Procedure to create Installers

*Rev: A0-03*

*18 jan, 2017*

Spectra Logic, Inc.

Deep Storage Browser

Procedure to create Installers for windows, macOS , and Ubuntu platforms.

**Revision History:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Rev No.** | **Description** | **By** |
| 01-AUG-2016 | A0-01 | First draft | VVDN |
| 19-SEP-2016 | A0-02 | Second draft | VVDN |
| 11-NOV-2016 | A0-03 | Third draft | VVDN |

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# Steps to create a EXE file from runnable jar for Windows

## Build the project

* Build the project to create runnable jar say "**dsb.jar**"

## Install WiX Toolset and visual studio for windows

* Install Visual Studio 2015 along with latest WiX toolset.

## Build the .msi

* Put the executable jar inside (SpectraSetup -> SetupProject -> Jar) with name dsb.jar.
* Click on SpectraSetup.sln file.(It will import the project into visual studio).
* In the solution explorer right click on CustomAction and clean then build.
* In the solution explorer right click on SetupProject (parallel to CustomAction).
* Select clean and then build the project.
* DeepStorageBrowser.msi would be created inside the SpectraSetup\SetupProject\bin\Release\.

# Steps to create a Debian package from an runnable jar for Ubuntu

## Create a directory where .deb file will be stored.

->mkdir spectralogic

->cd spectralogic

## Copy jar and icon

* Copy the required jar i.e spectralogic.jar and icon of the installer.

## Create a script to start the java application.

**deepstoragebrowser**

#!/bin/sh

/bin/ps -ef | grep -i spectralogic.jar | grep -v "grep" >/dev/null 2>&1

if [ $? -eq0 ]

then

echo "Already running..!!"

wmctrl -a Deep Storage Browser

else

java -jar /usr/share/deepstoragebrowser/spectralogic.jar

fi

## Create a desktop file which contains categorized launcher for the application.

**deepstoragebrowser.desktop**

[Desktop Entry]

Encoding=UTF-8

Name=Deep Storage Browser

Comment=DeepStorageBrowser

Exec=/usr/deepstoragebrowser/deepstoragebrowser

Icon=/usr/share/deepstoragebrowser/deep\_storage\_browser.png

Terminal=false

Type=Application

StartupNotify=true

Name[en\_IN]=deepstoragebrowser

## Create a control file, containing metadata about the package, including (most importantly) its dependencies.

**control**

Section: java

Priority: optional

Architecture: all

Maintainer: VVDN Technologies

Description: Deep Storage Browser.

\*The Deep Storage Browser is a free and open-source BlackPearl Spectra S3 client that provides a graphical FTP-like interface to manage files between BlackPearl and your local computer or a server. Spectra S3 enables you to efficiently move large quantities of data with minimal cost and effort. The Spectra S3 communication interface allows the client to direct and manage “bulk” storage read or write operations of data objects. This interface supports bulk object storage operations with tape for accessibility to the lowest cost media option.

Depends: openjdk-8-jre | openjdk-7-jre | openjdk-6-jre | oracle-java8-installer | oracle-java7-installer | oracle-java6-installer | jarwrapper

## Debian requires a copyright notice, so create a copyright file

**copyright**

This package was debianized by VVDN technologies

Monday July 26 2016.

Copyright: (c) 2016 VVDN Technologies

## Create preinst file to perform actions before installation of software on linux

**preinst**

#!/bin/sh

set -x

a=`dpkg-query -l | grepinotify-tools | wc -l`

if [ $a -eq 0 ]

then

sudo apt-get install inotify-tools

else

echo "Already Installed"

notify-send "inotify-tools" "Already Installed"

fi

sudomkdir -p /opt/jvm

cd /opt

if [ -f "/opt/jdk-8u102-linux-i586.tar.gz" ]

then

if [ -d "/opt/jdk1.8.0\_102" ]

then

echo "jdk directory found"

notify-send "JDK" "jdk directory found"

else

notify-send "JDK-tar.gz is present in the system"

sudo tar -xvzf "jdk-8u102-linux-i586.tar.gz"

fi

else

sudowget --no-cookies --no-check-certificate --header "Cookie: gpw\_le24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" "http://download.oracle.com/otn-pub/java/jdk/8u102-b14/jdk-8u102-linux-i586.tar.gz"

command&& notify-send 'JDK' 'JDK-tar.gz has downloaded successfully'

sudo tar -xvzf jdk-8u102-linux-x64.tar.gz

echo "Already installed"

notify-send "JDK" "jdk Already installed"

fi

sudo update-alternatives --install /usr/bin/java java /opt/jdk1.8.0\_102/bin/java 1100

a=`dpkg-query -l | grepwmctrl | wc -l`

if [ $a -eq 0 ]

then

sudo apt-get install wmctrl

else

echo "Already installed"

notify-send "wmctrl" "Already Installed"

fi

exit 0

## Create postrm file to remove extra files and folder on uninstallation of the software

**postrm**

#!/bin/sh

set -x

echo "postrm executed"

MY\_DIR=$HOME"/.dsbrowser"

if [ -d $MY\_DIR ]; then

rm -rf .??\* $MY\_DIR

fi

notify-send "Removed .dsbrowser folder"

exit 0

## Finally write a shell script to wrap it all up and deliver a .deb package

**packagedeb.sh**

#!/bin/sh

PACKAGE\_NAME="deepstoragebrowser"

PACKAGE\_VERSION="2.0"

SOURCE\_DIR=$PWD

TEMP\_DIR="/tmp"

mkdir -p $TEMP\_DIR/debian/DEBIAN

mkdir -p $TEMP\_DIR/debian/lib

mkdir -p $TEMP\_DIR/debian/usr/uninstall

mkdir -p $TEMP\_DIR/debian/usr/deepstoragebrowser

mkdir -p $TEMP\_DIR/debian/usr/share/applications

mkdir -p $TEMP\_DIR/debian/usr/share/$PACKAGE\_NAME

mkdir -p $TEMP\_DIR/debian/usr/share/doc/$PACKAGE\_NAME

mkdir -p $TEMP\_DIR/debian/usr/share/common-licenses/$PACKAGE\_NAME

sh uninstall

echo "hello"

echo "Package: $PACKAGE\_NAME" > $TEMP\_DIR/debian/DEBIAN/control

echo "Version: $PACKAGE\_VERSION" >> $TEMP\_DIR/debian/DEBIAN/control

cat control >> $TEMP\_DIR/debian/DEBIAN/control

catpostrm>> $TEMP\_DIR/debian/DEBIAN/postrm

chmod 0755 $TEMP\_DIR/debian/DEBIAN/postrm

catpreinst>> $TEMP\_DIR/debian/DEBIAN/preinst

chmod 0755 $TEMP\_DIR/debian/DEBIAN/preinst

cp \*.desktop $TEMP\_DIR/debian/usr/share/applications/

cp copyright $TEMP\_DIR/debian/usr/share/common-licenses/$PACKAGE\_NAME/ # results in no copyright warning

cp copyright $TEMP\_DIR/debian/usr/share/doc/$PACKAGE\_NAME/ # results in obsolete location warning

echohii 11

cp \*.jar $TEMP\_DIR/debian/usr/share/$PACKAGE\_NAME/

cp uninstall $TEMP\_DIR/debian/usr/uninstall/

echohii 22

cp $PACKAGE\_NAME $TEMP\_DIR/debian/usr/deepstoragebrowser/

echo "$PACKAGE\_NAME ($PACKAGE\_VERSION) trusty; urgency=low" >changelog

echo " \* Rebuild" >>changelog

echo " -- Spectra Logic Corporation <www.spectralogic.com> `date -R`" >>changelog

gzip -9c changelog> $TEMP\_DIR/debian/usr/share/doc/$PACKAGE\_NAME/changelog.gz

echopng

cp \*.png $TEMP\_DIR/debian/usr/share/$PACKAGE\_NAME/

chmod 0664 $TEMP\_DIR/debian/usr/share/$PACKAGE\_NAME/\*png

echopng done

PACKAGE\_SIZE=`du -bs $TEMP\_DIR/debian | cut -f 1`

PACKAGE\_SIZE=$((PACKAGE\_SIZE/1024))

echo "Installed-Size: $PACKAGE\_SIZE" >> $TEMP\_DIR/debian/DEBIAN/control

chown -R root $TEMP\_DIR/debian/

chgrp -R root $TEMP\_DIR/debian/

cd $TEMP\_DIR/

dpkg --build debian

mvdebian.deb $SOURCE\_DIR/$PACKAGE\_NAME-$PACKAGE\_VERSION.deb

rm -r $TEMP\_DIR/debian

## Run the script as root:

Need to change modes of some files

chmod 0644 "jar name" like spectralogic.jar

chmod +x "name of file that contains jar's path" like deepstoragebrowser

chmod 777 deepstoragebrowser.desktop

**sudo** .**/**packagedeb.sh

## Run lintian on the result and make adjustments where necessary.

lintian-i spectralogic-0.1.1.deb

## run .deb package by double click

* .deb package (deepstoragebrowser\_2.0.deb) is ready to be installed on the system.

# Steps to create .dmg file from runnable jar for MAC

## create a folder where you want to create .dmg file

->mkdirDeepStorageBrowser

->cdDeepStorageBrowser

## create icon for the application

->curl"image path" say "https://github.com/SpectraLogic/ds3\_java\_browser/blob/master/Builders/Mac/DeepStorageBrowser.png". Alternatively, the file can also be downloaded directly form github to your local path to perform the steps mentioned below.

->mkdir"foldername" say "DeepStorageBrowser.iconset"

->sips-z 32 32DeepStorageBrowser.png --out DeepStorageBrowser.iconset/icon\_32x32.png//giving dimensions for the icon

->sips-s format icns DeepStorageBrowser.png --out DeepStorageBrowser.icns//converts the format of icon from png to icns

->ls-l

->mkdir-p package/macosx//make directory for icon

->cpDeepStorageBrowser.icns package/macosx//copy icon to that directory

## Createdmg file

->jdk=$(/usr/libexec/java\_home)//java\_home reference in jdk variable

->$jdk/bin/javapackager -version//to check the version of present java

->$jdk/bin/javapackager -deploy -native dmg -srcfiles DeepStorageBrowser.jar -appclasscom.spectralogic.dsbrowser.gui.Main -name DeepStorageBrowser -BappVersion=2.1 -Bmac.signing-key-developer-id-app="Spectra Logic Corporation" -outdir deploy –outfile DeepStorageBrowser// creates dmg file in deploy folder

Some Important Points while creating .dmg file:

* For version name , just type the –BappVersion=2.0 after dmg file name as:

$jdk/bin/javapackager -deploy -native dmg -srcfiles "SpectraLogic.jar" -appclass "com.spectralogic.dsbrowser.gui.Main" -name "spectraLogic"–BappVersion=2.0-outdirdeploy -outfilespectraLogic –v

* Dmg file name and –outfile name should be same.
* Image (.icns) and folder name should be same.
* DeepStorageBrowser.app should be in same folder where all other files are placed.
* Keep .jar file in the same folder as well. (in DeepStorageBrowser)