Installing on Reference Platforms

The reference platforms and their recommended settings are:

Operating System: OpenSuse 11.4

- Install Standard System with Gnome

Database: PostgreSQL 9.1

- Using Yast, install postgresql server
- Run postgresql, initialize and configure database, using following commands:

```
service postgresql start
su - postgres
createdb da
createuser sa
Superuser? yes
psql da
create language plpgsql;
\q
exit
```

- Edit configuration files *pg_hba.conf* and *postgresql.conf*

pg_hba.conf - relace authentication method 'ident same' with 'trust' for localhost

postgresql.conf - set parameters depending on server memory size

Parameters/Memory	Default	4GB	8GB	16GB
max_connections	100	200	400	1000
shared_buffers	32MB	1GB	2GB	4GB
work_mem	1MB	512MB	1GB	2GB
maintenance_work_mem	16MB	512MB	1GB	2GB
effective_cache_size	64KB	1GB	3GB	6GB

***For OpenSuse 12.1 and later**, you will need to add the following lines in **/etc/sysctl.conf**

```
kernel.shmmax=17179869184   #if you want max shared_buffer size of 16GB.
kernel.shmall=4194304
```

- Reload configuration using command

```
sysctl -p /etc/sysctl.conf
```

- Restart postgresql using command

```
service postgresql restart
```

- Click here if you'd want to set up Standby Server Replication

Container: Tomcat 6

*(*for Tomcat 7 on OpenSuse 12 and later, see at the end of the page)*

- Using Yast, install tomcat container and webapps modules
- Create symbolic link tomcat in folder /usr using File Manager or the following command

```
      ln -s /usr/share/tomcat6 /usr/tomcat
```

- Unzip sharedlib.zip into /usr/tomcat/lib to place additional .jar files.
- Copy da.war into folder /usr/tomcat/webapps
- Edit file /usr/tomcat/conf/server.xml to change port 8080 to 80
- Edit file /usr/tomcat/conf/tomcat6.conf to change TOMCAT_USER from tomcat to root
- Edit file /usr/tomcat/bin/catalina.sh to add the following line as the first un-commented line

```
      set CATALINA_OPTS="-Djava.awt.headless=true -Xmx1400M"
```

Note: -Xmx (Maximum Java heap size) for a production system with 4GB of memory should be around 1400M, leaving ample room for PostgreSQL. You may need to change this for systems with higher memories.

- Copy index.html into ROOT, using command

```
      cp /usr/tomcat/webapps/da/index.html /usr/tomcat/webapps/ROOT
```

- Start Tomcat using command

```
      service tomcat6 start
```

Legacy Report Generator CrystalClear 5.4

Ensure that the file /etc/hosts has the IP address as per crystalclear.properties.

Using Yast, set up System Services(Runlevel) so that PostgreSQL and Tomcat are automatically started at boot. Reboot server to complete installation

Licensing

The next step is to license your server. Click here for details of the licensing process

*OpenSuse 12.1 and later versions with Tomcat 7

OpenSuse now uses **systemd** based service runner, instead of /etc/init.d/tomcat.

You need to make the following changes

- **/usr/tomcat/conf/server.xml** – change port 8080 to 80

- **/usr/tomcat/conf/tomcat.conf** – add the lines

```
  TOMCAT_USER="root"
  TOMCAT_GROUP="root"
  SECURITY_MANAGER="false"
  CATALINA_OPTS="-Djava.awt.headless=true -Xmx1400M" #for RAM with 4GB, more
for servers with higher RAM
```

- **/usr/lib/systemd/system/tomcat.service** – comment out user and group.

- **/usr/sbin/tomcat-sysd** – comment out the routine for checking uid=0

There is a bug in the yast in 12.3. You cannot stop automatic startup of firewall. You need to run these commands

```
systemctl status SuSEfirewall2.service
systemctl enable SuSEfirewall2.service
systemctl start SuSEfirewall2.service
systemctl stop SuSEfirewall2.service
systemctl disable SuSEfirewall2.service
```