# National Utilization Management Integration (NUMI)

Server Setup Guide

Release 1.1.14.3



<mark>Nov 2015</mark>

# **Revision History**

Date	Description	Author
04/22/2009	Submitted to Medora Team for	Rob Fatzinger
07/14/2009	Updated to reflect "Release 1.1"	Suzanne Van Order
08/28/2009	Updated document name to	Suzanne Van Order
08/01/2011	Updated per issues found in AITC	Dan Michaelis, Wai
08/02/2011	Updated section 9.9 per AITC	Doug Lincoln
08/04/2011	Refined CERME instructions in section 6 per AITC Windows SA	Doug Lincoln
08/24/2011	Refined MDWS instructions in section 6.12-6.15 per AITC	Doug Lincoln
10/13/2011	Updated CERME instructions in	Tim Blanchard
04/10/2012	Draft preliminary update for	Dave Curl
07/03/2012	Added figures to section 6.13; added captions to figures throughout,; replaced example in section 6.12, step #10; added new section 6.14; updated cover and footers to "Release 14" per VA PM	Eric Dahlenburg
01/03/2013	Added section 6.12; updated section 6.13 with new Fig. 19, corrected Section 6.14, Windows Event Log and updated SSL setup and config; updated 6.19 per Operational feedback; added Appendix F NUMI Exchange	Eric Dahlenburg
03/25/2013	Modified section 6.15 for NUMI event folder, modified section 6.19	Dave Curl

Date	Description	Author
3/29/2013	Removed original highlighting and	Dave Curl
	updated per customer feedback: changed Section 2.2 Web Server (Server 2) to reference NUMI Exchange and MDWS; updated	
	Section 3.1 Disk Space and Devices; updated Section 5.1 to reference test environments and removed Section 5.6, Installation During Off Peak Hours. Also reordered installation steps SQL and CERMe (now section 6.1 and 6.14) and added CERMe SSL	
5/13/2013	Corrected release referenced in section 1, removed content for Windows Server 2003 and IIS 6 setup, added content for Windows Server 2008 and IIS 7 setup, added content for MDWS 2.Xinstallation, re-organized document content.	D. Curl
5/24/2013	Made the following corrections	D. Curl
	per VA comments: Changed section 2.2.1 to specify SQL Server 2005, changed figures 37,	
	38, 39 to reflect MDWS1.2, added MDWS config information to section 6.11.3 (MDWS1.2) and	
	6.12.4 (MDWS2.x), added execution timeout setting for the synchronizer in section 6.18.1, step 4.	

Date	Description	Author
6/17/2013	Made the following corrections per VA comments: Changed section 2.2.1 to clarify restoring from a NUMI backup database and added replication comments, updated 3.1.3 with CPU capacity details, updated section 3.1.4 with disk space details, changed section 5 to clarify restoring from a NUMI backup database, updated section 5.1 added synchronizer and user account information, removed original item 3, updated section 6.7 to specify version and recovery mode, updated section 6.8 removed Medora information, updated section 6.19 to add more script information.	D. Curl
6/27/2013	Updated to version number to 14.1 changed sections 2.2.1 and 5. To include 14.0 and 14.1 database information.	D. Curl
7/2/2013	Changed example directory references to remove 14.0	D. Curl
8/2/2013	Removed references to CERMe 2012. Changed hard coded build name directory references to <install_dir>.</install_dir>	D. Curl
8/20/2013	Added version number for MDWS in section 2.2.2, added version number for CERME in section 2.2.3, added RAM to section 3.1.3, updated Figure 68, removed MDWS 1.2 section 6.11, renamed MDWS 2.x to MDWS 2.7.3.2 in section 6.12, renamed section 6.12 to 6.11	D. Curl
5/11/2015	Updated the version number from 14.1 to 14.2	Padma Subbaraman
11/12/2015	Updated the version number from 14.2 to 14.3	Padma Subbaraman

### **Table of Contents**

1.	Introdu	uction		.1
	1.1. Pur	pose		. 1
	1.2. Sco	pe		. 1
	1.3. Tar	get Audience		. 1
2.	Deploy	/ment Overview		.1
	2.1. Nat	ional Deployment Request		. 1
	2.2. Inst	alling NUMI on the Servers		. 1
	2.2.1.	Database Server		. 1
	2.2.2.	Web Server		. 2
	2.2.3.	Application Server		. 2
3.	Pre-Ins	stallation Instructions and Preparation		.3
	3.1. Inst	allation Process Requirements		.3
	3.1.1.	Minimum Software Version		. 3
	3.1.2.	Resources Required		. 3
	3.1.3.	CPU Capacity		. 3
	3.1.4.	Disk Space		. 3
	3.1.5.	Devices (Servers, etc.)		. 3
	3.1.6.	VistA Rights Needed for NUMI Users		. 3
	3.2. Inst	all Software in Test Environments		. 4
	3.3. Ge	herate Pre-Installation Reports		. 4
	3.4. Co	ordinate Installation with Other Teams		. 4
	3.5. Inst	all Sequence Information for Multiple Patches		. 4
	3.6. Log	off During Installation		. 4
	3.7. Ave	rage Amount of Time Required to Complete the	Installation	. 4
4.	Databa	ase Information		.5
5.	Instruc	ctions for Installing Database Components	S	.5
	5.1. Dat	abase Installation / Restoration Procedures		. 5
6.	Installa	ation Procedure for Server 2008 R2		.6
	6.1. Pat	ch the OS		6
	6.2. SQ	L Server Setup (Windows Server 2008 R2)		. 6
	6.2.1.	Role Setup		. 6
NUM	IServer Setu	p Guide, v1.1.14.3 v	Nov 2015	

6.3. Wel	o Server Setup (Windows Server 2008 R2)	7
6.3.1.	Role Setup	7
6.3.2.	ASP.NET 2.0 AJAX Extensions 1.0 Setup	10
6.3.3.	Microsoft WSE 3.0 Setup	10
6.4. App	lication Server Setup (Windows Server 2008 R2)	10
6.4.1.	Role Setup	10
6.4.2.	Feature Delegation	13
6.5. Inst	all Microsoft ASP.Net 2.0 AJAX Extensions 1.0	14
6.6. Inst	all Microsoft Web Services Enhancements 3.0	18
6.7. Inst	all SQL Server	22
6.8. Dov	vnload all SQL Server Patches	22
6.9. Re	store the Appropriate Databases for the NUMI Application	22
6.10. Inst	alling NUMI Exchange on Server 2008 R2	22
6.10.1.	Unzip/Install NUMI Exchange Distribution	23
6.10.2.	NUMI Exchange Web Site Configuration	23
6.10.3.	Application Pool Configuration	27
6.11. Inst	alling MDWS 2.7.3.2 on Server 2008 R2	30
6.11.1.	Download MDWS	30
6.11.2.	Install MDWS Distribution	30
6.11.3.	MDWS Web Site Configuration	30
6.11.4.	Configuration File Setup	34
6.11.5.	MDWS Application Pool Configuration	34
6.11.6.	To Restart IIS	36
6.11.7.	To Test That MDWS Is Working	37
6.12. Inst	alling NUMI on Server 2008 R2	38
6.12.1.	Software CopyInstructions	38
6.12.2.	NUMI Web Site Configuration	39
6.12.3.	Configuration File Setup	45
6.12.4.	Application Pool Configuration	45
6.13. Insta	Iling CERME (COTS Product) Software and Database from CERM	е
Insta	II CD	48
6.13.1.	Install CERME on the Application Server	48
6.13.2.	Install CERME SSL Certificate	49
NUMI Server Setu	p Guide, v1.1.14.3 vi Nov 2015	

	6.14. Setting up NUMI Section in the Windows Event Log	53
	6.15. Validate XML Configuration File Settings	54
	6.16. Perform Restart	55
	6.16.1. Test NUMI Web Site Functionality	56
	6.17. Installing NUMI Synchronizer on the DB Server	56
	6.17.1. Software CopyInstructions	56
	6.18. Add Jobs to the SQL Server	59
7.	Post-Installation Considerations	59
8.	Acronyms and Descriptions	60

### List of Tables

Гable 1: CPRS Rights	4
Cable 2: CPRS Access Tabs	4

### **List of Figures**

Figure 1: SQL Server Role Services
Figure 2: NUMI Exchange / MDWS Role Services
Figure 3: NUMI Exchange/MOWS Web Services (IIS)9
Figure 4: NUMI Role Services
Figure 5: NUMI Web Services IIS
Figure 6: IIS Feature Delegation
Figure 7: Feature Delegation Selection
Figure 8: Microsoft ASP.Net 2.0 File Download-Security Warning Window
Figure 9: Microsoft ASP.Net 2.0 Internet Explorer-Security Warning Window
Figure 10: Microsoft ASP.NET 2.0 AJAX Extensions 1.0 Setup Wizard Window
Figure 11: Microsoft ASP.NET 2.0 AJAX License Agreement Window
Figure 12: Microsoft ASP.NET 2.0 AJAX Installation Window
Figure 13: Microsoft ASP.NET 2.0 AJAX Completion window
Figure 14: Microsoft WSE 3.0 File Download-Security Warning Window
Figure 15: Microsoft WSE 3.0 Internet Explorer-Security Warning Window
Figure 16: Microsoft WSE 3.0 InstallShield Wizard Welcome Window
Figure 17: Microsoft WSE 3.0 License Agreement Window
Figure 18: Microsoft WSE 3.0 InstallShield Wizard Window
Figure 19: Microsoft WSE 3.0 Installation Window
Figure 20: Microsoft WSE 3.0 Completion Window
Figure 21: Add NUMI Exchange Website
Figure 22: NUMI Exchange Website
Figure 23: NUMI Exchange Basic Settings
Figure 24: NUMI Advanced Settings
Figure 25: NUMI Exchange Bindings
Figure 26: NUMI Exchange Authentication Settings
Figure 27: NUMI Exchange SSL Settings
Figure 28: Application Pool Window
Figure 29: NUMI Exchange Application Pool Basic Settings
Figure 30: NUMI Exchange Pool Advanced Settings
Figure 31: Configuring MDWS Website
Figure 32: MDWS Website Basic Settings
Figure 33: MDWS Website Advanced Settings
Figure 34: MDWS Default Website
Figure 35: MDWS Bindings
Figure 36: MDWS Authentication
Figure 37: Configuring Application Pool Settings
Figure 38: MDWS Application Pool Basic Settings
Figure 39: MDWS Application Pool Advanced Settings

Figure 40: Sample Welcome Message 3	8
Figure 41: Unblocking Restricted Files in Installation ZIP File	9
Figure 42: Add NUMI Website	0
Figure 43: NUMI Basic Settings	0
Figure 44: NUMI Advanced Settings 4	1
Figure 45: NUMI Bindings	2
Figure 46: NUMI Authentication Settings 4	3
Figure 47: NUMI Provider Settings 4	3
Figure 48: NUMI SSL Settings	4
Figure 49: NUMI Compression Settings 4	5
Figure 50: Application Pool Window 4	6
Figure 51: NUMI Application Pool Basic Settings 4	6
Figure 52: NUMI Application Pool Advanced Settings4	7
Figure 53: IIS Server Certificates 5	0
Figure 54: IIS Server Certificate Selection 5	0
Figure 55: IIS Certificate Details 5	51
Figure 56: keytool -keystore "C:\Certs\CERME.ks" –list	52
Figure 57: Creating a NUMI section in the Windows Event Log	4
Figure 58: Updating Settings in NUMI XML Configuration File	5
Figure 59: Unblocking Restricted Files in Installation ZIP file	6
Figure 60: Synchronizer.exe Window5	57
Figure 61: Starting the Service 5	8

# 1. Introduction

This Server Setup Guide explains how to install National Utilization Management Integration (NUMI), Release 1.1.14.3.

### 1.1. Purpose

The purpose of this document is to explain the hardware and software requirements and tasks that must be performed before and after the installation process.

## 1.2. Scope

The scope of this document includes explanations of the appropriate steps to install the NUMI software, and the steps that are needed to be completed before and after the installation process is started.

# 1.3. Target Audience

This document is intended for Information Technology team and/or the individuals who install software in your organization.

# 2. Deployment Overview

The following process is followed to request permission to do a National Deployment.

# 2.1. National Deployment Request

The request for a National Deployment is governed by the ProPath Release Management processes. Please refer to ProPath for guidance on requesting a release. This process must be complete before installation of services on the NUMI servers.

# 2.2. Installing NUMI on the Servers

The steps to install NUMI on the servers are described below. The middle tier of NUMI is Medical Domain Web Services (MDWS), which runs on the web servers. The primary NUMI application servers are located at the Austin Information Technology Center (AITC) facility in Austin, Texas. The application servers run on an Internet Information Services (IIS) Application Server. The NUMI application requires Microsoft ASP .NET 2.0 Ajax Extensions 1.0 and Web Services Enhancements 3.0 to enable the interactions with the Web Services.

### 2.2.1. Database Server

The NUMI database as it exists now is a manifestation of multiple changes over multiple releases. This installation document has as a pre-requisite the backup of an existing NUMI database. Therefore, to install a new NUMI database, it is necessary to restore a backup of an existing NUMI database, and make whatever data alterations are desired for the target environment (i.e., the removal of sensitive data in non-production environments). For an upgrade backup, work from the NUMI 13.2 or 14.0 databases. For a fresh install backup, work from the NUMI 1.1.14.3 database.

Database Platform installation, and Database Restoration Procedures

1. Install Windows Server 2008 on the database server platform

- 2. Download and install any critical patches for the Operating System
- 3. Install the 64 bit Microsoft SQL Server 2005 application according to local "best practices"

3.1. Microsoft's Full Text Search is required for the NUMI installation

3.2. Replication is necessary for the NUMI installation to use the alternate database reporting capability of NUMI

3.3. Reporting Services is not necessary for installation on the NUMI database server

3.4. NUMI's database will function properly in either and active/passive or active/active cluster, but clustering is not required for the NUMI application

4. Apply all appropriate patches (according to local best practices) to Microsoft SQL Server 2005

5. Install / restore the database components according to the instructions in section 5 Instructions for Installing Database Components.

### 2.2.2. Web Server

To install NUMI Exchange, MDWS software on the Web Server (Server 2)

- 1. Install Windows Server 2008 on the web server platform
- 2. Download and install any critical patches for the Operating System on all web servers
- 3. Install Microsoft ASP.NET 2.0 Ajax Extensions 1.0
- 4. Install Web Services Enhancements 3.0
- 5. Install NUMI Exchange
- 6. Change the web.config file settings as needed
- 7. Install MDWS 2.7.3.2 (pronounced "Meadows")
- 8. Change the web.config file settings as needed

### 2.2.3. Application Server

To install NUMI application software on the Application Server (Server 3)

- 1. Install Windows Server 2008 on the application server platform
- 2. Download and install any critical patches for the Operating System on all application servers
- 3. Install the CERME 2012.2 application
- 4. Install the NUMI application
- 5. Change the web.config file settings as needed

# 3. Pre-Installation Instructions and Preparation

This section explains the tasks that need to be performed before installing National Utilization Management Integration (NUMI) software. Before proceeding with the installation procedures, consult the list of requirements below.

### 3.1. Installation Process Requirements

It is assumed that the person responsible for doing installations at your site has performed appropriate pre-installation planning.

### 3.1.1. Minimum Software Version

Operating System: Windows Server 2008

Database: SQL Server 2005

### 3.1.2. Resources Required

Sys Admin, DBA

### 3.1.3. CPU Capacity

64GB RAM, 2.8ghz Xeon – Database Server 16GB RAM, 2.8 ghz Xeon – Application Server 8GB RAM, 2.8 ghz Xeon – Web Server

### 3.1.4. Disk Space

SAN - 900 gigabyte

Application server - 100 GB

Web Services server - 100 GB

Database - 800 GB (This includes space needed for the backups and data storage.)

### 3.1.5. Devices (Servers, etc.)

- 1 Database Server
- 2 Application Servers
- 2 Web Servers
- 1 Data Warehouse Server
- 1 SQL Reporting Server

### 3.1.6. VistA Rights Needed for NUMI Users

Each NUMI user must have CPRS access in their VistA menu structure, such as in their secondary menu tree. The VistA menu name is CPRSChart (or CPRS GUI CHART). <u>Table 1</u> and <u>Table 2</u> identify the menus, options and settings these user accounts will need to have assigned.

#### Table 1: CPRS Rights

CPRS Rights
Primary Menu: XMUSER
Primary Menu: MailMan Menu
Secondary Menu: [OR CPRS GUI CHART]
Secondary Menu: CPRSChart Release 1.1.27.77
Keys Held
Patient Selection
Restrict? NO
OE/RR List

#### Table 2: CPRS Access Tabs

Nam e	Description	Effective Date	Expiration Date
RPT	Reports tab	Sept. 2, 2008	N/A

### 3.2. Install Software in Test Environments

The software will be installed in the Test environments before installing in Production.

### 3.3. Generate Pre-Installation Reports

Not applicable.

### **3.4. Coordinate Installation with Other Teams**

The Installation Team will need to involve the Implementation/Architecture Team.

### 3.5. Install Sequence Information for Multiple Patches

Not applicable.

### 3.6. Logoff During Installation

End users do not need to be logged off during installation (during the act of copying files and installation executions to the server(s)). However, the users must be logged off for any updates to the software (running the executions and/or configuring the software and configuration files). Logging off during software updates is no different than any other logoff that a user may do.

# 3.7. Average Amount of Time Required to Complete the Installation

The average amount of time required to complete the NUMI installation is 2 days.

# 4. Database Information

Please see the *NUMI Systems Management Guide* for information about the structure and components of the NUMI database.

# 5. Instructions for Installing Database Components

The NUMI database as it exists now is a manifestation of multiple changes over multiple releases. This installation document has as a pre-requisite the backup of an existing NUMI database. Therefore, to install a new NUMI database, it is necessary to restore a backup of an existing NUMI database, and make whatever data alterations are desired for the target environment (i.e., the removal of sensitive data in non-production environments). For an upgrade backup, work from the NUMI 13.2 or 14.0 databases. For a fresh install backup, work from the NUMI 1.1.14.3 database.

### 5.1. Database Installation / Restoration Procedures

1. Copy a backup of an existing NUMI database(s) of appropriate size and content to the new NUMI database server

1.1. The application database (typically called NUMI) is necessary for proper function of the application

1.2. The "auditing" database (typically called LogSyncDb) is necessary for proper functioning of the application and the synchronizer

1.3. The CERMe database can be restored from an existing backup, or can be built from scratch from the CERMe installation media

1.3.1. If the CERMe database is restored from an existing backup, verify that the application configuration files reference a database authenticated user that has DBO privilege on the CERMe database for proper functioning of the NUMI application

1.3.2. If the CERMe database is installed from media, follow the instructions provided by McKesson for installation

- 2. Restore the database backup to the existing server
  - 2.1. File paths will have to be altered according to local best practices

2.2. User accounts may be, but are not required to be, restored with the database. NUMI requires the numi\_user account to be setup.

2.3. Database ownership may be altered so that the owning account for the NUMIdatabase complies with local best practices

2.4. A database authenticated user for the application should be configured, and granted DBO privileges on the NUMI database

3. Run the Install\_XX.sql if it was provided with the build, where XX is the database version for the NUMI build. This will apply changes to the database necessary for the version of NUMI that is being installed.

4. Install the NUMI Synchronizer according to the instructions in section 6.18 Installing NUMI Synchronizer on the DB Server

# 6. Installation Procedure for Server 2008 R2

This section identifies the installation procedures that shall be followed.

# 6.1. Patch the OS

This applies to all servers.

- 1. Open up an instance of Internet Explorer.
- 2. Select menu item <Tools/Windows Update>.

3. Follow the instructions on Microsoft's website. (Note: a restart of the servers may be necessary).

# 6.2. SQL Server Setup (Windows Server 2008 R2)

### 6.2.1. Role Setup

This applies to the SQL database server, with Windows Server 2008 R2 installed. Use Server Manager to install the File Services with the role services shown in Figure 1: SQL Server Role Services.

• File Services	
e storage, enable file replication, mana t computers	ige shared folders, ensure fast file
	Go to File Services
24 hours	
	_
	🛃 Add Role Services
Status	🚆 Remove Role Services
Installed	
Not installed	
Not installed	
Not installed	
Not installed	
Not installed	
Not installed	
Not installed	
Not installed	
Not installed	
	e storage, enable file replication, mana t computers  24 hours  24 hours  Status Installed Not installed

Figure 1: SQL Server Role Services

### 6.3. Web Server Setup (Windows Server 2008 R2)

### 6.3.1. Role Setup

This applies to the NUMI Exchange /MDWS web servers, with Windows Server 2008 R2 installed. Use Server Manager to install the File Services and Web Server (IIS) roles with the role services shown in Figure 2: NUMI Exchange / MDWS Role Services and Figure 3: NUMI Exchange / MDWS Web Services (IIS).

File Services		File Services Help	
Provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers			
🔊 Role Status		Go to File Services	
Messages: None System Services: All Running () Events: 3 informational in the last :	24 hours		
Role Services: 1 installed		Add Role Services	
Role Service	Status	Remove Role Services	
📥 File Server	Installed		
Distributed File System	Not installed		
DFS Namespaces	Not installed		
DFS Replication	Not installed		
File Server Resource Manager	Not installed		
Services for Network File System	Not installed		
Windows Search Service	Not installed		
Windows Server 2003 File Services	Not installed		
Indexing Service	Not installed		
BranchCache for network files	Not installed		
, Description:			
File Server manages shared folders and er computer from the network.	nables users to access files on this		

Figure 2: NUMI Exchange / MDWS Role Services

8 Web Server (IIS)		I Web Server (IIS) Help
Provides a reliable, manageable, and scalable Web application	on infrastructure.	
8 Role Status		Ta Go to Web Server (IIS)
Message s: None		
System Service s: 3 Running, 1 Stopped		
. Events: 2 warnings 12 informational in the last 24	hours	
Part Profises Andurar: To that a Part Profises	Andurar was as to	
the Best Practices Analyzer tile on this role's home this Role	page and click Scan	
8 Role Services: 24 Installed		<b>ED</b> XII
Role Service	Statue	& Ramova Rola Cavinas
Web Server	Installed	
Common HTTP Features	Installed	
Static Content	Installed	
Default Document	Installed	
Directory Browsing	Installed	
HTTP Errors	Installed	
HTTP Redirection	Not installed	
WebDAV Publishing	Not installed	
Application Development	Installed	
ASDINET	Installed	
NET Extensibility	installed	
ASP	Installed	
CGI	installed	
I CAPIEvtan sign s	Installed	
ISADEIters	Installed	
Sever file o	Installed	
Jevel Jue Includes	Installed	
Health and Diagnostics	Installed	
Hill Logging	Installed	
Logging Tools	Notinstalled	
Nequest Monitor	Installed	
Tracing	Not installed	
Custom logging	Not Installed	
ODBC Logging	Not installed	
Security	Installed	
Basic Authentication	Not Installed	
Windows Authentication	Installed	
Digest Authentication	Not installed	
Client Certificate Mapping Authentication	Not installed	
liS Client Certificate Mapping Authentication	Not Installed	
URL Authorization	Not installed	
Request Filtering	Installed	
IP and Domain Restrictions	Not installed	
& Performance	Installed	
Static Content Compression	Installed	
Dynamic Content Compression	Not Installed	
& Management Tools	Installed	
liS Management Console	Installed	
liS Management Scripts and Tools	Not installed	
Management Service	Not installed	
li\$ 6 Management Compatibility	Not installed	
IIS 6 Metabase Compatibility	Not installed IIS	
6 WMCompatibility	Not installed	
IIS6 Scripting Tools	Not Installed Ii\$	
6 Management Console	Not installed	
FTP Server	Not installed	
FTP Service	Not installed	
FTP Exten sibility	Not installed	
IIS Hostable Web Core	Not installed	
	- the interaction	
Description :		
Web Server provides support for HTML Web sites and op ASP.MET, ASP, and Web server extensions. You can use t host an internal or external Web site or to crovide an env	tional support for he Web Server to ironment for	
developers to create Web-based applications.		

Figure 3: NUMI Exchange/MOWS Web Services (IIS)

### 6.3.2. ASP.NET 2.0 AJAX Extensions 1.0 Setup

Install the ASP.NET 2.0 AJAX Extensions 1.0 as detailed in section 6.5, Install Microsoft ASP.Net 2.0 AJAX Extensions 1.0.

### 6.3.3. Microsoft WSE 3.0 Setup

Install Microsoft WSE 3.0 as detailed in section 6.6 Install Microsoft Web Services Enhancements 3.0.

### 6.4. Application Server Setup (Windows Server 2008 R2)

### 6.4.1. Role Setup

This applies to the NUMI app servers, with Windows Server 2008 R2 installed. Use Server Manager to install the File Services and Web Server (IIS) roles with the role services shown in Figure 4: NUMI Role Services and Figure 5: NUMI Web Services (IIS).

File Services		Pile Services Help
rovides technologies that help you manag earching, and enable access for UNIX clier	e storage, enable file replication, mana It computers	ge shared folders, ensure fast file
🔊 Role Status		Go to File Services
Messages: None		
System Services: All Running		
(i) Events: 3 informational in the last :	24 hours	
Role Services: 1 installed		Add Role Services
Role Service	Status	😤 Remove Role Services
👆 File Server	Installed	
Distributed File System	Not installed	
DFS Namespaces	Not installed	
DFS Replication	Not installed	
File Server Resource Manager	Not installed	
Services for Network File System	Not installed	
Windows Search Service	Not installed	
Windows Server 2003 File Services	Not installed	
Indexing Service	Not installed	
BranchCache for network files	Not installed	
Desevision		
Description:		



0) Web Server (HiS)		10 Web Server (IiS) Help
Provides a reliable, manageable, and scalable Web applicat	ion infrastructure.	
0) Role Status		l'à Go to Web Server (liS)
Messages: None System Services: 4 Running, 2 Stopped & Events: 1 warning, 12 informational in the last 24 Best Practices Analyzer: To start a Best Practice to the Analyzer Analyzer.	hours s Analyzer scan, go	
Scan this Role	i inniepage and circk	
8 Role Services: 33 Installed		Add Role Services
Role Service	Status	& Remove Role Services
Common HTTP Features	Installed	
Static Content	Installed	
Default Document	Installed	
Directory Browsing	Installed	
HTTP Errors	Installed	
WebDAV Publishing	Not installed	
Assiration Development	Installed	
ASP NFT	Installed	
.NET Extensibility	Installed	
ASP	Not installed	
CGI	Not installed	
ISAPI Extensions	Installed	
!SAPFilters	Installed	
Sever Side Includes	Not installed	
Health and Diagnostics	Installed	
HTTP Logging	Installed	
Logging Tools	Installed	
Request Monitor	Installed	
Tracing	Installed	
Custom logging	Not installed	
Const Logging	Not installed	
P	Installed	
Windows Authentication	Installed	
Digest Authentication	Not installed	
Client Certificate Mapping Authentication	Installed Ii S	
Client Cerbhcate Mapping Authentication In:	stalled URL	
Authorization	Not installed	
Request Filtering	Installed	
IP and Domain Restrictions	Not installed	
Performance	Installed	
Static Content Compression	Installed	
Manager Teals	Not installed	
lis Massement Console	Installed	
liS Management Scripts and Tools	Installed	
Management Service	Installed	
liS6 Nanagement Compatibility	Installed	
IiS 6 Metabase Compatibility	Installed	
IIS 6 WMCompatibility	Installed	
IIS 6 Scripting Tools	Installed	
liS6 Management Console	Installed	
FTP Server	Not installed	
FTP Service	Not installed	
FIP Extensibility	Not installed	
IIS Hostable Web Core	NOT INSTALLED	
Description:	1	
Web Server provides support for HTML Web sites and op ASP.NET, ASP, and Web server extensions. You can use the best an internal or extension. Web site or to conside a new	tional support for he Web Server to	
developers to create Web-based applications.		

Figure 5: NUMI Web Services IIS

### 6.4.2. Feature Delegation

Select the main node in IIS, with the server name. Then double click on "Feature Delegation" item. Change the "Feature Delegation" settings for the server, as shown in Figure 6: IIS Feature Delegation.



Figure 6: IIS Feature Delegation

Make sure all authentication rules are set to Read/Write as shown in Figure 7: Feature Delegation Selection.

onnections	Feature Delega	ition	
VAAUSNUMAPP81 (VHAMASTER)	Use this feature to configure the default delegation state for features at lower levels in IIS Manager.		
Application Pools	Group by: No Grouping	•	
	Name 🔺	Delegation	
	NET Authorization Rules	Read/Write	
	.NET Compilation	Read/Write	
	.NET Error Pages	Read/Write	
	.NET Globalization	Read/Write	
	.NET Profile	Read/Write	
	.NET Roles	Configuration Read/Write	
	.NET Trust Levels	Read/Write	
	.NET Users	Configuration Read/Write	
	Application Settings	Read/Write	
	ASP.NET Impersonation	Read/Write	
	Authentication - Anonymous	Read/Write	
(	Authentication - Forms	Read/Write	
	Authentication - Windows	Read/Write	
	Authorization Rules	Read/Write	
	Compression	Read/Write	
	Connection Strings	Read/Write	
	Default Document	Read/Write	
	Directory Browsing	Read/Write	
	Error Pages	Read/Write	
	Feature Delegation	Readywrite	
	Handler Mappings	Read/Write	
	HTTP Response Headers	Read, write	
	ISAPI Filters	Read Only Net Delegated	
	Logging Mashina Kau	Not Delegated	
	MIME Tupos	Read/Write	
	Modules	Read/Write	
	Output Caching		
	Pages and Controls	Read/Write	
	Request Filtering	Read/Write	
	Session State	Read/Write	
	SMTP E-mail	Read/Write	
	SSL Settings	Read Only	

Figure 7: Feature Delegation Selection

### 6.5. Install Microsoft ASP.Net 2.0 AJAX Extensions 1.0

This applies to the **web** servers only.

1. Download the Microsoft ASP.Net 2.0 AJAX Extensions 1.0 from Microsoft's website.

2. Run the ASPAJAXExtSetup.msi by double-clicking it.

3. When the *File Download – Security Warning* window displays, *click* the <Run> button (shown in Figure 8: Microsoft ASP.Net 2.0 File Download-Security Warning window).

File Down	load - Security Warning 🛛 🗙
Do you	want to run or save this file?
18	Name: ASPAJAXExtSetup.msi Type: Windows Installer Package, 1.36 MB From: vhaannweb2.v11.med.va.gov
	<u>R</u> un <u>S</u> ave Cancel
1	While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. <u>What's the risk?</u>

#### Figure 8: Microsoft ASP.Net 2.0 File Download-Security Warning Window

4. When the *Internet Explorer – Security Warning* window displays, *click* the <Run> button (shown in Figure 9: Microsoft ASP.Net 2.0 Internet Explorer-Security Warning window).

Internet	Explorer - Security Warning		X
Do you	want to run this software?		
	Name: <u>ASP.NET 2.0 AJAX Extensio</u> Publisher: <u>Microsoft Corporation</u>	<u>205</u>	
× Mor	re options	Run	Don't Run
١	While files from the Internet can be use your computer. Only run software from	ful, this file type ca publishers you trus	n potentially harm st. <u>What's the risk?</u>

#### Figure 9: Microsoft ASP.Net 2.0 Internet Explorer-Security Warning Window

5. When the Microsoft ASP.NET AJAX Extensions 1.0 Setup window displays, click the <Next> button (shown in Figure 10: Microsoft ASP.NET 2.0 AJAX Extensions 1.0 Setup Wizard window).





6. Click the "I accept the terms in the License Agreement" checkbox, as illustrated in Figure 11: Microsoft ASP.NET 2.0 AJAX License Agreement window.

7. *Click* the <Next> button.



Figure 11: Microsoft ASP.NET 2.0 AJAX License Agreement Window

8. *Click* the <Install>button (shown in Figure 12: Microsoft ASP.NET 2.0 AJAX Installation window).



Figure 12: Microsoft ASP.NET 2.0 AJAX Installation Window

9. The installation is complete. Select the <Finish> button by *clicking* on it to exit the installation wizard, as depicted in Figure 13: Microsoft ASP.NET 2.0 AJAX Completion window.

If you do not wish to view the release notes, *un-check* the "Display Microsoft"

ASP.NET 2.0 AJAX Extensions 1.0 Release Notes" checkbox.



Figure 13: Microsoft ASP.NET 2.0 AJAX Completion window

### 6.6. Install Microsoft Web Services Enhancements 3.0

This applies to the **web** servers only.

- 1. Download the Microsoft Web Services Enhancements 3.0 from Microsoft's website.
- 2. Run the **Microsoft WSE 3.0.msi** by *double-clicking* it.

3. When the *File Download* – *Security Warning* window displays, *click* the <Run> button (shown in Figure 14: Microsoft WSE 3.0 File Download-Security Warning window).



Figure 14: Microsoft WSE 3.0 File Download-Security Warning Window

4. When the *Internet Explorer – Security Warning* window displays, *click* the <Run> button (shown in Figure 15: Microsoft WSE 3.0 Internet Explorer-Security Warning window).

Internet	Explorer - Security Warning		×
Do you	want to run this software?		
	Name: <u>Web Services Enhancement</u> Publisher: <u>Microsoft Corporation</u>	ts 3.0 SDK Installati	on Pac
× Mor	e options	Run	Don't Run
1	While files from the Internet can be use your computer. Only run software from	ful, this file type car publishers you trus	n potentially harm t. <u>What's the risk?</u>

Figure 15: Microsoft WSE 3.0 Internet Explorer-Security Warning Window

5. When the Microsoft WSE 3.0 – InstallShield Wizard window displays, click the <Next> button (shown in Figure 16: Microsoft WSE 3.0 InstallShield Wizard Welcome window).



Figure 16: Microsoft WSE 3.0 InstallShield Wizard Welcome Window

6. Click the **"I accept the terms in the license agreement"** checkbox, as illustrated in Figure 17: Microsoft WSE 3.0 License Agreement window.

7. *Click* the <Next> button.

Թ Microsoft WSE 3.0 - InstallShield Wizard	×
License Agreement Please read the following license agreement carefully. Before this software can be installed, the terms of this agreement must be accepted.	0
MICROSOFT SOFTWARE LICENSE TERMS	-
WEB SERVICES ENHANCEMENTS 3.0 FOR MICROSOFT.NET SOFTWARE DEVELOPMENT KIT	
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft	۰ ۲
C I accept the terms in the license agreement	. 1
C I do not accept the terms in the license agreement	K
Instalishield	
< <u>B</u> ack <u>N</u> ext > Can	cel

Figure 17: Microsoft WSE 3.0 License Agreement Window

8. Click the <Administrator>radio button, as illustrated in Figure 18: Microsoft WSE 3.0 InstallShield Wizard window. $\langle$ 

9. *Click* the <Next> button.

🙀 Microsoft WSE 3.0 -	InstallShield Wizard 🛛 🗙		
Setup Type Choose the setup typ	be that best suits your needs.		
Please select a setup	type:		
C Runtime	Installs the runtime files only.		
• Administrator	Runtime install plus standalone tools. Suitable for a deployment scenario where the tools are needed for configuration.		
C <u>D</u> eveloper	Administrator install plus documentation and samples. Microsoft .NET Framework SDK 2.0 or Microsoft Visual Studio 2005 are required to view the documentation. Microsoft Visual Studio 2005 is required to build and run the samples.		
C Visual Studio Developer	Developer install plus Visual Studio Tools. Microsoft Visual Studio 2005 is required for this installation type.		
C Cu <u>s</u> tom	Choose which program features you want installed and where they will be installed. Recommended for advanced users.		
InstallShield			
	< <u>B</u> ack <u>N</u> ext > Cancel		

#### Figure 18: Microsoft WSE 3.0 InstallShield Wizard Window

10. *Click* the <Install>button (shown in Figure 19: Microsoft WSE 3.0 Installation window).

🙀 Microsoft WSE 3.0 - InstallShield Wizard	×
Ready to Install the Program         The wizard is ready to begin installation.	9
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
Instationeid <u>Rack</u> Install Cancel	

#### Figure 19: Microsoft WSE 3.0 Installation Window

11. *Click* the <Finish>button (shown in Figure 20: Microsoft WSE 3.0 Completion window).



Figure 20: Microsoft WSE 3.0 Completion Window

# 6.7. Install SQL Server

Install the Microsoft SQL Server 2005 Database Server software only on the **database server**, applying both Microsoft installation instructions and local best practices.

All service packs through SP 3 are required; additional service packs or patches may be installed subsequent to application testing, and in accordance with local best practices.

All production NUMI databases should be run in Simple Recovery mode, to enable replication to function, and to maximize the recoverability of the databases. In non-production environments, any recovery mode is acceptable, and simple recovery mode is encouraged for development and QA testing environments due to ease of administration.

### 6.8. Download all SQL Server Patches

This applies to the **database server** only.

# 6.9. Restore the Appropriate Databases for the NUMI Application

This applies to the **database server** only.

Follow the instructions in section 5 Instructions for Installing Database Components.

# 6.10. Installing NUMI Exchange on Server 2008 R2

Before doing this, you must make a backup copy of the web.config file (if this is an upgrade). Settings may need to be extracted from this in the future.

### 6.10.1. Unzip/Install NUMI Exchange Distribution

1. Using Windows Explorer, create the **NumiExchange** folder on the D drive, if available; otherwise create on the C drive. E.g., D:\NumiExchange

2. Unzip the NUMI Exchange files into the NumiExchange folder created above.

3. Update the application settings in the NUMI Exchange web.config file, located in the directory created above. Typically, this would involve updating the database connection string.

### 6.10.2. NUMI Exchange Web Site Configuration

Using IIS Manager, add a new web site and select the SSL certificate as shown in Figure 21: Add NUMI Exchange web site.

Add Web Site			? ×
Site name: Ap	plication pool:		
NumiExchange	miExchange		S <u>e</u> lect
Content Directory			
Physical path:			
D:\NumiExchange\NUMI_Increment	:6_Sprint2_Build_2		
Pass-through authentication			
Connect as Test Settings			
Binding			
<u>I</u> ype: <u>I</u> P address:		Port:	_
https 🔄 All Unassigne	;d	▼ 443	
Host name:			
<u>S</u> L certificate:			
VAAUSNUMWEB81.aac.dva.va.gov	· •	<u>⊻</u> iew…	
Start Web site immediately			
		ОК	Cancel





Figure 22: NUMI Exchange Website

The NUMI web site basic and advanced settings are shown in Figure 23: NUMI Exchange Basic Settings and Figure 24: NUMI Advanced Settings.

Edit Site	? ×
Site name: Application pool:           NumiExchange         NumiExchange	S <u>e</u> lect
Physical path: D:\NumiExchange\NUMI_Increment6_Sprint2_Build_2 Pass-through authentication	
Connect as Test Settings	
ОК	Cancel

Figure 23: NUMI Exchange Basic Settings

🗄 (General)	
Application Pool	NumiExchange
Bindings	https:*:443:
ID	2
Name	NumiExchange
Physical Path	D:\NumiExchange\NUMI_Increment6_Sprint2_Build_201304
Physical Path Credentials	
Physical Path Credentials Logon Type	ClearText
Start Automatically	True
3 Behavior	
Onnection Limits	
Enabled Protocols	http
Name [name] A unique name for the site.	

#### Figure 24: NUMI Advanced Settings

25

The NUMI Exchange web site bindings are shown in Figure 25: NUMI Exchange Bindings.

e Bindir	ngs				?
Type https	Host Name	Port 443	IP Address *	Binding Information	<u>A</u> dd Edit <u>R</u> emove B <u>r</u> owse
					ose

Figure 25: NUMI Exchange Bindings

The NUMI Exchange web site authentication settings are shown in Figure 26: NUMI Exchange Authentication Settings.

1 Internet Information Services (IIS) Manager							
COO O VAAUSNUMWEB	42 🕨 Sites 🕨 NumiExchange 🕨			🖾 🖂 🚱 •			
<u>File Vi</u> ew <u>H</u> elp							
Connections	Authentication			Actions			
Start Page	<b>V</b>			W Help			
VAAUSNUMWEB42 (VHAMAST	Group by: No Grouping 🔹						
Application Pools	Name A	Status	Response Type				
	Anonymous Authentication	Enabled					
	Forms Authentication	Disabled	HTTP 302 Login/Redirect				
🕀 🌍 NumiExchange	Windows Authentication	Disabled	HTTP 401 Challenge				
T	🔚 Features View 💦 Content View						
Configuration: 'NumiExchange' web.conf	ig			¶.:			

Figure 26: NUMI Exchange Authentication Settings

The NUMI Exchange website SSL settings are shown in Figure 27: NUMI Exchange SSL Settings.



#### Figure 27: NUMI Exchange SSL Settings

### 6.10.3. Application Pool Configuration

The NUMI Exchange application pool setup is shown in Figure 28: Application Pool window.

📲 Internet Information Services (IIS) Manager 📃 🔍								
🔕 🕤 🕼 • VAAUSNUMWEB42 • Application Pools 🛛 😨 🖄 🔞 •								
Eile View Help								
Ele View Help Connections Start Page VAUSNUMWEB42 (VHAMAST Application Pools Application Pools MDWS1_2 NumExchange	Application	on Pools and manage rocesses, co Status Started Started Started Started Started Started Started	S the list of applic ontain one or mc Go ~ Shor .NET Frame v4.0 v4.0 v4.0 v4.0 v4.0 v4.0 v4.0 v2.0 v2.0 v2.0	ation pools on the se re applications, and Managed Pipeli Integrated Classic Classic Integrated Classic Integrated Integrated	erver. Application pools are provide isolation among di lo Grouping Identity ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden	fferent Applica 0 0 1 1 1 1	Act	ions Add Application Pool Defaults Set Application Pool Defaults Application Pool Tasks Start Stop Recycle Edit Application Pool Basic Settings Recycling Advanced Settings Rename Remove View Applications Help Online Help
<b>I</b>	Features View	ontent View				Þ		
Ready								<b>€</b> 1.:

#### Figure 28: Application Pool Window

The NUMI Exchange application pool basic settings are shown in Figure 29: NUMI Exchange Application Pool Basic Settings.

Edit Application Pool	? ×
Name:	
NumiExchange	
.NET Framework version:	
.NET Framework v2.0.50727	•
Managed pipeline mode:	
Integrated	
Start application pool immediately	
OK Cancel	

#### Figure 29: NUMI Exchange Application Pool Basic Settings

The NUMI Exchange application pool advanced settings are shown in Figure 30: NUMI Exchange Application Pool Advanced Settings.

Vanced Settings       v2.0      ,         EI (General)       v2.0      ,         Name       NumExchange      ,         ManagedPipiline Mode       Integrated      ,         Name       NumExchange      ,         Queve Length       1000      ,         Start Automatically       True      ,         Imit       0      ,         Imit Action       NoAction      ,         Imit Action       NoAction      ,         Imit Action       NoAction      ,         Processor Affinity Enabled       False      ,         Processor Affinity Mask       4294967295      ,         El Processor Model      ,      ,         Identity       Application Poolidentity      ,         Identin teorol <th></th> <th></th>		
El (General)           El (General)         v2.0        ,J           Enable 32-Bit Applications         False        ,J           ManagedPipine Mode         Integrated         NumE schange           Queue Length         1000        ,J           El CPU        ,J        ,J           Imit         0        ,J           Imit Action         NoAction        ,J           Imit Action         NoAction        ,J           Imit Action         NoAction        ,J           Process Affinity Enabled         False        ,J           Process Model         Identity        ,J           Identity         Application PoolIdentity        ,J           Identity         Application PoolIdentity<	Ivanced Settings	61
VET Famework Version       v2.0      ,         Enable 32-Bit Applications       Faise      ,         Managed Fipline Mode       Integrated       NumE         Name       NumExchange      ,         Queue Length       1000       Start Automatically       True         EI CPU      ,      ,      ,         Imit       0      ,      ,         Imit Action       NoAction      ,      ,         Imit Action       NoAction      ,      ,         Imit Interval (minutes)       5      ,      ,         Processor Affinity Mask       4294967295      ,      ,         EI Processor Affinity Mask       4294967295      ,      ,         Identity       Application PoolIdentity      ,      , <tr< th=""><th>El (General)</th><th></th></tr<>	El (General)	
Enable 32-Bit Applications       False         ManagedPipeline Mode       Integrated         Name       NumExchange         Queue Length       1000         Start Automatically       True         El CPU       0         limit       0         limit Action       NoAction         limit Devel (minutes)       20         load User Profile       False         Maximu Worker Processes       I         Ping Pendo(seconds)       30         Shutdown Time Limit (seconds)       90         Startup Time Limit (seconds)       90         El Process Orphaning       Enabled         Enabled       False         Executable       Suddown Executable         Shutdown Executable       S         Shutdown Executable       S         Shutdown Executable       True <t< td=""><td>.NET Framework Version</td><td>v2.0</td></t<>	.NET Framework Version	v2.0
Managed Pipelins Mode     Integrated       Name     NumE Exchange       Queue Length     1000       Start Automatically     True       EI     CPU       Imit     0       Imit Action     NoAction       Imit Action     NoAction       Imit Action     NoAction       Imit Interval (minutes)     5       Process Adfinity Enabled     False       Process Model     Identity       Identity     Application Poolidentity       Integrated     True       Ping Application     So       Statup Time limit (seconds)     9	Enable 32-Bit Applications	False
Name     NumE xchange       Queue Length     1000       Start Automatically     True       EI CPU     0       limit     0       limit Action     NoAction       limit Interval (minutes)     5       Processor Affinity Enabled     False       Processor Affinity Enabled     False       Processor Affinity Enabled     False       Identity     Application PoolIdentity       Identhy     Application PoolIdenti	Managed Pipeline Mode	Integrated
Queue Length       1000         Start Automatically       True         EI CPU       0         limit       0         limit Action       NoAction         limit Interval (minutes)       5         Processor Affinity Enabled       False         Processor Affinity Enabled       False         Processor Affinity Mask       4294967295         EI Process Model       Identity         Identity       Application PoolIdentity         Ing Enabled       True         Palse       Executable	Name	NumiExchange
Start Automatically       True         EI CPU       0         limit Action       NoAction         limit Action       NoAction         limit Action       NoAction         limit Action       NoAction         limit Iteval (minutes)       5         Processor Affinity Mask       4294967295         EI Process Model       False         Identity       Application PoolIdentity         Inadeconds       90         El Pooces Orphaning       Enabled         El Proces Orphaning       False	Queue Length	1000
EI CPU limit Action NoAction limit Interval (minutes) 5 Processor Affinity Enabled False Processor Affinity Mask 4294967295 EI Process Model Identity Application PoolIdentity Ide Time out (minutes) 20 Ioad User Profile False Maximum Worker Processes I Ping Enabled True Ping Maximum Response Time (seconds) 90 Statutg Time limit (seconds) 90 Statutg Time limit (seconds) 90 Statutg Time limit (seconds) 90 EI Process Orphaning Enabled False Executable Parameters EI Rapid-FailProtection "Service Unavailable" Response Type Httplevel Enabled True Failure Interval(minutes) 5 Shutdown Executable Shutdown Executable Shutdown Executable Parameters EI Recycling False B Generate Recycle Event log Entry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Reguest limit 0 IB Specific Times Time (KB) 0 <b>NET Framework Version</b> [mangedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" wilicause allASP.NET requests to fail.	Start Automatically	True
limit       0         limit Action       NoAction         limit Interval (minutes)       5         Processor Affinity Inabled       False         Processor Affinity       Application PoolIdentity         Identity       Application PoolIdentity         Process Orphaning       True         Enabled       False         Executable       Parameters         El       R	EI CPU	
Imit Action       NoAction         Imit Interval (minutes)       5         Processor Affinity Mask       4294967295         El Process Model       Imit Jack (294967295)         Identity       Application PoolIdentity         Ing Enabled       True         Ping Enabled       False         Executable       False         Executable       False         Executable       False         Interview Failer rotection       S         Shutdown Executable       S	limit	0
limit Interval (minutes)       5         Processor Affinity Enabled       False         Processor Affinity Mask       4294967295         El Process Model       Application PoolIdentity         Identity       Application PoolIdentity         Ing Bashed       True         Ping Maximum Response Time (seconds)       90         El Process Orphaning       Implication         Enabled       False         Executable       False         Executable       False         Executable       False         Shutdown Executable <td>limit Action</td> <td>NoAction</td>	limit Action	NoAction
Processor Affinity Enabled       False         Processor Affinity Mask       4294967295         El Processo Model       Identity         Identity       Application PoolIdentity         Process Orphaning       Solutown Implication Pool         Enabled       False       Executable         Executable       False       Executable         Shutdown Executable       Solutown Executable       Solutown Executable         Shutdown Executable       Solutown Executable       Solutown Executable         Bisabl	limitInterval (minutes)	5
Processor Affinity Mask 4294967295 EI Process Model Identity Application PoolIdentity Ide Time-out (minutes) 20 Ioad User Profile False Maximum Worker Processes I Ping Enabled True Ping Maximum Response Time (seconds) 90 Ping Period(seconds) 30 Shutdown Time Limit (seconds) 90 Startup Time Limit (seconds) 90 EI Process Orphaning Enabled False Executable Parameters EI Rapid-FailP rotection "Service Unavailable" Response Type Httplevel Enabled True Failure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Parameters EI Repiding Disable Overlapped Recycle False BI Recycling To Configuration Change False BI Recycling Time Interval(minutes) 1740 Request limit 0 BI Specific Times Time Span][Array VitualMemory Limit (KB) 0 MET Framework Version] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Processor Affinity Enabled	False
El Process Model Identity Application PoolIdentity Idle Time-out (minutes) 20 Ioad User Profile False Maximum Worker Processes I Ping Enabled True Ping Maximum Response Time (seconds) 90 Ping Period (seconds) 30 Shutdown Time Limit (seconds) 90 Statup Time limit (seconds) 90 El Process Orphaning Enabled False Executable Executable Parameters El Rapid-FailP rotection "Service Unavailable" Response Type Httplevel Enabled True False Executable Parameters 5 El Rapid-FailP rotection "Service Unavailable" Response Type Httplevel Enabled True Falure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Shutdown Executable Shutdown Executable Parameters El Recycling Disable Overlapped Recycle False Disable Recycle Dentry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Request limit 0 IB Specific Times Time Span[] Array VitualMemory Limit (KB) 0 <b>NET Framework Version</b> ImanagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Processor Affinity Mask	4294967295
Identity       Application PoolIdentity         Identity       20         Ioad User Profile       False         Maximum Worker Processes       I         Ping Enabled       True         Ping Enabled       True         Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       Process Orphaning         Enabled       True         Falue Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Process         Shutdown Executable       Process <t< td=""><td>El Process Model</td><td></td></t<>	El Process Model	
Ide Time out (minutes)       20         load User Profile       False         Maximum Worker Processes       I         Ping Enabled       True         Ping Period (seconds)       90         Shutdown Time Limit (seconds)       90         Startup Time limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       False         Executable       False         Executable       False         Executable       False         Enabled       False         Executable       False         Executable       False         Executable       False         Enabled       True         False       S         Shutdown Executable       S         Shutdown Executable       S         Shutdown Executable       False         Disable Recycling for Configuration Change False       IB         B Generate Recycle Event log Entry       Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740       Reguest limit       0         IB Specific Times       Time S pan[] A rray       VitualM e mory Limit (KB)       0 <t< td=""><td>Identity</td><td>ApplicationPoolIdentity</td></t<>	Identity	ApplicationPoolIdentity
load User Profile       False         Maximum Worker Processes       I         Ping Enabled       True         Ping Enabled       True         Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         Startup Time limit (seconds)       90         El Process Orphaning       False         Enabled       False         Executable       Executable         Executable       False         Executable       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB         B Generate Recycle Event log Entry       Private Memory Limit (KB)       0         Request limit       0       0         IB Specific Times       Time Span[] A rray       VitualMemory Limit (KB)         0       0       ImagedRuntime Version       0         NET Framework. Selecting "No Managed Code" wilicause allA	Idle Time-out (minutes)	20
Maximum Worker Processes       I         Ping Enabled       True         Ping Maximum Response Time (seconds)       90         Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       False         Executable       False         Executable       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       S         Shutdown Executable       False         Babled       True         False       False         El Reyoling       S         Maximum Failures       5         Shutdown Executable       S         Shutdown Executable       False         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB         IB Generate Recycle Event log Entry       Private Memory Limit (KB)       0         Regular Time Interval(minutes)       1740       Regular Time Interval(minutes)         IB Specific Times       Time Span[] A rray       Vitual Memory Limit (KB)       0         Net Framework Versi	load User Profile	False
Ping Enabled       True         Ping Maximum Response Time (seconds)       90         Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         Startup Time limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       False         Executable       False         Executable       True         Failure Interval (minutes)       5         Maximum Failures       5         Shutdown Executable       S         Shutdown Executable       False         Bable Overlapped Recycle       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         B Generate Recycle Event log Entry       Private Memory Limit (KB)         Private Memory Limit (KB)       0         Reguest limit       0         B Specific Times       Time Span[] A rray         Vitual Memory Limit (KB)       0         NET Framework Version       0         ImaagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.		
Ping Maximum Response Time (seconds)       90         Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         Startup Time limit (seconds)       90         El Process Orphaning       False         Enabled       False         Executable       Executable         Executable       True         Faller Interval (minutes)       5         Maximum Failures       5         Shutdown Executable       S         Shutdown Executable       False         Shutdown Executable       S         Shutdown Executable       S         Shutdown Executable       S         Shutdown Executable       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         B Generate Recycle Event log Entry       Private Memory Limit (KB)         Private Memory Limit (KB)       0         Request limit       0         B Specific Times       Time Span[] A rray         Vitual Memory Limit (KB)       0         NET Framework Version       0         ImaagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail. <td>Ping Enabled</td> <td>True</td>	Ping Enabled	True
Ping Period (seconds)       30         Shutdown Time Limit (seconds)       90         Startup Time Limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       Executable         Executable       False         Executable       False         Executable       False         Executable       False         Executable       True         Falure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       Shutdown Executable         Shutdown Executable       False         Disable Covenapped Recycle       False         Disable Recycling for Configuration Change False       IB         B Generate Recycle Event log Entry       Private Memory Limit (KB)       0         Request limit       0       IRS pan[] A rray         VitualM emory Limit (KB)       0       Immediate Span[] A rray         VitualM emory Limit (KB)       0       Immediate Span[] A rray         VitualM emory Limit (KB)       0       Immediate Span[] A rray         NET Framework       Version       Immediate Span[] A specific version of th	Ping Maximum Response Time (seconds)	00
Shutdown Time Limit (seconds)       90         Startup Time limit (seconds)       90         El Process Orphaning       False         Enabled       False         Executable       Executable         Executable       False         Executable       False         Executable       False         Executable       False         Executable       False         Executable       False         Executable       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         Disable Overlapped Recycle       False         IB Generate Recycle Event log Entry       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] A rray         VitualMemory Limit (KB)       0         MET Framework Version       0         MeanagedRuntimeVersion] Configures the application pool to load a specific	Pine Period (seconds)	30
Startup Time Limit (seconds)       90         El Process Orphaning       90         Enabled       False         Executable       Executable         Executable       Executable         Executable       False         Executable       False         Executable       False         Executable       False         Executable       False         Enabled       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       False         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB         B Generate Recycle Event log Entry       Private Memory Limit (KB)         Private Memory Limit (KB)       0         Reguest limit       0         IB Specific Times       Time Span[] A rray         Virtual Memory Limit (KB)       0         MAXIM Exercision Configures the application pool to load a specific version of the         .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Shutdown Time Limit (seconds)	90
EI       Process Orphaning         Enabled       False         Executable       Executable         Executable       Parameters         EI       Rapid-FailP rotection         "Service Unavailable" Response Type       Httplevel         Enabled       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       Palse         Disable Overlapped Recycle       False         Disable Recycling       0         Request limit       0         Request limit       0         IB Specific Times       Time Span[] A rray         VinualM emory Limit (KB)       0         NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Statun Time limit (seconds)	90
En Process orphaning       False         Enabled       False         Executable       Executable         Executable       Parameters         El Rapid-FailP rotection       "Service Unavailable" Response Type         "Service Unavailable" Response Type       Httplevel         Enabled       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       Shutdown Executable         Shutdown Executable       Palse         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB         B Generate Recycle Event log Entry       Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0       IB         IB Specific Times       Time Span[] A rray         VitualMemory Limit (KB)       0         IMET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	El Brosses Ornhaning	50
Executable Executable Executable Parameters EI Rapid-FailP rotection "Service Unavailable" Response Type Httplevel Enabled True Failure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Shutdown Executable Shutdown Executable Parameters EI Recycling Disable Overlapped Recycle False Disable Recycling for Configuration Change False IB Generate Recycle Event log Entry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Request limit 0 IB Specific Times TimeSpan[] Array VitualMemory Limit (KB) 0 MET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Encoded	Falsa
Executable Parameters Executable Parameters EI Rapid-FailP rotection "Service Unavailable" Response Type Httplevel Enabled True Failure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Shutdown Executable Shutdown Executable Parameters EI Recycling Disable Overlapped Recycle False Disable Recycling for Configuration Change False IB Generate Recycle Event log Entry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Request limit 0 IB Specific Times Time Span[] A rray VitualMemory Limit (KB) 0 MET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Eventshe	raise
Electronic Fundanciers El Rapid-FailProtection "Service Unavailable" Response Type Httplevel Enabled True Failure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Shutdown Executable Shutdown Executable Parameters El Recycling Disable Overlapped Recycle False Disable Recycling for Configuration Change False IB Generate Recycle Event log Entry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Request limit 0 IB Specific Times Time Span[] A rray VitualMemory Limit (KB) 0 MET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Executable Parameters	
"Service Unavailable" Response Type       Httplevel         Enabled       True         Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       5         Shutdown Executable       5         Shutdown Executable       5         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       18         B Generate Recycle Event log Entry       0         Private Memory Limit (KB)       0         Request limit       0         IB Specific Times       Time Span[] A rray         Vitual Memory Limit (KB)       0         .NET Framework Version       [managed Runtime Version] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	El Basid EsilBrataction	
Enabled True Failure Interval(minutes) 5 Maximum Failures 5 Shutdown Executable Shutdown Executable Parameters EI Recycling Disable Overlapped Recycle False Disable Recycling for Configuration Change False IB Generate Recycle Event log Entry Private Memory Limit (KB) 0 Regular TimeInterval(minutes) 1740 Request limit 0 IB Specific Times Time Span[] A rray Vitual Memory Limit (KB) 0 .NET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	"Service Unavailable" Response Type	Httplayol
Failure Interval(minutes)       5         Maximum Failures       5         Shutdown Executable       7         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       18         Benerate Recycle Event log Entry       7         Private Memory Limit (KB)       0         Request limit       0         IB Specific Times       Time Span[] A rray         VitualMemory Limit (KB)       0         .NET Framework Version       0         ImanagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Enabled	
Maximum Failures       5         Maximum Failures       5         Shutdown Executable       5         Shutdown Executable       5         Shutdown Executable Parameters       5         El Recycling       0         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       0         IB Generate Recycle Event log Entry       0         Private Memory Limit (KB)       0         Request limit       0         IB Specific Times       Time Span[] A rray         Vitual Memory Limit (KB)       0         INET Framework Version       0         ImanagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Failure Interval(minutes)	5
Maximum Particles       J         Shutdown Executable       Shutdown Executable Parameters         EI Recycling       Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] A rray         VitualMemory Limit (KB)       0         .NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Maximum Eailures	5
Shutdown Executable         Shutdown Executable         Shutdown Executable         Private         Disable Overlapped Recycle         False         Disable Recycling for Configuration Change False         IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] A rray         VitualMemory Limit (KB)       0         .NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Shutdawa Fugavitable	5
Shutdown Executable Parameters         EI Recycling         Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False         IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] A rray         VitualMemory Limit (KB)       0         .NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Shutdown Executable	
Ein Recycling       Disable Overlapped Recycle       False         Disable Recycling for Configuration Change False       IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       Time Span[] A rray         VitualMemory Limit (KB)       0         IMET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Shudowin Executable Parameters	
Disable Ovenapped Recycle       Faise         Disable Recycling for Configuration Change False         IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] Array         VitualMemory Limit (KB)       0         .NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.		
IB Generate Recycle Event log Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] Array         Virtual Memory Limit (KB)       0         .NET Framework Version       [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Disable Overlapped Recycle	False
B Generate Recycle Event Tog Entry         Private Memory Limit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       TimeSpan[] A rray         VitualMemory Limit (KB)       0         .NET Framework Version       0         [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Disable Recycling Tor Connguration Change	Taise
Image: Private memory climit (KB)       0         Regular TimeInterval(minutes)       1740         Request limit       0         IB Specific Times       Time Span[] A rray         Virtual Memory Limit (KB)       0         INET Framework Version       0         ImanagedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	B Generate Recycle Event log Entry	
Request limit       0         IB Specific Times       Time Span[] A rray         Vitual Memory Limit (KB)       0         .NET Framework Version       0         [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Private memory Limit (KB) Regular, Time Interval (minutes)	1740
IB Specific Times Time Span[] A rray Virtual Memory Limit (KB) 0 .NET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause all ASP.NET requests to fail.	Request limit	0
Imespan Array VirtualMemory Limit (KB) 0  IMET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	IR Creation Times	v Time See and Alice v
.NET Framework Version       0         [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	IB Specific Times	limeSpan(JArray
.NET Framework Version [managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	Virtual Memory Limit (KB)	0
[managedRuntimeVersion] Configures the application pool to load a specific version of the .NET Framework. Selecting "No Managed Code" willcause allASP.NET requests to fail.	NET Framework Version	
	[managedRuntimeVersion] Configures the ap .NET Framework. Selecting "No Managed Cod	plication pool to load a specific version of the le" willcause all ASP.NET requests to fail.
OK Cancel		ok Cancel

#### Figure 30: NUMI Exchange Pool Advanced Settings

### 6.11. Installing MDWS 2.7.3.2 on Server 2008 R2

Before doing this, you must make a backup copy of the web.config file (if this is an upgrade). Settings may need to be extracted from this in the future.

### 6.11.1. Download MDWS

Download MDWS 2.7.3.2 from:

ftp://downloads.medora.va.gov/mdws

### 6.11.2. Install MDWS Distribution

Install MDWS following the MDWS Installation Instructions located at:

http://trac.medora.va.gov/web/wiki/Projects/MDWS/Installation

It is recommended that MDWS be installed in the D:\NUMI folder. e.g., D:\NUMI\NUMI2\_7\_3\_2

The following steps from the MDWS Installation Instructions can be skipped:

- Step 4. SQL Server 2008 (optional for non-BSE installations).
- Step 6. Oracle ODAC Server Software.

web.config settings to update:

```
<system.webServer>
```

```
<defaultDocument >
```

<files>

```
<add value="NumiService.asmx" />
```

</files>

</defaultDocument>

</system.webService>

### 6.11.3. MDWS Web Site Configuration

The MDWS web site configuration is shown in Figure 41: Configuring MDWS Website, Figure 42: MDWS Website Basic Settings and Figure 43: MDWS Website Advanced Settings.

HINTERNET INFORMATION SERVICES (IIS)	1anager			
O I ► VAAUSNUMWEB22 ►	Sites 🔸 Default Web Site 🕨	mdws2 🕨		🖸 🛛 🖾 🛛 🖉 🕶
<u>File View H</u> elp				
Connections Start Page VAAUSNUMWEB22 (VHAMASTER\vf Application Pools Sites Sites Model Web Site Model MOWS1_2	/mdws2 Horr	NET Error Pages Globalization Connection Strings Machine Key	roup by:	Actions         Explore         Edit Permissions         Basic Settings         View Virtual Directories         Manage Application         Browse Application         Browse *:8082 (http)         Advanced Settings         Welp         Online Help
	ASP Authentication	CGI Compression	Default Document	
Ready				• <b>1</b> .:

Figure 31: Configuring MDWS Website

dit Applicatio	on		? ×
Site name: Path:	Default Web Site /		
<u>A</u> lias:		Application pool:	
mdws2		MDWS2_APP_POOL	S <u>e</u> lect
Example: sale	es		
Physical path			
D:\MDWS\MD	)WS2_7_3_2		
Pass-through	authentication		
<u>C</u> onnect as.	Test Settings		
		ОК	Cancel

Figure 32: MDWS Website Basic Settings

Analization Deal			
Application Pool		MDW52_APP_POOL	
Physical Path		D:\MDW5\MDW52_7_3_2	
Physical Path Credentials			
Physical Path Credentials I	.ogon Type	ClearText	
Virtual Path		/mdws2	
Behavior			
Enabled Protocols		http	
Application Pool applicationPool] Configures	this application	to run in the specified application pool.	

#### Figure 33: MDWS Website Advanced Settings

The MDWS bindings configuration is shown in Figure 44: MDWS Default Website and Figure 45: MDWS Bindings, If NUMI Exchange is installed on the server using port 80, then configure MDWS to use a different port, e.g., port 8082.

Number Information Services (IIS)	Manager	_ <b>_ _</b> ×
COO	▶ Sites ▶ Default Web Site ▶	🖸 🛛 🖄 I 🖉 🗸
<u>File V</u> iew <u>H</u> elp		
Connections	Second State       Second State <th< th=""><th>Actions Explore Edit Permissions Edit Site Bindings Basic Settings View Applications View Virtual Directories Manage Web Site Restart Start Start Browse Web Site Browse Web Site Browse *:8082 (http) Advanced Settings Configure Limits Help Online Help</th></th<>	Actions Explore Edit Permissions Edit Site Bindings Basic Settings View Applications View Virtual Directories Manage Web Site Restart Start Start Browse Web Site Browse Web Site Browse *:8082 (http) Advanced Settings Configure Limits Help Online Help
Ready		• <b>1</b> .:

#### Figure 34: MDWS Default Website

ite Bindin	gs				? ×
Type http net.tcp net.pipe net.m msmq	Host Name	Port 8082	IP Address *	Binding Information 808:* * localhost localhost	<u>A</u> dd <u>E</u> dit <u>R</u> emove B <u>r</u> owse
					Close

#### Figure 35: MDWS Bindings

The MDWS authentication setup is shown in Figure 46: MDWS Authentication.

🐂 Internet Information Services (IIS) Manager	
AAUSNUMWEB22 > Sites > Default Web Site > mdws2 >	🖬 🛛 🟠 I 🕐 👻
Eile <u>V</u> iew <u>H</u> elp	
Connections Ac	tions
	) Help
Start Page Group by: No Grouping	Online Help
Application Pools Name A Status Response Type	
Image: Sites       Anonymous Authentication       Enabled         Image: Sites       Anonymous Authentication       Disabled         Image: Sites       Anonymous Authentication       Disabled         Image: Sites       Image: Sites       Anonymous Authentication       Disabled         Image: Sites       Image: Sites       Image: Sites       Image: Sites         Image: Sites       Image: Sites       Image: Sites       Image: Sites	
Configuration: 'Default Web Site/mdws2' web.config	<b>€</b> ≣ .:

Figure 36: MDWS Authentication

### 6.11.4. Configuration File Setup

Web.Config

Verify the httpExecution timeout field in the MDWS web.config file:

```
<httpRuntime executionTimeout="900" />
```

VhaSites.xml

If there are any new VistA sites to add to MDWS, add the site information in the MDWS VhaSites.xml file. Follow the same format used for existing sites already in the file. The file is located in the xml folder of the resources directory in the MDWS website directory. E.g., D:\MDWS\MDWS2\_7\_3\_2\resources\xml\VhaSites.xml.

### 6.11.5. MDWS Application Pool Configuration

The application pool settings are shown in Figure 47: Configuring Application Pool Settings, Figure 48: MDWS Application Pool Basic Settings and Figure 49: MDWS Application Pool Advanced Settings.

Internet Information Ser	vices (IIS) Manager							
📀 💿 🚺 🕻 VAAUSN	UMWEB22    Application	Pools						🔁 🖂 🏠 I 🕑 🗸
<u>File View H</u> elp								
Connections	Application with worker processes, or Filter: Name A ASP.NET v4.0 Classic NET APD. Classic NET APD. DefaultAppPool MDWS1_2 MDWS2_APP_POOL	n Pools and manage contain one of Status Started Started Started Started Started Started Started Started Started	the list of application for more application or whether the second secon	ation pools on the set ons, and provide isola (All Group by: M Managed Pipeli Integrated Classic Integrated Classic Integrated Integrated	ver. Application pools ar ation among different app o Grouping Identity ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden	e associated plications. Applications 0 0 1 1 1 1 1	Act	tions Add Application Pool Set Application Pool Tasks Start Stop Recycle Edit Application Pool Basic Settings Recycling Advanced Settings Rename Remove View Applications Help Online Help
Ready								

Figure 37: Configuring Application Pool Settings

Edit Application Pool	? ×
<u>N</u> ame:	
MDW52_APP_POOL	
.NET Framework version:	
NET Framework v4.0.30319	•
Managed pipeline mode:	
Integrated 💌	
Start application pool immediately	
OK Cance	

Figure 38: MDWS Application Pool Basic Settings

Ξ	(General)	▲
	.NET Framework Version	¥4.0 ×
ľ	Enable 32-Bit Applications	False
	Managed Pipeline Mode	Integrated
	Name	MDWS2_APP_POOL
	Queue Length	1000
	Start Automatically	True
Ξ	CPU	
	Limit	0
	Limit Action	NoAction
	Limit Interval (minutes)	5
	Processor Affinity Enabled	False
	Processor Affinity Mask	4294967295
Ξ	Process Model	
	Identity	ApplicationPoolIdentity
	Idle Time-out (minutes)	20
	Load User Profile	False
	Maximum Worker Processes	1
	Ping Enabled	True
	Ping Maximum Response Time (seconds)	90
	Ping Period (seconds)	30
	Shutdown Time Limit (seconds)	90
	Startup Time Limit (seconds)	90
Ξ	Process Orphaning	
	Enabled	False
	Executable	
	Executable Parameters	
Ξ	Rapid-Fail Protection	
	"Service Unavailable" Response Type	HttpLevel
	Enabled	True
	Failure Interval (minutes)	5
	Maximum Failures	5
	Shutdown Executable	•

Figure 39: MDWS Application Pool Advanced Settings

### 6.11.6. To Restart IIS

- 1. Click <Start>.
- 2. *Click* the **Command Prompt** (or <Run>, depending on the Operating System).

- 3. Type: IISReset.
- 4. Click <Enter>.

Watch the command lines to make sure IIS stops and then starts again.

### 6.11.7. To Test That MDWS Is Working

1. Open a browser on the **application** server and enter the following in the Address bar:

#### http://localhost/NumiService.asmx

2. You have the ability to enter either <localhost>,<the actual IP address>or <the name of the server>. Examples: http://localhost/NumiService.aspx and http://hostname.aac.va.gov/NumiService.aspx

- 3. *Click* the  $\langle G_0 \rangle$  button on the browser to go to the address.
- 4. The *NUMI SERVICE* page will display.
- 5. Choose "ConnectAndLogin"
- 6. In the **Site code** field, enter the code for the VistA you are trying to access.
- 7. Put in your Access and Verify Codes for the username and password.
- 8. Leave the context field blank.
- 9. *Click* the <Invoke>button.

10. If the connection is successful, the VistA welcome message will display in the form of an xml file. Example:

```
<?xml version="1.0" encoding="utf-8" ?>
<UserTO xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://mdws.med.va.gov/numi/NumiService">
 <name>Doe,John</name>
 <$$N>00000001</$$N>
 <DUZ>1000000000</DUZ>
 <siteId>506</siteId>
 <orderRole>0</orderRole>
 <greeting>Good evening DOE, JOHN</preeting>
 <siteMessage>..... DEPARTMENT OF VETERANS AFFAIRS VVV
VVV V*A AAA...... WARNING: UNAUTHORIZED ACCESS, INCLUDING VVV
V*AAAAAAAAAA..... USE OF ACCESS CODES OTHER THAN YOUR OWN, OR
VVVVV*A AAAAAAAA..... MISUSE OF THIS SYSTEM AND/OR ITS DATA IS A VVV*A
AAAAAAAA.... FEDERAL FELONY WARRANTING FBI INVESTIGATION. V*A
AAAAAAAA.. >>> Production Account <<< -----
----- USER HELP TO INCLUDE
VISTA ACCESS/VERIFY, TELEPHONE PINS, OR NETWORK ACCESS PROBLEMS:
Contact your service ADPAC or the Information Systems Help Desk
(x53500) Help Desk hours 7:00am - 4:30pm, Mon-Fri; for EMERGENCY
repairs after 4:30pm, please call the AOD at x55279. SYSTEM BACKUP
characters long and contain at least one letter, one number, and one
symbol(!#$%&*.,≫). Thank you. This is a PRODUCTION
account.</siteMessage>
 </UserTO>
```

#### Figure 40: Sample Welcome Message

If the Access and Verify codes are incorrect, this message will be imbedded in the xml: <message>Not a valid ACCESS CODE/VERIFY CODE pair.</message>

If the Site code is incorrect, this message will be imbedded in the xml:

<message>No site for sitecode 50</message>

Other error messages my display due to connectivity issues.

11. After successfully testing the connection, *click* the <<u>here</u>>link in the following string:

'Click here for a complete list of operations'.

12. Select <Disconnect> from the list.

13. Click the <Invoke> button. This will prevent a connection from being left open.

### 6.12. Installing NUMI on Server 2008 R2

### 6.12.1. Software Copy Instructions

Right click on the zip file and select the "Unblock" if active and select O.K.. Some security schemes will block certain files from being unpacked, typically the Java files under the "web" directory. Setting the file to Unblock eliminates this problem.

Help	NUMI_Main_1.1	I.15.0_Build_20121019.1.zip Properties	? ×
> Folders IIII →	General Secu	urity Summary	
Name -		NUMI_Main_1.1.15.0_Build_20121019.1.zip	
	Type of file:	Compressed (zipped) Folder	
	Opens with:	Compressed (zipped) F	
	Location:	C:\Temp	
	Size:	18.8 MB (19,817,151 bytes)	
	Size on disk:	18.9 MB (19,820,544 bytes)	
	Created:	Yesterday, October 22, 2012, 9:41:45 AM	
	Modified:	Yesterday, October 22, 2012, 9:41:46 AM	
	Accessed:	Today, October 23, 2012, 9:11:24 AM	
	Attributes:	🗖 Bead-only 🗖 Hidden 🛛 Advance	±
	Security:	This file came from another computer and might be blocked to help protect this computer.	

Figure 41: Unblocking Restricted Files in Installation ZIP File

It is recommended that NUMI be installed in the D:\NUMI folder. Using Windows Explorer, create a **NUMI** folder in D drive, if available, otherwise create in C drive. E.g., D:\NUMI.

Unzip the NumiWebApp folder from the NUMI distribution zip file into the D:\NUMI folder. Rename the NumiWebApp folder using the build name of the distribution zip file.

### 6.12.2. NUMI Web Site Configuration

Using IIS Manager, add a new web site as shown in Figure 52: Add NUMI web site.

Add Web Site ? 🗙
Site name: Application pool:
NUMI Select
Content Directory
Physical path:
D:\NUMI\ <install_dir></install_dir>
Pass-through authentication
Connect as Test Settings
Binding
Type: IP address: Port:
http All Unassigned 80
Host name:
Example: www.contoso.com or marketing.contoso.com
Start Web site immediately
OK Cancel

Figure 42: Add NUMI Website

The NUMI web site basic and advanced settings are shown in Figure 53: NUMI Basic Settings and Figure 54: NUMI Advanced Settings.

Edit Site	? ×
Site name: Application poo	S <u>e</u> lect
Physical path: D:\NUMI\ <install_dir></install_dir>	
Pass-through authentication	
Connect as Test Settings	
	OK Cancel

Figure 43: NUMI Basic Settings

٧ā	anced Settings		
	(General)		 
	Application Pool	NUMT	
	Bindinas	http:///11132:.https:///8132:	
	ID	4	
	Name	NUMI Prod 1 1 13 2	
	Physical Path	D:\NUMI\ <install dir=""></install>	
	Physical Path Credentials		
	Physical Path Credentials Logon Type	ClearText	
	Start Automatically	True	
3	Behavior		
-	Connection Limits		
	Enabled Protocols	http	
Ð	Failed Request Tracing		
Ŧ	Failed Request Tracing		

#### Figure 44: NUMI Advanced Settings

The NUMI web site bindings are shown in Figure 55: NUMI Bindings.

Гуре	Host Name	Port	IP Address	Binding Information	<u>A</u> dd
nttp		80	*		
nttps		443	*		<u>E</u> dit
net.tcp				808:*	Romovio
net.pipe				*	Kennove
net.m				localhost	Browse
nsmq				localhost	

#### Figure 45: NUMI Bindings

The NUMI web site authentication settings are shown in Figure 56: NUMI Authentication Settings and Figure 57: NUMI Provider Settings. Make sure NTLM is before Negotiate in the Providers dialog.

Nation Services (IIS	5) Manager			
COC & VAAUSNUMAPP22	► Sites ► NUMI ►			🔁 🖂 🔂 -
<u>File View H</u> elp				
Connections	Authentication Group by: No Grouping Name Anonymous Authentication ASP.NET Impersonation Basic Authentication Forms Authentication Windows Authentication	Status Disabled Disabled Disabled Enabled	Response Type HTTP 401 Challenge HTTP 302 Login/Redirect HTTP 401 Challenge	Alerts         ▲ Click here to learn how to configure Extended Protection.         Actions         Disable         Advanced Settings         Providers         ② Help         Online Help
Configuration: 'NUMI' web.config				• <b>1</b> .:

Figure 46: NUMI Authentication Settings

Providers	? ×
Enabled Providers:	
NTLM Negotiate	Моуе Цр
	Move <u>D</u> own
	<u>R</u> emove
Select a provider from the list of available providers and click Add to add it to the enabled providers.	
Available Providers:	
V	Add
OK	Cancel

Figure 47: NUMI Provider Settings

The NUMI website SSL settings are shown in Figure 58: NUMI SSL Settings.



#### Figure 48: NUMI SSL Settings

The NUMI web site compression settings are shown in Figure 59: NUMI Compression Settings.



Figure 49: NUMI Compression Settings

### 6.12.3. Configuration File Setup

Verify the httpExectuion timeout field in the NUMI web.config file:

<httpRuntime executionTimeout="300" />

### 6.12.4. Application Pool Configuration

The NUMI application pool setup is shown in Figure 60: Application Pool window.

Thternet Information Services (III	5) Manager					
	<ul> <li>Application Pools</li> </ul>					😥 🛛 🏠 I 🕖 🗸
<u>File View H</u> elp						
Connections	Applicatio	n Pools nd manage the list of a o Status .NET Fram Started v4.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0 Started v2.0	oplication pools on the s rmore applications, and Show <u>A</u> ll  Group by: 1 e <u>Managed Pipeli</u> Integrated Classic Integrated Classic Classic	erver. Application pools an provide isolation among No Grouping I dentity ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden ApplicationPoolIden	e Applic 0 0 0 1	Actions          Add Application Pool         Set Application Pool Defaults         Help         Online Help
Ready						<b>*1</b> .:

#### Figure 50: Application Pool Window

The NUMI application pool basic settings are shown in Figure 61: NUMI Application Pool Basic Settings.

Edit Application Pool	? ×
Name:	
NUMI	
.NET <u>F</u> ramework version:	
NET Framework v2.0.50727	-
Managed pipeline mode:	
Start application pool immediately	
OK Cance	el

#### Figure 51: NUMI Application Pool Basic Settings

The NUMI application pool advanced settings are shown in Figure 62: NUMI Application Pool Advanced Settings.

#### Advanced Settongs

6D

EL (Gaparal)	
LI (General)	-2.0
INET Framework version	
Managed Diseling Mardia	Faise Classic
Managed Pipeline Mode	Classic
Name	NUPI
Queue Length	1000
Start Automatically	True
EI CPU	
limit	0
limit Action	NoAction
limit interval (minutes)	5
Processor Affinity Enabled	False
Processor Affinity Mask	4294967295
El Process Model	
Identity	ApplicationPoolIdentity
Idle Time-out (minutes)	20
load User Profile	True
Maximum Worker Processes	
Ping Enabled	True
Ping Maximum Response Time (seconds)	90
Ping Period (seconds)	30
Shutdown Timelimit (seconds)	90
Startup Time limit (seconds)	90
I Process Orphaning	
Enabled	False
Executable	
Executable Parameters	
I Rapid-FailProtection	
"ServiceUnavailable" Response Type	Httplevel
Enabled	True
Eailure Interval(minutes)	5
Maximum Failures	5
Shutdown Executable	,
Shutdown Executable Daramaters	
Piceble Overlage and Descuria	
Disable Overlapped Recycle	False
Disable Recycling for Configuration Changes	False
B Generate Recycle Event log Entry	
Private Memory Limit (KB)	0
Regular TimeInterval(minutes)	120
Request limit	0
B Specific Times	Time Span [] Array
Vintual Memory Limit (KB)	0
NET Framework Version [managedRuntimeVersion] Configures the app Framework. Selecting "No Managed Code" wilk	lication poolto load a specific version of the .NET cause allASP.NET requests to fail.
	~ ()

#### Figure 52: NUMI Application Pool Advanced Settings

# 6.13. Installing CERME (COTS Product) Software and Database from CERMe Install CD

See the *RM Install Guide* PDF file on the CERMe setup CD for detailed instructions on how to setup CERMe. (DBA assistance may be required to setup the database, which must be done before application setup).

### 6.13.1. Install CERME on the Application Server

CERMe install helpful hints: VERSION 12.0 (2013) CUSTOMER ID: **1102** PRODUCT KEY: 755638-507216-296082-523246-21 ORGANIZATION: Department of Veterans Affairs

1. Verify that CERME database is already set up before proceeding with the software installation.

2. If the installation does not start automatically, double click the install.htm file (using Internet Explorer) in the root directory to open the setup welcome page.

3. On license information page, enter the CERME license information provided above and then click "Next".

4. Select Review Manager Enterprise and then click "Next". Select New Installation and then click "Next".

5. When the 'Choose Components" install window is reached select all of the checkboxes and then click "Next".

6. Choose a directory based on local policy (example D:\ Program Files), "Next".

7. On the database page, select "SQL Server" from the dropdown and then click "Next".

8. Enter the **CERME** database connection information, including the database server name, database name (**CERME**), port **1433**, instance (**leave blank**), and the database user credential (user ID **CERME**, DBA assistance required for the password).

9. Choose default settings on the rest of the steps.

10. Use a separate database to store report data and then click No.

11. On the "Install Jetty" window, select Yes to install Jetty.

Installation of the software should start after going through all the setup steps.

After the CERMe application version n.n.n.n and database is installed the following configuration needs to be done.

1. Add the below element in **ReviewManager.xml** file which is located <home directory>  $\ McKesson\CERME\Jetty\$ 

e.g., D:\Program Files (x86)\McKesson\CERME\Jetty\ReviewManager\_xml

Add this element in Config group bottom.

<IntegratedLogin Enabled="true" CookieName="unifiedkey" UnifiedKey="8rzVNfLwjHWHvPctaen9dw=="

AuthenticationFailUrl="/iqm/html/rm\_integrated\_authentication\_failed.htm" GuidUserCid="IQ\_1" Guid="A1B0B165-3C18-4561-935F-5FB81BD42128"

AuthenticateWS="false"/>

2. NOTE- If after successfully setting up the server, it is possible that NUMI will run, but not show any CERMe information. If the user right-clicks on the blank information and views source, they may see a warning about invalid log-in. This is usually because the Integrated Login information entered in the xml file did not get propagated to the CERMe service. Usually, restarting the CERMe service will fix the problem. Before performing a Service Restart, verify ReviewManager.xml contains the correct server name for the desired database access as configured below:

3. Open jetty.xml file from <home directory> \ McKesson\CERME\Jetty\etc folder.

<ConParams name="McKCERME" DBtype="MSS" DBCID="" Driver="net.sourceforge.jtds.jdbc.Driver"

URL="jdbc:jtds:sqlserver://<database\_server>:1433/cerme;sendStringParam etersAsUn

```
icode=false" ABAutoSumConnectionName="" ABIQCConnectionName="" RMDB="Y"
```

/>

```
<PoolParams dbname="McKCERME" Size="25" PoolMax="35" UseCount="200"
```

Timeout="600"

4. Change the default port to "8357" from "80".

e.g., <Set name="Port"><SystemProperty name="jetty.port" default="8357"/></Set>

### 6.13.2. Install CERME SSL Certificate

NUMI will need SSL certificates for CERMe (for Jetty). NUMI uses the SSL certificate for the server that CERMe is running on. If the sever does not have a SSL certificate installed, follow the normal VA processes for obtaining SSL Certificates and install it.

1. Use IIS Manager to export the current certificate to a .pfx file. Select the server name in the Connections pane and double click on the Server Certificates in the IIS pane as shown in Figure 63: IIS Server Certificates.

Number Information Services (II	5) Manager	
COC 1 VAAUSNUMAPP42	•	) 🔛 🖄 I 🕡 👻
<u>File View H</u> elp		
Connections		Actions
😪 - 🕞 🖄 😽	VAAUSNUMAPP42 Home	Open Feature
Start Page	Filter:	Manage Server
Application Pools	IIS	🗢 Restart
		Start
		Stop
⊕ NUMI_1_1_15_0	Authentication Authorization Compression Default Directory Error Pages	View Application Pools
HI WI SU8_Test		View Sites
🗄 🌀 NUMI_ppd	- 🛋 📲 🌇 🧕 🍺 📃	Change .NET Framework Version
H- VII_prodsup	Handler HTTP ISAPI and CGI ISAPI Filters Logging MIME Types	W Help
	Mappings Respo Restrictions	Of line help
	Modules Output Request Server Worker	
	Caching Hitering Certificates Processes	
	Management	
	Configuration Feature Shared Editor Delegation Configuration	
	E Features View	
Ready		• <b>1</b> .:

#### Figure 53: IIS Server Certificates

2. Select the certificate to export and click on the "Export..." link in the Actions pane, as shown in Figure 64: IIS Server Certificate Selection.

Figure 54: IIS Server Certificate Selection

3. Set the name of the .pfx file. Set the password, e.g., use numi (all lowercase) for the password, as shown in Figure 65: IIS Certificate Details. This password will be used in subsequent steps.

Export Certificate			? ×
<u>E</u> xport to:			
D:\Certs\NUMI.pf×			
Password:			
••••			
Confir <u>m</u> password:			
••••			
	OK	Cancel	

Figure 55: IIS Certificate Details

NOTE: For the following, the password can be whatever you choose, but please make a note of them, as they will be used later. For this example, D:\Certs\NUMI.pfx is the file name and the password, the one that you used to export the .pfx file, e.g., numi (all lowercase).

4. Open a command prompt window and change the current directory to the location of the keytool executable. In this example it would be: D:\Program Files (x86)\McKesson\CERME\Jre\bin\keytool.exe

5. Execute the following command:

keytool -importkeystore -srcstoretype PKCS12 -srckeystore "D:\Certs\NUMI.pfx" - destkeystore "D:\Certs\CERME.ks"

NOTE: -srckeystore value will be the .pfx path and filename above, -destkeystore can be whatever you choose; again, passwords can be whatever you choose, but please make a note of them. The word "secret" is used as the keystore password in this example.

6. Execute the following command:

keytool -keystore "D:\Certs\CERME.ks" -list

Make a note of the long, auto-generated alphanumeric value circled in red below. Recommended actions are to copy and paste the entire command prompt output to notepad to copy and paste this value.



#### Figure 56: keytool -keystore "C:\Certs\CERME.ks" -list

7. Execute the following command:

keytool -changealias -keystore "D:\Certs\CERME.ks" -destalias numi -alias

<alphanumeric value>

NOTE: Replace <alphanumeric value> with the value noted and circled from the step above. The keystore password is the password specified when creating the keystore above, secret in our example. The key password is the password specified when creating the pfx file, numi in our example.

8. Execute the following command:

keytool -keypasswd -keystore "D:\Certs\CERME.ks" -alias numi

NOTE: With this command, we are changing the key password to "reallysecret" for this example.

9. Next, copy the keystore, (D:\Certs\CERME.ks), to the Jetty\etc directory. For this example it would be here: D:\Program Files (x86)\McKesson\CERME\Jetty\etc

Open the jetty.xml file in the same directory and scroll down to the "add a HTTPS SSL listener" section, (pictured below). If the items highlighted in red exist in your file, delete them. They are xml comments and will cause the section to be ignored. Items highlighted in yellow may need to be updated.

<!--- To add a HTTPS SSL listener -->
<!--- To add a HTTPS SSL listener -->

<!-- if NIO is not available, use org.eclipse.jetty.server.ssl.SslSocketConnector -->

<!--

<Call name="addConnector">

<Arg>

 $<\!\!New \ class = "org.eclipse.jetty.server.ssl.SslSelectChannelConnector"\!>$ 

<Set name="Port">8443</Set>

<Set name="maxIdleTime">30000</Set>

<Set name="Acceptors">2</Set>

```
<Set name="AcceptQueueSize">100</Set>
```

<Set name="Keystore"><Property name="jetty.home" default="."

/>/etc/CERME.ks</Set>

<Set name="Password">secret</Set>

<Set name="KeyPassword">reallysecret</Set>

<Set name="truststore"><Property name="jetty.home" default="."

/>/etc/CERME.ks</Set>

<Set name="trustPassword">secret</Set>

</New>

</Arg>

</Call>

-->

10. Open the windows services management console, (START->RUN->services.msc->OK), and restart the CERME service. It will take about 20 to 30 seconds for the service to completely restart, but you should be able to browse directly to the secure CERME. Use whatever URL is used to access NUMI, e.g., https://vaww.prod.temp.numi.med.va.gov/web/home.aspx

11. Replace the "/web/home.aspx" portion with CERME's secure port, (8443 by default), e.g., https://vaww.prod.temp.numi.med.va.gov:8443/

The CERMe website should be displayed and you should not have been warned of the security certificate problem.

### 6.14. Setting up NUMI Section in the Windows Event Log

1. Change Directory - Go to command prompt (run as Administrator) and change current directory to Framework v2.0 bit folder e.g., C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727

2. Install Command - Type InstallUtil.exe /I < source folder full path >\bin\NumiWebApp.dll under Framework v2.0 folder and press enter.

e.g., InstallUtil.exe /i D:\NUMI\<install\_dir>\bin\NumiWebApp.dll

3. This should create a NUMI section in the Windows Event log.

🛃 Event Viewer					
<u>File Action View H</u> elp					
🔶 🄿 🖄 📰 🔢 🖬					
Event Viewer (Local)	Applications and Services Lo	gs			Actions
	Name Hardware Events	Type Administrative	Number of Events	Size 68 KB	Applications and Services
Applications and Services Logs     Hardware Events     Interpet Events	Internet Explorer	Administrative	0	68 KB	<ul> <li>Open Saved Log</li> <li>Create Custom View</li> </ul>
Key Management Service	Microsoft	Administrative	21	68 KB	Import Custom View
NIMI     Operations Manager	Operations Manager Windows RewerShell	Administrative	12,304	5.07 MB	View
Windows PowerShell	Windows Power Sheir	Administrative	32	00 KD	Help
					Hardware Events 🔺
					Pierre Help

Figure 57: Creating a NUMI section in the Windows Event Log

4. NUMI Event Folder Properties

a. Go to NUMI Properties by right mouse.

b. Click on General Tab under **NUMI** Properties dialog box window. Check/Click on Overwrite events as needed.

- c. Press <Apply> button (if needed) and Press <OK> button.
- d. Verify Event View, if any error logs occurred during the installation.

### 6.15. Validate XML Configuration File Settings

Verify that all XML configuration file settings are correct.

Validate NUMI XML Configuration File Settings.

- 1. Edit the application settings in the web.config file in the NUMI folder.
- E.g., D:\NUMI\<install\_dir>\web.config

Settings to update:

2. <!-- change this setting to point to the appropriate config file for the deployment. --> <appSettings configSource="src\\main\\resources\\xml\\deployment\\numiwebapp.config"/> <connectionStrings/>

NUMIServer Setup Guide, v1.1.14.3

📕 Web.config - Notepad
Eile Edit Format View Help
<pre> Web.config - Notepad  File Edit Format View Help   </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help  </pre> <pre> File Edit Format View Help </pre> <pre> File Edit Format View Help Help </pre> <pre> File Edit Format View Help </pre> <pre> File Edit Format View Help Help Help </pre> <pre> File Edit Format View Help Help </pre> <pre> File Edit Format View Help Help Help </pre> <pre> File Edit Format View Help Help Help Help Help Help Help Help</pre>
<pre><add assembly="eworld.UI" namespace="eworld.UI" tagprefix="ew"></add></pre>

Figure 58: Updating Settings in NUMI XML Configuration File

3. Edit the application settings in the **config** file indicated in the previous entry. Make sure to enter the MDWS server and the NUMI database server names, and the NUMI database password as indicated.

 $D:\NUMI\<\install\_dir>\src\main\resources\xml\deployment\numiweb\ app.config$ 

Settings to update:

```
<add key="serviceUrl" value="http://<enter_mdws_server>/NumiService.asmx" />
```

```
<add key="numiDbConnectionString" value="Data
Source=<enter_database_server>;Database=NUMI;User
ID=numi_user;Password=xxxxxxx;Trusted_Connection=False" />
```

<add key="reportDbConnectionString" value="Data Source=<enter\_database\_server>;Database=NUMI;User ID=numi\_user;Password=xxxxxxx;Trusted\_Connection=False" />

### 6.16. Perform Restart

#### Restart IIS

- 1. Click <Start>.
- 2. Click the Command Prompt (or <Run>, depending on the Operating System)
- 3. Type: IISReset
- 4. Click <Enter>.

### 6.16.1. Test NUMI Web Site Functionality

1. Open Internet Explorer and type: http://servername/Web/Home.aspx e.g., https://vaausnumapp40/Web/Home.aspx

# 6.17. Installing NUMI Synchronizer on the DB Server

### 6.17.1. Software Copy Instructions

1. Right click on the zip file, select "Unblock" if active, and select O.K. Some security schemes will block certain files from being unpacked, typically the Java files under the "web" directory. Setting the file to Unblock eliminates this problem.

Help	NUMI_Main_1.1	1.15.0_Build_20121019.1.zip Properties	? ×
> Folders IIII →	General Secu	urity Summary	
Name -		NUMI_Main_1.1.15.0_Build_20121019.1.zip	
<b>E</b> NOM_MAN_1.1.13.0_Dand_20121019.1.2p	Type of file:	Compressed (zipped) Folder	
	Opens with:	Compressed (zipped) F	
	Location:	C:\Temp	
	Size:	18.8 MB (19,817,151 bytes)	
	Size on disk:	18.9 MB (19,820,544 bytes)	
	Created:	Yesterday, October 22, 2012, 9:41:45 AM	
	Modified:	Yesterday, October 22, 2012, 9:41:46 AM	
	Accessed:	Today, October 23, 2012, 9:11:24 AM	
	Attributes:	□ <u>Read-only</u> □ <u>H</u> idden <u>Ad</u> vance	ed
	Security:	This file came from another computer and might be blocked to help protect this computer.	*

Figure 59: Unblocking Restricted Files in Installation ZIP file

It is recommended that Synchronizer be installed in the D:\NUMI folder. Using Windows Explorer, create a **NUMI** folder in D drive, if available, otherwise create in C drive. E.g., D:\NUMI

2. Unzip the Synchronizer folder from the NUMI distribution zip file into the D:\NUMI folder. Rename the Synchronizer folder using the build name of the distribution zip file.

3. Open Config File - Open **synchronizer.exe.config** file in notepad under D:\NUMI\ <install\_dir> folder.

4. Make sure the configSource points to the Synchronizer.config file path location, e.g., <a psychology configSource="src\\main\\resources\\xml\\deployment\\Synchronizer.config" />

Verify the httpExecution timeout field:

<httpRuntime executionTimeout="900" />

Note: All server configuration targeted files are located at

NUMI Server Setup Guide, v1.1.14.3

5. Edit the Synchronizer.config file to point to the MDWS server that the synchronizer will be using, e.g.,

<app key="serviceUrl" value="http://vaausnumweb42:8081/NumiService.asmx" />

6. Edit the Synchronizer.config file to point to the Database server that the synchronizer will be using, e.g.,

```
<app key="numiDbConnectionString" value="Data
Source=vaausnumsql83;Database=NUMI;User
ID=numi_user;Password=xxx;Trusted_Connection=False" />
```

7. NOTE: If you are going to specify a different visitor account than the standard DOD visitor, then enter the appropriate visitor information in the Sunchronizer.config file. If you do create a new visitor for your environment, you will need to add the new visitor record to the NumiUser table in the NUMI database, similar to the standard DOD visitor that is already in the table.

8. Change Directory - Go to command prompt (run as Administrator) and change current directory to Framework v2.0 bit folder e.g.,

#### C:\WINDOWS\Microsoft.NET\Framework64\v2.0.50727

9. Install Command - Type installutil.exe -I <source folder full path >synchronizer.exe (Figure 70: Synchronizer.exe window) under Framework v2.0 folder and press enter. E.g., installutil.exe -I D:\NUMI\<install\_dir>\synchronizer.exe

```
G:\VINDOWS\Microsoft.NET\Framework64\v2.8.50727>installutil.exe -i C:\NUMI\R_1_1
@\all\x64\synchronizer.exe
Microsoft (8) .MET Framework Installation utility Uersion 2.8.50727.42
Copyright (c) Microsoft Corporation. All rights reserved.
Running a transacted installation.
Beginning the Install phase of the installation.
See the contents of the log file for the C:\NUMI\R_1__0\all\x64\synchronizer.ex
e assembly's progress.
The file is located at C:\NUMI\R_1_1_0\all\x64\synchronizer.InstallLog.
Installing assembly 'C:\NUMI\R_1_1_0\all\x64\synchronizer.exe'.
Affected parameters are:
    i =
    assemblypath = C:\NUMI\R_1_1_0\all\x64\synchronizer.exe
    logfile = C:\NUMI\R_1_1_0\all\x64\synchronizer.exe
    logfile = C:\NUMI\R_1_1_0\all\x64\synchronizer.exe
    logfoconsole =
    Installing service NUMISynchronizer...
Service NUMISynchronizer...
Service NUMISynchronizer in log Application...
The Install phase completed successfully. and the Commit phase is beginning.
See the contents of the log file for the C:\NUMI\R_1_1_0\all\x64\synchronizer.InstallLog.
Commiting assembly 'C:\NUMI\R_1_1_0\all\x64\synchronizer.installLog.
Commiting assembly 'C:\NUMI\R_1_1_0\all\x64\synchronizer.exe'.
Affected parameters are:
    i =
    assemblyshth = C:\NUMI\R_1_1_0\all\x64\synchronizer.exe'.
Affected parameters are:
    i =
     assemblypath = C:\NUMI\R_1_1_0\all\x64\synchronizer.installLog.
Commit phase completed successfully.
The transacted install has completed.
C:\VINDOWS\Microsoft.NET\Framework64\v2.8.50727>net start NUMISynchronizer v1.1.14.0
The NUMI Synchronizer service is starting.
The NUMI Synchronizer service is astarting.
T
```

Figure 60: Synchronizer.exe Window

Start Synchronizer -

Note: The Synchronizer name is hard coded. The synchronizer name can be found during synchronizer setup (See Figure 70: Synchronizer.exe window). The status lines

"Installing Service: xxx" and "Service xxx has been successfully installed" show the synchronizer name.

10. Go to "Services" via "Administration Tools", right click on the service, and select Start (See Figure 71: Starting the Service). Alternately, you could enter "services.msc" in the run box to bring up the Services Explorer window. Verify

'Started' is displayed in the Status column in the row for the Synchronizer Service.



Figure 61: Starting the Service

Uninstall:

If you need to uninstall the NUMI Synchronizer services use: installutil.exe -u

C:\NUMI\ synchronizer\synchronizer.exe

Please see the event logs if you have any issues.

Validate Installation:

To confirm the synchronizer installation

Open Microsoft SQL Server Management Studio after 2 hours. Open a new query and type:

Use numi go.

Select TOP 1000 \* from patientstay.

Click the <Execute> button to run the query. New records shall display.

### 6.18. Add Jobs to the SQL Server

There are three jobs that must be added to the SQL Server, specifically,

 $NUMI\_PhysicianAdvisorPatientReview\_AutoExpire LogSynchDB\_ValidateSynchronizer NUMI\_AlterIndex\_Rebuild$ 

These jobs can be installed from scripts (included in the build) or, if you are transferring from another server, you can right click on each job and script as DROP and CREATE.

Backup the jobs before you run the scripts. Modify the scripts to replace the

@owner\_login\_name with the owner login name appropriate for your installation, if necessary NUMI\_PhysicianAdvisorPatientReview\_AutoExpire is a job that executes the Stored Procedure usp\_PhysicianAdvisorPatientReview\_AutoExpire every day at midnight. The Stored Procedure looks for **Physician UM Advisor** (PUMA) Reviews that have not been completed within 14 days and marks them as Completed with a reason description of Expired.

LogSynchDB\_ValidateSynchronizer is job that executed the stored procedure LogSyncDB.dbo.usp\_LogSync\_ValidateSynchronizer every hour. This stored procedure checks that stays have been imported within the last 3 hours and reports the problem to a pre-defined email distribution list, as decided by the needs of the particular installation

NUMI\_AlterIndex\_Rebuild is a job that executes the stored procedure NUMI.dbo.usp\_AlterIndex\_Rebuild. This stored procedure rebuilds the indexes for the tables in the NUMI database.

# 7. Post-Installation Considerations

If this is applicable to NUMI, this information will be provided by the appropriate project teams.

# Acronyms and Descriptions

Acronym	Description
CERMe	CareEnhanceReviewManagementEnterprise
CPU	Central Processing Unit
НТТР	HyperText Transfer Protocol
HTTPS	HyperText Transfer Protocol Secure
lis	Internet Information Services
MDWS	Medical Domain Web Services
NUMI	National Utilization Management Integration
РМ	Project Manager
PUMA	Physician UM Advisor
QA	Quality Assurance
SQL	Standard Query Language
SSL	Secure Socket Layer
UM	Utilization Management
URL	Uniform Resource Locator