click ▼
OK Cancel

Figure 15 Create Task Dialog to Add the New Task

### 4.4.2. Confirm or fine-tune the scheduled task configuration

After creating the FDAMedGuidePrinterTask, you should verify that the imported settings are correct. The following screen captures represent the desired configuration settings for the FDAMedGuidePrinterTask task on a Windows Server 2008 system. Your system should be set up in a similar fashion. Compare the following screenshots with your setting and adjust accordingly—if necessary.



#### Figure 16 FDAMedGuidePrinterTask in Task Library

The General tab is where you can change the account for the user or group associated with the FDAMedGuidePrinterTask task. If needed, click on the "Change User or Group…" button and respond to the dialog asking for user credentials. The default user is Network Service.

🔮 FDAMedGuid	lePrinterTask Properties ( )	×
General Trig	ggers Actions Conditions Settings History	
Name:	FDAMedGuidePrinterTask	
Location:	X	
Author:	(ANAMAN PROVIDE INVALUE)	
Description:	Java application to print FDA Med Guides	
- Security opt	tions	
When runni	ing the task, use the following user account:	
NETWORK	SERVICE Change User or	Group
C Run only	y when user is logged on	
💿 Run whe	ether user is logged on or not	
🗖 Don	not store password. The task will only have access to local computer resources.	
💌 Run with	h highest privileges	
🗖 Hidden	Configure for: Windows Vista™, Windows Server™ 2008	•
	ОК	Cancel

#### Figure 17 General Tab Settings

DAMedGuidePrin	terTask Properties ()	
	Actions Conditions Settings History	
When you create	a task, you can specify the conditions that will trigger the t	task.
Trigger	Details	Status
At startup	At system startup	Enabled
New	Edit Delete	
		OK Cancel

Figure 18 Triggers Tab Settings

Edit Trigger	×
Begin the task: At startup	
No additional settings required.	
Advanced settings	
Delay task for: 15 minutes	
Repeat task every: 1 hour      for a duration of: 1 day	
Stop all running tasks at end of repetition duration	
Stop task if it runs longer than: 3 days	
🗖 Activate: 9/ 7/2011 💌 12:35:13 PM 🚔 🗖 Synchronize across time zones	
🗖 Expire: 9/ 7/2012 💌 12:35:13 PM 😴 🗖 Synchronize across time zones	
✓ Enabled	
OK Can	
	cei

#### Figure 19 Edit Trigger Settings

Maria	and the second second for the second second second second second second second second
when you create a t	task, you must specify the action that will occur when your task starts.
Action	Details
Start a program	C:\FDAMedGuidesPrinter\START_fda_med_guides_automatic_printing.bat
	*
∢[	

#### Figure 20 Actions Tab Settings

Edit Action	X
You must specify what action this task will perf	orm.
Action: Start a program	
Program/script:	
C:\FDAMedGuidesPrinter\START_fda_med_g	uides_autorr Browse
Add arguments (optional):	
Start in (optional):	C:\FDAMedGuidesPrinte
	OK Cancel

#### Figure 21 Edit Action Settings

	listory	
Specify the conditions that, along with the trigger, de run if any condition specified here is not true. idle	termine whether the task shot	nu run. The task will not
Start the task only if the computer is idle for:	10 minutes	<b>~</b>
Wait for idle for:	1 hour	~
🗹 Stop if the computer ceases to be idle		
Restart if the idle state resumes		
Power		
Start the task only if the computer is on AC power		
Stop if the computer switches to battery power		
Wake the computer to run this task		
Network		
	vailable:	
Start only if the following network connection is a		
Any connection		<u>~</u>
		<u></u>
		<u> </u>
		<u>~</u>

Figure 22 Conditions Tab Settings

FDAMedGuidePrinterTask Properties (	X
General Triggers Actions Conditions Settings History	
Specify additional settings that affect the behavior of the task.	
Allow task to be run on demand	
Run task as soon as possible after a scheduled start is missed	
□ If the task fails, restart every:	
Attempt to restart up to:	
Stop the task if it runs longer than:	
✓ If the running task does not end when requested, force it to stop	
□ If the task is not scheduled to run again, delete it after:	
If the task is already running, then the following rule applies:	
Do not start a new instance	
OK Cancel	

Figure 23 Settings Tab Settings

🝸 Nu	mber of eve	ents: 725	· · · ·			
Level	Date a	Even	Task Category	Operational Code	Correlation Id	<b>_</b>
🛈 Inf	7/18/2	140	Task registratio	Info		
🛈 Inf	7/18/2	111	Task terminated	Termination	834aca48-7	
🛈 Inf	7/18/2	330	Task stopping d	Info	834aca48-7	
🛈 Inf	7/18/2	129	Created Task P	Info		
🛈 Inf	7/18/2	200	Action started	(1)	834aca48-7	
🛈 Inf	7/18/2	100	Task Started	(1)	834aca48-7	
🛈 Inf	7/18/2	319	Task Engine rec	(1)		
🛈 Inf	7/18/2	110	Task triggered	Info	834aca48-7	
<u> </u>	7/18/2	140	Task registratio	Info		<u> </u>
Event 14	0, TaskSche	duler				×
	Details	updated	Task Scheduler tasi	k "\FDAMedGuidePr	interTask"	<b>_</b>
						–
Log P	Vame:	Micro	soft-Windows-Tas	kScheduler/Operatio	onal	-

Figure 24 Sample History Tab

# 4.5. Import customized Adobe Reader Windows Registry settings

The FDA Med Guides Printer Tool controls Adobe Reader in the background, while no interactive user is logged in. Adobe Reader sometimes tries to interact with a user when no user is available to reply to Adobe Reader prompts. An example of this is when Adobe Reader presents the End-User License

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Agreement (EULA) screen. There are Registry settings that can be set to inhibit these prompts. These are listed in the included Windows Registry Editor file.

Important:	If a user account other than Network Service is assigned to the
	FDAMedGuidePrinterTask task, the NetworkServiceTaskSettings.reg file must be edited to replace HKEY_USERS\S-1-5-20 with the appropriate user account.

Before starting the task (first use), you must import these Registry settings. Locate the NetworkServiceTaskSettings.reg file in the C:\FDAMedGuidesPrinter\installation folder. Then, import the settings as indicated in the screen captures below.

🕌 installation				
😋 🕞 🗸 🕨 🗸 Computer 🕶 Local Di	isk (C:) + FDAMedGuidesPrinter + installation		👻 🚺 Searc	th installation
File Edit View Tools Help				
Organize 🔻 🂣 Merge 🔻 Print	New folder			== -
🛃 Floppy Disk Drive (A:)	▲ Name ^	Date modified	Туре	Size
🚢 Local Disk (C:)	FDAMede Right Click xml	9/22/2011 4:58 PM	XML Document	4 KB
FDAMedGuidesPrinter	NetworkServiceTa Settings.reg	9/22/2011 8:44 PM	Registration Entries	1 KB
🕌 installation	-0			
ib				
🌗 workspace				
🌗 medguides				
🌗 temp				

Figure 25 NetworkServiceTaskSettings.reg Registry Settings File

📙 installation				
G v - Computer - Local Disk (C:)	▼ FDAMedGuidesPrinter ▼ installation		👻 🐼 Seard	th installation
File Edit View Tools Help				
Organize 🔻 🃸 Merge 👻 Print New I	folder			
📑 Floppy Disk Drive (A:)	Name *	Date modified	Туре	Size
Local Disk (C:)	FDAMedGuidePrinterTask.xml	Left Click 1 4:58 PM	XML Document	4 K
	NetworkServiceTaskSettings.reg	Merge	Registration Entries	1 K
🍌 installation		Edit 😼		
ib		Print		
🍌 workspace		Open with		
鷆 medguides		💟 Scan for threats		
🔒 temp		Restore previous versions		

Figure 26 Merge Menu Item



#### Figure 27 Confirmation Dialog. Click on "Yes" Button



#### Figure 28 Confirmation Dialog. Click on "Yes" Button

(i) Regi	stry Editor 🗙
1	The keys and values contained in C:\FDAMedGuidesPrinter\installation\NetworkServiceTaskSettings.reg have been successfully added to the registry.
	OK

#### Figure 29 Notification Dialog. Click on "OK" Button

## 4.6. Confirm correct deployment of program files

A batch file automates the process of confirming that the necessary folders and files were deployed correctly. Confirmation is made only on files belonging to the FDA Med Guides Printer Tool.

### 4.6.1. Run the verifying batch file

Execute the batch file located in: C:\FDAMedGuidesPrinter\installation\Verify\_installation.bat. The resulting display should look similar to the one below. Any missing files or configuration errors should be listed in the results.

Administrator: INSTALLATION CHECK: FDA Medication Guides Automatic Printer Tool	- 🗆 ×
Verifying file install and configuration	
Any missing files will be listed within this block	
Check Adobe Reader v9.0 Registry values	
HKEY_USERS\.DEFAULT\Software\Adobe\Acrobat Reader\9.0\AdobeViewer EULA REG_DWORD 0×1 Launched REG_DWORD 0×1	
HKEY_USERS\S-1-5-20\Software\Adobe\Acrobat Reader\9.0\AdobeViewer EULA REG_DWORD Øx1 Launched REG_DWORD Øx1	
HKEY_LOCAL_MACHINE\software\adobe\acrobat reader\9.0\adobeviewer EULA REG_DWORD 0x1 Launched REG_DWORD 0x1	
HKEY_USERS\S-1-5-20\software\adobe\commonfiles\usage\reader 9 OptIn REG_DWORD 0x0	
HKEY_USERS\S-1-5-20\software\adobe\acrobat reader\9.0\avgeneral bCheckForUpdatesAtStartup REG_DWORD 0x0 bLastExitNormal REG_DWORD 0x0	
HKEY_USERS\S-1-5-20\SOFTWARE\Adobe\Acrobat Reader\9.0\Originals bDisplayedSplash REG_DWORD 0x1	
Check for Java version java version "1.6.0.27" Java(TM) SE Runtime Environment (build 1.6.0.27-b07) Java HotSpot(TM) 64-Bit Server VM (build 20.2-b06, mixed mode)	
Check for Task Job	
Folder: \ TaskName Next Run Time Status	
FDAMedGuidePrinterTask N/A Running	
Press any key to continue	-

Figure 30 Display of Installation Confirmation Results with no Errors Reported

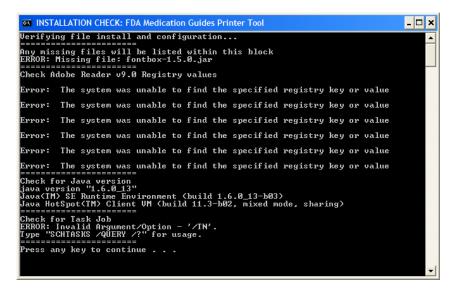


Figure 31 Display of Installation Confirmation Results with Some Errors Reported

# 4.7. Starting or stopping the FDAMedGuidePrinterTask task manually.

After installing and configuring the FDA Med Guides Printer Tool system, it is strongly recommended that you reboot the server to start the FDAMedGuidePrinterTask task—the task is configured to start with the system. However, you can also start or stop the task manually.

The procedure appears in the following screen captures. To start the task, select "Run" from the pop-up menu. To stop the task, select "End". To confirm that the task is running, see the text indicated in the Status column. Ready means that the task is active, but not running. Running means that the task is running.

Server Manager ( )	Task Scheduler
	Task Scheduler Summary (Last refreshed: 9/22/2011 12:49:50 PM)
Diagnostics     Configuration     Task Scheduler     Task Scheduler     Task Scheduler Library     Windows Firewall with Adva	Status of tasks that have started in the following time period: Last 24 hours T
₩MI Control ★ Local Users and Groups	Task Name Run Result Run Start Run End Trig
<ul> <li></li></ul>	HaitAgent (last run succeeded at       HaitAgent (last run succeede at         E Consolidator (last run succeede         FDAMedGuidePrinterTask (last         E KernelCeipTask (last run succeede         E LPRemove (last run succeeded         I LPRemove (last run succeeded         Active Tasks         Active tasks are tasks that are currently enabled and have not expired.         Summary: 27 total
	Task Name     Double-click     Run Time     Triggers       CorruptionDetec     On event - Log: System,       DecompressionFailureDetector     On event - Log: Microso       FDAMedGuidePrinterTask     At system startup       IpAddressConflict1     On event - Log: System,       IpAddressConflict2     On event - Log: System,

Figure 32 FDAMedGuidePrinterTask Task Listed in Task Scheduler List

🛃 Server Manager	
File Action View Help	
Server Manager	Task Scheduler Library 1 Tasks
Roles     Roles     Features     Features     Topostics     Gonfiguration     Task Scheduler     Task Scheduler     Windows Firewall with Adve     Services     WMI Control     Local Users and Groups     Storage	Name       Status       Triggers       Right Click       Next Run Time       Lat         (D) {2D6B489D       Ready       When the       Right Click       r modified       9/14/2011 10:08:25 AM       Th         (D) {DAMedGuid       Ready       At system startup       Never       Never
	General Triggers Actions Conditions Settings History
	Name: FDAMedGuidePrinterTask
	Location: N

Figure 33 Select Task and Open Menu

Task Scheduler Library 1 Tasks	
Name Status Triggers (© {2068469D Ready When the task is cre (© FDAMedGuid Ready At system startup Run Disable Export Properties Delete	Never
	E
General Triggers Actions Conditions Settings Hist Name: FDAMedGuidePrinterTask Location: \	ory

#### Figure 34 Select Run from Menu

📕 Server Manager				
File Action View Help				
🗢 🔿 🔰 🖬 🚺 🖬				
Server Manager	Task Scheduler I	Library 2	Tasks	
<ul> <li>              € Roles      </li> <li>             € a Features         </li> </ul>	Name	Status	Triggers	Next Run Time Last Run Time La
Diagnostics	(De (2D6B489D	Deady	When the task is created or modified	9/14/2011 10:08:25 AM Th
🖃 🁬 Configuration	EDAMedGuid.	Running	t system startup	9/22/2011 10:12:26 PM Th
<ul> <li>Task Scheduler</li> <li>Task Scheduler Library</li> </ul>				
Windows Firewall with Adva				
Services				
🗃 WMI Control				
				Þ
	General Trigge	ers Action	s Conditions Settings History	
	Name:	FDAMedGu	idePrinterTask	<u> </u>
	Location: \			

#### Figure 35 Task is Shown in "Running" state. Application is Ready to Receive Print Requests

Note:	At this point, test the FDA Med Guides Printer Tool by sending a print request. A test is successful if the expected output is found at the destination
	printer.

Image Name 🔺	User Name	CPU	Memory (	Description
AcroRd32.exe *32	NETWORK SERVICE	00	11,056 K	Adobe Reader 9.4
AdobeARM.exe *32	vhaislfeldmr	00	480 K	Adobe Reader and Acrobat Mana
BESClient.exe *32	SYSTEM	00	5,108 K	BigFix BESClient Application
BESClientHelper.exe *32	SYSTEM	00	188 K	Service for monitoring the status
BESClientUI.exe *32	vhaislfeldmr	00	496 K	BigFix Enterprise Suite Client User
cmd.exe	NETWORK SERVICE	00	388 K	Windows Command Processor
conhost.exe	SYSTEM	00	168 K	Console Window Host
conhost.exe	SYSTEM	00	128 K	Console Window Host
conhost.exe	NETWORK SERVICE	00	684 K	Console Window Host
csrss.exe	SYSTEM	00	1,060 K	Client Server Runtime Process
csrss.exe	SYSTEM	00	160 K	Client Server Runtime Process
csrss.exe	SYSTEM	00	1,300 K	Client Server Runtime Process
dllhost.exe	SYSTEM	00	556 K	COM Surrogate
dwm.exe	vhaislfeldmr	00	352 K	Desktop Window Manager
EngineServer.exe	SYSTEM	00	180 K	Common Shell3 - Scanners' interf

Figure 36 After a Print Job Request is Sent, Adobe Reader is Listed in Task Manager

# 5. Back-out/Uninstall Procedures

• Stop the FDAMedGuidesPrinterTask task in the Task Scheduler.

Task Scheduler Library 1 Tasks Name FDAMedGuidePrinter Task Running	Trioners Next Run Time Last Run Time Left Click rtup 9/26/2011 12: End Disable S Export Properties Delete
•	
General Triggers Actions Conditions	Settings History
Name: FDAMedGuidePrinterTask	<u> </u>
Location: N	

Figure 37 Stopping a Running FDAMedGuidesPrinterTask Task

• Delete the FDAMedGuidesPrinterTask task from the Scheduler list.

🕘 Task Scheduler				
File Action View Help				
Task Scheduler (Local)     Task Scheduler Library	Name Right Click	Status Deady Run End Disable E Left Delete	Triggers Absystem startup Click	Next Run Time

#### Figure 38 Deleting the Task

- Delete the C:\FDAMedGuidesPrinter folder and all its contents.
- Optionally uninstall Adobe Reader using the Control Panel.
- Optionally uninstall Java JRE using the Control Panel.

# 6. Troubleshooting

If you encounter errors in this system, they are likely to be deployment-related malfunctions. Using Adobe Reader in a non-interactive fashion risks encountering a Server 2008 condition known as Session 0 Isolation. Likewise, using the Network Service account for the FDAMedGuidePrinterTask task risks that the task may not have sufficient permissions to access needed network resources, like printers or the CMOP Portal. These two risks are the most likely source of a malfunction. The main symptoms are:

- No output reaches the destination printer spool.
- No file is downloaded to the C:\FDAMedGuidesPrinter\workspace\medguides folder from the CMOP Portal.
- No temporary PDF file is created in the C:\FDAMedGuidesPrinter\workspace\temp folder.
- Adobe Reader isn't responding or is responding incorrectly. Again, the symptom is that no output reaches the destination printer spool.
- The user assigned to the FDAMedGuidePrinterTask task is unable to connect to CMOP.

Note:	One useful troubleshooting technique is to run the FDA Med Guides Printer Tool while bypassing the FDAMedGuidePrinterTask task. This is done in
	interactive mode by logging in as an interactive user and following these steps:
	<ol> <li>End the FDAMedGuidePrinterTask task, if it is running.</li> <li>Start the</li> </ol>
	C:\FDAMedGuidesPrinter\START_fda_med_guides_automatic_printing .bat batch file.

Following are possible malfunctions and remedies.

## 6.1. Session 0 Isolation

Session 0 Isolation is a new security feature in Windows 7 and Windows Server 2008. It affects noninteractive sessions by restricting a program's ability to interact with the console. This feature directly affects the way that Adobe Reader is used in this system, and a problem may occur when Adobe Reader presents interactive dialogs while expecting a user response.

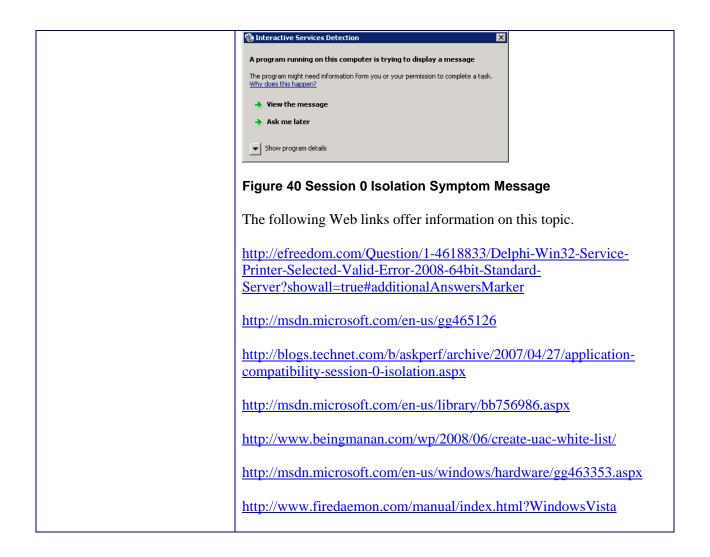
These events are rare and occur as a result of a new Adobe Reader installation or upgrade. Typically, these are the request to agree to a EULA or a Product Improvement Program opt-in message. Session 0 Isolation is complex and is explained in the links below.

The installation step labeled "Import customized Adobe Reader Windows Registry settings" addresses this problem by importing Registry keys that prevent known prompting events. These Registry settings are bound to individual user accounts and must be applied to the user account selected to control the FDAMedGuidePrinterTask task. You may need to make adjustments to the NetworkServiceTaskSettings.reg file to reflect the correct user account.

	Help Improve the Adobe Reader Experience
	Participate in the design of future versions of Reader. Just click 'Yes' now to give us permission to learn about how you use Reader, and we'll do the rest.
	<ul> <li>There are no mandatory surveys or follow-up emails.</li> <li>No personal contact information is collected.</li> <li>You can stop participating at any time.</li> </ul>
	More Details
	With your permission, Adobe will automatically receive anonymous information about how you use Reader.
1419	C yes, I would like to help make Reader even better
	ි No, thank you

#### Figure 39 Example Adobe Reader Prompt to User

Symptom	Possible solution
Adobe Reader doesn't seem to	Log on as an interactive user and determine whether Adobe Reader is
respond to print requests.	requesting a response from the user.
	This interaction is not visible to the non-interactive user, giving the
	impression that the med guide's application is malfunctioning.
	Therefore, no output is generated at the printer spool. The server's
	system administrator must identify the user account associated with the
	FDA Med Guides scheduled task, log on as that user, start Adobe
	Reader manually, and respond to all prompts generated. For Network
	Service, this can only be resolved via Registry adjustments on that
	account



## 6.2. Can't find Adobe Reader

Symptom	Possible solution
can't be located.	Verify that the path pointing to the Reader executable is correct in the C:\FDAMedGuidesPrinter\fda_med_guides.properties file

# 6.3. Can't download Med Guides from CMOP Portal

If a med guide request is made and no med guide file appears in C:\FDAMedGuidesPrinter\workspace\medguides, the application is likely unable to connect to the CMOP SharePoint site. Reasons for this to occur are as follows:

Symptom	Possible solution
CMOP site is down	Try again later.
User assigned to task has insufficient privileges to access CMOP site.	Adjust permissions, or create a new user with appropriate access.
Unable to write downloaded med guide to local folder.	Confirm that user has write access to folder.
An error page is printed instead of the expected med guide.	The med guide name is invalid or the med guide PDF file doesn't exist at the CMOP Portal. Verify that the PDF file exists, or that the PDF file name indicated in the print request is correct.

# 6.4. Nothing is sent to the destination printer spool

Symptom	Possible solution
Adobe Reader is malfunctioning	Using Task Manager, kill any AcroRd32.exe
	processes belonging to the pertinent user account.
Destination printer name in med guide request is	Verify that the printer name is correct.
incorrect	

# 6.5. java.lang.NoClassDefFoundError in batch file

Symptom	Possible solution
Invoking the	Verify that paths indicated in batch and
START_fda_med_guides_automatic_printing.bat	properties files are correct, particularly the
batch file fails to start the Java application and indicates:	path to the JAR file.
Exception in thread "main"	•
java.lang.NoClassDefFoundError	
🖙 FDA Medication Guide Automatic Printing application	
Exception in thread "main" java.lang.NoClassDefFoundError: gov/va/med/pharmacy/f da_med_guides/automatic_printing/AutomaticPDMedGuides Caused by: java.lang.ClassNotFoundException: gov.va.med.pharmacy.fda_med_guides. automatic_printing.AutomaticPDMedGuides at java.net.URLClassLoader51.run(Unknown Source) at java.accurity.AccessController.dofrvilleged(Native Method) at java.accurity.AccessController.dofrvilleged(Native Method) at java.anet.URLClassLoader.findClass(Unknown Source) at java.anet.URLClassLoader.findClass(Unknown Source) at sun.misc_LauncherShopfClassLoader.loadClass(Unknown Source) could messionascholter.ong.source) ting.AutomaticFDMMedGuides. Program vill dest. Press any key to continue	
Figure 41 JAR File Error	

# 6.6. "Protected Mode" is enabled in Adobe Reader 10

If you are using the NetworkService account, you can skip this procedure--this setting is already toggled off by the Registry settings import procedure listed above. If you are using any other account, Protected

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Mode is toggled on by default in Adobe Reader X. This setting interferes with the proper functioning of the Java component, so you must toggle it off while logged on as that account.

ferences	
Categories:	Basic Tools
Commenting	Use single-key accelerators to access tools
Documents	Create links from URLs
Full Screen	☐ Make Hand tool select text & images
General	✓ Make Hand tool read articles
Page Display	
	Make Hand tool use mouse-wheel zooming
3D & Multimedia	Make Select tool select images before text
Accessibility	
Forms	Use fixed resolution for Snapshot tool images: 72 🚊 pixels/inch
dentity	
international Internet	_ Warnings
nternet IavaScript	Do not show edit warnings
avascripc Measuring (2D)	Do not show edit warnings Reset All Warnings Reset All Warnings
Measuring (3D)	
Measuring (Geo)	Messages from Adobe
Multimedia (legacy)	Show me messages when I launch Reader
Multimedia Trust (legacy)	-
Online Services	Don't show messages while viewing a document
Reading	
Reviewing	Application Startup
Search	Show splash screen
Security	Use only certified plug-ins Currently in Certified Mode: Yes
Security (Enhanced)	Contentary in Certained Model 165
Spelling	
Fracker	
Frust Manager	
Jnits	Enable Protected Mode at startup
Updater 🔨	A dide i contratta i contratta di
	Select Default PDF Handler
	OK Cancel
	OK Caricer

Figure 42 Disabling Protected Mode at Startup

## 6.7. NetworkService account and Adobe Reader 9

There is a known "ROAMING PROFILE" issue with Adobe Reader 9.x that causes it to malfunction under certain circumstances while assigning the NetworkService account to the FDAMedGuidePrinterTask task. For this reason, Adobe Reader 9.x is not recommended for this application. Use Adobe Reader 10 instead.

# 7. Appendix

After extracting the contents of the ZIP file, the below FDA Med Guides Printer Tool folder structure and files should be available on the C:\ drive.

Path	Туре	Description
C:\FDAMedGuidesPrinter	Folder	Main folder. Root folder for application files. These include the JAR, batch and properties files.
C:\FDAMedGuidesPrinter\lib	Folder	Sub-folder containing supporting third-party Java

		libraries
C:\FDAMedGuidesPrinter\installation	Folder	Folder containing pre-defined configuration files
C:\FDAMedGuidesPrinter\workspace	Folder	Workspace main folder.
C:\FDAMedGuidesPrinter\workspace\medguides	Folder	Path to med guides local repository. Folder contains copies of original FDA Med Guides as downloaded from the CMOP Portal Site.
C:\FDAMedGuidesPrinter\workspace\temp	Folder	Path to area for temporarily processing stamped med guides. Folder contains scratch files of altered med guides
C:\FDAMedGuidesPrinter\START_fda_med_guides_au tomatic_printing.bat	Batch file	Batch file to initiate the FDA Med Guides Printer Tool Java program
C:\FDAMedGuidesPrinter\fda_med_guides.properties	Configuration file	User-configurable items for the FDA Med Guides Printer Tool
C:\FDAMedGuidesPrinter\fda_med_guides_logging.pro	Configuration	User-configurable items for
perties	file	the logging engine
C:\FDAMedGuidesPrinter\fda_med_guides_automatic_ printing_0.9.0.5.jar	Java archive	Main jar file containing all Java code for the FDA Med Guides Printer Tool
C:\FDAMedGuidesPrinter\installation\ FDAMedGuidePrinterTask.xml	XML file	Configuration file used to create the FDAMedGuidePrinterTask task
C:\FDAMedGuidesPrinter\installation\ NetworkServiceTaskSettings.reg	Windows Registry import file	Configuration file used to set up the Adobe Reader setting for use by the NT AUTHORITY\NETWORKS ERVICE user
C:\FDAMedGuidesPrinter\installation\ Verify_installation.bat	Batch file	Batch file used to confirm a successful deployment of the FDA Med Guides Printer Tool
Path	Туре	Description
C:\FDAMedGuidesPrinter\lib\commons-io-2.0.1.jar	Java archive	Supporting third-party Apache Commons Java library
C:\FDAMedGuidesPrinter\lib\commons-lang-2.6.jar	Java archive	Supporting third-party Apache Commons Java library
C:\FDAMedGuidesPrinter\lib\commons-logging- 1.1.1.jar	Java archive	Supporting third-party Apache Commons Java library
C:\FDAMedGuidesPrinter\lib\fontbox-1.5.0.jar	Java archive	Supporting third-party PDFBox Java library.

C:\FDAMedGuidesPrinter\lib\jempbox-1.5.0.jar	Java archive	Supporting third-party PDFBox Java library.
C:\FDAMedGuidesPrinter\lib\pdfbox-1.5.0.jar	Java archive	Supporting third-party PDFBox Java library.
Log files in folder C:\FDAMedGuidesPrinter	*.log	Log files are used for debugging purposes only and are created AFTER the initial use of the program.