

Installing Alfresco components one by one

Angel Borroy
developer@keensoft

Alfresco components (201702)

Alfresco

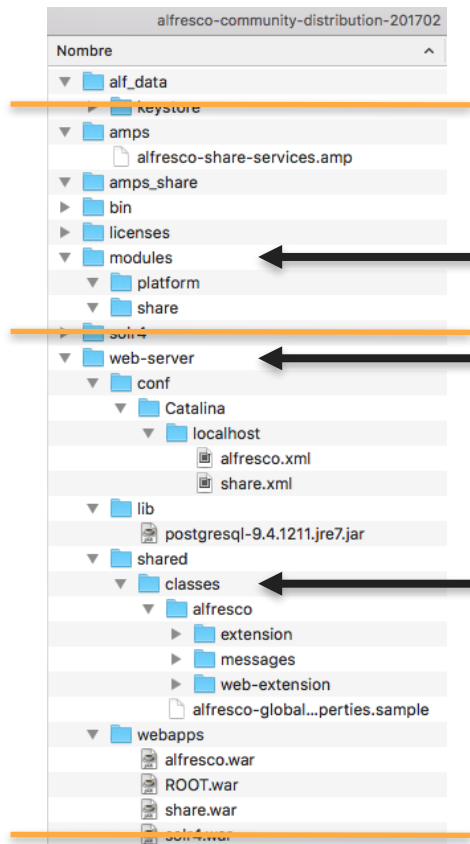
File	Description
alfresco-community-distribution-201702.zip (md5: 0fe1cf64f2d95bbc4d89c780b636580f)	Use this download for manual install. Contains Web Archive (WAR) bundles for the Alfresco repository and Share UI. This file also contains Module Management tool, JLAN native libraries for windows and Solr4 integration
alfresco-community-file-transfer-receiver-5.2.0.zip (md5: 25246f73444ceeb5584389fd7ea22b79)	Alfresco File Transfer Receiver
alfresco-wmq-5.2.0.zip (md5: d83b40b31656ad4acd11c4bfb6315298)	Alfresco Web Quick Start – refer to Alfresco Web Quick Start documentation .
alfresco-webeditor-5.2.0.zip (md5: cc7a3a1815ab96d0c77f9add8c1fe8ff)	Alfresco Web Editor – refer to Alfresco Web Editor documentation .
alfresco-solr4-5.2.0.zip (md5: 30d6d888404674cb99bd6c57ad55e178)	Alfresco Solr4 Integration version 5.2.0

Solr 6 Integration

File	Description
alfresco-search-services-1.0.0.zip (md5: ca9239b519a9bdaf734dbe530ed6a6e5)	Alfresco Solr6 Integration version 1.0.0

<https://community.alfresco.com/docs/DOC-6641-alfresco-community-edition-file-list-201702>

Alfresco Community Distribution

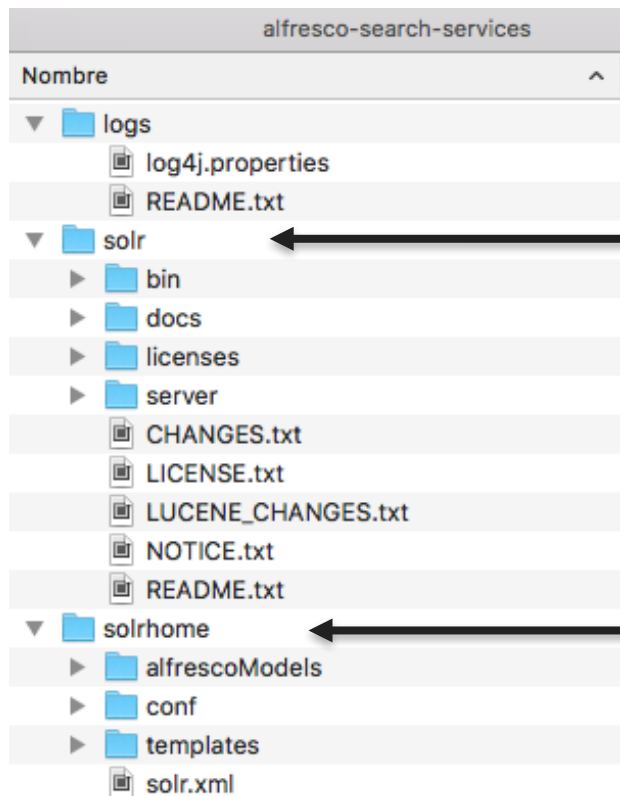


Alfresco SDK 3.0.0

Tomcat resources

Extension path

Alfresco Search Services (aka SOLR 6)



SOLR 6 software

SOLR 6 Alfresco cores definition

Anything else?

Alfresco Supported Platforms

Apache HTTPd



Apache
Tomcat

jetty://



PostgreSQL

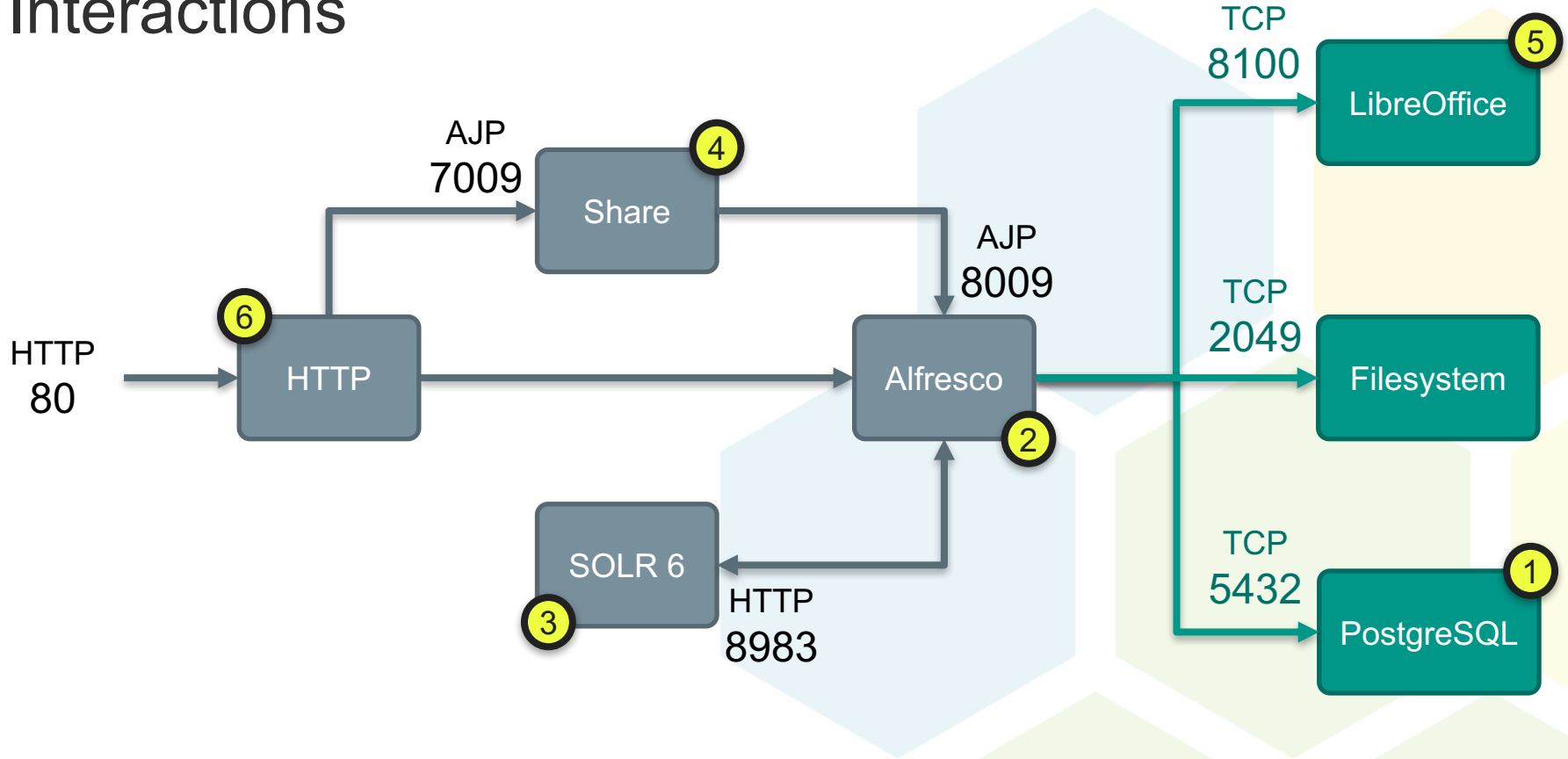


LibreOffice
The Document Foundation



CentOS

Interactions



Resources - Server map

12
GB

HTTP	0,5 GB
Share	2 GB
Alfresco	3 GB
SOLR	3 GB
LibreOffice	1 GB
PostgreSQL	2 GB
OS	0,5 GB

ecm.local
share.local
alfresco.local
solr.local
libreoffice.local
postgresql.local

6
servers



Installing

30 minutes count down

Base OS image

```
$ cat /etc/redhat-release
CentOS Linux release 7.2.1511 (Core)

$ yum list installed
ImageMagick.x86_64                6.7.8.9-15.el7_2
apr.x86_64                        1.4.8-3.el7
cairo.x86_64                      1.14.2-1.el7
cups-libs.x86_64                  1:1.6.3-22.el7
fontconfig.x86_64                2.10.95-7.el7
ghostscript.x86_64               9.07-18.el7
httpd.x86_64                      2.4.6-40.el7.centos.4
postgresql94.x86_64              9.4.9-1PGDG.rhel7
```

<https://www.dropbox.com/s/mm43kmzg4jtrueb/alfresco-centos.ova?dl=0>

root / keensoft

Downloaded software

```
# ls -lh
-rw-r--r--. 1 root root 315M alfresco-community-distribution-201702.zip
-rw-r--r--. 1 root root 127M alfresco-search-services-1.0.0.zip
-rw-r--r--. 1 root root 8,6M apache-tomcat-7.0.59.tar.gz
-rw-r--r--. 1 root root 173M jdk-8u101-linux-x64.tar.gz
-rw-r--r--. 1 root root 263M LibreOffice_5.3.2_Linux_x86-64_rpm.tar.gz
```

Faking server names

```
$ vi /etc/hosts
127.0.0.1    ecm.local
127.0.0.1    alfresco.local
127.0.0.1    share.local
127.0.0.1    solr.local
127.0.0.1    libreoffice.local
127.0.0.1    postgresql.local
```



Install Oracle JDK

```
$ cd /opt
$ tar xvf /root/jdk-8u101-linux-x64.tar.gz

$ alternatives --install /usr/bin/java java /opt/jdk1.8.0_101/bin/java 2

$ java -version
java version "1.8.0_101"
Java(TM) SE Runtime Environment (build 1.8.0_101-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.101-b13, mixed mode)
```

1. Install PostgreSQL

```
$ /usr/pgsql-9.4/bin/postgresql94-setup initdb
```

```
$ systemctl enable postgresql-9.4
```

```
$ systemctl start postgresql-9.4
```

```
$ su - postgres
```

```
$ psql
```

```
CREATE DATABASE alfresco
```

```
WITH OWNER = postgres
```

```
ENCODING = 'UTF8'
```

```
TABLESPACE = pg_default
```

```
TEMPLATE template0;
```

1. Install PostgreSQL

```
CREATE ROLE alfresco LOGIN  
PASSWORD 'alfresco'  
NOSUPERUSER INHERIT NOCREATEDB NOCREATEROLE;  
  
GRANT ALL ON DATABASE alfresco TO public;  
  
GRANT ALL ON DATABASE alfresco TO postgres;  
  
GRANT ALL ON DATABASE alfresco TO alfresco;  
  
\q
```

1. Install PostgreSQL

```
$ vi /var/lib/pgsql/9.4/data/pg_hba.conf
host      all             all             127.0.0.1/32      trust
host      all             all             ::1/128           trust

$ vi /var/lib/pgsql/9.4/data/postgresql.conf
maintenance_work_mem = 192MB
checkpoint_completion_target = 0.7
effective_cache_size = 2048MB
work_mem = 22MB
wal_buffers = 4MB
checkpoint_segments = 8
shared_buffers = 768MB
```

1. Install PostgreSQL

```
$ exit
```

```
$ systemctl restart postgresql-9.4
```

```
$ cat /etc/hosts
```

```
127.0.0.1    postgresql.local
```




Apache
Tomcat

2. Install **Alfresco** webapp

```
$ mkdir /opt/alfresco
$ cd /opt/alfresco
$ tar xvf /root/apache-tomcat-7.0.59.tar.gz
$ mv apache-tomcat-7.0.59 tomcat

$ cd tomcat/bin/
$ tar xzvf tomcat-native.tar.gz
$ cd tomcat-native-1.1.32-src/jni/native/
$ ./configure --with-apr=/usr/bin/apr-1-config \
--with-java-home=/opt/jdk1.8.0_101
$ make; make install
Libraries have been installed in:
    /usr/local/apr/lib
```



Apache
Tomcat

2. Install **Alfresco** webapp

```
$ vi /opt/alfresco/tomcat/bin/setenv.sh
# Load Tomcat Native Library
LD_LIBRARY_PATH="/usr/local/apr/lib:$LD_LIBRARY_PATH"
export LD_LIBRARY_PATH

$ /opt/alfresco/tomcat/bin/catalina.sh start
$ tail -f -n 100 /opt/alfresco/tomcat/logs/catalina.out

INFO: Loaded APR based Apache Tomcat Native library 1.1.32 using APR version
1.4.8.

$ /opt/alfresco/tomcat/bin/catalina.sh stop
```

2. Install **Alfresco** webapp

```
$ unzip alfresco-community-distribution-201702.zip
$ cd alfresco-community-distribution-201702

$ mkdir /opt/alfresco/alf_data

$ cp -r amps /opt/alfresco

$ mkdir /opt/alfresco/bin
$ cp bin/alfresco-mmt.jar /opt/alfresco/bin
$ cp bin/apply_amps.sh /opt/alfresco/bin
$ cp bin/clean_tomcat.sh /opt/alfresco/bin

$ mkdir -p /opt/alfresco/modules/platform
```

2. Install **Alfresco** webapp

```
$ cd web-server

$ cp -r * /opt/alfresco/tomcat

$ rm -rf /opt/alfresco/tomcat/webapps/share.war
$ rm -rf /opt/alfresco/tomcat/webapps/solr4.war
$ rm -rf /opt/alfresco/tomcat/conf/Catalina/localhost/share.xml
$ rm -rf /opt/alfresco/tomcat/shared/classes/alfresco/web-extension

$ mkdir /opt/alfresco/tomcat/shared/lib
$ vi /opt/alfresco/tomcat/conf/catalina.properties
shared.loader=${catalina.base}/shared/classes,${catalina.base}/shared/lib/*.
jar
```



Apache
Tomcat

2. Install **Alfresco** webapp

```
$ chmod +x /opt/alfresco/tomcat/bin/setenv.sh

$ vi /opt/alfresco/tomcat/bin/setenv.sh
JAVA_OPTS="$JAVA_OPTS -Dalfresco.home=/opt/alfresco"
JAVA_OPTS="$JAVA_OPTS -Dcom.sun.management.jmxremote"
JAVA_OPTS="$JAVA_OPTS -XX:ReservedCodeCacheSize=128m"
JAVA_OPTS="$JAVA_OPTS -Xms512M -Xmx3072M"
export JAVA_OPTS
```

2. Install **Alfresco** webapp

```
$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties

dir.root=/opt/alfresco/alf_data

db.driver=org.postgresql.Driver
db.username=alfresco
db.password=alfresco
db.url=jdbc:postgresql://postgresql.local:5432/alfresco
```

2. Install **Alfresco** webapp

```
$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties

alfresco.context=alfresco
alfresco.host=alfresco.local
alfresco.port=8080
alfresco.protocol=http

cifs.enabled=false
ftp.enabled=false
imap.server.enabled=false
alfresco.rmi.services.host=0.0.0.0
monitor.rmi.service.port=0

index.subsystem.name=noindex
```

2. Install **Alfresco** webapp

```
$ cat /etc/hosts
127.0.0.1    alfresco.local

$ ls /opt/alfresco/amps
alfresco-share-services.amp

$ chmod +x /opt/alfresco/bin/apply_amps.sh
$ /opt/alfresco/bin/apply_amps.sh

03210000 Invalid directory '/opt/alfresco/amps_share'
```


2. Install **Alfresco** webapp

```
$ /opt/alfresco/tomcat/bin/catalina.sh start
```

```
$ tail -f /opt/alfresco/tomcat/logs/catalina.out
```

```
abr 21, 2017 4:42:46 PM org.apache.coyote.AbstractProtocol start
```

```
INFO: Starting ProtocolHandler ["http-apr-8080"]
```

```
abr 21, 2017 4:42:46 PM org.apache.coyote.AbstractProtocol start
```

```
INFO: Starting ProtocolHandler ["ajp-apr-8009"]
```

```
abr 21, 2017 4:42:46 PM org.apache.catalina.startup.Catalina start
```

```
INFO: Server startup in 104755 ms
```

3. Install **SOLR 6** webapp

```
$ mkdir /opt/solr6
$ cd /opt/solr6
$ unzip /root/alfresco-search-services-1.0.0.zip

$ cd alfresco-search-services
$ mv * ..
$ cd ..
$ rm -rf alfresco-search-services/

$ vi /opt/solr6/solrhome/templates/rerank/conf/solrcore.properties

alfresco.host=alfresco.local
```

3. Install SOLR 6 webapp

```
$ /opt/solr6/solr/bin/solr start -force -m 3G \  
-a -Dcreate.alfresco.defaults=alfresco,archive
```

```
Started Solr server on port 8983 (pid=2498).  
Happy searching!
```

```
$ tail -f /opt/solr6/logs/solr.log
```

```
2017-04-21 17:01:47.272 INFO (main) [ ] o.e.j.s.ServerConnector Started  
ServerConnector@624ea235{HTTP/1.1,[http/1.1]}{0.0.0.0:8983}  
2017-04-21 17:01:47.272 INFO (main) [ ] o.e.j.s.Server Started @7126ms
```

3. Install **SOLR 6** webapp

```
$ cat /etc/hosts
127.0.0.1      solr.local

$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties

index.subsystem.name=solr6
solr.host=solr.local
solr.port=8983
solr.port.ssl=8984
solr.secureComms=none

$ /opt/alfresco/tomcat/bin/catalina.sh stop
$ /opt/alfresco/tomcat/bin/catalina.sh start
```



Apache
Tomcat

4. Install Share webapp

```
$ mkdir /opt/share
$ cd /opt/share
$ tar xvf /root/apache-tomcat-7.0.59.tar.gz
$ mv apache-tomcat-7.0.59 tomcat

$ vi /opt/share/tomcat/bin/setenv.sh
# Load Tomcat Native Library
LD_LIBRARY_PATH="/usr/local/apr/lib:$LD_LIBRARY_PATH"
export LD_LIBRARY_PATH
```



Apache
Tomcat

4. Install Share webapp

```
$ vi /opt/share/tomcat/conf/server.xml
<Server port="7005" shutdown="SHUTDOWN">
  <Connector port="7080" protocol="HTTP/1.1"
    connectionTimeout="20000" redirectPort="7443" />
  <Connector port="7009" URIEncoding="UTF-8"
    protocol="AJP/1.3" redirectPort="7443" />
</Server>
```

4. Install **Share** webapp

```
$ cd /root/alfresco-community-distribution-201702

$ mkdir /opt/share/amps_share

$ mkdir /opt/share/bin
$ cp bin/alfresco-mmt.jar /opt/share/bin
$ cp bin/apply_amps.sh /opt/share/bin
$ cp bin/clean_tomcat.sh /opt/share/bin

$ mkdir -p /opt/share/modules/share
```

4. Install Share webapp

```
$ cd web-server

$ cp -r * /opt/share/tomcat

$ rm -rf /opt/share/tomcat/webapps/alfresco.war
$ rm -rf /opt/share/tomcat/webapps/solr4.war
$ rm -rf /opt/share/tomcat/conf/Catalina/localhost/alfresco.xml
$ rm -rf /opt/share/tomcat/shared/classes/alfresco/extension

$ mkdir /opt/share/tomcat/shared/lib
$ vi /opt/share/tomcat/conf/catalina.properties
shared.loader=${catalina.base}/shared/classes,${catalina.base}/shared/lib/*.
jar
```


4. Install Share webapp

```
$ vi /opt/share/tomcat/shared/classes/alfresco/web-extension/share-config-  
custom.xml  
  
<config evaluator="string-compare" condition="Remote">  
  
    <endpoint-url>http://alfresco.local:8080/alfresco/s</endpoint-url> [x4]  
  
</config>  
  
$ cat /etc/hosts  
127.0.0.1    share.local
```



Apache
Tomcat

4. Install Share webapp

```
$ touch /opt/share/tomcat/bin/setenv.sh
$ chmod +x /opt/share/tomcat/bin/setenv.sh

$ vi /opt/share/tomcat/bin/setenv.sh

LD_LIBRARY_PATH="/usr/local/apr/lib:$LD_LIBRARY_PATH"
export LD_LIBRARY_PATH

JAVA_OPTS="$JAVA_OPTS -XX:ReservedCodeCacheSize=128m"
JAVA_OPTS="$JAVA_OPTS -Xms512M -Xmx2048M"
export JAVA_OPTS
```

4. Install Share webapp

```
$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties
```

```
share.context=share  
share.host=share.local  
share.port=7080  
share.protocol=http
```

```
img.root=/usr/share/doc/imagemagick  
img.exe=/usr/bin/convert  
img.config=${img.root}  
img.coders=/usr/lib64/ImageMagick-6.7.8/modules-Q16/coders  
img.dyn=/usr/local/lib  
img.gslib=/usr/local/lib
```

```
$ /opt/alfresco/tomcat/bin/catalina.sh stop  
$ /opt/alfresco/tomcat/bin/catalina.sh start
```

4. Install **Share** webapp

```
$ /opt/share/tomcat/bin/catalina.sh start
```

```
$ tail -f /opt/share/tomcat/logs/catalina.out
```

```
INFO: Starting ProtocolHandler ["http-apr-7080"]  
abr 21, 2017 7:37:02 PM org.apache.coyote.AbstractProtocol start  
INFO: Starting ProtocolHandler ["ajp-apr-7009"]  
abr 21, 2017 7:37:03 PM org.apache.catalina.startup.Catalina start  
INFO: Server startup in 38529 ms
```

5. Install LibreOffice service

```
$ cd
$ tar xzf LibreOffice_5.3.2_Linux_x86-64_rpm.tar.gz
$ yum install -y LibreOffice_5.3.2.2_Linux_x86-64_rpm/RPMS/*.rpm

$ vi /opt/libreoffice.sh

/opt/libreoffice5.3/program/soffice.bin "--
accept=socket,host=localhost,port=8100;urp;StarOffice.ServiceManager" "-
env:UserInstallation=file:///opt/alfresco/alf_data/oouser" --nologo --
headless --nofirststartwizard --norestore --nodefault &

$ chmod +x /opt/libreoffice.sh
$ /opt/libreoffice.sh
```

5. Install LibreOffice service

```
$ cat /etc/hosts
127.0.0.1    libreoffice.local

$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties

ooo.enabled=true
ooo.port=8100
ooo.host=libreoffice.local

$ /opt/alfresco/tomcat/bin/catalina.sh stop
$ /opt/alfresco/tomcat/bin/catalina.sh start
```

6. Install Apache HTTPd

```
$ cat /etc/httpd/conf.d/alfresco.conf
<VirtualHost *:80>
    ProxyRequests Off
    ProxyPass /alfresco ajp://alfresco.local:8009/alfresco
    ProxyPassReverse /alfresco ajp://alfresco.local:8009/alfresco
    ProxyPass "/share" "ajp://share.local:7009/share"
    ProxyPassReverse "/share" "ajp://share.local:7009/share"
</VirtualHost>
```

6. Install Apache HTTPd

```
$ /usr/sbin/setsebool -P httpd_can_network_connect 1
```

```
$ systemctl start httpd
```

```
$ systemctl enable httpd
```

```
$ cat /etc/hosts
```

```
127.0.0.1    ecm.local
```


6. Install Apache HTTPd

```
$ vi /opt/alfresco/tomcat/shared/classes/alfresco-global.properties

alfresco.host=ecm.local
alfresco.port=80

share.host=ecm.local
share.port=80

$ /opt/alfresco/tomcat/bin/catalina.sh stop
$ /opt/alfresco/tomcat/bin/catalina.sh start
```

Hands up!





Closing

Testing & AOB

Testing

Repository

<http://ecm.local/alfresco>

Share

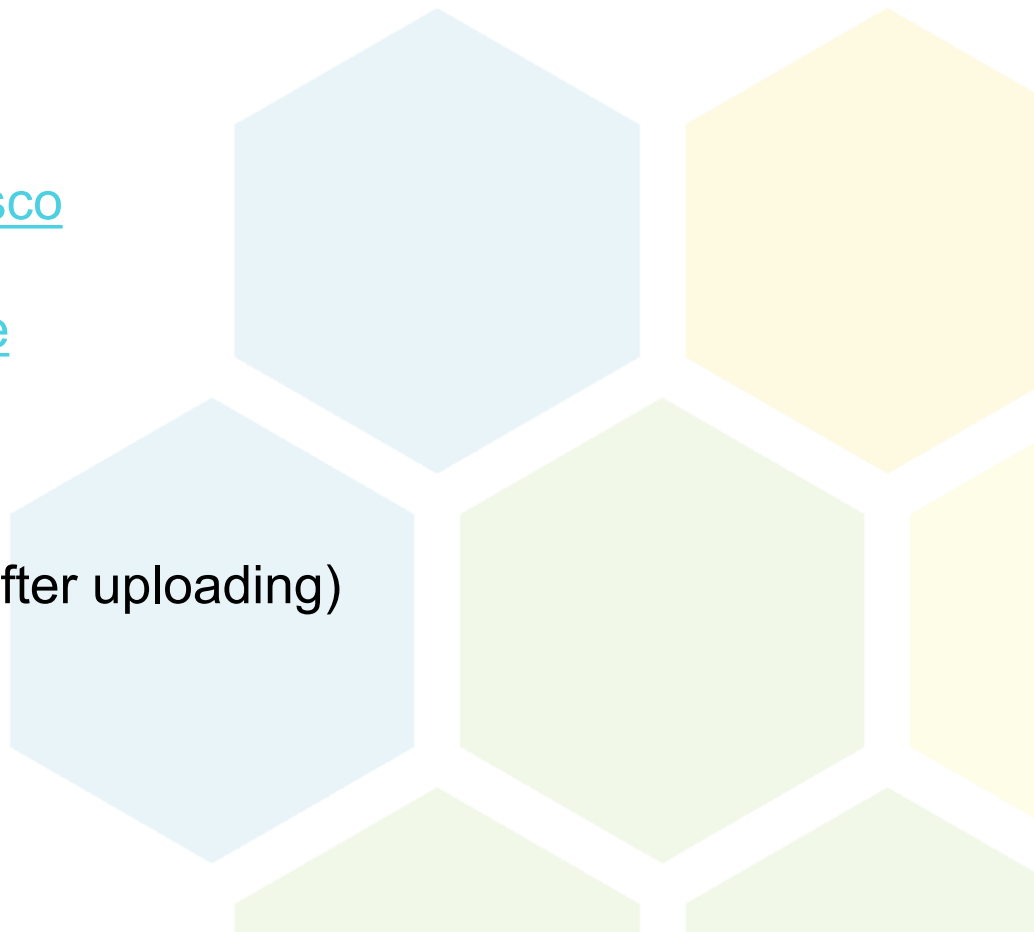
<http://ecm.local/share>

Libreoffice

Upload a ODT file

SOLR

Search for content (after uploading)



Enhancing our configuration

Apache / NGINX

<http://beecon.buzz/talks/?id=20160125025>

<https://github.com/ecm4u/alfresco-reverse-proxy>

SSL using Apache HTTP & Let's Encrypt

www.keensoft.es/en/configuring-alfresco-ssl-by-using-lets-encrypt/

PostgreSQL tuning

<http://beecon.buzz/2016/talks/?id=20160125019>



Thanks!

angel.borroy@keensoft.es