

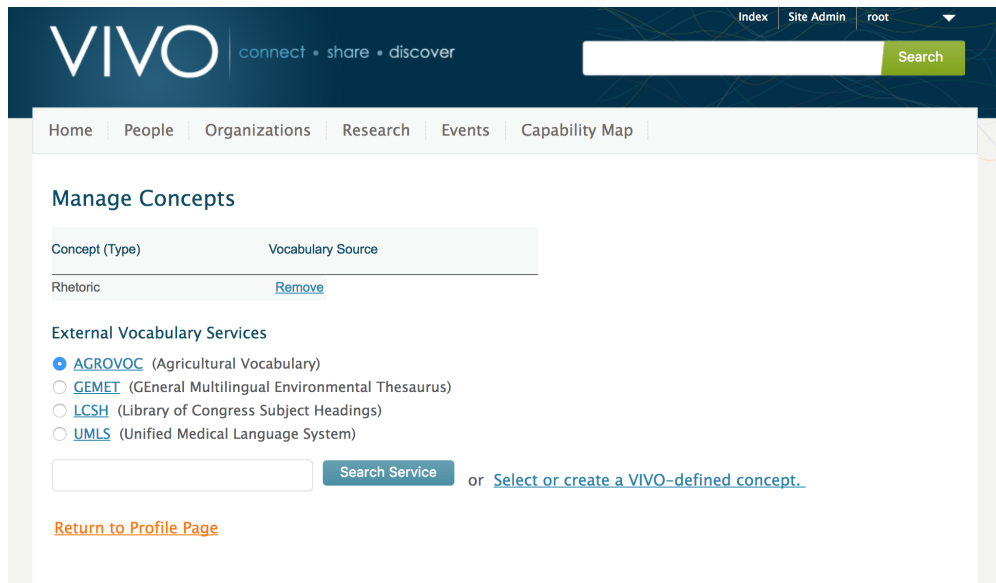
# Configuring External Vocabularies

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## Overview

VIVO provides the ability to use external vocabularies to represent the research areas of scholars, and the concepts pertaining to scholarly works. External vocabularies that provide RDF can be used with VIVO. Using an external service, a curator, or page owner may query the external vocabulary for terms, and select terms representing the work or scholar. The terms are fetched from the external service and added to the VIVO triple store. Links from the work or person are added to connect the person or work to the selected term or terms.

See below



The screenshot shows the VIVO web interface. At the top is a dark blue header with the VIVO logo and the tagline "connect • share • discover". To the right of the header are links for "Index", "Site Admin", and "root", along with a search bar. Below the header is a navigation bar with links for "Home", "People", "Organizations", "Research", "Events", and "Capability Map". The main content area is titled "Manage Concepts". It contains a table with two columns: "Concept (Type)" and "Vocabulary Source". The table has one row with "Rhetoric" in the first column and a "Remove" link in the second. Below the table is a section titled "External Vocabulary Services". It contains four radio buttons, each followed by a service name and a brief description: "AGROVOC (Agricultural Vocabulary)", "GEMET (GEneral Multilingual Environmental Thesaurus)", "LCSH (Library of Congress Subject Headings)", and "UMLS (Unified Medical Language System)". The "AGROVOC" option is selected. Below the radio buttons is a search bar with a "Search Service" button and a link "or [Select or create a VIVO-defined concept.](#)". At the bottom of the section is a link "Return to Profile Page".

## Configuring the UMLS External Vocabulary Service

The UMLS External Vocabulary Service is provided by the National Institutes of Health in the United States. They require an apikey to use the service. You can get an apikey at no charge from the NIH. Visit <https://www.nlm.nih.gov/databases/umls.html> for general information, and <https://documentation.uts.nlm.nih.gov/rest/authentication.html> for information on generating an API key.

Once you have the apikey, create a text file called `umls.properties`. Your file should look like the one below, with your value for apikey substituted.

<code>umls.properties</code>
<pre>apikey = yourumlsapikey</pre>

Place this file in the directory `VIVO/installer/webapp/src/main/webResources/WEB-INF/classes/` in your source tree and reinstall VIVO. (You can copy the file directly to `WEB-INF/classes` inside the VIVO directory under Tomcat's webapps directory if you want to use UMLS right away without reinstalling VIVO and restarting Tomcat. Note that the file will not be preserved through future installations unless you also add it to your source tree.)

## Notes

When external concepts are added to VIVO, they retain their original URI from the external vocabulary. Since we have no way of knowing whether these URIs represent OWL classes or RDF instance data, VIVO does not assert a type for the concepts, which will therefore only be interpreted as being of type `owl:Thing`.

To add a new external vocabulary, see [Adding External Vocabularies](#)