Discovery

DSpace Discovery

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Introduction Video

Usage Guidelines

The Discovery Module enables faceted searching for your repository.

In a faceted search, a user can filter what they are looking for by grouping entries into a facet, and drill down to find the content they are interested in. So instead of user searching: [wetland + "dc.author=Mitsch, William J" + dc.subject="water quality"], they can instead do their initial search, [wetland], and then filter the results by attributes.

Although these techniques are new in DSpace, they might feel familiar from other platforms like Aquabroser or Amazon, where facets help you to select the right product according to facets like price and brand. DSpace Discovery offers very powerful browse and search configurations that were only possible with code customization in the past.

Instructions for enabling Discovery in DSpace 1.7.0

As with any upgrade procedure, it is highly recommend that you backup your existing data thoroughly. This includes cases where upgrading DSpace from 1.6.2 to 1.7.0. Although upgrades in versions of Solr/Lucene do tend to be forwards compatible for the data stored in the Lucene index, it is always a best practice to backup your dspace.dir/solr/statistics cores to assure no data is lost.

1. Enable the Discovery Aspects in the XMLUI by changing the following settings in config/xmlui.xconf
    a. Comment out: SearchArtifacts
    b. Uncomment: Discovery

```
<xmlui>
    <aspects>
        <aspect name="Artifact Browser" path="resource://aspects/ArtifactBrowser/" />
        <aspect name="Browsing Artifacts" path="resource://aspects/BrowseArtifacts/" />
        <!--<aspect name="Searching Artifacts" path="resource://aspects/SearchArtifacts/" />-->
        <aspect name="Administration" path="resource://aspects/Administrative/" />
        <aspect name="E-Person" path="resource://aspects/EPerson/" />
        <aspect name="Submission and Workflow" path="resource://aspects/Submission/" />
        <aspect name="Statistics" path="resource://aspects/Statistics/" />

        <!--
            To enable Discovery, uncomment this Aspect that will enable it
            within your existing XMLUI
            Also make sure to comment the SearchArtifacts aspect
            as leaving it on together with discovery will cause UI overlap issues-->
        <aspect name="Discovery" path="resource://aspects/Discovery/" />


        <!--
            This aspect tests the various possible DRI features,
            it helps a theme developer create themes
        -->
        <!-- <aspect name="XML Tests" path="resource://aspects/XMLTest/"/> -->
    </aspects>
```

2. Enable the Discovery Indexing Consumer that will update Discovery Indexes on changes to content in XMLUI, JSPUI, SWORD, and LNI in config /dspace.cfg
    a. Add discovery to the list of event.dispatcher.default.consumers
    b. Change recent.submissions.count to zero

```
#### Event System Configuration ####

# default synchronous dispatcher (same behavior as traditional DSpace)
event.dispatcher.default.class = org.dspace.event.BasicDispatcher
#event.dispatcher.default.consumers = search, browse, eperson, harvester
event.dispatcher.default.consumers = search, browse, discovery, eperson, harvester

#Put the recent submissions count to 0 so that discovery can use it's recent submissions,
# not doing this when discovery is enabled will cause UI overlap issues
#How many recent submissions should be displayed at any one time
#recent.submissions.count = 5
recent.submissions.count = 0
```

3. Check that the port is correct for solr.search.server in config/dspace-solr-search.cfg
    a. If all of your traffic runs over port 80, then you need to remove the port from the URL

```
##### Search Indexing #####
solr.search.server = http://localhost/solr/search
```

4. From the command line, navigate to the dspace directory and run the command below to index the content of your DSpace instance into Discovery.

```
./bin/dspace update-discovery-index
```

NOTE: This step may take some time if you have a large number of items in your repository.

Instructions for Configuring Discovery

Discovery can be configured at multiple levels of the application. Outlined below will be where in Discovery changes can be made that will alter the presentation. The primary place that the user experience is altered in XMLUi is through the **dspace-solr-search.cfg** file

Configuring Facets that are Exposed for Search Results

Property:	solr.search.server
Example Value:	http://localhost:8080/solr/search
Informational Note:	Discovery relies on a SOLR index. This parameter determines the location of the SOLR index.
Property:	solr.facets.search
Example Value:	solr.facets.search=dc.contributor.author,dc.subject,dc.date.issued_dt
Informational Note:	The Discovery search facets, offered in the navigation bar, can be customized for each specific page in DSpace. When no specification is given for a page, this default configuration is used. Every SOLR facet field which ends with _dt will be handled as a date. Handeling as date implies that (field.name).year will be used for faceting
Property:	solr.facets.site
Example Value:	solr.facets.site=dc.contributor.author,dc.subject,dc.date.issued_dt

Informational Note:	Defines the facet fields, offered on the DSpace homepage
Property:	solr.facets.community
Example Value:	solr.facets.community=dc.contributor.author,dc.subject,dc.date.issued_dt
Informational Note:	Defines the facet fields, offered on community homepages
Property:	solr.facets.collection
Example Value:	solr.facets.collection=dc.contributor.author,dc.subject,dc.date.issued_dt
Informational Note:	Defines the facet fields, offered on collection homepages
Property:	solr.facets.item
Example Value:	solr.facets.item=dc.contributor.author,dc.subject,dc.date.issued_dt
Informational Note:	Defines the facet fields, offered on item pages
Property:	solr.default.filterQuery
Example Value:	solr.default.filterQuery=location:l2
Informational Note:	Aside from filters that are applied when users are searching, filters can also be applied by default. This property allos to define default filters that are used for every search in Discovery. The syntax is metadatafieldname:value. **location** is a special example, used to restrict a search to certain communities and collections. l stands for collection, while m is used to restrict the search to a community. The numbers, written after l or m is the internal database ID of the collection or community
Property:	solr.site.default.filterQuery
Example Value:	solr.site.default.filterQuery=dc.contributor.author:Kevin*
Informational Note:	This parameter applies additional filters on the Recently Added list, shown on the DSpace homepage. As these filters are strict matches, the star in the example is used to filter on all dc.contributor.author values that start with Kevin
Property:	solr.community.default.filterQuery
Example Value:	solr.community.default.filterQuery=dc.contributor.author:Kevin*
Informational Note:	This parameter applies additional filters on the Recently Added list, shown on Community Homepages. As these filters are strict matches, the star in the example is used to filter on all dc.contributor.author values that start with Kevin

Property:	solr.collection.default.filterQuery
Example Value:	solr.collection.default.filterQuery=dc.contributor.author:Kevin*
Informational Note:	This parameter applies additional filters on the Recently Added list, shown on Collection Homepages. As these filters are strict matches, the star in the example is used to filter on all dc.contributor.author values that start with Kevin
Property:	solr.search.default.filterQuery
Example Value:	solr.search.default.filterQuery=dc.embargo:lifted
Informational Note:	This parameter applies additional filters on all Discovery searches. In this example, only items who have the value **lifted** in the embargo field, are being shown as search results.
Property:	solr.search.filters
Example Value:	dc.title, dc.contributor.author, dc.subject, dc.date.issued.year
Informational Note:	Defines which fields are shown in the (advanced) search form.
Property:	solr.search.sort
Example Value:	solr.search.sort=dc.title, dc.date.issued_dt
Informational Note:	Defines which indexed fields can be sorted on in the search results. With this parameter it's possible to make any field available for sorting.
Property:	solr.index.type.date
Example Value:	solr.index.type.date=dc.date,dc.date.*
Informational Note:	Defines whichs fields are indexed as dates. Please be aware that for each date field an _dt will be suffixed so that dc.date.issued will become dc.date.issued_dt. For each date indexed the year will also be stored separately in a (field.name).year so it can be used for date faceting
Property:	solr.recent-submissions.size
Example Value:	solr.recent-submissions.size=5
Informational Note:	Defines the number of items that are shown in the Recently Added lists.
Property:	recent.submissions.sort-option

Example Value:	recent.submissions.sort-option=dc.date.accessioned_dt
Informational Note:	The indexed metadata field on which Discovery sorts to determine which items were recently submitted
Property:	search.facet.max
Example Value:	search.facet.max=10
Informational Note:	Use the property below to limit the number of facet filters in the side of the search page

Advanced Configuration in Solr

Solr itself now runs two cores. One for collection DSpace Solr based "statistics", the other for Discovery Solr based "search"

```
solr
 search
    conf
       admin-extra.html
       elevate.xml
       protwords.txt
       schema.xml
       scripts.conf
       solrconfig.xml
       spellings.txt
       stopwords.txt
       synonyms.txt
       xslt
           DRI.xsl
           example.xsl
           example_atom.xsl
           example_rss.xsl
           luke.xsl
    conf2
 solr.xml
 statistics
     conf
         admin-extra.html
         elevate.xml
         protwords.txt
         schema.xml
         scripts.conf
         solrconfig.xml
         spellings.txt
         stopwords.txt
         synonyms.txt
         xslt
             example.xsl
             example_atom.xsl
             example_rss.xsl
             luke.xsl
```