Batch Installer Inoculation for Digital Repository Software Open Source DSpace

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ABSTRACT

This technical writing describes the batch process injection for installing Dspace 1.8.2 version on MS-Window operating system XP-VISTA-7.The public complier of process which has been made for DSpace-1.8.2.exe, Apache Ant 1.8.3.exe, Apache Tomcat (Dspace) _1.7.28 .exe while postgresql-9.1.3-1-windows.exe and jdk-6u31-windows-i586.exe remained no changes. The limiting factor to adopt Dspace has ever been the difficulty in Installing DSpace. And as we know that installation and configuration of the prerequisites that are usually time consuming and difficult with any operating system Linux, MAC or Window

Key words: Software Installation, Digital Repository Software, Installation, Batch processing, DSpace.

INTRODUCTION

Structural overviews of complied Files and DSpace 1.8.2:

D Space batch installer package consists of following files: Apache Ant 1.8.3, DSpace-1.8.2, ApacheTomcat1.7.28 and Window batch files with Run Me.html

Apache Ant 1.8.3

Apache Ant is a Java library and command-line tool whose mission is to drive processes described in build files as targets and extension points dependent upon each other. The main known usage of Ant is the build of Java applications. Ant supplies a number of built-in tasks allowing to compile, assemble, test and run Java applications.

Ant can also be used effectively to build non Java applications, for instance C or C++ applications. More generally, Ant can be used to pilot any type of process which can be described in terms of targets and tasks.

Ant is written in Java. Users of Ant can develop their own "antlibs" containing Ant tasks and types, and are offered a large number of ready-made commercial or open-source "antlibs".

Ant is extremely flexible and does not impose coding conventions or directory layouts to the Java projects which adopt it as a build tool.

Here the binary version of ant has been complied with Source-team install creator and the all sources files will by default be deploy in to c:\

```
<!-- DEFINE A CONTEXT PATH FOR DSpace JSP User Interface -->
<Context path="/jspui" docBase="C:\dspace\webapps\jspui" debug="0"
reloadable="true" cachingAllowed="false"
allowLinking="true"/>

<!-- DEFINE A CONTEXT PATH FOR DSpace OAI User Interface -->
<Context path="/oai" docBase="C:\dspace\webapps\oai" debug="0"
reloadable="true" cachingAllowed="false"
allowLinking="true"/>

<!-- DEFINE A CONTEXT PATH FOR DSpace xmlui User Interface -->
<Context path="/xmlui" docBase="C:\dspace\webapps\xmlui" debug="0"
reloadable="true" cachingAllowed="false"
allowLinking="true"/>
```

Fig. 1:

```
@echo off. will open DSpace Run

start /d "C:\dspace-1.8.2-src-
release\dspace\target\dspace-
1.8.2-build\" ant fresh_install
cmd.exe

@echo off.
```

Fig. 2:

```
@echo off.
REM Next command will open admin account of Dspace  in a
new Internet Explorer window.

start /d "C:\dspace\bin" start dspace create-administrator
cmd.exe

@echo off.
close
```

Fig. 3:

Fig. 4:

Apache Tomcat Version 7.0.28 (with DSpace Context scripts) has been made from source code of binary distribution of Apache Tomcat Version 7.0.28- please refer tomcat.apache.org

ApacheTomcat (dspace)_1.7.28 .exe

Apache Tomcat is an open source software implementation of the Java Servlet and JavaServer Pages technologies. The Java Servlet and JavaServer Pages specifications are developed under the Java Community Process.

The Binary Distributions of core version 1.7.28 is used to compile [context path] Added following box scripts before compilation to… /conf/server.xml

A. DSpace-1.8.2

DSpace 1.8 is a major release of DSpace. It contains many new features, numerous bug fixes and system improvements, including:

1. Improvements to the upgrade and configuration process: Most notably dspace.cfg has been split up, and the default behaviour when doing 'Ant update' is to replace the existing files if the new files are different.
2. More Curation Tools/Plugins: Including a new "Metadata Link Checker" and "Metadata Translator".
3. Configurable Workflow for the XMLUI: Allows administrators to customize their workflow approval process.
4. SWORD Client: Enables DSpace to push/submit content to other SWORD enabled repositories.
5. SWORDv2 Server Module: DSpace can now support submissions via SWORD protocol version 2 (as well as version 1).
6. RSS feeds now support richer features, such as iTunes podcast and publishing to iTunesU.
7. Enhancements to Discovery faceted searching & browsing system.
8. Rewrite of Creative Commons licensing for XMLUI.
9. Ability to now reorder bitstreams in an item.

Ability to enable automatic virus checking during item submission.

Ability to Withdraw/Reinstate/Delete Items in Bulk, via Batch Metadata Editing.

The directory structure for this Dspace release is more detailed

´   *[dspace-source]*
´   *dspace/* - DSpace 'build' and configuration module
´   *dspace-api/* - Java API source module
´   *dspace-discovery* - Discovery source module
´   *dspace-jspui/* - JSP-UI source module
´   *dspace-oai* - OAI-PMH source module
´   *dspace-xmlui* - XML-UI (Manakin) source module
´   *dspace-lni* - Lightweight Network Interface source module
´   *dspace-stats* - Statistics source module
´   *dspace-sword* - SWORD (Simple Web-serve Offering Repository Deposit) deposit service source module
´   *dspace-swordv2* - SWORDv2 source module
´   *dspace-sword-client* - XMLUI client for SWORD
´   *pom.xml* - DSpace Parent Project definition

Batch files

A batch file is a text file that contains a sequence of commands for a computer operating system. It's called a batch file because it batches (bundles or packages) into a single file a set of commands that would otherwise have to be presented to the system interactively from a keyboard one at a time. A batch file is usually created for command sequences for which a user has a repeated need. Commonly needed batch files are often delivered as part of an operating system. You initiate the sequence of commands in the batch file by simply entering the name of the batch file on a command line.

In the Disk Operating System (DOS), a batch file has the file name extension ".BAT". (The best known DOS batch file is the AUTOEXEC.BAT file that initializes DOS when you start the system.) In UNIX-based operating systems, a batch file is called a shell script. In IBM's mainframe VM operating systems, it's called an EXEC.

Install Dspace.bat

The install dspace.bat is programmed with the following scripts

Create Admin Account.bat

The createAdminAccount.bat is programmed with following scripts

Environment.reg

This is very important and also to be known Windows Registry?

The Windows Registry, usually referred to as "the registry," is a collection of databases of configuration settings in Microsoft Windows operating systems.

´ Set up the JAVA_HOME in to system variable with value \java\jre6\ and Set up the PATH in to system variable with value \ant\bin; \java\jre6\bin

´ export the rage of registry name with Environment to anywhere in the machine

´ similarly import registry with setting environment

DBMS like postgresql-windows and platform like jdk-windows- shall installed as per providers

F. Installing DSpace using Batch

Shortest steps to install DSpace 1.8.2 in execution mode. (Note: Open all program in Internet Explore for the best execution. always source the program rather save it to the drive

´ Install JDK6.31 - Java – install from internet

´ Set up Environment Variables – find from source

´ Restart your computer

´ Install Postgresql 9.1.3.1and- install form internet

´ Open PgAdmin III and create user role l Dspacel and database lDspacel with encoding UTF8

´ Execute DSpace 1.8.2 [source] -this operation will execute all DSpace source files to C drive

´ Deploy DSpace 1.8.2 [source] - this operation will run by Apache ant and Install DSpace

´ Create DSpace Administrator User account [Source]

Install Apache Tomcat [Source] - all context with DSpace have been complied with the package

´ Start Apache Tomcat Service [source]- do not close service console window with your running DSpace

´ Browse DSpace page at http://localhost:8080/jspui or http://localhost:8080/xmlui

CONCLUSION

This work has been meant for making Dspace a handy software and saving time of setting Environmental Variables, running window command line. Anyone with slightest knowledge of computer can also run Dspace with simple steps. Here your DSpace Installer will work completely offline no need to get connected with internet. I do believe that these batch installer specification shall definitely save your valuable time and efforts.

REFERENCES

1.   http://www.dspace.org
2.   http//www.ant.apache.org
3.   http://www.tomcat.apache.org