

United States Department of Agriculture
National Agricultural Library

NALT Deployment Guide Document

Deployment Guide Document

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1. INTRODUCTION

This section provides a brief overview of the system and this document is available on the NAL shared drive

[S:\NAL\ISD\O&M_Documents\MultiTes\NAL
MulTiTes_Deployment_Guide_Document_V1.0.docx]

The Agricultural Thesaurus and Glossary were first released by the National Agricultural Library in 2002. In 2007, NAL and the Inter-American Institute for Cooperation on Agriculture (IICA) collaborated to develop the Spanish version of the NAL Agricultural Thesaurus and Glossary, named Tesauro Agrícola y Glosario

Multites is a software used to build and maintain NAL Thesaurus. A th2 file of NALT is generated through MultiTes and it is converted to SKOS file by using in-house program developed by Ying, Li (<https://programs.nal.usda.gov/>).

1.1 POINTS OF CONTACT

[This subsection of the DGD presents the names, roles, and contact information for all key personnel involved in the management, design, implementation, and testing of the current software release. The table below should contain at a minimum:]

- *Project Managers*
- *IT Tech Leads*
- *Any SMEs or other resources that will be supporting the development or deployment of this DGD*

Table 1-1: Points of Contact

Name	Email	Phone	Contact for:
Jennifer, Woodward-Greene	Jennifer.Woodward@ARS.USDA.GOV	301-504-	Chief, Indexing & Infoormatics Branch (I&I)
Sujata Suri	Sujata.suri@ars.usda.gov	301-504-5058	Thesaurus Coordinator
Sue, Phelps	Sue.Phelps@ARS.USDA.GOV>	301-504	IT
Truong Nguyen	Truong.Nguyen@ars.usda.gov	703-622-1646	Contractor

1.2 APPLICATION SERVERS IN SCOPE

[The following table contains the list of server instances that are the target for this Release Package DGD. This document may be applied to one specific server, or many, if each server receives an identical application build.]

Table 1-2: Application Servers in Scope

Application Name	Hostname	Environment
NALT	nalt-prod.nal.usda.gov	Production

1.3 SOFTWARE MEDIA REQUIRED

Table 1.3-1: Application Identification Information

Application Name	MultiTes Pro WDK
Application Acronym	MultiTes Pro
Release Number	v2018.04.01
GitHub Location	N/A

Table 1.3-2: Software Required for Build

Name	Version
IIS	7

Table 1.3-3: Software Released

Name	Description
?	Web deployment file for NALT

Table 1.3-4: Database Scripts Affecting the Current Release Only

Name	Description
None	

Table 1.3-5: Required Software License

Name	Description
None	

2. PRE-INSTALLATION

2.1 TECHNICAL ASSUMPTIONS

[This section contains all relevant assumptions regarding the installation of this application, such as availability of support personnel or skill set required. Include any security support requirements, or support from any other organization or vendor.]

- The primary deployment file is a th2 file that is automatically generated through the software. Creating the th2 file requires good working knowledge of Multites, creating reports and structuring data.

2.2 TECHNICAL DEPENDENCIES

[This section lists all key dependencies that are required for a successful installation. Examples are infrastructure services, such as DNS, WINS, etc, or other applications that must be available prior to beginning this application installation.]

This section also contains any required sequencing of applications installations, identifying predecessors and successors, if a particular sequence of installations is required for bringing a complete system online (i.e. App A needs to be operational before App B can begin installation).

Identify any upstream or downstream applications that are directly affected by this application.

Determine whether any of the previous versions of the software will need to be uninstalled before installing the new items.

Ensure that installation scripts generate meaningful status information as they run or that an installation log is created.

2.3 TECHNICAL RISKS

[This section identifies any significant technical risks (associated with this particular release only) to the successful completion of this installation. Ensure that any support or application knowledge shortcomings (i.e. the original developer is no longer available) are identified.]

- The build process requires a working knowledge of MultiTes, understanding of data structure and configurations.

2.4 TERMINOLOGY AND ACRONYMS

This table defines the client-specific terminology and acronyms used in this document.

Table 2.4-1: Terminology and Acronyms

Term	Definition
NAL	National Agriculture Library
NALT	National Agricultural Library Thesaurus

2.5 PRE-WORK

[This section contains all pre-work items that must be completed before following the installation instructions, such as creating backup copies of critical files, locating IDs/passwords, converting data, or verifying any server settings.]

The installation staff shall have the linux admin privilege on the deployment server.

2.6.1 PREPARING FOR BACKOUT

[This section provides details on what will need to be done should a backout be necessary. For example, perform special backup of specified files or folders prior to the update, perform archiving, etc.]

Back up the current deployment file “nal.war” using the simple command
`$ sudo cp /opt/tomcat/webapps/nal.war /opt/tomcat/webapps/nal.war.bk`

3. INSTALLATION INSTRUCTIONS

This section provides the detailed instructions which would allow a systems administrator to use the Software media posted to GitHub repositories it by the Application Teams to successfully install the application on the target server.

Note: *The installation instructions should not include the following:*

- *Windows operating system*
- *Unix operating system*
- *Middleware products: IIS, Oracle AS, Apache Tomcat, Oracle DB, SQL Server, Coldfusion, Business Objects, Documentum*

A standard installation procedure will be followed for these products.

3.1 MULTITES DEPLOYMENT

3.1.1 MULTITES – GENERATING WEB FILE

A clean NALT th.2 web file (NALT20XXweb.th2) and a glossary (GLOS20XX.th2) file is generated from the Multites. The instructions for generating web files for NALT and Glossary can be found in S:\NAL\DPD\Indexing & Informatics\NAL Thesaurus\NALT Manual-Procedures for publishing a new edition of Thesaurus and Glossary Revised 2018.

3.1.2 MULTITES – MOVE .TH2 FILE TO DEPLOYMENT SERVER

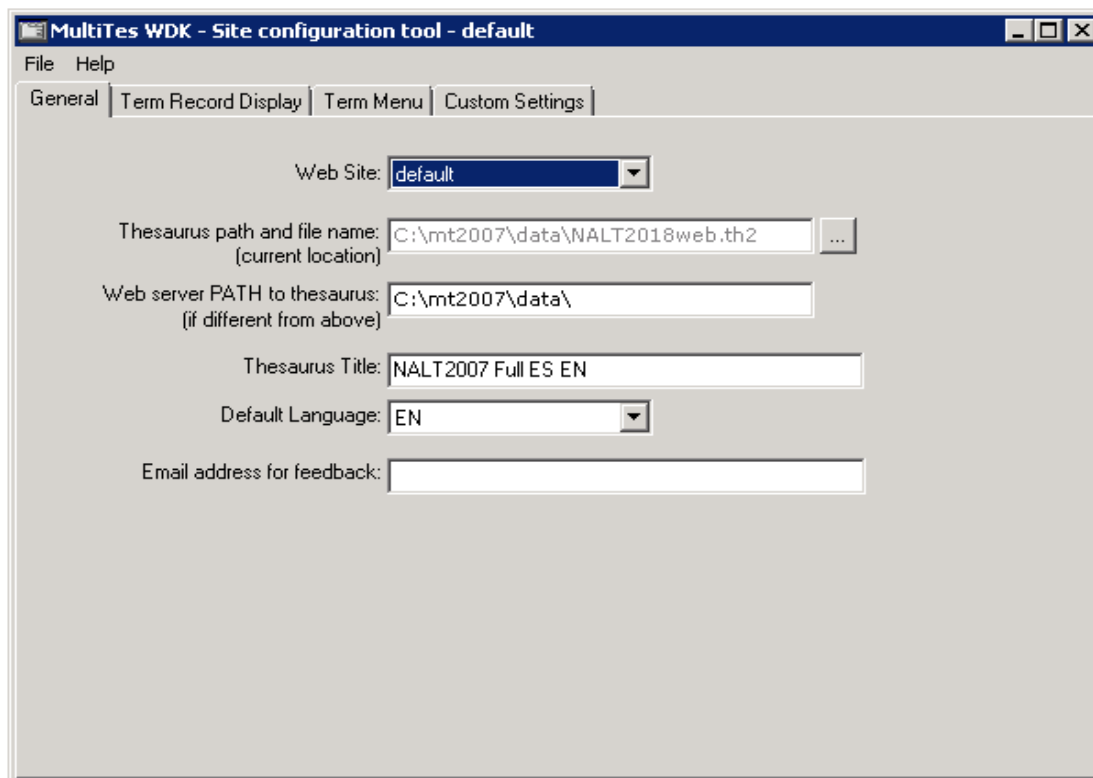
Copy NALT20XXweb.th2 and GLOSS20XX.th2 files and paste it into mt2007/data on production server.

3.1.3 MULTITES – SITE CONFIGURATION TOOL

Configuration for NALT and glossary can be set as shown in the screenshots below:

Go to mt2007/WDK/ WDKConfig and select different options from drop down “Web Site” for NAL Thesaurus and glossary in English and Spanish as shown below

Web Site: default (For NALT in English)



MultiTes WDK - Site configuration tool - default

File Help

General | Term Record Display | Term Menu | Custom Settings

Web Site: **default**

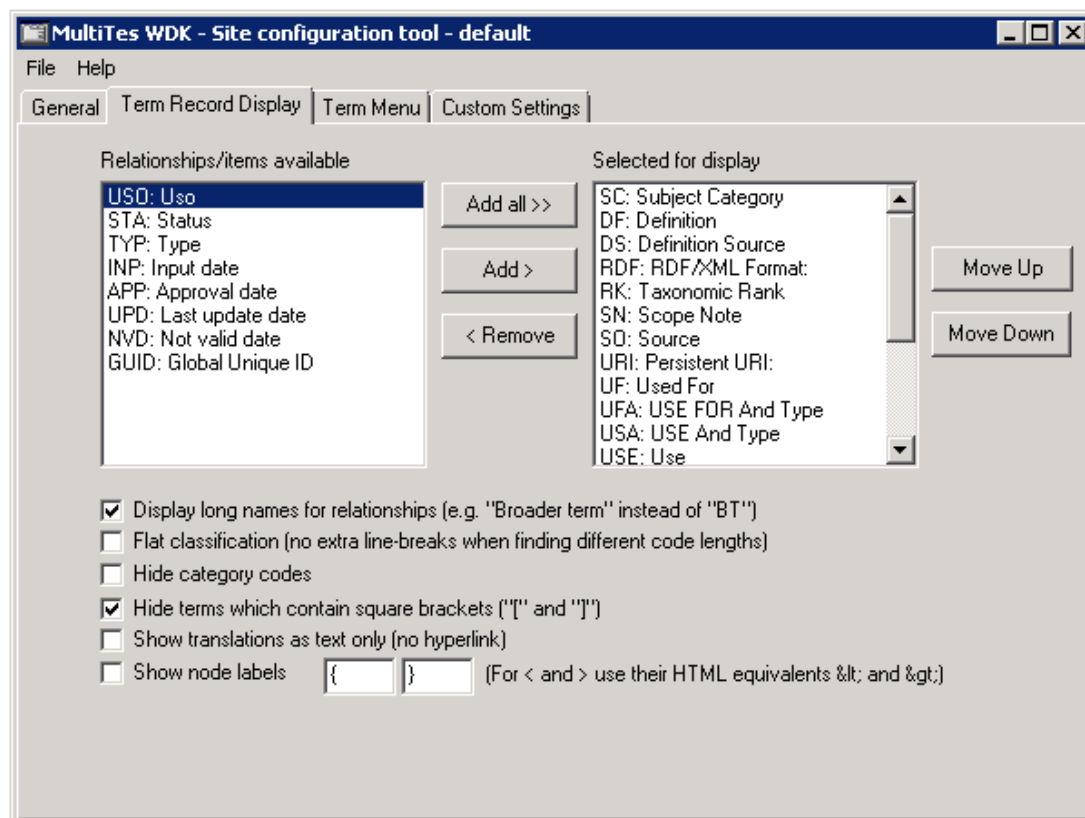
Thesaurus path and file name: ...
(current location)

Web server PATH to thesaurus:
(if different from above)

Thesaurus Title:

Default Language: **EN**

Email address for feedback:



MultiTes WDK - Site configuration tool - default

File Help

General | Term Record Display | Term Menu | Custom Settings

Relationships/items available

- USD: Use
- STA: Status
- TYP: Type
- INP: Input date
- APP: Approval date
- UPD: Last update date
- NVD: Not valid date
- GUID: Global Unique ID

Add all >>

Add >

< Remove

Selected for display

- SC: Subject Category
- DF: Definition
- DS: Definition Source
- RDF: RDF/XML Format
- RK: Taxonomic Rank
- SN: Scope Note
- SO: Source
- URI: Persistent URI
- UF: Used For
- UFA: USE FOR And Type
- USA: USE And Type
- USE: Use

Move Up

Move Down

☒ Display long names for relationships (e.g. "Broader term" instead of "BT")

☐ Flat classification (no extra line-breaks when finding different code lengths)

☐ Hide category codes

☒ Hide terms which contain square brackets ("[" and "]")

☐ Show translations as text only (no hyperlink)

☐ Show node labels { } (For < and > use their HTML equivalents < and >.)

MultiTes WDK - Site configuration tool - default

File Help

General Term Record Display Term Menu Custom Settings

Relationships/items available

- USD: Uso
- STA: Status
- TYP: Type
- INP: Input date
- APP: Approval date
- UPD: Last update date
- NVD: Not valid date
- GUID: Global Unique ID

Add all >> Add > < Remove

Selected for display

- UF: Used For
- UFA: USE FOR And Type
- USA: USE And Type
- USE: Use
- BT: Broader Term
- NT: Narrower Term
- RT: Related Term
- EN: English
- ES: Spanish
- TNR: Term Number
- UP: Usado para

Move Up Move Down

☒ Display long names for relationships (e.g. "Broader term" instead of "BT")
☐ Flat classification (no extra line-breaks when finding different code lengths)
☐ Hide category codes
☒ Hide terms which contain square brackets ("[" and "]")
☐ Show translations as text only (no hyperlink)
☐ Show node labels { } (For < and > use their HTML equivalents < and >)

MultiTes WDK - Site configuration tool - default

File Help

General Term Record Display Term Menu Custom Settings

Show relationships label: `Term Relationships

</div>`

Show hierarchy label: `Change`

☐ Stay in Selected display format

Send feedback label:

Search link name/label: `Search y` >> Use % to indicate where the drop-down will show. If not specified, it will be placed at the end.

Submit terms as:

Show external links as:

Search engine / External Link definition

Link name	URL (required)	URL (suffix, optional)
<code><div class=showHier></code>	<code>http://scholar.google.com/scholar?q=%22</code>	<code>%22&ie=UTF-8&oe=UTF-8</code>
<code><div class=showHier></code>	<code>http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?DB=%22&STARTDB=AGRID</code>	<code>%22</code>
<code><div class=showHier></code>	<code>http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?DB=%22</code>	<code>%22</code>
<code><div class=showHier></code>	<code>http://dtnav.nal.usda.gov/search?q=%22</code>	<code>%22</code>

MultiTies WDK - Site configuration tool - default

File Help

General | Term Record Display | Term Menu | Custom Settings

HTML Template file: C:\mt2007\WDK\WebSite\dne\NewTemplate.f ... Validate

Navigation links, tags and messages (HTML tags allowed)

"New search" page URL: http://agclass.nal.usda.gov/agt/dne/sea
(if different from default)

Search results: Search Results: Click on term to display i

"No records found" message: No records found. Please check

New search:

Previous page: Previous Page

Next page: Next Page

☒ Show navigation bar on top and bottom

Hierarchical display help: Legend
. = Narrower Tem

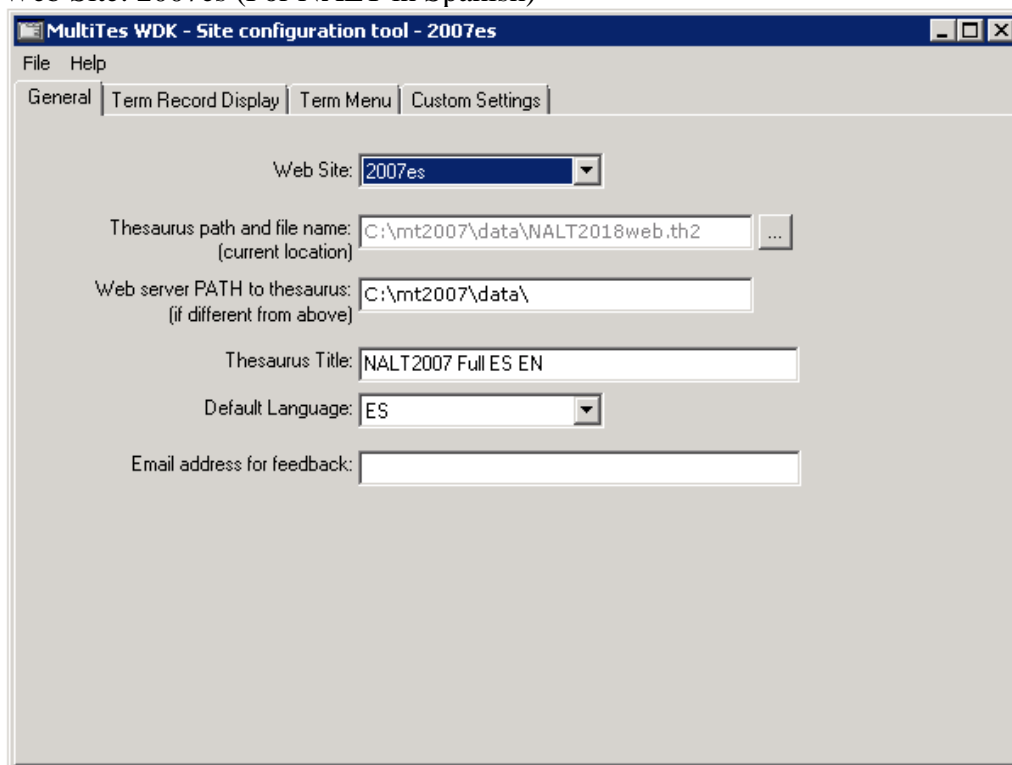
Introduction/Help text file: ...

HTTP Header information

Character set: utf-8

HTTP Headers:

Web Site: 2007es (For NALT in Spanish)



MultiTes WDK - Site configuration tool - 2007es

File Help

General | Term Record Display | Term Menu | Custom Settings

Web Site: 2007es

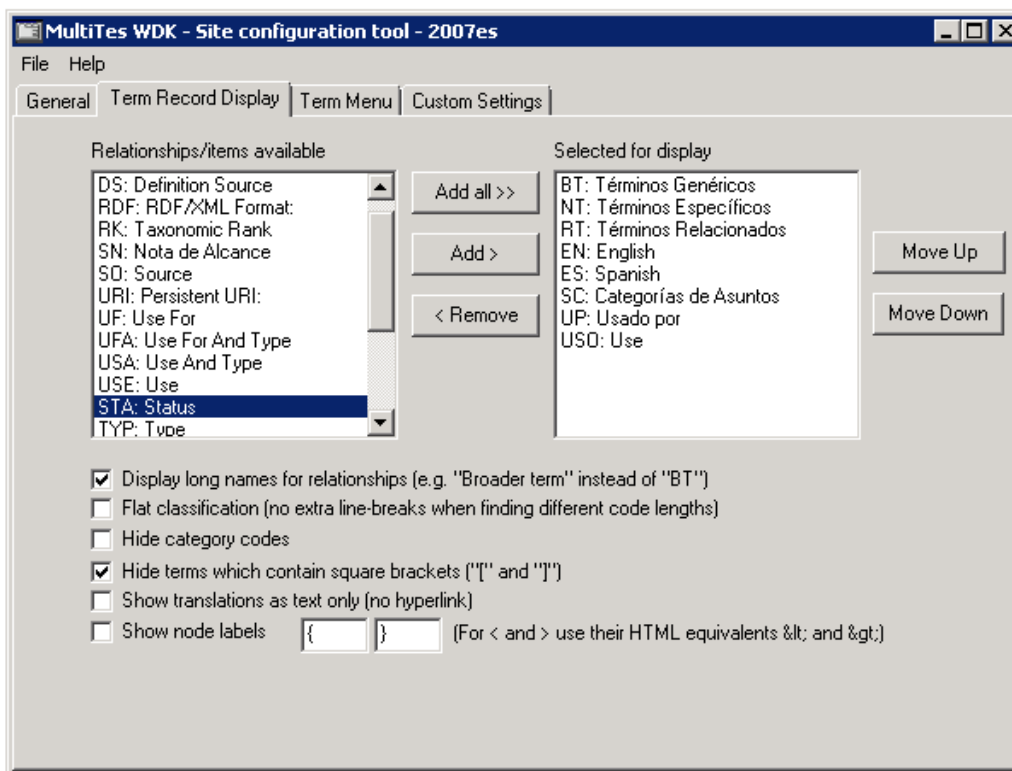
Thesaurus path and file name: C:\mt2007\data\NALT2018web.th2 ...

Web server PATH to thesaurus: C:\mt2007\data\

Thesaurus Title: NALT2007 Full ES EN

Default Language: ES

Email address for feedback:



MultiTes WDK - Site configuration tool - 2007es

File Help

General | Term Record Display | Term Menu | Custom Settings

Relationships/items available

- DS: Definition Source
- RDF: RDF/XML Format
- RK: Taxonomic Rank
- SN: Nota de Alcance
- SD: Source
- URI: Persistent URI
- UF: Use For
- UFA: Use For And Type
- USA: Use And Type
- USE: Use
- STA: Status
- TYP: Type

Selected for display

- BT: Términos Genéricos
- NT: Términos Específicos
- RT: Términos Relacionados
- EN: English
- ES: Spanish
- SC: Categorías de Asuntos
- UP: Usado por
- USD: Use

Buttons: Add all >>, Add >, < Remove, Move Up, Move Down

Display options:

- ☒ Display long names for relationships (e.g. "Broader term" instead of "BT")
- ☐ Flat classification (no extra line-breaks when finding different code lengths)
- ☐ Hide category codes
- ☒ Hide terms which contain square brackets ("[" and "]")
- ☐ Show translations as text only (no hyperlink)
- ☐ Show node labels { } (For < and > use their HTML equivalents < and >)

MultiTes WDK - Site configuration tool - 2007es

File Help

General | Term Record Display | Term Menu | Custom Settings

Show relationships label:

Show hierarchy label:

☐ Stay in Selected display format

Send feedback label:

Search link name/label:

Submit terms as:

Show external links as:

Search engine / External Link definition

Link name	URL (required)	URL (suffix, optional)
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?DB=&Search_Code=GKEY&S	
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?Search=&DB=local&CNT=25&Sea	
<div class=showHier>	http://scholar.google.es/scholar?q=	&hl=es

>> Use % to indicate where the drop-down will show. If not specified, it will be placed at the end.

MultiTes WDK - Site configuration tool - 2007es

File Help

General | Term Record Display | Term Menu | Custom Settings

HTML Template file: ...

Navigation links, tags and messages (HTML tags allowed)

"New search" page URL:

(if different from default)

Search results:

"No records found" message:

New search:

Previous page:

Next page:

☒ Show navigation bar on top and bottom

Hierarchical display help:

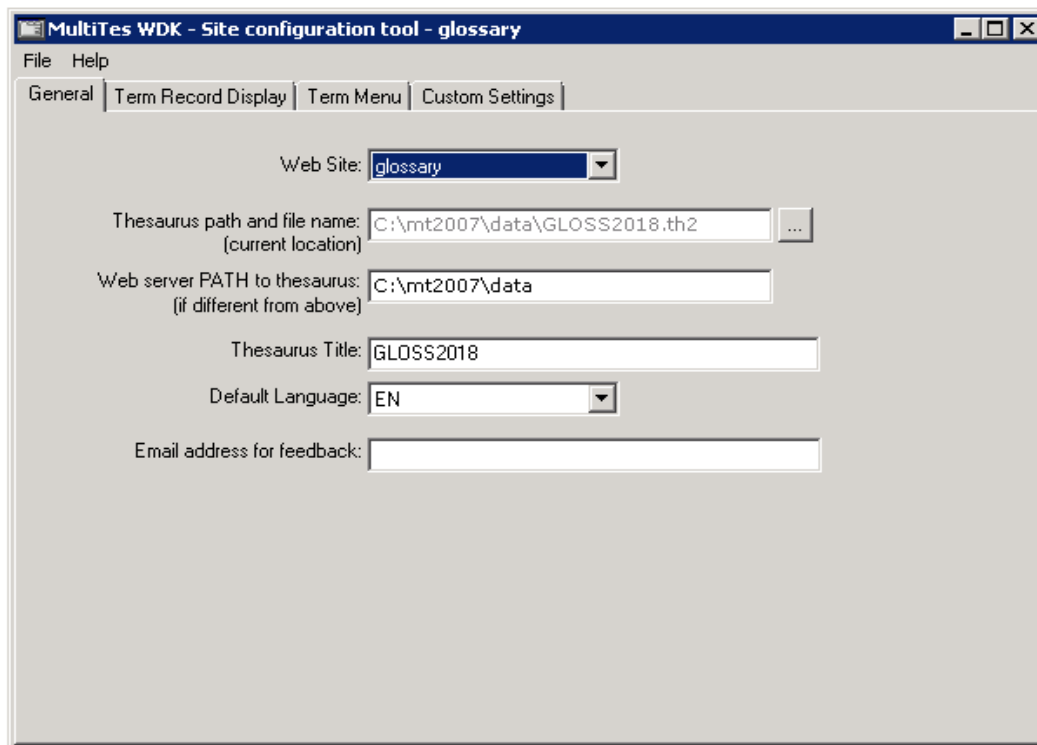
Introduction/Help text file: ...

HTTP Header information

Character set:

HTTP Headers:

Web Site: glossary (For NAL glossary in English)



MultiTes WDK - Site configuration tool - glossary

File Help

General | Term Record Display | Term Menu | Custom Settings

Web Site:

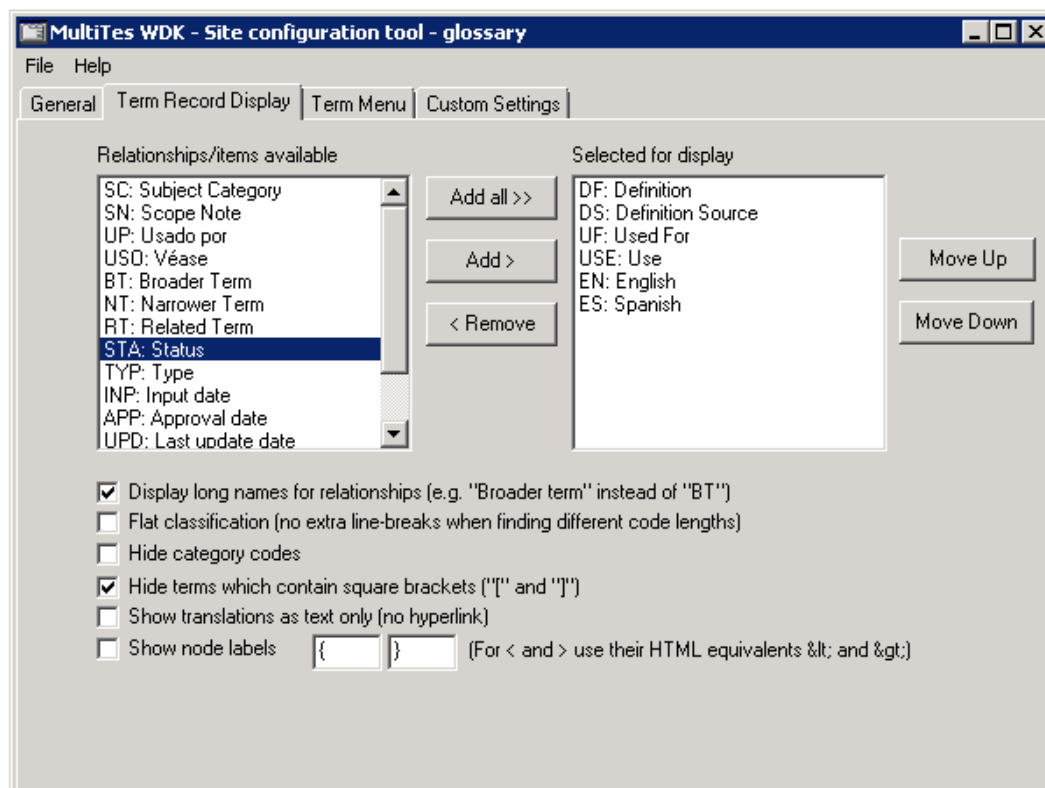
Thesaurus path and file name: ...
(current location)

Web server PATH to thesaurus:
(if different from above)

Thesaurus Title:

Default Language:

Email address for feedback:



MultiTes WDK - Site configuration tool - glossary

File Help

General | Term Record Display | Term Menu | Custom Settings

Relationships/items available

- SC: Subject Category
- SN: Scope Note
- UP: Usado por
- USD: Véase
- BT: Broader Term
- NT: Narrower Term
- RT: Related Term
- STA: Status
- TYP: Type
- INP: Input date
- APP: Approval date
- UPD: Last update date

Selected for display

- DF: Definition
- DS: Definition Source
- UF: Used For
- USE: Use
- EN: English
- ES: Spanish

Buttons: Add all >>, Add >, < Remove, Move Up, Move Down

Display options:

- ☒ Display long names for relationships (e.g. "Broader term" instead of "BT")
- ☐ Flat classification (no extra line-breaks when finding different code lengths)
- ☐ Hide category codes
- ☒ Hide terms which contain square brackets ("[" and "]")
- ☐ Show translations as text only (no hyperlink)
- ☐ Show node labels { } (For < and > use their HTML equivalents < and >)

MultiTes WDK - Site configuration tool - glossary

File Help

General | Term Record Display | Term Menu | Custom Settings

Show relationships label:

Show hierarchy label:

☐ Stay in Selected display format

Send feedback label:

Search link name/label: >> Use % to indicate where the drop-down will show. If not specified, it will be placed at the end.

Submit terms as:

Show external links as:

Search engine / External Link definition

Link name	URL (required)	URL (suffix, optional)
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?DB: &Search_Code=GKEY&S	
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?Se&DB=local&CNT=25&Sea	
<div class=showHier>	http://scholar.google.com/scholar?q=	&ie=UTF-8&oe=UTF-8&hl

MultiTes WDK - Site configuration tool - glossary

File Help

General | Term Record Display | Term Menu | Custom Settings

HTML Template file:

Navigation links, tags and messages (HTML tags allowed)

"New search" page URL: (if different from default)

Search results:

"No records found" message:

New search:

Previous page:

Next page:

☒ Show navigation bar on top and bottom

Hierarchical display help:

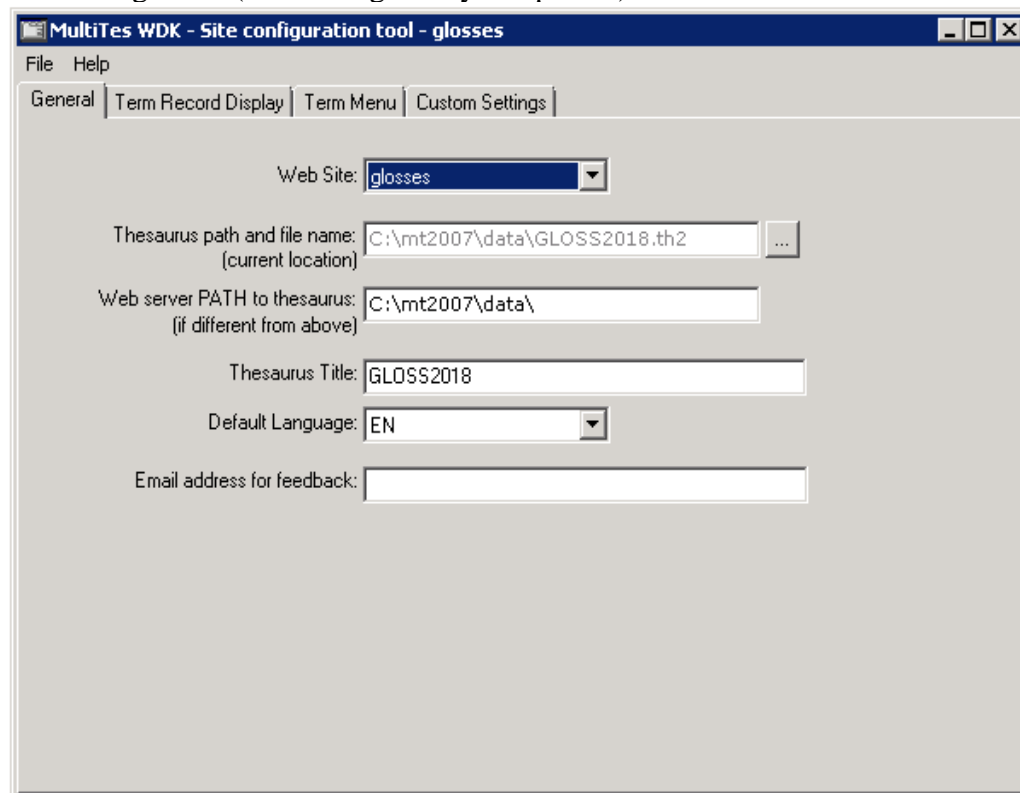
Introduction/Help text file:

HTTP Header information

Character set:

HTTP Headers:

Web Site: glosses (For NAL glossary in Spanish)



MultiTes WDK - Site configuration tool - glosses

File Help

General | Term Record Display | Term Menu | Custom Settings

Web Site:

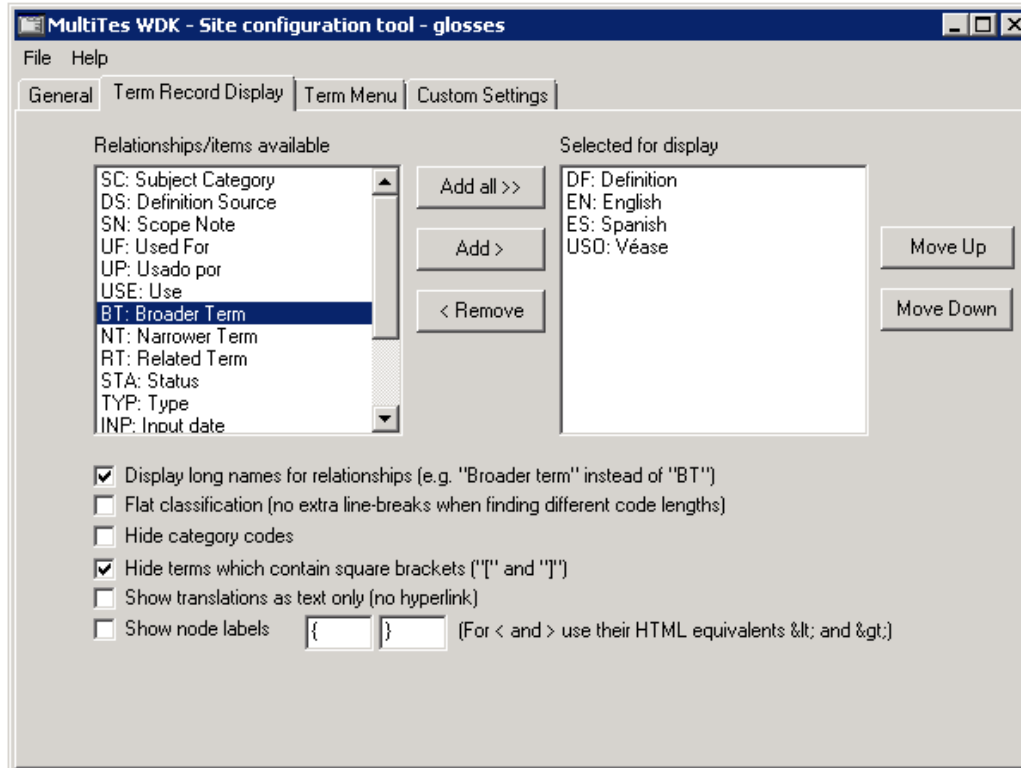
Thesaurus path and file name: ...
(current location)

Web server PATH to thesaurus:
(if different from above)

Thesaurus Title:

Default Language:

Email address for feedback:



MultiTes WDK - Site configuration tool - glosses

File Help

General | Term Record Display | Term Menu | Custom Settings

Relationships/items available

- SC: Subject Category
- DS: Definition Source
- SN: Scope Note
- UF: Used For
- UP: Usado por
- USE: Use
- BT: Broader Term**
- NT: Narrower Term
- RT: Related Term
- STA: Status
- TYP: Type
- INP: Input date

Add all >>

Add >

< Remove

Selected for display

- DF: Definition
- EN: English
- ES: Spanish
- USD: Véase

Move Up

Move Down

☒ Display long names for relationships (e.g. "Broader term" instead of "BT")

☐ Flat classification (no extra line-breaks when finding different code lengths)

☐ Hide category codes

☒ Hide terms which contain square brackets ("[" and "]")

☐ Show translations as text only (no hyperlink)

☐ Show node labels (For < and > use their HTML equivalents < and >)

MultiTes WDK - Site configuration tool - glosses

File Help

General | Term Record Display | Term Menu | Custom Settings

Show relationships label:

Show hierarchy label:

☐ Stay in Selected display format

Send feedback label:

Search link name/label: >> Use % to indicate where the drop-down will show. If not specified, it will be placed at the end.

Submit terms as:

Show external links as:

Search engine / External Link definition

Link name	URL (required)	URL (suffix, optional)
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?DB=	&Search_Code=GKEY&S
<div class=showHier>	http://agricola.nal.usda.gov/cgi-bin/Pwebrecon.cgi?Se	&DB=local&CNT=25&Sea
<div class=showHier>	http://scholar.google.es/scholar?q=	&hl=es

MultiTes WDK - Site configuration tool - glosses

File Help

General | Term Record Display | Term Menu | Custom Settings

HTML Template file:

Navigation links, tags and messages (HTML tags allowed)

"New search" page URL: (if different from default)

Search results:

"No records found" message:

New search:

Previous page:

Next page:

☒ Show navigation bar on top and bottom

Hierarchical display help:

Introduction/Help text file:

HTTP Header information

Character set:

HTTP Headers:

3.2 STEPS TO IIS

Table 3-1: Steps for Deployment in Tomcat

Stage/Phase (Target Environment): Build machine/ build phase		Duration:
Step	Task/Description	Comments
1	<code>\$ sudo systemctl stop tomcat</code>	Stop the tomcat instance
2	<code>\$ sudo -rf /opt/tomcat/webapps/nal.war</code> <code>\$ sudo -rf /opt/tomcat/webapps/nal</code>	Delete the current deployment war file and folder
3	<code>\$ sudo cp dist/nal.war /opt/tomcat/webapps/nal.war</code>	Copy the deployment nal.war file
4	<code>\$ sudo systemctl start tomcat</code>	Start the tomcat instance

4. VERIFICATION PLAN

[This section describes the criteria and verification tests that the NAL Systems Administrator should perform after completing the installation, to confirm successful completion. This is usually a short list of simple checks, such as communication to target devices, status on consoles, interface of the application through a web browser, etc. These checks will be conducted prior to turning the application over for full system testing.]

Note: *This section should include basic system verification steps, not a full blown system test plan. The system test plan is maintained independently from this document. Upon successful completion of the Verification Plan, the system will be turned over for formal and complete system testing.]*

Target Environment:		
Step (Task)	Expected Outcome	Comments
1	Navigate to the lca collaboration server portal <ul style="list-style-type: none">• Dev: http://annotator-dev:8080/nal/• Staging:TBD• Production: TBD	The landing page should be rendered without any errors

5. BACKOUT PLAN

5.1 BACKOUT PLAN

[This section describes any steps necessary to backout an unsuccessful installation. This does not need to include steps to uninstall the software on the target server, but rather to reset any links, DNS entries, or other external dependencies that may have been established assuming the new server coming online. Steps taken under Section 2.6.1 Preparing for a Backout should be referenced here, for example: “restore the back up that was performed under Section 2.6.1. This section should also include any dependant applications and/or components that may need to be reset if this installation fails.]

Environment:		Duration:
Step	Task/Description	Comments:
1	<code>sudo systemctl stop tomcat</code>	Stop tomcat
2	<code>sudo rm -rf /opt/tomcat/webapps/nal/</code> <code>sudo rm -rf /opt/tomcat/webapps/nal.war</code>	Delete the current web folder and war file
3	<code>sudo mv /opt/tomcat/webapps/nal.bak /opt/tomcat/webapps/nal.war</code>	Restore the previous deployment war file
4	<code>sudo systemctl start tomcat</code>	Start tomcat

Note: If the system fails in PROD, then any special steps to be taken should be detailed in a “Backout From PROD SOP” to be added as an Appendix to this document.

6. KNOWN PROBLEMS

[This section contains all known problems with the application installation or ongoing operational issues, such as known bugs or unusual behavior.]

None

APPENDIX A: KEY TERMS

The following table provides definitions and explanations for terms and acronyms relevant to the content presented within this document.

Acronym	Definition
DNS	Domain Name System
ISD	Information Systems Division
NAL	National Agriculture Library
NALT	National Agricultural Library Thesaurus
SOP	Standard Operating Procedure
WDK	Web Deployment Kit