The DSpace Course

Module – DSpace Installation
Module objectives

By the end of this module you will:

- Understand the platforms DSpace can be hosted on
- Understand the third party components and tools DSpace requires to run
- Understand how to install DSpace
- Have hands on experience of configuring and installing DSpace
Operating Systems

- UNIX like OS
  - Linux
  - HP/UX
  - Sun Solaris
  - MacOS X

- Microsoft Windows
  - Microsoft Server 2003/8
  - Development: Windows XP/VISTA
Third party software, tools and components

- Java JDK 5 or later (standard JDK)
- Apache Maven 2.0.8 or later (Java build tool)
- Apache Ant 1.6.2 or later (Java build tool)
- Relational Database
  - PostgreSQL (7.3 or greater)
  - Oracle 9 or greater
- Servlet Engine
  - Jakarta Tomcat
  - Jetty
  - Caucho Resin
Live CD contains all this software pre-installed & configured

Detailed information on prerequisite software & configuration can be found in the handbooks & in the DSpace installation documentation

- Website: www.dspace.org
- [dspace-src]/dspace/docs
2 release versions:

- Default release
  - Adequate for most cases of running DSpace
  - Quickest way to get DSpace installed and running
  - Still allows for customisation

- Source release
  - Recommended for development
  - Contains *all* DSpace code

- We’ll be using the source release in this training
DSpace uses Subversion (SVN) to manage its source code, record code changes and allow multiple developers to work on DSpace without overwriting each others code.

Source repository can be viewed at:
- [http://dspace.svn.sourceforge.net/viewvc/dspace/trunk/dspace](http://dspace.svn.sourceforge.net/viewvc/dspace/trunk/dspace)

Check out code from SVN:
- `svn checkout`  
  `https://dspace.svn.sourceforge.net/svnroot/dspace/trunk/dspace dspace`

Today we’ll be using a pre-downloaded version of the DSpace source as oppose to SVN.
DSpace Software Installation

- Download the DSpace Source
  - See local instructions sheet for the location of the DSpace Source: referred to as [dspace-src]

- Create the DSpace User
  - useradd -m dspace

- Create a UNICODE dspace database owned by the dspace PostgreSQL user
  - createuser -U postgres -d -A -P dspace15
  - createdb -U dspace15 -E UNICODE dspace15
- Edit `[dspace-source]/dspace/config/dspace.cfg`
  - `dspace.dir` -- must be set to the `[dspace]` (installation) directory.
  - `dspace.url` -- complete URL of this server's DSpace home page.
  - `dspace.hostname` -- fully-qualified domain name of web server.
  - `dspace.name` -- "Proper" name of your server, e.g. "My Digital Library".
  - `db.url` -- URL for connecting to the database
  - `db.username` -- the database username you entered in the previous step.
  - `db.password` -- the database password you entered in the previous step.
  - `mail.*` -- email settings

- Create the directory for the DSpace installation
  - `mkdir [dspace]`
  - `chown dspace [dspace]` (Assuming dspace is the UNIX user)
As the dspace UNIX user, generate the DSpace installation package into the target directory:
[dspace-src]/dspace/target/dspace-[version].dir/

- cd [dspace-src]/dspace/
- mvn package

Initialise the database and install DSpace to [dspace]
- cd [dspace-src]/dspace/target/dspace-[version].dir/
- ant fresh_install

Set correct permissions on [dspace]/* directories
DSpace Software Installation

- Link the DSpace web application(s) to the deployment directory of Tomcat
  - /var/lib/tomcat5.5/webapps/
  - `sudo ln -s [dspace]/webapps/jspui jspui`
  - `sudo ln -s [dspace]/webapps/xmlui xmlui` ....

- Create an initial administrator account
  - `[dspace]/bin/create-administrator`

- Browse to the base URL of your DSpace web apps
  - JSP User Interface – [http://localhost:8080/jspui](http://localhost:8080/jspui) ...
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