Standards & Terminology Services (STS)

VETS Deployment Services
Production Release

Set Up Guide

Version 1.0

March 2010

Department of Veterans Affairs
Office of Information and Technology (OI&T)
Office of Enterprise Development (OED)

Revision History

Date	Version	Description	Author
Oct. 12, 2009	0.1	Installation Manual outline, deployment processes, and builds instructions.	Peri Koester, Greg Spalding, Duncan Shelley
Oct. 27, 2009	0.2	Format and screen size changes.	Peri Koester
Nov. 23, 2009	0.3	Incorporated Duncan's changes.	Peri Koester
Dec. 02, 2009	0.4	Review changes.	Peri Koester
Dec. 08, 2009	0.5	Added Create User info from User Guide and changed name to Set Up Guide.	Peri Koester
Dec. 17, 2009	0.6	Removed internal Glossary link and added embedded Glossary.	Peri Koester
Feb. 22, 2010	0.7	Added new headings and partial content.	Peri Koester
March 01, 2010	0.8	Adding new screen shots for Creating New Users. Removing Creating and Installing a Domain and replacing with Installing and configuring. Also adding how to update files post production.	Greg Spalding, Peri Koester
March 22, 2010	1.0	Publishing document as final.	Peri Koester

Table of Contents

Introduction

This manual describes the STS Deployment Services Version 9.0 Set Up procedures. The procedures include:

- Build and Data Conversion

- STS Deployment

- Copying New Configuration and Help Files

- Starting and Stopping WebLogic Servers

- Creating STS Application User

PreInstallation

The STS Terminology Deployment Service Version 9.0 release uses an Oracle WebLogic Server 11g as the database server.

WebLogic 10.3.2 and Java 6 must be installed.

VETS V9 Build and Data Conversion Instructions

This section describes the steps you need to perform to create the VETS V9 database schemas and copy the VETS V8 data into the VETS V9 schema. The VETS V8 and V9 schemas can co-exist in the same database while the VETS V9 environment is validated and the VETS V8 environment can be archived.

These tables list the V8 schema names and their corresponding V9 schema names in the environments that the V9 data creates from a V8 schema.

PRODUCTION (HDRP06)	
V8 SCHEMA NAME	**V9 SCHEMA NAME**
DS	DS_V09
REQUESTDB	NTRT_V09
TDEVHAT	VHAT_V09
VTS	VTS_V09
VUID	VUID_V09

SQA (ETSD06 on vhaislbll10)	
V8 SCHEMA NAME	**V9 SCHEMA NAME**
DS_V08	DS_V09T
NTRT_V08	NTRT_V09T
VHAT_V08	VHAT_V09T
VTS_V08	VTS_V09T
VUID_V08	VUID_V09T

The V09T schemas on ETSD06 where copied into the V09 schemas on ETSD07 for SQA testing on 9/28/09.

Integration (STSI01 on vhaislbll26)	
V8 SCHEMA NAME	**V9 SCHEMA NAME**
DS_V08	DS_V09T
NTRT_V08	NTRT_V09T
VHAT_V08	VHAT_V09T
VTS_V08	VTS_V09T
VUID_V08	VUID_V09T

Create VETS V9 Schemas Instructions

Follow the steps below to create the V9 schemas:

1. These steps are executed from a PC or UNIX server that has Oracle client installed and tnsnames.ora connection information to the database for the new VETS V9 schema.

2. Execute the Oracle SQL script.
   build_version9_releasenumber_full_databasename.sql

   - The releasenumber is the latest database build number for V 9.
   - The databasename is the name of the database that the build will be created on.
   - The build_version9_releasenumber_full_databasename.sql file calls other SQL files to build the environment.
   - All parameters needed to create the objects are specified in the build_version9_releasenumber_full_databasename.sql file.

3. Review the script file before the script is executed to ensure that all of the information is correct.

   - All SQL files used in this step are stored in Perforce.
   - The objects that are created by this script can be viewed via this HTML data model contained in the zip file VETS_001009.zip.

Follow the step below to create the VETS V9 data model on a PC:

1. Unload the zip files into a directory on your computer.
    <FILE://\\vhaislmul1\Projects\ETS (STS)\VETS\Version 9\Toad Data
    Modeler\Reports\HTML\VETS_001009.zip>

2. Open the file VETS_001009.html in a browser window to view the data model.

Copy VETS V8 Data into the VETS V9 Schemas Instructions

The conversion process below was designed so that the V8 and the V9 data reside in the same database. Follow the steps below to copy V8 data in to the V9 schemas:

1. Copy the following files into the data_pump_dir directory on the database server:
    copy_v8_to_v9_databasename.sh

    copy_v8_v9_ds_databasename.sql

    copy_v8_v9_ntrt_databasename.sql

    copy_v8_v9_vts_databasename.sql

    copy_v8_v9_vuid_databasename.sql

2. The following files need to be edited to update the variables with the correct values:
    copy_v8_to_v9_databasename.sh

    copy_v8_v9_ds_databasename.sql

    copy_v8_v9_ntrt_databasename.sql

    copy_v8_v9_vts_databasename.sql

    copy_v8_v9_vuid_databasename.sql

3. Execute the shell script copy_v8_to_v9_databasename.sh on the database server to copy the data.

This script can be executed against an empty V9 schema, or when data is in the V9 schema and data needs to be reloaded. The main tasks that this script performs are:

- Copies data directly from V8 tables into V9 tables using Insert/Select statements for tables that do not contain LONG RAW data
- Export/Import V8 NTRT table into a V9 NTRT table because table contains LONG RAW data
- Export/Import V8 NTRT schema into a V9 NTRT schema because there are no changes in the structure between versions
- Sets all sequences to correct values
- Sets all object permissions
- Moves indexes to correct tablespace
- Gathers schema statistics for all V9 schema

All files used in this step are stored in Perforce.

STS Deployment Process

The STS Deployment Process consists of installing a VETS V9 domain and configuring the scripts.

Prerequisites

- WebLogic version 10.3.2

  Perform a default install, installing to /u01/app/oracle/middleware.

  If you install to another directory change the paths in the rest of the STS Deployment Process section to reflect the path you installed to.

- Java 6

  Install Java 6.

  Create a symbolic link named /usr/java/java6 and the target is the Java 6 installation location.

  This is necessary so that the paths spelled out in the STS Deployment Process are correct.

This section assumes the following directories exist:

Domain home = /u01/app/oracle/middleware/user_projects/domains

Setup Directory = /u01/app/setup

Configuration Script

The domain is set up using a python configuration script and WebLogic Scripting Tool (WLST).

1. Log in to vahdrppwls14 as the WebLogic user or sudo to the WebLogic user after logging in as you.

2. Ensure the following are in the WebLogic users path:

   /u01/app/oracle/middleware/wlserver_10.3/common/bin
   /u01/app/oracle/middleware/wlserver_10.3/common/nodemanager

3. Copy the setup.zip file to the /u01/app/setup directory and extract it with the following command:

   unzip setup.zip

4. Execute the following command in the /u01/app/setup directory:

   wlst.sh config.py --create -b -c stsV9.config

5. Copy the v9_prod_domain.zip file to the /U01/APP/ORACLE/MIDDLEWARE/USER_PROJECTS/DOMAINS/V9.PROD directory and extract it with the following command:

   unzip v9_prod_domain.zip

6. When prompted to overwrite the files, reply YES.

7. Execute the following command in both the /U01/APP/ORACLE/MIDDLEWARE/USER_PROJECTS/DOMAINS/V9.PROD/bin and /U01/APP/ORACLE/MIDDLEWARE/USER_PROJECTS/DOMAINS/V9.PROD/bin/no demanager directories:

   chmod 766*.sh

8. Start the admin server by executing the following command in the /U01/APP/ORACLE/MIDDLEWARE/USER_PROJECTS/DOMAINS/V9.PROD directory:

   nohup ./startWebLogic.sh &

9. Press the **Enter** button.

10. Use the following command to monitor the progress of the server start:

    tail -200f nohup.out

    Note: Press the **Ctrl** and **C** buttons to exit after the server has started.

11. Watch for errors while the server is starting.

12. To ensure the Administration Console is working, use the following link to bring up the console in your browser.

    http://vahdrppwls14.aac.va.gov:7200/console/

13. Return to the terminal session and execute the following command in the /u01/app/setup directory:

    wlst.sh new_config.py --create -o -c stsV9.config

Edit the Servers

For every server, except the Admin server, do the following:

1. Log in to the WebLogic console as the WebLogic user.
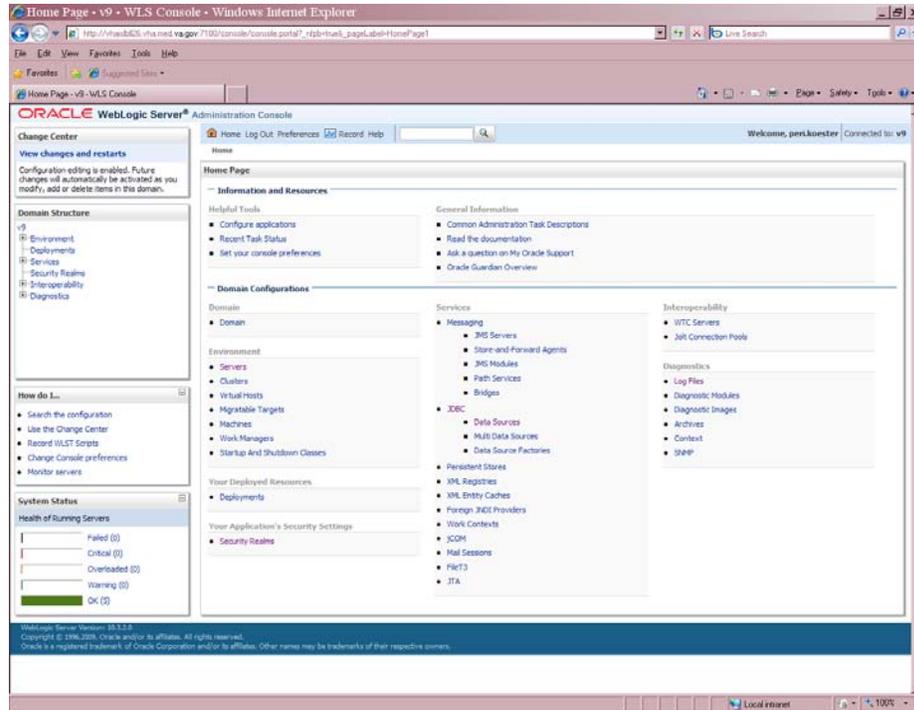
2. In the Domain Structure box click the Environment link.

3. In the Domain Structure box or the Summary of Environment section click the Server link.

4. Click on each server and edit the following in each server's start tab:

   Note: do not edit the Admin server.

   Java Home = /user/java/java6

   Java Vendor = Sun

   BEA Home = /u01/app/oracle/middleware

   Root Directory = /u01/app/oracle/middleware/user_projects/domains/v9.Prod

   Classpath = /u01/app/oracle/middleware/user_projects/domains/v9.Prod/lib/antlr-
   2.7.6.jar:/usr/java/java6/lib/tools.jar:/u01/app/oracle/middleware/wlserver_10.3/server/
   lib/weblogic_sp.jar:/u01/app/oracle/middleware/wlserver_10.3/server/lib/weblogic.jar:/

u01/app/oracle/middleware/modules/features/weblogic.server.modules_10.3.0.0.jar:/
u01/app/oracle/middleware/modules/features/com.bea.cie.common-
plugin.launch_2.2.0.0.jar:/u01/app/oracle/middleware/wlserver_10.3/server/lib/webser
vices.jar:/u01/app/oracle/middleware/modules/org.apache.ant_1.6.5/lib/ant-
all.jar:/u01/app/oracle/middleware/modules/net.sf.antcontrib_1.0.0.0_1-
0b2/lib/antcontrib.jar:/u01/app/oracle/middleware/user_projects/domains/v9.Prod/sts.
config:/u01/app/oracle/middleware/wlserver_10.3/server/lib/xqrl.jar:

User Name = weblogic

5. In the Domain Structure box click the Services link.

6. In the Domain Structure box or the Summary of Services section click the JDBC link.

7. In the Domain Structure box or the Summary of Services: JDBC section click the Data Sources link.

8. Do the following for each Data Source:

    a. Click the data source link

    b. Click the Connection Pool tab.

    c. Type the correct password.

9. In the Domain Structure box click the Environment link.

10. In the Domain Structure box or the Summary of Environment section click the Machines link.

11. In the Summary of Machines section click the vahdrppwls14 link.

12. Click the Node Manager tab and make a note of the Listen Port.

13. In your terminal session, start the Node Manager.

14. Go to the /u01/app/oracle/middleware/wlserver_10.3/server/bin and type:

    nohup ./startNodeManager.sh &

15. Press the **Enter** button.

16. Use the following command to monitor the progress of the Node Manager start:

    tail -200f nohup.out

    Note: Press the **Ctrl** and **C** buttons to exit after the Node Manager has started.

17. Go to the /u01/app/oracle/middleware/wlserver_10.3/common/nodemanager.

   If necessary, edit the Listen Port entry to match the entry you wrote from the Node Manager tab (step 12 above).

   If you make a change, you will need to stop and start the Node Manager.

   a. To stop the Node Manager, use kill on its process ID.

      You can find the process ID by typing the following:

      ps –efl / grep 32m

   b. Start the Node Manager by following steps 14 and 15 above.

18. In the WebLogic Administration Console, in the Domain Structure box click the Environment link.

19. In the Domain Structure box or the Summary of Environment section click the Server link.

20. Click on each server, except the admin server.

21. Click the Control tab and then click the **Start** button.

22. After each server has started return to your terminal session.

23. In the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory execute the following commands one at a time:

   ./autoTDSDeploy.sh

   ./autoBrowserDeploy.sh

   ./autoNTRTDeploy.sh

   ./autoVUIDDeploy.sh

24. In your browser window check to make sure each server has started. Click the following links:

   http://vahdrppwls14.aac.va.gov:7201/sts.deployment/

   http://vahdrppwls14.aac.va.gov:7202/ntrt/

   http://vahdrppwls14.aac.va.gov:7203/vuid/

   http://vahdrppwls14.aac.va.gov:7204/sts.browser/

Copying New Configuration and Help Files

The following files may be updated in the Production environment:

- application.properties

- browserconfig.xml

- terminologyconfig.xml

- browserhelp.html

- browserintro.html

The files reside in the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/sts.config directory. To update the files:

1. Sign in as the WebLogic user.

2. Copy the files to the directory (above).

   If the file being updated is the application.properties or terminologyconfig.xml:

3. Restart the TDS by entering the following command in the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory:

   ./bounceTDS.sh

Starting and Stopping WebLogic Servers

To start all WebLogic servers in the V9 domain (i.e. after server reboot) follow the steps below:

1. Start a console session on vahdrppwls14 as a user with sudo rights to the WebLogic user.

2. Type sudo su – weblogic and enter your password (if necessary).

3. Change to the /u01/app/oracle/middleware/user_projects/domains/v9.Prod directory.

4. Rename or delete the nohup.out file.

5. Type nohup./startWebLogic.sh& and press the **Enter** button.
   This starts the admin server.

6. Change to the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory.

7. Type ./startTDS.sh to start the Deployment server.

8. Type ./startNTRT.sh to start the NTRT server.

9. Type ./startVUID.sh to start the VUID server.

10. Type ./startBrowser to start the browser.

To stop all WebLogic servers in the sts.prod domain follow the steps below:

1. Start a console session on vahdrppwls14 as a user with sudo rights to the WebLogic user.

2. Type sudo su – weblogic and enter your password (if necessary).

3. Change to the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory.

4. Type ./stopTDS.sh and wait for the command to finish.

5. Type ./stopNTRT.sh and wait for the command to finish.

6. Type ./stopVUID.sh and wait for the command to finish.

7. Type ./stopBrowser.sh and wait for the command to finish.

8. Type ./stopWebLogic.sh and wait for the command to finish.

To stop an individual server, follow the steps below:

1. Start a console session on vahdrppwls14 as a user with sudo rights to the WebLogic user.

2. Type sudo su – weblogic and ener your password (if necessary).

3. Change to the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory.

4. Type the appropriate command to stop the server you want stopped.

- VETS server: ./stopTDS.sh

- NTRT server: ./stopNTRT.sh

- VUID server: ./stopVUID.sh

- Browser server: ./stopBrowser.sh

To start or restart an individual server, follow the steps below:

1. Start a console session on vahdrppwls14 as a user with sudo rights to the WebLogic user.

2. Type sudo su – weblogic and ener your password (if necessary).

3. Change to the /u01/app/oracle/middleware/user_projects/domains/v9.Prod/bin directory.

4. Type the appropriate command to start the server you want started.

   - VETS server: ./startTDS.sh or ./bounceTDS.sh

   - NTRT server: ./startNTRT.sh or ./bounceNTRT.sh

   - VUID server: ./startVUID.sh or ./bounceVUID.sh

   - Browser server: ./startBrowser.sh or ./bounceBrowser.sh

Creating STS Application Users

Follow the steps below to create users for STS applications:

1. Enter the following URL in your web browser to bring up the WebLogic Server Administration Console.

   /login/LoginForm.jsp

2. Type your username in the **Username** field.

3. Type your password in the **Password** field.

4. Click the **Log In** button or press the **Enter** button.
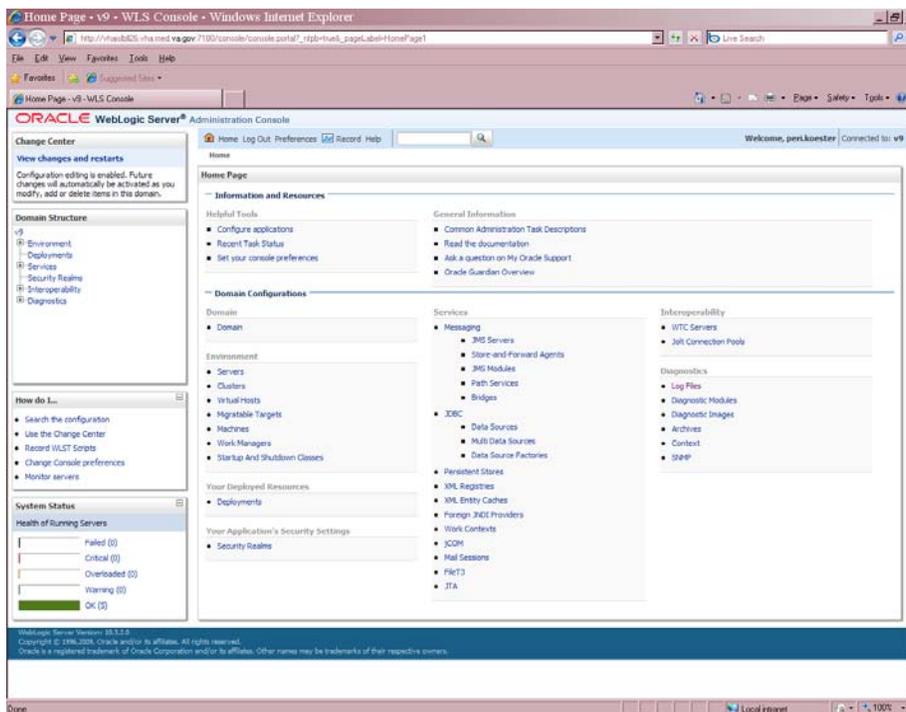
5. In the left side panel, click the **Security Realms** link.
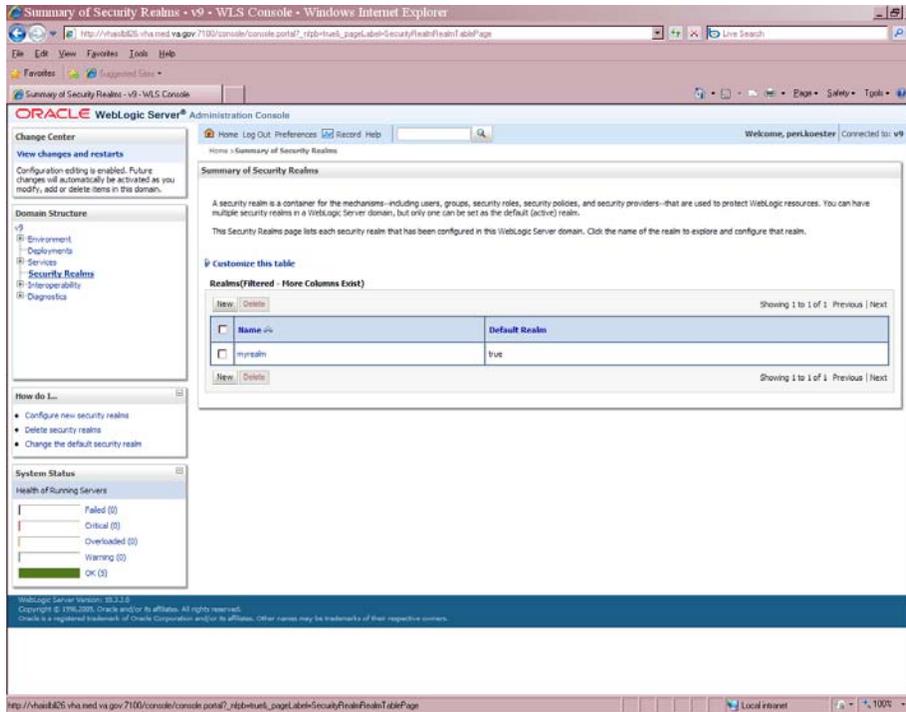
6. On the Summary of Security Realms screen, click the **myrealm** name link.
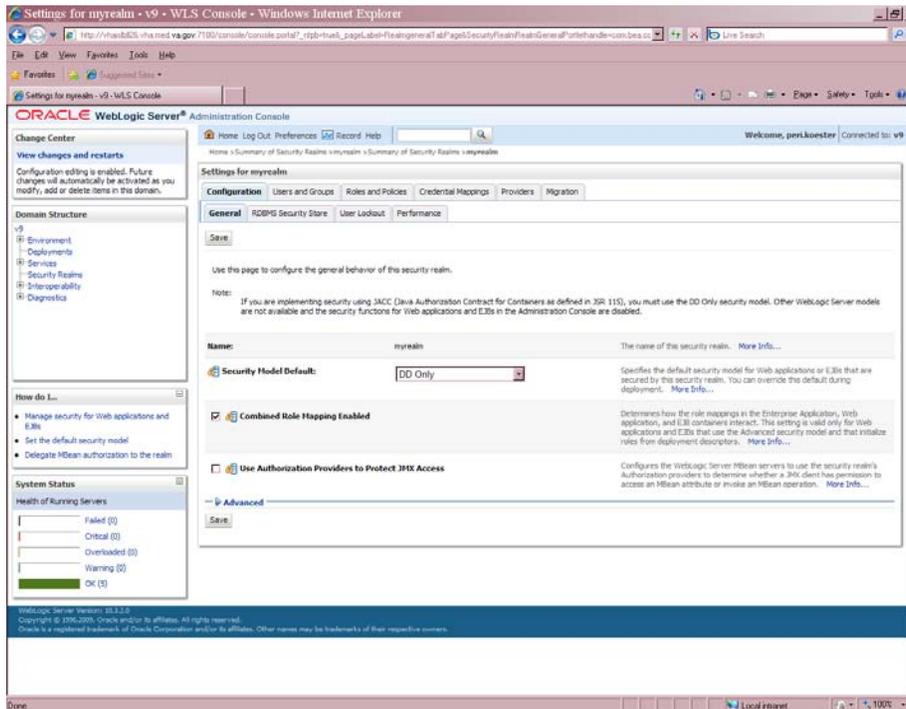
7. On the Setting for myrealm screen, click the **Users and Groups** tab.
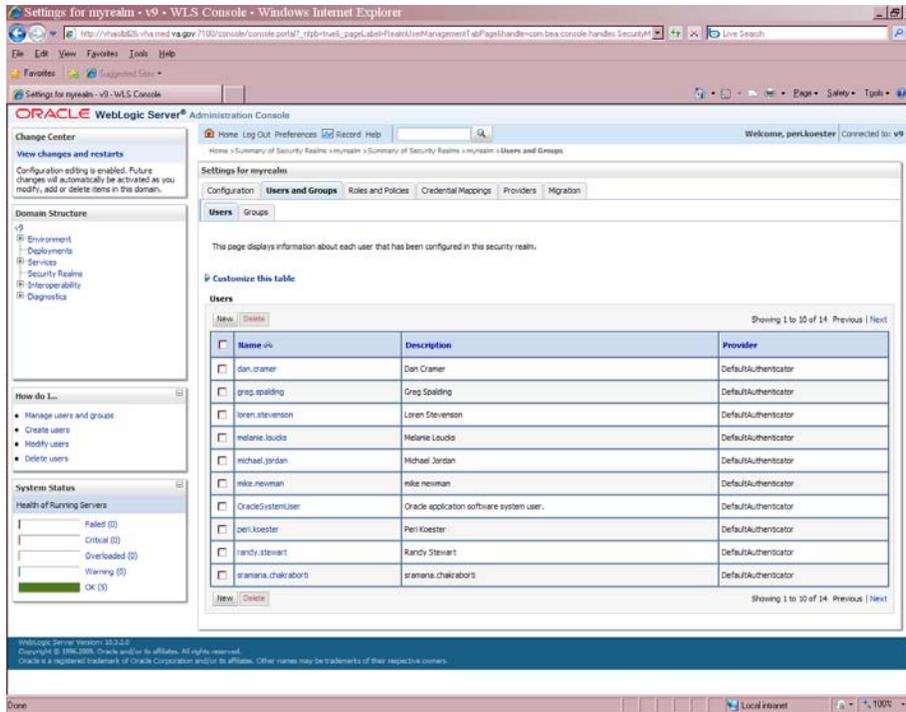
8. On the Users and Groups tab, click the **Groups** tab.
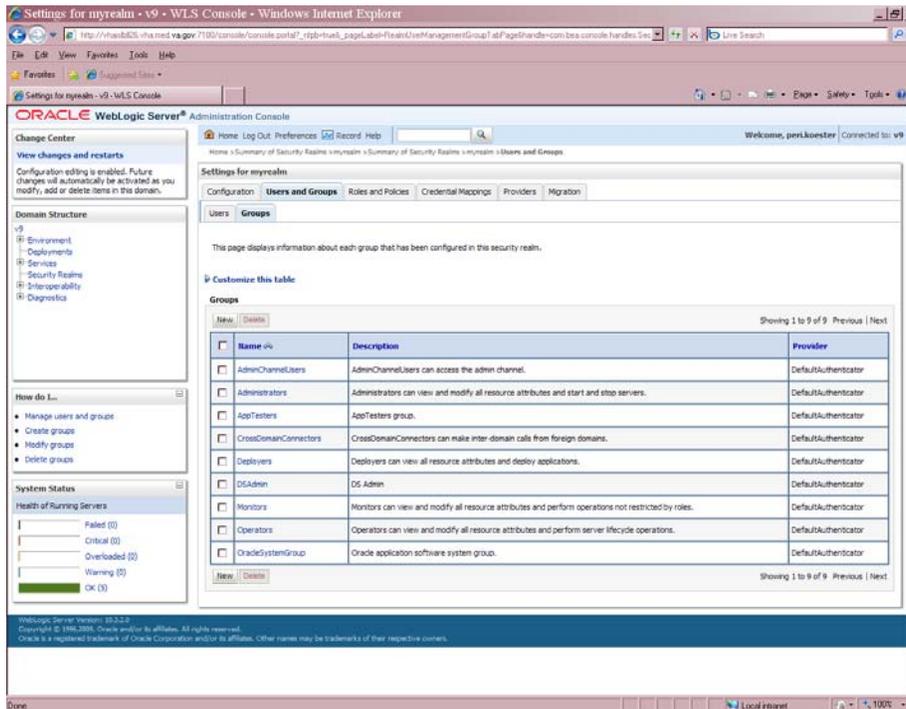
9. On the Groups screen, click the **DSAdmin** link.

You must have a DSAdmin group. You will add the new uses to this group.

If you do not have a DSAdmin group, you need to create it.

1. On the **Groups** screen, click the **New** button.
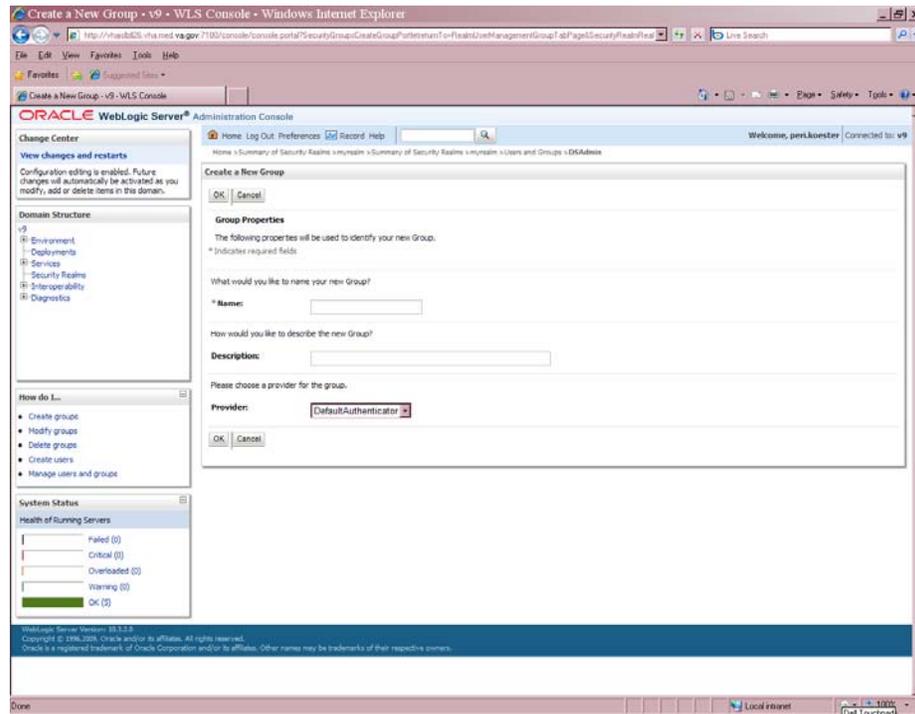
2. On the **Create a New Group** screen, type **DSAdmin** in the Name field.

3. Type **DS Admin** in the Description field.

4. Click the **OK** button.

Continue creating users in the DSAdmin group.

10. On the **Settings for myrealm** screen, click the **Users** tab.
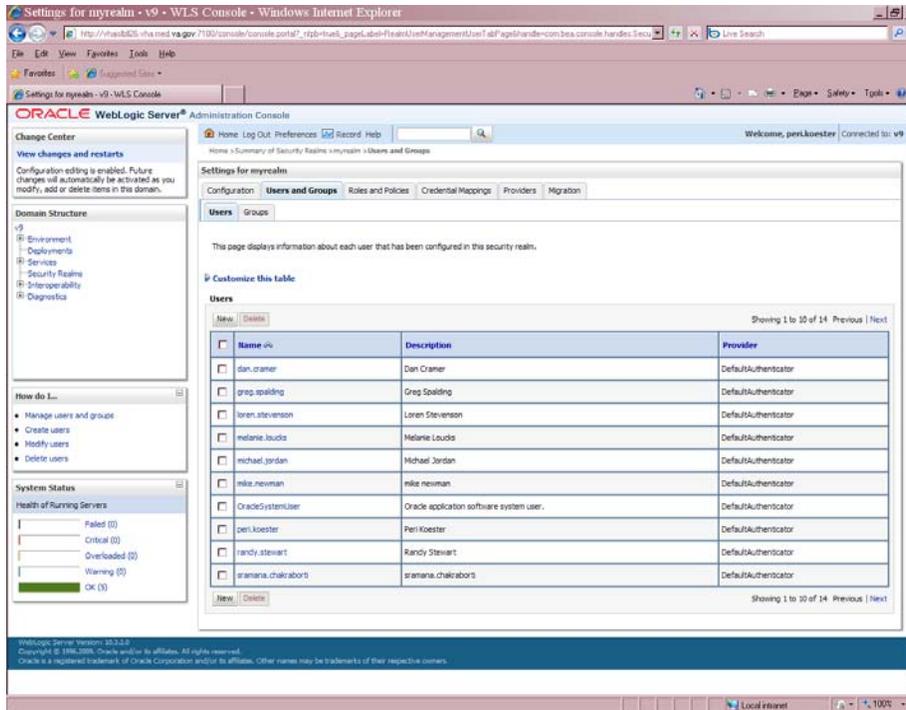
11. On the **Users** screen, click the **New** button.
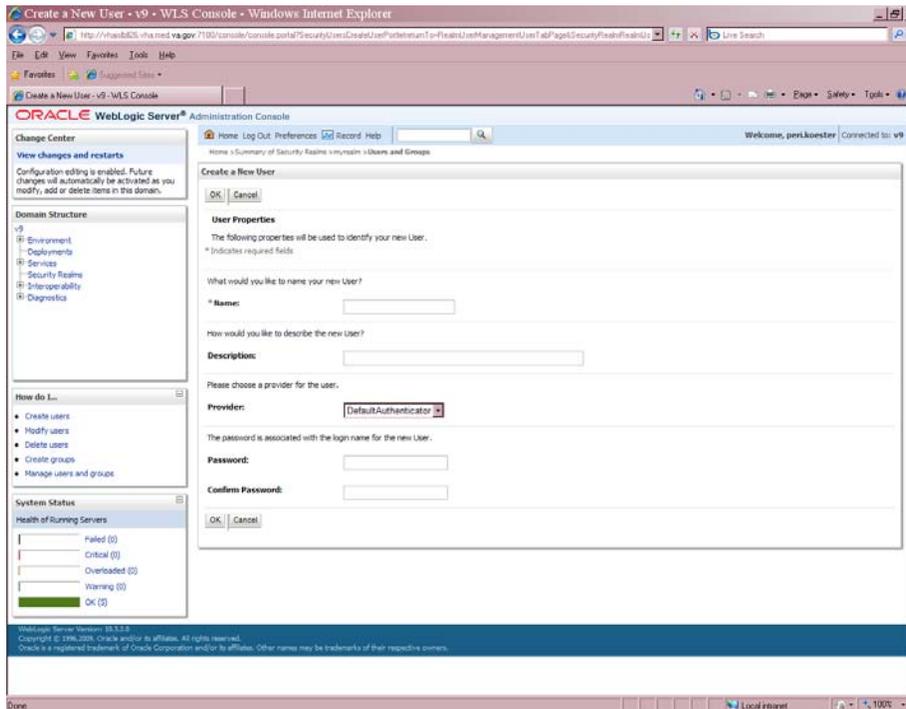
12. On the **Create a New User** screen, type the user's full name in the **Name** field.

13. Type a description in the **Description** field.

14. In the **Provider** field, leave **DefaultAuthenticator** selected.

15. In the Password field, type the login password for this user.

    Passwords must be 8 characters in length.

16. In the Confirm Password field, retype the login password for this user.

17. Click the OK button.
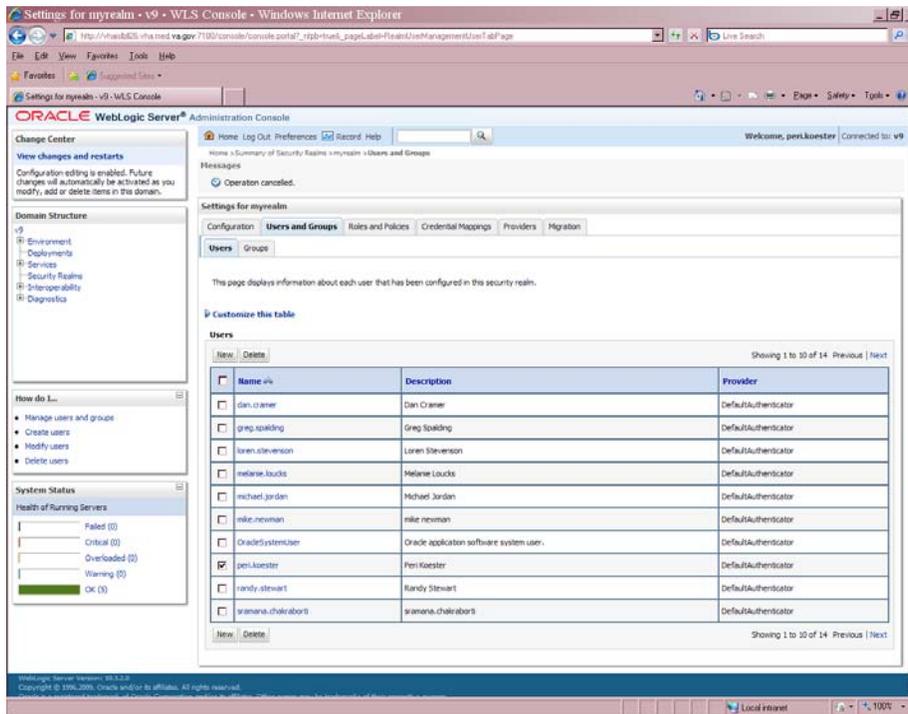
18. On the Users screen, click the user name link of the user you created to assign them to groups.
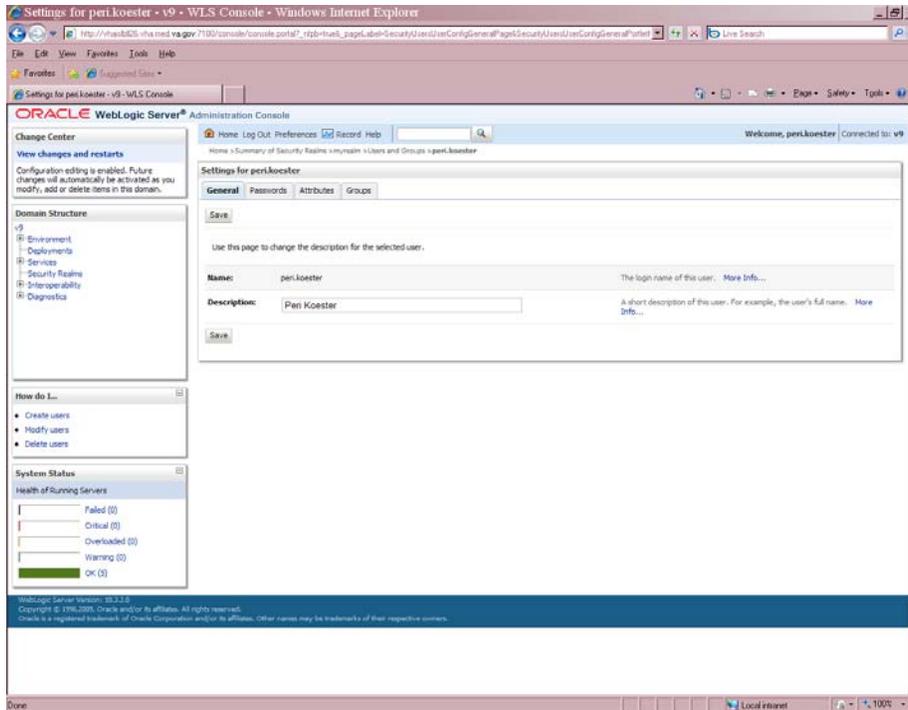
19. On the Settings for <Name of User> screen, click the Groups tab.
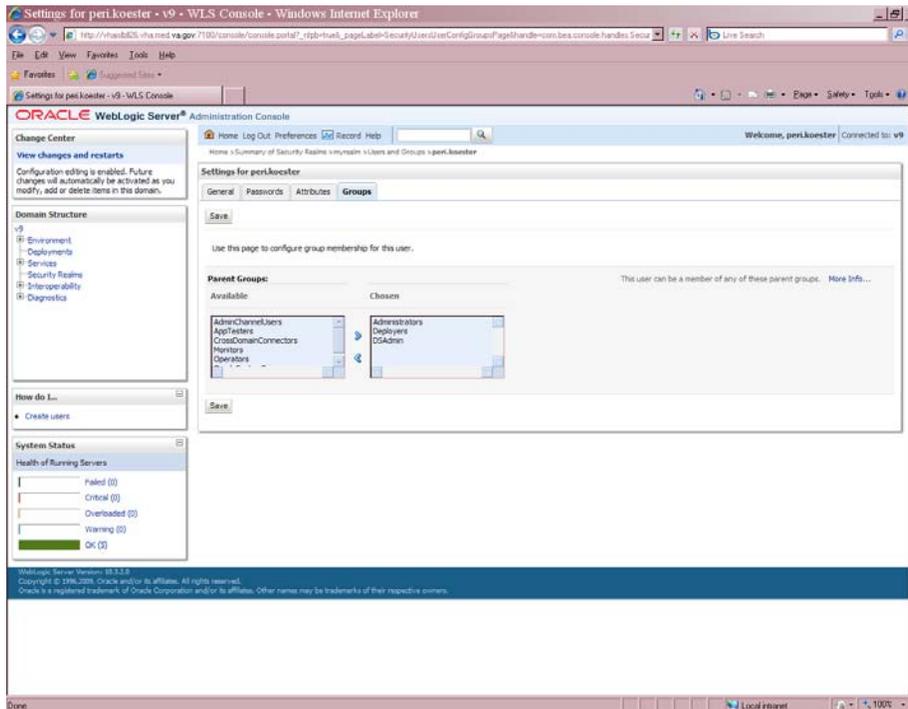
20. On the Groups screen, in the Available column select the group you want to assign to this user.

For STS applications select the Deployers and DSAdmin groups.

21. Click the right arrow to add the group to the Chosen column.

22. When you have selected all the groups for this user, click the **Save** button.

The new user is created.

Glossary

STS Terminology Glossary

Term	Definition
Application Program Interface (API)	An API is: 1. The interface or set of functions, between the application software and the application platform. 2. The means by which an application designer enters and retrieves information.
archetype	An archetype is: 1. A syntactically and semantically structured aggregation of vocabulary or other data that is the basic unit of clinical information. See also: template 2. A formal, reusable model of a concept for a given domain.
attribute	A named characteristic of a concept that can be assigned a value. See also: property (preferred)
authoring	The process of creating and editing terminology content. See also: development environment
candidate version	Terminology Deployment Server (TDS) content that has passed internal testing and is sent to Software Quality Assurance (SQA) for quality assurance testing.
change set	A generic term for any terminology content that is deployed by TDS; specifically an Initial Deployment, a Candidate Version, or a Finalized Version.
characteristic	An attribute or behavior of something. See also: property
child	The subtype in a parent-child relationship. The child (subtype) is narrower and more specific while the parent (supertype) is broader and more general. The child inherits the characteristics of the parent.
classification	Groupings of concepts for a given purpose where entries are found in one category.
code set	Any set of codes used for encoding data elements, such as tables of terms, medical concepts, medical diagnosis codes, or medical procedure codes.
component	An identifiable item in the main body of SNOMED CT or in an authorized extension. Components include: concepts, descriptions, relationships, subsets, histories, and extensions.
Computerized Patient Record System (CPRS)	The CPRS is the people, data, rules and procedures, processing and storage devices, and communication and support facilities that provide the capture, storage, processing, communication, security, and presentation of computer-based patient record information.
concept	An abstract unit of thought.
concept equivalence	Concept equivalence occurs when two concepts have the same meaning.
concept to concept linking	Concept to concept linking is when one concept is explicitly associated with another concept. Types of concept to concept linking are the creation of Map Sets, Translation Services, and Pre and Post Coordinated terms.
context	A context can be: 1. The environment in which it is appropriate to display a specific designation for a concept. 2. A specified part or field of a patient record, application, protocol, query, or communication in SNOMED CT.

Term	Definition
data cleanup	Activities that are taken to correct, normalize, and eliminate terms from a reference file before it is matched to a new standard. See also: standardization
data model	A schema that describes the way data is represented.
data standardization	The process of defining, creating, deploying, and maintaining a common terminology resource.
datatype	A data storage format that can contain a specific type or range of values.
deploy	Deploy means: 1. Within general software development, to send electronically as a unit. 2. Within STS, to publish terminology content from the development to production environments.
deployment	A deployment is: 1. The process of publishing terminology content from the development environment to the production environment. 2. Groups of concepts that are ready to be tested and potentially added to the terminology.
description	The text that represents a concept in human readable form. See also: designation (preferred)
designation	A representation of a concept. See also: description, display form, expression, surface form, term
development environment	All the software and hardware components needed to create or edit a terminology. See also: authoring
display form	A representation of a concept. See also: designation (preferred), description, expression, surface form, term
domain	A domain is: 1. A specialized discipline of medicine. 2. A set of terms belonging to a specialized discipline of medicine. 3. A set of terms associated within a VistA application.
entity relationship model	A graphical representation of work or information flow. Consists of entities (things), attributes (data), and relationships (connections between entities). Often used to model basic work or information flow. See also: information model, terminology model
Enterprise Terminology Services (ETS)	The term ETS is no longer used. This team is now referred to as Standardization and Terminology Services (STS).
expression	Human readable representation of a concept or the name of a concept. See also: designation (preferred), description, surface form
finalized version	TDS content that has passed SQA testing and is sent to production sites for field use.
Health Data Repository (HDR)	The HDR is a repository of clinical information normally residing on one or more independent platforms for use by clinicians and other personnel in support of patient-centric care.

Term	Definition
Health Level Seven (HL7)	HL7 is: 1. One of the American National Standards Institute (ANSI) accredited Standards Developing Organizations (SDO) operating in the healthcare arena. 2. An interoperability specification for transactions produced and received by computer systems.
homophone	One of two or more words pronounced alike but different in meaning, derivation, or spelling.
homonym	One of two or more words spelled and pronounced alike but different in meaning.
International Classification of Diseases – 9th edition (ICD-9)	ICD-9 classifies morbidity and mortality information for statistical purposes and for indexing of hospital records by disease and operations for data storage and retrieval.
International Classification of Diseases – 9th edition – Clinical Modification (ICD-9-CM)	ICD-9-CM is a clinical modification of the World Health Organization's ICD-9. It purpose is to classify morbidity data for indexing medical records, medical care review, and ambulatory and other medical care programs as well as for basic health statistics.
initial deployment	TDS content that has passed initial review and is sent to testing sites for internal evaluation.
Internal Entry Number (IEN)	A number used to identify an entry within a file. Every record has a unique internal entry number. In a VistA file, an IEN is a numerical identifier.
information model	A structured specification, expressed graphically and/or narratively, of the information requirements of a domain. An information model describes the required classes of information and the properties of those classes, optionally including attributes, relationships, and other essential information. See also: entity relationship model, terminology model
lexicon	A lexicon is: 1. The vocabulary of a language. See: terminology 2. Commonly used to refer to VistA's Lexicon Utility.
Logical Observation Identifiers, Names, And Codes (LOINC)	The LOINC database provides a set of universal names and ID codes for identifying laboratory and clinical observations. LOINC codes are used to facilitate the exchange and pooling of clinical laboratory results, such as blood hemoglobin or serum potassium, for clinical care, outcomes management, and research.
map entry	The link between concepts from a source code system to one or more concepts from a target code system. Map entries may be from two standard code systems or from within the same code system. A map entry is an instance of the data in a map set.
map entry order	The numeric order of the target code(s) for a source code.
map set	A collection of map entries with associated metadata.
metadata	Attributes that describe the format and content of information to enable sharing of information between users and applications.
modifier	A word or phrase associated with a concept that changes its meaning.
nomenclature	A system of names and groupings, which is structured according to pre-established naming rules. See also: classification, taxonomy
non-domain	Content that is not part of a clinical domain.

Term	Definition
non-VistA	Content that is not deployed to VistA.
normalization	The process of identifying lexical variations of concepts that may include identification of synonyms.
ontology	Ontology is: 1. An explicit formal specification of how to represent the objects, concepts, and other entities that are assumed to exist in some area of interest and the relationships that hold among them. See also: terminology 2. All terms in a domain including the relationships among them.
parent	The supertype in a parent-child relationship. The child (subtype) is narrower and more specific while the parent (supertype) is broader and more general. The child inherits the characteristics of the parent.
partial deployment	Deploying one or more subsets within a Version instead of deploying the entire Version.
post-coordination	The representation of a complex concept as a combination of two or more concepts. See also: pre-coordination
pre-coordination	The representation of a complex concept as a single concept. See also: post-coordination
preferred term	The preferred human readable representation of a concept or the preferred name of a concept. Often used as the default display form of a concept. Synonyms: preferred designation, preferred expression
production environment	The software and hardware that is used by end users, as opposed to developers and testers, to access terminology services in the VHA enterprise.
property	A named characteristic of a concept that can be assigned a value.
qualifier	A word or phrase associated with a concept that does not change its meaning.
reference file	Non-patient VistA data file that contains reference or Terminology information not Patient Data.
reference terminology	Reference terminology is: 1. A comprehensive, consistent, and logically organized set of concepts that is designed to completely embody the expressive detail of a given domain, supported by a set of relationships that defines the elements within the domain and shows how their meanings relate to each other. 2. A controlled medical vocabulary intended for use as a reference to enable storage, retrieval, and analysis of clinical data.
relationship	An association between concepts. See also: semantics, semantic relationship
Standards Development Organization (SDO)	Any entity whose primary activities are developing and maintaining standards that address the interests of a wide base of users outside the standards development organization
semantics	The meanings assigned to terminology content. See also: semantic relationship
semantic relationship	An association between two concepts that has a specific meaning.
service oriented architecture (SOA)	The Health*e*Vet-VistA architecture is an SOA whereby applications that provide functionality for use by other applications are created as a service that conforms to a set of VHA standardized design patterns.

Term	Definition
Systemized Nomenclature of Medicine (SNOMED) Clinical Terms (CT)	SNOMED CT is a dynamic, scientifically validated clinical reference terminology that makes health care knowledge more usable and accessible.
standard code system (SCS)	An organized collection of terms or concepts established by an authoritative source such as an SDO.
standardization	The process of defining, creating, deploying, and maintaining a common terminology resource.
Standards and Terminology Services (STS)	STS includes project teams that were previously known as Data Standardization (DS) and ETS as well as the VETS and Enterprise Reference Terminology (ERT) subproject teams.
subset	A collection of concepts or designations that share a specified purpose or set of characteristics.
subtype	The child in a parent-child relationship. The subtype (child) is narrower and more specific while the supertype (parent) is broader and more general. The subtype contains all the characteristics of the supertype.
supertype	The parent in a parent-child relationship. The supertype (parent) is broader and more general while the subtype (child) is narrower and more specific. All the characteristics of the supertype are included in the subtype.
surface form	The term that 3M uses for a human readable representation of a concept, or the name of a concept. See also: designation (preferred)
synonym	A term or an expression that is an acceptable alternative to the preferred designation.
taxonomy	A hierarchical classification of concepts.
template	A template is: 1. A structured aggregation of one or more archetypes, with optional order, to represent clinical data. An HL7 template is a data structure, based on the HL7 RIM that expresses the data content that is needed in a specific clinical or administrative context. Templates are drawn from the RIM and make use of HL7 vocabulary domains. Templates are also described as constraints on HL7 artifacts. 2. A locally produced constraint specification that specifies which archetypes go together in an application dialog or message specification.
term	A human readable representation of a concept or name of a concept. See also: designation (preferred)
terminology	Set of concepts, designations, and relationships for a specialized subject area. The terms that are characterized by special reference within a discipline are called the terms of the discipline and, collectively, they form the terminology. Terms that function in general reference over a variety of languages are simply words and their totality is a vocabulary.
terminology deployment services	Central distribution point for all terminology services. Updates are uploaded to the terminology deployment server, which in turn distributes them to targeted VistA sites.
terminology model	A terminology model provides a consistent structure and specifies the formal representation of a concept. The STS terminology model comprises of components such as concepts, designations, properties, and relationships. Other components of the STS terminology model include Subsets and Concept to Concept linking.
terminology server	The software application and hardware that provide access to terminology content through a published set of API.

Term	Definition
test environment	The software and hardware that is used by developers and testers as opposed to end users to test terminology services in the VHA enterprise.
translation	After two terminologies have been mapped, a translation between the two is possible.
Unified Medical Language System (UMLS) Metathesaurus	The UMLS Metathesaurus is a very large, multi-purpose, and multi-lingual vocabulary database that contains information about biomedical and health related concepts, their various names, and the relationships among them. It reflects and preserves the meanings, concept names, and relationships from its source vocabularies. It also supplies information that computer programs can use to create standard data, interpret user inquiries, interact with users to refine their questions, and convert the users' terms into the vocabulary used in relevant information sources.
value	A quantitative or qualitative state that is assigned to a property.
value domain	All allowable values for a terminology, datatype, or value set. May be an infinite set of values.
value set	A finite set of allowable values. Typically, a value set has a small number of values. If it has a large number of values, it may be a terminology.
version	A version is: 1. Formal changes in a terminology. May be used to find and track inactivated codes, determine the current code set, or track the history of a concept. 2. Also applies to formal revisions in computer code or programs. 3. An STS deployment that has passed internal testing. Can refer to a Candidate Version or a Finalized Version.
Veterans Health Administration (VHA) Enterprise Terminology Services (VETS)	VETS focuses on requirements for the deployment of and runtime access to terminology content in ERT for all VHA clinical applications.
VHA Terminology (VHAT)	VHAT is the terminology that is created and maintained by STS, in which Department of Veterans Affairs (VA) Unique Identifiers (VUID) are used to enable consistent, enterprise-wide use throughout the VHA.
Veterans Health Information Systems and Technology Architecture (VistA)	VistA is a term used to describe the VA's health care information system. It encompasses in-house developed applications developed by VA staff, office automation applications, locally developed applications, and commercial-off-the-shelf applications.
vocabulary	A list of words or phrases with their meanings. See also: terminology
Web Services Description Language (WSDL)	WSDL is an XML-based language that provides a model for describing Web services. The meaning of the acronym has changed from version 1.2 where the D meant Definition.

Appendix A – stsV9.config

```
[domain]  #  [CreateDomain] + [SetDomain]
stsv9_name=v9
stsv9_rootdir=/u01/app/domains
stsv9_domainversion=10.3.2.0
stsv9_configurationversion=10.3.2.0
stsv9_adminservername=v9.admin

[adminserver]  # [CreateAdminServer] + [SetAdminServer]
stsv9admin_name=v9.admin
stsv9admin_listenport=7200
stsv9admin_listenaddress=10.224.67.14
stsv9admin_serverstart=-server -Xms512m -Xmx1024m -Xverify:none  -
XX:MaxPermSize=512m -XX:PermSize=128m -
Dcds.jndi.provider.url=t3://10.224.67.14:7200

[ssl]  #  [SetSSL]
ssl01_listenport=10000
ssl01_enabled=True

[user]  #  [CreateUser]
weblogiccm_user=sts.admin
weblogiccm_password=sts.admin

[machine]  #  [CreateMachine]
machine01_name=vahdrppwls14.aac.va.gov
machine01_type=Machine

[debugport]  #  [SetDebugPort]
debugport01_portno=7151

[manageserver]  #  [CreateManageNode] + [SetManageNode]
stsv9node1_server=v9.deployment
stsv9node1_ListenPort=7201
stsv9node1_ListenAddress=""
stsv9node1_machine=vahdrppwls14.aac.va.gov
stsv9node1_ServerStart=-server -Xms1024m -Xmx2048m -Xverify:none  -
XX:MaxPermSize=384m -XX:PermSize=128m -
Dcds.jndi.provider.url=t3://10.224.67.14:7201
stsv9node2_server=v9.browser
stsv9node2_ListenPort=7204
stsv9node2_ListenAddress=""
stsv9node2_machine=vahdrppwls14.aac.va.gov
stsv9node2_ServerStart=-server -Xms512m -Xmx1024m -Xverify:none  -
XX:MaxPermSize=384m -XX:PermSize=128m -
Dcds.jndi.provider.url=t3://10.224.67.14:7204
stsv9node3_server=v9.ntrt
stsv9node3_ListenPort=7202
stsv9node3_ListenAddress=""
stsv9node3_machine=vahdrppwls14.aac.va.gov
```

```
stsv9node3_ServerStart=-server -Xms512m -Xmx1024m -Xverify:none  -
XX:MaxPermSize=384m -XX:PermSize=128m -
Dcds.jndi.provider.url=t3://10.224.67.14:7202
stsv9node4_server=v9.vuid
stsv9node4_ListenPort=7203
stsv9node4_ListenAddress=""
stsv9node4_machine=vahdrppwls14.aac.va.gov
stsv9node4_ServerStart=-server -Xms512m -Xmx1024m -Xverify:none  -
XX:MaxPermSize=384m -XX:PermSize=128m -
Dcds.jndi.provider.url=t3://10.224.67.14:7203


[embeddedldap]
embeddedldap01_Credential=c2s202


[initoptions]
initoptions01_timeout=240000
initoptions01_overwriterootdir=true


####### <<<<<< JDBC SECTION STARTS HERE  >>>>>> #######

[jdbcsystemresource]  #  [CreateJDBCSystemResource] + [SetJDBCDataSource]
+ [SetJDBCSystemResource]
Deployment_Name=Deployment
Deployment_Target=v9.deployment
VETS_Name=VETS
VETS_Target=v9.deployment v9.browser v9.ntrt
NTRT_Name=NTRT
NTRT_Target=v9.ntrt
VUID_Name=VUID
VUID_Target=v9.deployment v9.vuid


[jdbcproperty]  #  [CreateProperty] + [SetJDBCProperty]
Deployment_user=ds_v09
Deployment_portNumber=1565
Deployment_serverName=10.224.67.201
Deployment_SID=HDRP06
VETS_user=vts_v09
VETS_portNumber=1565
VETS_serverName=10.224.67.201
VETS_SID=HDRP06
NTRT_user=ntrt_v09
NTRT_portNumber=1565
NTRT_serverName=10.224.67.201
NTRT_SID=HDRP06
VUID_user=vuid_v09
VUID_portNumber=1565
VUID_serverName=10.224.67.201
VUID_SID=HDRP06


[jdbcdriverparams]  #   [SetJDBCDriverParams]
Deployment_Password=c2s106
Deployment_Url=jdbc:oracle:thin:@10.224.67.201:1565:HDRP06
Deployment_DriverName=oracle.jdbc.OracleDriver
VETS_Password=c2s92
```

```
VETS_Url=jdbc:oracle:thin:@10.224.67.201:1565:HDRP06
VETS_DriverName=oracle.jdbc.OracleDriver
NTRT_Password=c2s145
NTRT_Url=jdbc:oracle:thin:@10.224.67.201:1565:HDRP06
NTRT_DriverName=oracle.jdbc.OracleDriver
VUID_Password=c2s79
VUID_Url=jdbc:oracle:thin:@10.224.67.201:1565:HDRP06
VUID_DriverName=oracle.jdbc.OracleDriver

[jdbcxaparams]    #   [SetJDBCXAParams]
Deployment_KeepXaConnTillTxComplete=true
Deployment_XaRetryDurationSeconds=300
Deployment_XaTransactionTimeout=120
Deployment_XaSetTransactionTimeout=true
Deployment_XaEndOnlyOnce=true
VETS_KeepXaConnTillTxComplete=true
VETS_XaRetryDurationSeconds=300
VETS_XaTransactionTimeout=120
VETS_XaSetTransactionTimeout=true
VETS_XaEndOnlyOnce=true
NTRT_KeepXaConnTillTxComplete=true
NTRT_XaRetryDurationSeconds=300
NTRT_XaTransactionTimeout=120
NTRT_XaSetTransactionTimeout=true
NTRT_XaEndOnlyOnce=true
VUID_KeepXaConnTillTxComplete=true
VUID_XaRetryDurationSeconds=300
VUID_XaTransactionTimeout=120
VUID_XaSetTransactionTimeout=true
VUID_XaEndOnlyOnce=true

[jdbcdatasourceparams]    #   [SetJDBCDataSourceParams]
Deployment_GlobalTransactionsProtocol=TwoPhaseCommit
Deployment_JNDINames=jdbc/gov.va.med.term.deployment
VETS_GlobalTransactionsProtocol=TwoPhaseCommit
VETS_JNDINames=jdbc/gov.va.med.term.services
NTRT_GlobalTransactionsProtocol=OnePhaseCommit
NTRT_JNDINames=jdbc/gov.va.med.term.ntrt
VUID_GlobalTransactionsProtocol=TwoPhaseCommit
VUID_JNDINames=jdbc/gov.va.med.term.vuid

[jdbcconnectionpoolparams]    #   [SetJDBCConnectionPoolParams]
Deployment_TestConnectionsOnReserve=true
Deployment_MaxCapacity=15
Deployment_CapacityIncrement=1
Deployment_TestTableName=SQL SELECT 1 FROM DUAL
Deployment_InitialCapacity=1
VETS_TestConnectionsOnReserve=true
VETS_MaxCapacity=15
VETS_CapacityIncrement=1
VETS_TestTableName=SQL SELECT 1 FROM DUAL
VETS_InitialCapacity=1
NTRT_TestConnectionsOnReserve=true
NTRT_MaxCapacity=15
```

```
NTRT_CapacityIncrement=1
NTRT_TestTableName=SQL SELECT 1 FROM DUAL
NTRT_InitialCapacity=1
VUID_TestConnectionsOnReserve=true
VUID_MaxCapacity=15
VUID_CapacityIncrement=1
VUID_TestTableName=SQL SELECT 1 FROM DUAL
VUID_InitialCapacity=1


#######  <<<<<<  JDBC SECTION ENDS HERE   >>>>>>  #######

#######  <<<<<<  JMS SECTION ENDS HERE   >>>>>>  #######

[realm]   #   [CreateRealm]
myrealm_Name=myrealm


[rolemapper]   #   [CreateRoleMapper]
XACMLRoleMapper_Name=XACMLRoleMapper
XACMLRoleMapper_Realm=myrealm


[credentialmapper]   #   [CreateCredentialMapper]
DefaultCredentialMapper_Name=DefaultCredentialMapper
DefaultCredentialMapper_Realm=myrealm


[certpathprovider]   #   [CreateCertPathProvider]
WebLogicCertPathProvider_Name=WebLogicCertPathProvider
WebLogicCertPathProvider_Realm=myrealm


[authorizer]   #   [CreateAuthorizer]
XACMLAuthorizer_Name=XACMLAuthorizer
XACMLAuthorizer_Realm=myrealm


[adjudicator]   #   [CreateAdjudicator]
DefaultAdjudicator_Name=DefaultAdjudicator
DefaultAdjudicator_Realm=myrealm


[authenticationprovider]   #   [CreateAuthenticationProvider] +
[SetDefaultIdentityAsserter]
DefaultAuthenticator_Name=DefaultAuthenticator
DefaultAuthenticator_Realm=myrealm
DefaultIdentityAsserter_Name=DefaultIdentityAsserter
DefaultIdentityAsserter_Realm=myrealm
DefaultIdentityAsserter_ActiveTypes=AuthenticatedUser

[CreateAuthenticationProvider]
CreateAuthenticationProvider01=myrealm DefaultAuthenticator
CreateAuthenticationProvider02=myrealm DefaultIdentityAsserter

[SetDefaultIdentityAsserter]
SetDefaultIdentityAsserter01=DefaultIdentityAsserter myrealm ActiveTypes
AuthenticatedUser


[SetSecurityConfiguration]
```

```
SetSecurityConfiguration01=sts.v9 NodeManagerUsername Credential
NodeManagerPassword
```