

DSpace Customization

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Why to Customize

- Your own institutional need
- User interface enhancements
- Address quality and accessibility

Ways to Customize

- User Interface
 - Home page, Layout, quick links
 - Logo, Header, Footer, Navigation Bar
 - Texts
- Metadata
 - New element
 - Updating/Deleting existing one

Ways to Customize

- Submission/Input Form
- Item Display
- Browse Fields
- Browse Layout
- Discover
- Language

Skill Required for DSpace Customization

- Understanding of HTML
- Understanding of CSS
 - layout, colors, and fonts

DSpace Directories

Source Directories ([/home/dspace/dspace-5.0-src-release/])

All customization generally takes place here

- `jsp/` - DSpace JSPs
- `src/` - DSpace Servlets & Classes

Installed Directories ([/dspace/])

- Home to all "live" configuration files, properties, Java libraries (including `dspace.jar`)
 - `config/` - DSpace configurations
- Usually home to log files, reports, search indices, and "bitstreams" themselves!

Web Deployment Directory (Webapplication Directory ([/dspace/webapps/])

- Home to all compiled servlets and JSPs
- Basic customizations can also take place here *after installation*

Header / Navigation Bar



Home Dspace

Browse ▾

Help

Search DSpace



Sign on to: ▾

DSpace JSPUI

DSpace preserves and enables easy and open access to all types of digital content including text, images, moving images, mpegs and data sets

[Learn More](#)

Messages Properties / Navigation Bar



Location Bar

DSpace Short-Term Course

NISCAIR

Top News

Welcome to our digital repository of NISCAIR

NISCAIR
SDC

Side Bar News

Footer



NISCAIR Copyright © 2002-2013 - [Feedback](#)

Basic Customization: Top & Sidebar News

The screenshot shows the DSpace administrator interface. At the top, there is a navigation bar with links for Home Dspace, Content, Access Control, Statistics, General Settings, and Help. The user is logged in as admin@gmail.com. Below the navigation bar, there is a green banner for 'DSpace Short-Term Course / Administer'. The main content area is titled 'News Editor' with a help icon. A dropdown menu is open under 'General Settings', showing options: Metadata Registry, Bitstream Format Registry, Edit News (highlighted with a red circle), Edit Default, and License. In the 'News Editor' section, there are two options: 'Top News' and 'Sidebar News', both highlighted with red circles. An 'Edit' button is located at the bottom left of the 'News Editor' section.

•To change the Top/Sidebar News:
Administer->General Settings->Edit News

Tips: Top news/Sidebar page can be designed using web designing, imaging & animation software & then pasting its HTML code in Top news/Sidebar editor.

Customization: Header/ Footer/ Navbar

Files Located in:

/dspace/webapps/jspui/layout

Change the HTML in **header-default.jsp**, **footer-default.jsp**, **navbar-default.jsp**, **location-bar.jsp**, ...

***N.B.** If you don't want something to be appeared in the site, just comment it using `<%--` and `--%>`*

Example:

```
<%-- <form method="get" action="<%=  
request.getContextPath() %>/simple-search"> --%>
```

Remember: After making the necessary changes, just refresh the page to get effects

Customization: Header/ Footer/ Navbar

Changing Header background & logo in NavBar

File: header-default.jsp

```
<header class="navbar navbar-inverse navbar-fixed-top">
```

Change to:

```
<header style="background-color:orange;" class="navbar-fixed-top">
```

Changing Logo

Copy logo image file to /dspace/webapps/jspui/image

Change logo image file name “dspace-logo-only.png” in navbar-default.jsp

Remember: After making the necessary changes, just refresh the page to get effects

Customization: Header/ Footer/ Navbar

Changing Title & BIG Logo (below NavBar)

Changing Title, Description & 'Learn more' link:

Texts defined in Messages.Properties file (steps covered under Customization: Texts)

```
jsp.layout.header-default.brand.heading = Dspace JSPUI
```

```
jsp.layout.header-default.brand.description = DSpace preserves and enables ...
```

Changing BIG logo:

Copy logo image file to /dspace/webapps/jspui/image

Change logo image file name “logo.gif” in header-default.jsp

Tips: You can create title graphics & use in place of separate Heading & logo

Remember: *After making the necessary changes, just refresh the page to get effects*

Customization: Header/ Footer/ Navbar

Adding menu items in NavBar

File: navbar-default.jsp

Find the word “Help” in above file & add the new menu item

```
<li class="<% = ( currentPage.endsWith( "/help" ) ? "active" : "" )  
%>"><dspace:popup page="<% =  
LocaleSupport.getLocalizedMessage(pageContext, \"help.index\")  
%>"><fmt:message key="jsp.layout.navbar-  
default.help"/></dspace:popup></li>
```

```
<li> <a href="http://www.niscair.res.in">NISCAIR</li>
```

Remember: *After making the necessary changes, just refresh the page to get effects*

Customization: Location Bar

Changing name:

Files Located in:

`/dspace/config/dspace.cfg`

Change name of the site in

`dspace.name = "DSpace Short-Term Course"`

Restart Tomcat to reflect changes.

Run `sh start_dspace` in `/home/dspace`

Customization: Location Bar

Changing background colour:

Files Located in:

/dspace/webapps/jspui/layout/location-bar.jsp

Change line:

```
<ol class="breadcrumb btn-success">
```

to:

```
<header style="background-color:red;">
```

To remove bullet, delete `` tags

Remember: After making the necessary changes, just refresh the page to get effects

Customization: Text

- “Messages.properties” contains almost all the text of DSpace
- Located in:

/home/dspace/dspace-5.0-src-release/dspace-api/src/main/resources

Copy to

/dspace/webapps/jspui/WEB-INF/classes

*Do changes **ONLY** in the folder /dspace/webapps/jspui/WEB-INF/classes*

Format of “Messages.properties”

jsp.layout.navbar-default.authors = Authors

(Navigation bar text “Authors” shared by pages in /jsp/layout/navbar-default.jsp)

To reflect changes, restart tomcat.

Customization: Text

- **Keys** in Messages.properties referenced in JSP with:

```
<fmt:message key="jsp.layout.navbar-default.authors"/>
```

(/jspui/layout/navbar-default.jsp)

- The text corresponds to a property "key" named after the JSP or Tag in which it appears.

- **Example:**

jsp.community-home.heading1 is a heading within /jsp/community-home.jsp

jsp.general.search.button is the text that appears on ALL search buttons in DSpace

Customization: Text

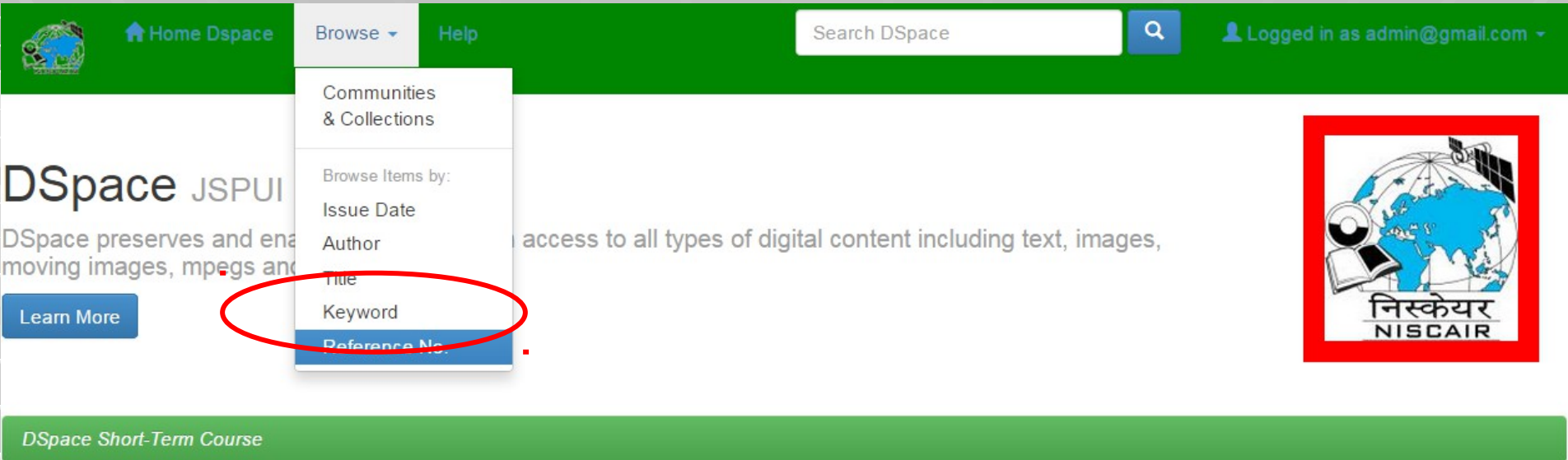
Before

The screenshot shows the DSpace website interface. At the top, there is a navigation bar with links for Home, Browse, and Help. A search box labeled 'Search DSpace' is on the right, along with 'Sign on to:' and 'Language' options. The 'Browse' menu is open, displaying a list of options: 'Communities & Collections', 'Browse Items by:', 'Issue Date', 'Author', 'Title', and 'Subject'. The 'Subject' option is circled in red. Below the navigation bar, the DSpace logo is visible on the left, and the DSPACE logo is on the right. A green banner at the bottom of the page contains the text 'DSpace Authorization'. Below the banner, a text block reads: 'DSpace is Live', 'Welcome to our digital repository of My University research!', and 'More exciting news to appear here.'

Change “Subject” to “Keyword”

Customization: Text

After



The screenshot shows the DSpace JSPUI interface. The top navigation bar is green and contains a home icon, 'Home DSpace', a 'Browse' dropdown menu, and a 'Help' link. A search bar is on the right with the text 'Search DSpace' and a magnifying glass icon. The user is logged in as 'admin@gmail.com'. The 'Browse' dropdown menu is open, showing options: 'Communities & Collections', 'Browse Items by:', 'Issue Date', 'Author', 'Title', 'Keyword', and 'Reference No.'. The 'Keyword' option is highlighted with a red oval. Below the navigation bar, the main content area features the DSpace JSPUI logo, a 'Learn More' button, and a description of the repository. A green banner below the main content reads 'DSpace Short-Term Course'. On the right side, there is a logo for NISCAIR (निसकेयर) featuring a globe and a book, enclosed in a red border.

NISCAIR

Welcome to our digital repository of NISCAIR

**Change “Subject” to “Keyword”
To reflect changes, restart tomcat.**

Customization: Text

Change “Subject” to “Keyword”

- `browse.type.metadata.subject = Subject`
- `browse.menu.subject = Subject`
- `jsp.browse.items-by-subject.heading1 = Items for Subject`
- `jsp.browse.items-by-subject.return = Return to Browse by Subject`
- `jsp.browse.items-by-subject.title = Items for Subject`
- `jsp.browse.subject.show = Showing subjects {0}-{1} of {2}.`
- `jsp.browse.subject.title = Browse by Subject`

Customization: Add Metadata

The screenshot shows the DSpace administration interface. At the top, there is a navigation bar with links for Home Dspace, Content, Access Control, Statistics, General Settings, and Help. The user is logged in as admin@gmail.com. Below the navigation bar, there is a green breadcrumb trail: DSpace Short-Term Course / Administer. A dropdown menu is open under General Settings, with 'Metadata Registry' highlighted in blue and circled in red. Other options in the menu include Bitstream Format Registry, Edit News, Edit Default License, and Edit Default License. Below the menu, there is a blue banner with the text 'Metadata Field Registry Schem' and a note: 'Note: Adding a new field to the registry does not add a corresponding input f'. The main content area shows a table with three rows of metadata fields. Each row has an ID, an Element, a Qualifier, a Scope Note, and buttons for Update and Delete.

| ID | Element | Qualifier | Scope Note | Update | Delete... |
|----|-------------|-----------|-----------------------------------|--------|-----------|
| 2 | contributor | advisor | Use primarily for thesis advisor. | Update | Delete... |
| 3 | contributor | author | | Update | Delete... |
| 4 | contributor | editor | | Update | Delete... |

•Login as Administrator
Administer->General Settings->Metadata Registry

Customization: Metadata

[Home Dspace](#)[Content](#)[Access Control](#)[Statistics](#)[General Settings](#)[Help](#)[Logged in as admin@gmail.com](#)

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Add Metadata Field

To create a new field you must provide a unique element and qualifier pair. The qualifier may be left blank if desired and the element and qualifier cannot contain spaces, underscores or periods.

Element:

Qualifier:

Scope Note:

Customization: Submit/ Input Form

Submission form is located in: */dspace/config/input-forms.xml*



Logged in as admin@gmail.com

Describe Describe Upload Verify License Complete

Submit: Describe this Item

Please fill in the requested information about this submission below. In most browsers, you can use the tab key to move the cursor to the next input box or button, to save you having to use the mouse each time.

Enter the names of the authors of this item.

Authors

Last name, e.g. Smith

First name(s) + "Jr", e.g. Donald Jr

+ Add More

Enter the main title of the item.

Title *

Enter the technical reference document Number of the item like IT100.

Reference No.

If the item has any alternative titles, please enter them here.

Other Titles

+ Add More

Please give the date of previous publication or public distribution. You can leave out the day and/or month if they aren't applicable.

Date of Issue *

Month:

(No Month)



Day:

Year:

Customization: Submit/ Input Form

General format of *input-forms.xml* (in */dspace/config*)

```
<page number="1">  
  <field>  
    <dc-element>refno</dc-element>  
    <dc-qualifier></dc-qualifier>  
    <repeatable></repeatable>  
    <label>Reference No.</label>  
    <input-type>onebox</input-type>  
    <hint>Enter Reference number of document</hint>  
    <required></required>  
  </field>  
  
</page>  
.....
```

Remember: After making any changes in the input form, re-start the Tomcat server

Customization: Item Display (in Abstract view metadata)



[Home Dspace](#) [Browse](#) [Help](#)

Search DSpace



Logged in as admin@gmail.com

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/4>

| | |
|-------------------------|---|
| Title: | DSpace customization |
| Authors: | Burde, Sanjay |
| Keywords: | Metadata;H₂O |
| Issue Date: | 2015 |
| Abstract: | how to customize DSpace new version 5.0 |
| URI: | http://hdl.handle.net/123456789/4 |
| Document Reference No.: | LIS100 |
| Appears in Collections: | Digital Library |

Admin Tools

[Edit...](#)

[Export Item](#)

[Export \(migrate\) Item](#)

[Export metadata](#)

Files in This Item:

| File | Description | Size | Format | |
|-----------------------------------|-------------|---------|-----------|---------------------------|
| DSpace-Manual.pdf | | 4.55 MB | Adobe PDF | View/Open |

Show full item record



Customization: Item Display

In **dspace.cfg**, add the new field to be displayed/ or change the order to display

```
webui.itemdisplay.default = dc.title, dc.title.alternative, dc.contributor.*, \  
dc.subject, dc.date.issued(date), dc.publisher, \  
dc.identifier.citation, dc.relation.ispartofseries, \  
dc.description.abstract, dc.description, \  
dc.identifier.govdoc, dc.identifier.uri(link), \  
dc.identifier.isbn, dc.identifier.issn, \  
dc.identifier.ismn, dc.identifier, \  
dc.refno
```

In **Messages.properties**, name the field to be displayed

metadata.dc.title = Title

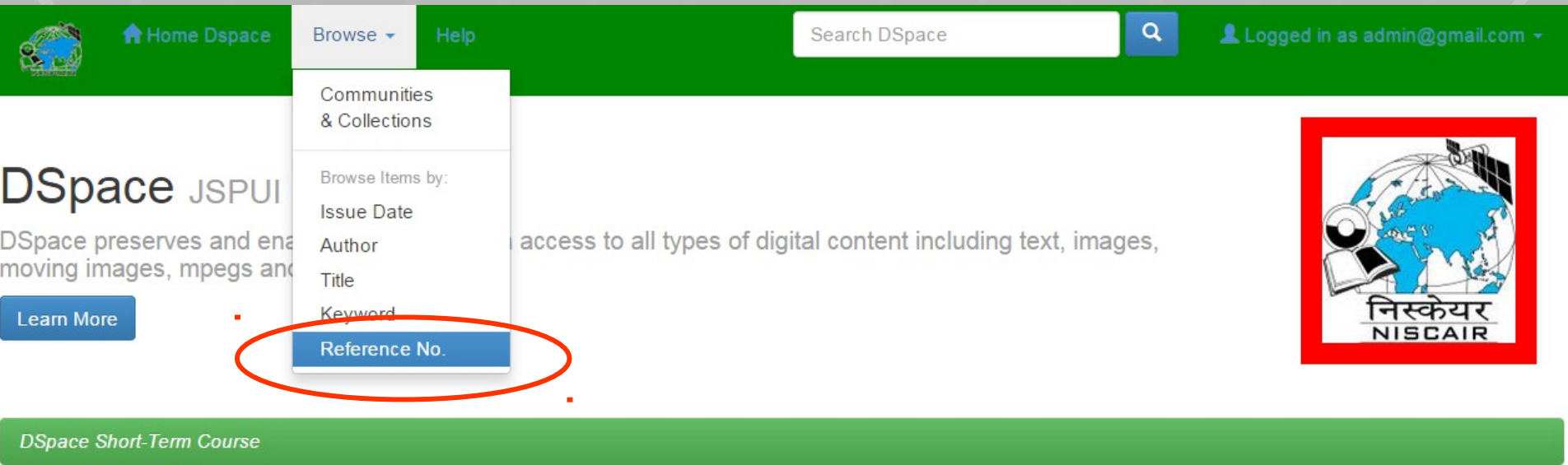
metadata.dc.title.alternative = Other Titles

metadata.dc.contributor.* = Authors

metadata.dc.refno = Reference No.

To reflect chnages, restart Tomcat

Customization: Browse Fields in Navigation Bar



The screenshot shows the top navigation bar of a DSpace repository. The bar is green and contains the following elements from left to right: a home icon and the text 'Home Dspace', a 'Browse' dropdown menu, and a 'Help' link. Below the 'Browse' menu, a list of browse fields is displayed: 'Communities & Collections', 'Browse Items by:', 'Issue Date', 'Author', 'Title', 'Keyword', and 'Reference No.'. The 'Reference No.' option is highlighted with a red circle. To the right of the navigation bar is a search box labeled 'Search DSpace' and a user login indicator 'Logged in as admin@gmail.com'. Below the navigation bar, the main content area features the text 'DSpace JSPUI' and 'DSpace preserves and enables access to all types of digital content including text, images, moving images, mpegs and'. A blue 'Learn More' button is located on the left. On the right, there is a logo for NISCAIR (National Institute of Science, Culture and Academic Resource Information) featuring a globe and the text 'निस्कैयर NISCAIR'. A green banner at the bottom of the navigation area contains the text 'DSpace Short-Term Course'.


NISCAIR

Welcome to our digital repository of NISCAIR

Customization: Browse Fields in Navigation Bar

Community page

Comm1 Community home page 

Recent Submissions   

Browse

Issue Date

Author


Title

Keyword

Reference No.

Customization: Browse Fields in Navigation Bar

Collection page

Digital Library [Collection home page](#) 

Browse

Issue Date Author Title Keyword **Reference No.**

Submit to This Collection


Subscribe to this collection to receive daily e-mail notification of new additions [Subscribe](#)

Collection's Items (Sorted by Submit Date in Descending order): 1 to 1 of 1

| Issue Date | Title | Author(s) | Reference No. |
|------------|--------------------------------------|-------------------------------|------------------------|
| 2015 | DSpace customization | Burde, Sanjay | LIS100 |

Collection's Items (Sorted by Submit Date in Descending order): 1 to 1 of 1

Admin Tools 

Edit...

Item Mapper

Edit Submitters


Export Collection

Export (migrate) Collection

Export metadata

Discover

Author

[Burde, Sanjay](#) 

Subject

[H₂O](#) 

[Metadata](#) 

Customization: Browse Fields in Navigation Bar

To modify the browse fields in navigation bar, modify **dspace.cfg** located in **/dspace/config**

In **dspace.cfg**, uncomment the following lines to specify the metadata fields for browsing in DSpace:- “Browse by Date”, “Browse Authors”, “Browse Titles” and “Browse Subjects”:-

```
#webui.browse.index.1 = dateissued:item:dateissued
```

```
#webui.browse.index.3 = title:item:title
```

```
webui.browse.index.5 = refno:metadata:dc.refno:text
```

After modification in any of the browse indices in dspace.cfg, one must Re-index for changes to take place.

In **Messages.Properties**

```
browse.menu.refno = Reference No.
```

```
Browse.type.metadata.refno = Reference No.
```

Remember: To reflect changes, restart Tomcat & re-index everything (go to **/dspace/bin** and execute the command, **sh dspace index-discovery -b**

Customization: Change Browse Layout (Date | Title | Authors...)

Digital Library [Collection home page](#) 

Browse

[Issue Date](#) [Author](#) [Title](#) [Keyword](#) [Reference No.](#)

[Submit to This Collection](#)


Subscribe to this collection to receive daily e-mail notification of new additions [Subscribe](#)

[RSS 1.0](#) [RSS 2.0](#) [RSS](#)

Collection's Items (Sorted by Submit Date in Descending order): 1 to 1 of 1

| Issue Date | Title | Author(s) | Reference No. |
|------------|--------------------------------------|-------------------------------|------------------------|
| 2015 | DSpace customization | Burde, Sanjay | LIS100 |

Collection's Items (Sorted by Submit Date in Descending order): 1 to 1 of 1

Admin Tools 

[Edit...](#)

[Item Mapper](#)

[Edit Submitters](#)


[Export Collection](#)

[Export \(migrate\) Collection](#)

[Export metadata](#)

Discover

Author

[Burde, Sanjay](#) 

Subject

[H₂O](#) 

[Metadata](#) 

Customization: Change Browse Layout (Date | Title | Authors...)

In `dspace.cfg`, change metadata fields which are displayed for each item in browse or search result.

Make the required changes in the following single line in `dspace.cfg` and uncomment it:

```
webui.itemlist.columns = dc.date.issued(date), dc.title,  
dc.contributor.*, dc.refno
```

In `Messages.properties`

```
itemlist.dc.refno = Reference No.
```

Remember: To reflect changes, restart Tomcat & re-index everything (go to `/dspace/bin` and execute the command, `sh dspace index-discovery -b`)

Customization: Discovery

- The Discovery enables faceted searching & browsing your repository
- Discovery is new in Dspace 5.0, but familiar for other platforms like Aquabrowser or Amazon, where facets help to select the right product according to facets like price and brand

More Details: <https://wiki.duraspace.org/display/DSDOC4x/Discovery>

Customization: Discovery

Sidebar Facet

- From the user perspective, faceted search (also called faceted navigation, guided navigation, or parametric search) breaks up search results into multiple categories, typically showing counts for each, and allows the user to "drill down" or further restrict their search results based on those facets

The image shows a search interface with four facets: Author, Subject, Date issued, and Reference No. Each facet has a search box with a count of 1. A blue callout box labeled "Custom Discovery Setting" points to the Reference No. facet.

| Facet | Value | Count |
|--------------|------------------|-------|
| Author | Burde, Sanjay | 1 |
| Subject | H ₂ O | 1 |
| | Metadata | 1 |
| Date issued | 2015 | 1 |
| Reference No | LIS100 | 1 |

Customization: Discovery

Search Filter

- In a standard search operation, a user specifies complete query
- If the results are not satisfactory, the user starts over again with a (slightly) altered query

Add filters:
Use filters to refine the search results.

Title ▾ Equals ▾

Title
Author
Subject
Date Issued ▾ | Sort items by

Reference No

Add filters:
Use filters to refine the search results.

Title ▾ Equals ▾ Add

Results/Page 10 ▾ | Sort items by Relevance ▾ In order Descending ▾ Authors/record All ▾ Update

Relevance
Title
Issue Date
Reference No

roduced no results.

Customization: Discovery

The screenshot shows a DSpace search interface. At the top, there is a green navigation bar with links for Home Dspace, Browse, and Help, a search box labeled 'Search DSpace', and a user login status 'Logged in as admin@gmail.com'. Below this is the 'Search' section, which includes a search type dropdown set to 'All of DSpace', a search input field containing 'custom', and a 'Go' button. A blue callout box labeled 'Search Filter' points to the 'Add filters' section, which contains a dropdown menu for 'Title' and a radio button for 'Equals'. Below the filters is a 'Results/Page' dropdown set to '10', a 'Sort items by' dropdown set to 'Relevance', and an 'In order' dropdown set to 'Descending'. A blue callout box labeled 'Sorting Search' points to the 'Relevance' dropdown. The search results section shows 'Results 1-1 of 1 (Search time: 0.003 seconds)'. A blue callout box labeled 'Sidebar Facet' points to the 'Discover' sidebar on the right, which lists facets: Author (Burde, Sanjay), Subject (H₂O, Metadata), Date issued (2015), and Reference No (LIS100). At the bottom, there is a table of item hits.

| Issue Date | Title | Author(s) | Reference No. |
|------------|--------------------------------------|---------------|---------------|
| 2015 | DSpace customization | Burde, Sanjay | LIS100 |

Customization: Discovery

Custom (metadata) Discovery Settings

Adding metadata dc.refno (Reference No.) to Discovery

Refer word document “[DiscoverySettings.docx](#)” for discovery.xml (located at */dspace/config/spring/api/discovery.xml*)

Steps for customizing discovery :

- First create bean id
- This bean ID set in the property of
 - SearchFilter
 - FacetSidebar
- SearchFilter and FacetSidebar place at two place
 - defaultConfiguration
 - homepageConfiguration

Note: After every changing need to re-index discovery and restart Apache-Tomcat

Customization: Discovery

Custom Discovery Settings ...

Bean ID

```
<bean id="searchFilterRefNo" class="org.dspace.discovery.configuration.DiscoverySearchFilterFacet">  
<property name="indexFieldName" value="refno"/>  
<property name="metadataFields">  
<list>  
<value>dc.refno</value>  
</list>  
</property>  
<property name="facetLimit" value="10"/>  
<property name="sortOrder" value="COUNT"/>  
</bean>
```

Customization: Discovery

Custom Discovery Settings ...

SidebarFacets

```
<property name="sidebarFacets">  
<list>  
<ref bean="searchFilterAuthor"/>  
<ref bean="searchFilterSubject"/>  
<ref bean="searchFilterIssued"/>  
<ref bean="searchFilterRefNo"/>  
</list>  
</property>
```

SearchFilter

```
<property name="searchFilters">  
<list>  
<ref bean="searchFilterTitle"/>  
<ref bean="searchFilterAuthor"/>  
<ref bean="searchFilterSubject"/>  
<ref bean="searchFilterIssued"/>  
<ref bean="searchFilterRefNo"/>  
</list>  
</property>
```

Customization: Discovery

Custom Discovery Settings ...

defaultConfiguration

```
<bean id="defaultConfiguration" class="org.dspace.discovery.configuration.DiscoveryConfiguration" scope="prototype">
<!-- Which sidebar facets are to be displayed -->
<property name="sidebarFacets">
<list>
.
.
.
```

homepageConfiguration

```
<bean id="homepageConfiguration" class="org.dspace.discovery.configuration.DiscoveryConfiguration" scope="prototype">
<!--
Which sidebar facets are to be displayed (same as defaultConfiguration above)
-->
<property name="sidebarFacets">
<list>
```

Customization: Discovery

Custom Discovery Settings ...

For Setting of sort Items order by

Create bean for Sorting

```
<bean id="sortRefNo" class="org.dspace.discovery.configuration.DiscoverySortFieldConfiguration">
<property name="metadataField" value="dc.refno"/>
</bean>
</beans>
```

Set bean in

```
<property name="searchSortConfiguration">
<bean class="org.dspace.discovery.configuration.DiscoverySortConfiguration">
<!--
.
.
</ref bean="sortRefNo"/>
```

At two places: defaultConfiguration and homepageConfiguration

```
<bean id="defaultConfiguration" class="org.dspace.discovery.configuration.DiscoveryConfiguration" scope="pr
ototype">
```

AND

```
<bean id="homepageConfiguration" class="org.dspace.discovery.configuration.DiscoveryConfiguration" scope
="prototype">
```


Customization: Discovery

Add key in Messages.property file

1.For Home, community page & search side facet: `jsp.search.facet.refine.refno = Reference No.`

1.For Search Filter: `jsp.search.filter.refno = Reference No.`

1.For Sort item by: `search.sort-by.dc.refno_sort = Reference No.`

Thank you