

COMPANY NAME

Server Deployment Plan for XYZ

Server Deployment Plan XYZ

Table Of Contents

LIST OF SOFTWARE USED FOR THE INSTALLATION OF XYZ	3
MINIMUM HARDWARE REQUIREMENT	4
SECTION I: - OPERATING SYSTEM INSTALLATION.....	5
Installation and Configuration:.....	5
Some more points to be taken into consideration while deploying server:	10
SECTION II: - JAVA INSTALLATION	11
SECTION III: - APPLICATIONS AND SERVER INSTALLATION	12
Apache	12
Changes to be made in httpd.conf.....	13
Tuning apache for better performance :.....	14
MySQL.....	16
Deploying Resin with Apache	18
Deploying DXReader.....	20
TROUBLESHOOTING.....	23
DEPLOYMENT OF DX SEARCH SERVER.....	24
DEPLOYMENT OF DX SEARCH ON SERVER.....	25
DEPLOYMENT OF DXSEARCHRETRIEVAL ENGINE	27
DEPLOYMENT OF DXPOWERSEARCH DISPLAY ENGINE.....	28

Section I: - Operating System installation

This system uses Red Hat Linux version 7.3 as the Operating System. This section gives the details of installation and configuration steps required for installation of the core Operating System.

Installation and Configuration:

Follow the steps given below to install Red Hat Linux version 7.3 (Operating System).

1. Make sure in BIOS setup Boot from CDROM option is enabled. Switch on the machine and insert RedHat Linux 7.3 setup CD (Disk # 1) into cdrom drive, let the setup continue till you get '**boot :**' prompt. Press enter key against the prompt and follow the setup instructions.
2. **Language Selection:** English, click on '**Next**' push button. OR Select your desired language
3. **Keyboard Configuration:** The installer will detect the keyboard. Just click **Next** to continue
4. **Mouse Configuration:** Select appropriate mouse accordingly e.g. Generic 3 button mouse (PS/2). You can use the default mouse that is detected. Click **Next** to continue.
5. Welcome screen for Red Hat Linux flashes, click on **NEXT** push button.
6. **Install Options:** Select 'Custom System' and proceed clicking on **NEXT**.
7. **Disk Partitioning Setup:** Select 'Manually partition with Disk Druid' option. Click **Next** push button.
8. **Disk setup:** This window helps you to partition the hard disk drive as per your requirements. We will create three partitions namely boot, swap and root using the following information.

NOTE: For some raw hard disks you may get a message stating to **initialize** the disk. Click "**initialize**" button to initialize the disk.

9. First delete all the partitions that are existing by selecting the partition and pressing the DELETE button.

10. Click on **New** to create new partition.

Boot Partition Creation:

Mount Point	Select '/boot' from the pull down menu
Size (MB)	Specify 30.
File system Type	Ext3
Allowable Drives	sda (By Default for single hard disk drive)

Click 'OK' to continue

Note : If you are using IDE hard disk you drive will be shown as "hda" instead of "sda"

11. Click on '**NEW**' again to create swap partition

Swap Partition Creation:

File system Type	'SWAP'
Size (MB)	Specify (* Double of RAM)
Allowable Drives	sda (By Default for single hard disk drive)

NOTE : if your physical memory is more than 512mb you don't have to create swap partition

Click on 'OK' to continue

12. Click on '**NEW**' again to create root (/) partition

Root Partition Creation:

Mount Point	Select '/' from the pull down menu
Size (MB)	Do not specify any thing here. In fact, do select the option 'Fill to maximum allowable size'
File system Type	Ext3
Allowable Drives	sda (By Default for single hard disk drive)

Click '**NEXT**' to continue

13 **Boot Loader Installation:** Linux boot loader. This is installed on Master boot record of your hard disk. Click '**NEXT**' to continue. By default this will install GRUB boot loader

14 **Grub Password:** You can give password if required. Then click "**NEXT**"

- 15 **Network Configuration:** Please contact your network administrator before proceeding for network configuration. To manually assign the IP addresses ~~deselect~~ the check box “**Configure using DHCP**” Keep the selection as it is for “Activation on boot”.

IP Address	(For e.g.) 172.16.50.1
NetMask	(For e.g.) 255.255.0.0
Network ID	(For e.g.) 172.16.0.0
Broadcast Address	(For e.g.) 172.16.255.255
Host Name	(For e.g.) vayu
Gateway	(For e.g.) 172.16.1.1
Primary DNS	(For e.g.) 172.16.1.31
Secondary DNS	(For e.g.) 172.16.1.1
Ternary DNS	(For e.g.) 202.54.01.30

NOTE: If you are going to use this server on Internet, please enter the real ip address that can be accessed through internet.

- 16 **Firewall Configuration:** Select “No firewall” and click “**NEXT**”
- 17 **Language Support:** Select your desired language and Click “**NEXT**” to continue
- 18 **Time Zone Selection:** In ‘View’ option select your time zone from the pull down menu. Click ‘**NEXT**’ to continue.
- 19 **Account Configuration:** Here you need to specify the password for the ‘root’ user. If required you can also create a system user. Click ‘**NEXT**’ to continue.
- 20 **Authentication Configuration:** This option specifies the use of different algorithms of password encryption. Use the default configuration. Click ‘**NEXT**’ to continue.
- 21 **Package Group Selection:** The packages to be selected from the available listing are given below.

Sr. No.	Package Name	Selection for Server
1.	Printer Support	No
2.	Classic X Window System	No
3.	X Window System	No
4.	Laptop support	No

SERVER DEPLOYMENT PLAN FOR
XYZ

5.	GNOME	No
6.	KDE	No
7.	Sound and Multimedia support	No
8.	Network Support	Yes
9.	Dialup Support	No
10.	Messaging & Web Tools	No
11.	Graphics & Image Manipulation	No
12.	News Server	No
13.	NFS File Server	No
14.	Windows File Server	No
15.	Anonymous FTP Server	No
16.	SQL Database server	No
17.	Web Server	No
18.	Router/Firewall	Yes
19.	DNS Name Server	No
20.	Network Managed workstation	Yes
21.	Authoring & Publishing	No
22.	Emacs	Yes
23.	Utilities	Yes
24.	Legacy Application support	No
25.	Software Development	Yes
26.	Kernel Development	Yes
27.	Windows compatibility Interoperability	No
28.	Games & Entertainment	No
29.	Everything	No

Click '**NEXT**' to continue

Note: If you choose Xwindows to install then only you will be prompted for Xconfiguration.

- 22 **Xconfiguration:** If you choose server installation, select the option 'Use console login'. For client installation you can choose 'Use graphical login'. Click '**NEXT**' to continue. Select "Skip X Configuration" since we are not going to install X Windows.
- 23 **About to Install:** This window intimates that the settings all you have selected are about to be installed on your machine. Click '**NEXT**' to continue with the installation or Click '**BACK**' to change the configuration.

- 24 Next it will format the hard disk drive and start installing the selected packages.
 - 25 Finally, you will receive a window stating the installation has been successfully completed, click on '**FINISH**' to restart the machine.
 - 26 If you need you can create the boot disk. You can also skip the creation of boot disk by selecting the check box of '**Skip boot disk creation**'
 - 27 Installation complete. Click "**Exit**" to finish Installation
 - 28 Your machine will automatically be rebooted and CD will be ejected.
 - 29 Remove the cd from the cdrom.
 - 30 After rebooting the machine, you will be prompted with a blue screen. This is your boot loader. Press '**Enter**' to boot into Linux
 - 31 All the services will be started
 - 32 You will be prompted with the login prompt as follows


```
RedHat Linux release 7.3 (Valhalla)
Kernel 2.4.18-3 on i686
Login:
Password:
```
 - 33 Enter **root** at login prompt and enter the **password** that you entered during the installation
 - 34 Your prompt will change to

```
[root@localhost]#
```
- You can now start using Linux.

Some more points to be taken into consideration while deploying server:

- Do not leave X-Windows running on the server.
- Start only necessary services. Using the command “ntsysv” on your prompt can do this. Below is the list of recommended services to be started.

Gpm
Mysql
Network
Smb
Sshd
wu-ftpd
Xinetd

- The services can be more or less depending on installation.

Section II: - Java installation

Required version of Java Development Kit is 1.3.

Follow the steps given below to install and configure Java Development Kit version 1.3.

1. Login as root. Get IBMJava2-SDK-1.3-9.0.i386.rpm to any folder (For e.g. /home/username).

2. This is a binary file. You can install it easily using rpm. Issue the following command where the binary file exists

```
# rpm -ivh IBMJava2-SDK-1.3-9.0.i386.rpm
```

3. This will install IBMJava in /opt/IBMJava1-13 directory

4. Set the environment variables in by editing /etc/profile file.

```
pathmunge /usr/java/jdk1.3.0_02/bin
```

5. Execute the file /etc/profile as follows to make immediate effects. You can also logout and login again.

```
# . /etc/profile
```

Section III: - Applications and Server installation

This section explains the installation of services that are as follows: -

1. Apache
2. MySQL.
3. Resin
4. Apache with resin

Apache

Apache is a well-known Web Server used to serve the Web Contents.

The recommended version of Apache is 1.3.27.

Follow the steps given below to install and configure Apache.

1. Login as root. Get apache_1.3.27.tar.gz from the ftp site into any temporary directory
(For e.g. /tmp).
2. Go to the folder /tmp and Run the following command so as to extract the apache_1.3.20.tar file.

```
# tar zxvf apache_1.3.27.tar.gz
```
3. This will result into extracting all the files into folder named 'apache_1.3.27'
4. Go to the folder 'apache_1.3.27'

```
# cd /tmp/apache-1.3.27
```
5. If you want more than 256 clients, Make following changes in httpd.h file in src /include directory before compiling

```
#HARD_SERVER_LIMIT 256 and change it to  
#HARD_SERVER_LIMIT 1024
```
6. Run the following command:

```
# CC="egcs"  
# CFLAGS="-O9 -funroll-loops -ffast-math -malign-double -  
mcpu=pentiumpro -march=pentiumpro -fomit-frame-pointer -  
fno-exceptions"  
#./configure  
--prefix=/usr/local/apache  
--enable-module=so  
--disable-module=status  
--disable-module=negotiation  
--disable-module=autoindex  
--disable-module=asis  
--disable-module=env
```
7. After completion of the above process you will be returned back to '#' prompt.
Now run the following command:

```
# make
```
8. This command will compile apache.
9. Run the command 'make install' now to install the apache package.

```
# make install
```

10. This completes the installation of apache web server. Next, start the apache web server. It runs as a service in Linux. Run the following command to start the service :

```
# /usr/local/apache/bin/apachectl start
```

11. To test the apache service running properly, open Netscape Navigator and browse for the following URL :

<http://localhost> or <http://<ip-address-of-your-server>/>

The following window is displayed:

Changes to be made in httpd.conf

APACHE FURTHER CONFIGURATION:

Keep the server type default to standalone so as to run httpd run as daemon. In case of inetd the httpd will invoke only when there is any request to the server.

```
ServerType standalone/inetd
```

Do not keep the server root directory on any NFS mounted filesystem. Do not use '/' at the end of the file. The log file will be interpreted as <servername>.log. For e.g. /usr/local/apache/dpsl.log.

```
ServerRoot /usr/local/apache
```

To Disable directory listing Add the following in

```
<directory />  
Options None  
</directory>
```

Add the following in IndexIgnore directive

```
IndexIgnore * *.* *
```

Lockfile to be kept as default value.

```
LockFile /usr/local/apache/logs/httpd.lock or in the  
/var/lock/ directory
```

The file in which the server should record its Process Identification Number (PID)

```
PidFile /usr/local/apache/logs/httpd.pid
```

MaximumKeepAlive should always be kept maximum for better performance on production sites.

```
MaximumKeepAlive 250
```

MaxSpareServers and MinSpareServers should be always more. MaxSpareServers should be always more than MinSpareServers

```
* MinSpareServers 8  
MaxSpareServers 10
```

Number of servers to be started

```
StartServers 10
```

Maximum limit of clients connected to the server.

```
* MaxClients 256 (If you want more than 256 clients, Make  
following changes in httpd.h file before compiling)
```

```
#HARD_SERVER_LIMIT 256 and change it to  
#HARD_SERVER_LIMIT 1024
```

MaxRequestPerChild should be set according to the machine configuration. Depending on amount of memory and processor. On high end processors the value can be set to high.

```
MaxRequestPerChild 1000
```

Listen, allows apache to bind to specific port other than default port.

```
Listen 80
```

Keep Extended Status off.

```
ExtendedStatus off
```

The port on which apache listens for.

```
Port 80
```

Apache to run as user or group.

```
User nobody
```

```
Group nobody
```

The email address of the administrator should be used in for this directive

```
ServerAdmin admin@dpsl.net
```

A valid DNS name should be used for ServerName or a valid ip address can be used in this case

```
ServerName <whatever your server name will be>
```

```
Eg: ServerName dxreader.dpsl.co.in
```

The directory from which all the files will be served.

```
DocumentRoot /usr/local/apache/htdocs
```

Uncomment CacheNegotiatedDocs directive

```
CacheNegotiatedDocs
```

Set HostNameLookups to off

```
HostNameLookups Off
```

Tuning apache for better performance :

If the server starts and responds successfully but is taking long time to accept the connections, increase the **MaxSpareServers** or **MaxClients** directive so that free servers will handle their requests

Since web servers need to respond to request as quickly as possible and because virtual memory (SWAP) is much slower than physical memory. Close attention is to be paid to minimize the use of virtual memory.

One nice way to get a snapshot of the current Apache status is with the **mod_status** module. **mod_status** describes the current state of every HTTP server, whether it is waiting for a new connection, reading the request, handling the request or writing a response.

Some more points to be taken into consideration while deploying apache web server:

- Do not leave X-Windows running on the system
- Avoid having more than 1000 files in your webpage directory.

- Webgraphics can be served from another low configuration machine
- Shut down unnecessary services

MySQL

Copy the mysql package on your machine.

Follow the steps given below to install and configure MySQL.

Source Installation

Log in as root and invoke the following commands

```
# groupadd mysql

# adduser -g mysql mysql

# gunzip < mysql-VERSION.tar.gz | tar -xvf -

# cd mysql-VERSION

# /configure --prefix=/usr/local/mysql
-with-innodb
-with-berkeleydb

# make

# make install

# scripts/mysql_install_db

# chown -R root /usr/local/mysql

# chown -R mysql /usr/local/mysql/var

# chgrp -R mysql /usr/local/mysql

# cp support-files/my-huge.cnf /etc/my.cnf

# /usr/local/mysql/bin/safe_mysqld --user=mysql &
```

Including mysql in \$PATH variable

Open /etc/profile in your text editor and add the following line

```
if ! echo $PATH | /bin/grep -q "/usr/local/mysql/bin" ; then
    PATH="$PATH:/usr/local/mysql/bin"
fi
```

Execute the file by invoking the following command.

```
# . /etc/profile
```

OR just logout and login back.

Type "mysql" your prompt should be changed to

```
mysql>
```

Creating user for accessing database.

On the mysql prompt invoke the command

```
mysql> grant all privileges on *.* to main@localhost
identified by 'main';
mysql> grant all privileges on *.* to main@'%' identified by
'main';
```

```
mysql> grant all privileges on *.* to main@<your-host-name>  
identified by 'main';
```

Change <your-host-name> accordingly.

Copy dxreader1_1.sql file from the ftp site and invoke the following command on your shell prompt to create the databases structure.

```
# mysql < dxreader1_1.sql
```

Now type the following command to see the database listing

```
# mysqlshow.
```

```
DXReaderCache
```

```
DXReaderDB
```

```
mysql
```

```
test
```

You should see the above databases

Following command will list the tables in the database

```
# mysqlshow <database-name>
```

Note: -

1. You have already created the blank database structure.
2. You will have to get the data for Skin (table) in DXReaderDB databases to view skins.

Deploying Resin with Apache

Resin, an application server to run DXReader.

Requirements:

Download latest version of Resin from <http://www.caucho.com/download/index.xtp>
resin-2.0.1.tar.gz (Current latest version **2.0.1**)

Installing Resin

Untar resin

```
tar zxvf resin-2.0.1.tar.gz
```

This should be also in the same directory i.e /usr/local/

Change the directory name

```
mv /usr/local/resin-2.0.1 /usr/local/resin
```

Change the directory to resin-2.0.1

```
cd /usr/local/resin
```

Compile resin with apache by invoking the following command

```
./configure -enable-linux-smp -prefix=/usr/local/resin -with-  
apache=/usr/local/apache
```

Note: -

- Apache has to be compiled with DSO support or else the above command will give an error for no DSO support.
- This will compile resin with apache and a new module will be added into apache (httpd.conf) in EOF i.e mod_caucho.
- Use enable-linux-smp if you are working on SMP system

Next compile and install resin by invoking the following command

```
Make && make install
```

Apache can be configured to serve static content like html pages & images where as Resin to serve JSP's and servlets.

Edit resin.conf file as follows.

```
cd /usr/local/resin/conf
```

Configuration of Resin :

Add this to your Resin.conf file for database pooling

```
<resource-ref>  
<res-ref-name>jdbc/dxreadercache</res-ref-name>  
<res-type>javax.sql.DataSource</res-type>  
<init-param driver-name="org.gjt.mm.mysql.Driver"/>  
<init-param url="jdbc:mysql://<ip-address-of-your-database-  
server>:3306/DXReaderCache?user=main&password=main"/>  
<init-param user=""/>  
<init-param password=""/>  
<init-param max-connections="20"/>  
<init-param max-idle-time="30"/>  
</resource-ref>  
  
<resource-ref>  
<res-ref-name>jdbc/dxreaderuser</res-ref-name>  
<res-type>javax.sql.DataSource</res-type>
```


SERVER DEPLOYMENT PLAN FOR XYZ

```
<init-param driver-name="org.gjt.mm.mysql.Driver"/>
<init-param url="jdbc:mysql://<ip-address-of-your-database-
server>:3306/DXReaderDB?user=main&password=main"/>
  <init-param user=""/>
  <init-param password=""/>
  <init-param max-connections="20"/>
  <init-param max-idle-time="30"/>
</resource-ref>
```

To disable directory listing make add following line in <http-servlet> context
<directory-servlet>none</directory-servlet>

Uncomment the 8080 port from resin.conf

```
<!-- the http port
<http port='8080' /> -->
```

Following changes are to be made in resin.conf :

```
<app-dir='/usr/local/apache/htdocs'>
```

To automatically compile JAVA in WEB-INF

```
<classpath id='WEB-INF/classes' source='WEB-INF/classes' />
```

The srln port, read by both JVM and plugin127.0.0.1 is the localhost. This can be changed to machine ip address

```
<srln host=<IP ADDRESS> ' port='6802' />
```

Check for servlet updates every 2 minutes

```
<class-update-interval>120</class-update-interval>
```

To maximize performance tweak this as follows

```
<thread-min>5</thread-min>
<thread-max>150</thread-max>
```

Threads to wait for keepalives

```
<thread-keepalive>5</thread-keepalive>
```

Sessions to be allowed

```
<session-config session-max='4096' session-timeout='30' />
```

Enabling internal caching

```
<cache dir='cache' size='4096' entries='4096' />
```

Cacheable things are cacheable for 1 minute

```
<cache-mapping url-pattern='/' expires='1m' />
<cache-mapping url-pattern='*.css' expires='15m' />
<cache-mapping url-pattern='*.html' expires='15m' />
<cache-mapping url-pattern='*.gif' expires='15m' />
<error-log id='log/error.log' />
```

Disable /caucho-status, set this to false

```
<caucho-status>false</caucho-status>
```

Sockets to hold in buffer before failing of requests

```
<accept-buffer-size id='256' />
```

Enables/disables exceptions when the browser closes a connection.

```
<ignore-client-disconnect>true</ignore-client-disconnect>
```

Deploying DXReader

You need to install the following softwares.

- Apache web server with DSO support.
- Resin compiled with apache.

Following steps are to be followed to deploy DXReader1.0

Step

Step 1:

Copy the following .jar files from the ftp site in /usr/local/resin/lib directory.

- activation.jar
- dom.jar
- jaxp.jar
- jdbc2_0-stdext.jar
- jdbc-mysql.jar
- jndi.jar
- jsdk23.jar
- jta-spec1_0_1.jar
- mail.jar
- org.jar
- parser.jar
- resin.jar
- sax.jar
- saxon-fop.jar
- saxon.jar
- saxon-jdom.jar
- tools.jar
- webutil.jar
- xalan.jar
- NetComponent.jar

Step 2: Copy DXReader1.x from the ftp site directory to /usr/local/resin-2.x/webapps/ directory

Step 3: Copy dxr directory from the ftp site to /usr/local/apache/htdocs directory.

Note :-

1. Copy skin folders in s directory of dxr
2. Copy media folders in m directory of dxr
3. Copy css folder in c2 directory of dxr

Step 4: Properties files to be changed

- 1) /usr/local/resin/webapps/dxreader1.x/WEB-INF/classes/config/Details.xml
- 2) /usr/local/resin/webapps/dxreader1.x/WEB-INF/classes/config/dxreaderconfig.properties

Step 5 : Location.xml

```
<?xml version="1.0"?>
<details>
    <skinLocation>http://<ip-address>/dxr/s</skinLocation>
    <jsLocation>http://<ip-address>/dxreader/j</jsLocation>
    <streamingserver>mms://<ip-address>/x03</streamingserver>
    <interfaceLoc>http://<ip-address>/dxreader/jsp/interface
</interfaceLoc>
```

```
<books type="x03">
    <mediaLocation>http:// <ip-address>/dxr/m </mediaLocation>
    <cssLocation>http://<ip-address>/dxr/c2</cssLocation>
</books>
<books type="oeb">
    <mediaLocation>http://<ip-address>/dxr/m</mediaLocation>
    <cssLocation>http://<ip-address>/dxr/c2</cssLocation>
</books>
<books type="xhtml">
    <mediaLocation>http://<ip-address>/dxr/m</mediaLocation>
    <cssLocation>http://<ip-address>/dxreader/xhtmll
</cssLocation>
    </books>
</details>
```

Step 6 : dxreaderconfig.properties

Change/Add the following directives

SERVERURL=http:// <ip-address>/dxreader

SERVERID = <ip-address-of-your-database-server>

RMISERVER=rmi://<ip-address-of-your-search-server>:1099/DXSearch

[NOTE : Deployment of Search Server will be done in the Next section]

```
<ip-address-of-your-database-server>_user=main
<ip-address-of-your-database-server>_password=main
<ip-address-of-your-database-server>_driver=org.gjt.mm.mysql.Driver
```

DOWNLOADHTTTPATH = <http://<ip-address>/data>

DXREADERSHOWPAGEFILEPATH=http:// [_<ip-address>](http://<ip-address>/dxreader/jsp/ShowBookPage.jsp)/dxreader/jsp/ShowBookPage.jsp

```
LOGSERVERIP=<Log-server-ipaddress>
LOGUSERNAME=dxreaderlog
LOGPASSWORD= <type-password-of-log-server ipadress user>
FINALDELETETIME=82800000
LOGTRIGGERPATH = http://<ipaddress-of-log-server>/GlobalAdminModule/jsp/loggeneration/LogFilesProcessor.jsp?dxreaderid=\$dxreaderid&datestr=\$datestr\$
```

Step 8: Config.xml

```
<?xml version="1.0"?>
<!-- FOR PROPER FUNCTIONING OF THE CODE DONOT LEAVE ANY TAG VALUES
BLANK -->
    <configuration>
        <module id="module-id-assigned-by-global-admin">
            <name>DXReader</name>
            <ip><ip-address></ip>

            <dns>http://dxreader.dpsl.co.in/DXMessage/jsp/DXReceive.jsp</dns>
        </module>
    </configuration>
```

Step 9: Dbprop.properties

```
DXReaderDB.url=jdbc:mysql:// <Database-IP-address>:3306/DXReaderDB
DXReaderCache.url=jdbc:mysql:// <Database-IP-
address>:3306/DXReaderCache
```

Step:10 LocalAdminModule.properties

```
SERVERID = <Database-IP-address>
SKINID_SQL_URL=jdbc:mysql:// <Database-IP-
address>/DXReaderDB?user=main&password=main
BOOKID_SQL_URL=jdbc:mysql:// <Database-IP-
address>/DXReaderCache?user=main&password=main
```

Step:11 Lookup.xml

```
<?xml version="1.0"?>
<lookup>
    <module id="<module-id-of-global-admin>">
        <name>Global Admin</name>
        <ip><ip-of-global-admin></ip>
        <dcppath>http://<ip-of-global-
admin>/GlobalAdminModule/jsp/dcp/ReceiveToken.jsp</dcppath>
    </module>
</lookup>
```

Step 12: Start resin by invoking the command
/usr/local/resin/bin/httpd.sh start

Step 13: Start apache by invoking the following command
/usr/local/apache/bin/apachectl start

Step 9 :To start resin and apache during boot time put the following lines in your
/etc/rc.d/rc.local file

- /usr/local/resin1.1/bin/srun.sh start
- /usr/local/apache/bin/apachectl start

Note : Sometimes java.lang goes out of memory, in this case you need to increase the
heap size. This can be done in two ways. Open the httpd.sh file from your resin home
directory and make following changes

args = "-J-ms500m"
or you can pass the parameter to ./httpd.sh
./httpd.sh -Xms256m -Xmx500m

Troubleshooting

Resin

Q1. I get No Tags error.

A. Remove jaxp.jar file from your lib directory

Q2. Everything is working fine but when DXReader opens page is not displayed

A. Check whether your resin.conf file is configured for connection pooling.

Q3. Error “Can’t bind to port xxxx”

A. Resin was not shut down properly. Invoke the command “killall java” and restart resin

Q4. Periodically I m getting “Out of memory error.”

A. You need to increase the heap size while starting resin. This can be done as follows
./httpd.sh -Xms256m -Xmx700m on a server having 1GB ram

Q5. Error Can’t contact servlet runner at localhost:6802

A. This is due to resin server not started. Restart your resin server.

Java

Q6. When I run the command java nothing is displayed.

A. This is due to your kernel version. Open the file java which is a shell script and add a line
before PRG=\$0 export LD_ASSUME_KERNEL=“2.4”

Q7. I get an error too many files open.

A. Make changes to your proc file system log in as root and invoke the following command

```
echo 12888 > /proc/sys/fs/file-max  
Then issue the following command :  
ulimit -n 12888  
ulimit -S -c unlimited
```

Note : The above settings remain no more when the server is rebooted

Apache

Q8. I m not able to start the server resin/apache.

A. Check that you have logged in as root.

MySQL

Q9. Driver not found org.gjt.mm.mysql.driver.

A. Copy org.jar in you java’s ext directory.

Deployment of DX Search Server

Features Provided by DXSearch are as below:

1. Index generation for required book.
2. Index deletion of specified book
3. At display end, presenting search result category wise as well as book wise.
4. Supports publishers specific indexes hence can be deployed on single and distributed environment as well.
5. Search facility implemented for:
 - Search in this book.
 - Search in mybooks.
 - Search in all the books.
 - Search in books of given categories.
 - AND/OR/PHRASE/PROXIMITY search
 - Concept search (title / toc / fullcontent /....)
 - Stemming.
 - Wildcard search.

Deployment of DX Search on Server

Directory Structure required for DXSearch module

1. Create following directories

```
#mkdir /usrdata
#mkdir /usrdata/xmlfiles
#mkdir /usrdata/search
#mkdir /usrdata/search/rafindexes
#mkdir /usrdata/search/rafrmsearch
#mkdir /usrdata/search/indexfiles
```

2. Create login having permissions for ftp required file to above location.

```
# adduser ftpuser
# passwd ftpuser
Enter password "ftpuser" do not change this password
```

Deploy DXIndexingProcessorV2B3

Step 1

Copy folder **DXIndexingProcessorV2B3** from the ftp site to /usrdata/search/rafindexes/ folder on required server.

Step 2

Edit FileResource.properties file located at
/usrdata/search/rafindexes/DXIndexingProcessorV2B3/config/
change SELFSERVERID field as well as PUBLISHERLISTFILE field.

```
SELFSERVERID=<ip-address-of-your-server>
PUBLISHERLISTFILE=/usrdata/search/
rafindexes/DXIndexingProcessorV2B3/config/publisherlist.xml
```

Step 3

Edit publisherlist.xml file located at
/usrdata/search/rafindexes/DXIndexingProcessorV2B3/config/
change all paths mentioned to /usrdata/search/indexfiles/

```
<?xml version="1.0"?>
<publisherlist>
<publisher name="default">/usrdata/search/indexfiles
/defaultPubDir/</publisher>
<publisher name="MainRegistryPath">/usrdata/search/indexfiles
/MainRegistry/</publisher>
<publisher
name="0">/usrdata/search/indexfiles/defaultPubDir/</publisher>
<publisher name="1">/usrdata/search/indexfiles/<Publisher -
Name></publisher>
</publisherlist>
```

Note :

- Change publisher name to your publisher name.
- Do not enter special characters

Step 4

Go to /usrdata/search/rafindexes/DXIndexingProcessorV2B3 and execute the command

```
# cd /usrdata/search/rafindexes/DXIndexingProcessorV2B3
```

```
# java -Xmx200m rmiindexer.RMIIndexerServer to run the program.
```


Deployment of DXSearchRetrieval Engine

Following step to be followed to deploy DXSearchRetrievalV2B3

Copy folder DXSearchRetrievalEngineV2B3 from the ftp site to /usrdata/search/rafrmsearch/ folder on required server.

Edit SearchRetrievalResource.properties file located at /usrdata/search/rafrmsearch/DXRafRMISearchV2B3/config/ Change MainRegistryDirPath field as well as AllPubDirList field.

```
AllPubDirList=0|/usrdata/search/indexfiles/defaultPubDir+1|/usrdata  
/search/indexfiles/<your-publishername>  
MainRegistryDirPath=/usrdata/search/indexfiles/MainRegistry/pubregi  
stryindex/
```

Note :

- Publisher name should be same as the one mentioned above while deploying DXIndexing Processor
- Check the directory path. It should be /usrdata/search/indexfiles/ in both the fields

Edit rmiprop.properties file located at /usrdata/search/rafrmsearch/DXRafRMISearchV2B3/rmsearch/ change RMISERVER field.(Replace by your server address)
RMISERVER=rmi://<ip-address-of-your-server>:1099/rmsearchobj

Go to /usrdata/search/rafrmsearch/DXRafRMISearchV2B3 and execute the command
java -Xmx700m rmsearch.RMISearchServer to run the program.

Deployment of DXPowerSearch Display Engine

Step 1

Copy folder **dxsearch** from the ftp site to /usr/local/resin/webapps on your server.

Step 2

Edit indexerrmi.properties file located at
/usr/local/resin/webapps/dxsearch/WEB-INF/classes/config
Change **pubID** field to **0/1** accordingly.
(PubID 0 is for default publisher and 1 is for you as a publisher.)

Step 3

Change serverID field to your server IP Address.
SERVERID=<your-server-ip-address>

Step 4

Edit rmiprop.properties file located at
/usr/local/resin/webapps/dxsearch/WEB-INF/classes/rmsearch/
Change RMISERVER <ip address> to your server IP Address.
RMISERVER=rmi:// <ip address>:1099/rmsearchobj

Step 5

Start the resin server.
cd /usr/local/resin/bin
./httpd.sh start

Step 3

url for DXPowerSearch is
<http://<ip-address-of-your-server>/dxsearch/jsp/main.jsp>

For quick search in dxsearch url should be
<http://<ip-address-of-your-server>/dxsearch/jsp/main.jsp?searchquery=searchtext>