

# Icecom SwitchBoard

Version 2.0

*Installation Manual for Debian Operating System*



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This manual was made for Icecom SwitchBoard version 2.0.

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PostgreSQL Database Management System  
(formerly known as Postgres then as Postgres95)

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## INTRODUCTION

This installation manual was made for Icecom SwitchBoard version 2.0, for installing the Debian operating system. The person installing the system must have root access rights during the installation.

The setup to be installed for the Icecom SwitchBoard software needs:

- Java Virtual Machine (J2SE, Runtime Environment )
- Jakarta Tomcat web server (from now on: Tomcat server)
- PostgreSQL database.

The installation kit supplied for installing the system requires the files:

- jre-1\_5\_0\_04-linux-i586.bin (<http://java.sun.com/j2se/1.5.0/download.jsp>)
- jakarta-tomcat-5.5.9.tar.gz  
(<http://apache.mirrors.hoobly.com/jakarta/tomcat-5/v5.5.9/bin/jakarta-tomcat-5.5.9.tar.gz>)
- swb.txt

Besides these, the installation requires the kit delivered with the Debian operating system:

- postgresql (Object-relational SQL database, descended from POSTGRES)

In this document, commands are marked **in bold** and they begin with the symbol #. (**Please note!** The # symbol is not to be typed in a command to be entered during the installation!) The names of files and directories are written in the Verdana font. Internet addresses are underlined and lines to be added are written *in italics*.

The installation kits explained in this manual should be installed in the order in which they are explained, in order to guarantee the best possible operability for the system.

**Please note!**

The instructions for configuring Asterisk can be found in the previous document.



## 1 INSTALLING JDK

Save the file `jre-1_5_0_04-linux-i586.bin` in the directory `/root`

Command:

```
# su -  
  
# mkdir /usr/java  
# mv /root/jre-1_5_0_04-linux-i586.bin /usr/java  
# cd /usr/java  
# chmod +x jre-1_5_0_04-linux-i586.bin  
# ./jre-1_5_0_04-linux-i586.bin
```

Explanation:

when asked, give the root user password  
makes a new directory  
moves the directory  
go to installation directory  
give access rights for the file  
install file

In the end of the file `/etc/profile` (Note! there is no suffix in the end of the filename), add the following line with the editor of your choice:

```
export JAVA_HOME=/usr/java/jre1.5.0_04
```

The operability of the kit can be verified with the command:

```
# /usr/java/jre1.5.0_04/bin/java -version
```

which displays on the screen the information of the jdk just installed.

## 2 INSTALLING TOMCAT SERVER

Copy the kit `jakarta-tomcat-5.5.9.tar.gz` into the installation directory of your choice (e.g. the `/root` directory), and install it with the commands:

```
# tar -zxvf jakarta-tomcat-5.5.9.tar.gz  
# cd jakarta-tomcat-5.5.9
```

In addition, use the editor of your choice to add the following line in the end of the file `/etc/profile`:

```
export CATALINA_HOME=/root/jakarta-tomcat-5.5.9
```

(Check that the path of `CATALINA_HOME` corresponds to the Tomcat installation path, by default the `/root` directory)



### 3 INSTALLING AND CONFIGURING DATABASE

Install the postgresql kit delivered with the Debian operating system (Object-relational SQL database, descended from POSTGRES) with the command:

```
# apt-get install postgresql  
(More instructions www.debian.org)
```

After the installation, create database super-user and database cluster with the commands:

<u>Command:</u>	<u>Explanation:</u>
# <b>adduser postgres</b>	adds new Linux user
# <b>mkdir /usr/local/pgsql/data</b>	creates directory for database
# <b>chown postgres /usr/local/pgsql/data</b>	rights to postgres user
# <b>su - postgres</b>	switches postgres as user
# <b>/usr/local/pgsql/bin/initdb -D /usr/local/pgsql/data</b>	initialises database for use

Add rights to the file /usr/local/pgsql/data/pg\_hba.conf:

```
host    all        127.0.0.1                255.255.255.0           trust  
host    all        <the IP address of the computer> 255.255.255.0           trust
```

Start up the database with the command:

```
# /usr/local/pgsql/bin/postmaster -D /usr/local/pgsql/data >pgsql_logfile.txt 2>&1 &
```

After this, create the database with the name "swb", in which Scandinavian alphabets (with dots) can be created with the command:

```
# /usr/local/pgsql/bin/createdb -E iso885915 swb
```

Copy the swb.txt coming with the installation kit into the directory of your choice. The file contains the database structure.

After this, create the tables needed for the application in the database by entering the command:

```
# /usr/local/pgsql/bin/psql swb < swb.txt
```

### 4 INSTALLING ICECOM SWITCHBOARD USER INTERFACE

Copy the icecomswb.war file included in the installation kit into the directory \$CATALINA\_HOME/webapps/.

Start the Tomcat server (section 5). On start-up, the file just copied will automatically unzip into the icecomswb directory.



## 5 STARTING UP TOMCAT SERVER

The Tomcat server is started with the command:

```
# $CATALINA_HOME/bin/startup.sh
```

Server operability can be checked in the Internet Explorer browser at:

<http://<the IP address of the computer>:8080/>, where Jakarta-Tomcat server's own test page will be displayed.

The Icecom SwitchBoard software can be found at:

<http://<the IP address of the Tomcat server>:8080/icecomswb/>

## 6 CLOSING DOWN TOMCAT SERVER

The Tomcat server can be closed with the command:

```
# $CATALINA_HOME/bin/shutdown.sh
```

## 7 UPDATING ICECOM SWITCHBOARD SOFTWARE

The Icecom SwitchBoard software can be updated only when the Tomcat server is closed (section 6).

The Icecom SwitchBoard software is updated by deleting the `icecomswb` directory from the `webapps` directory (`$CATALINA_HOME/webapps`) of the Tomcat server's installation directory. Alternatively the directory in question can be moved from the `webapps` directory into another directory. After this the new `icecomswb.war` file is copied into `webapps` directory, and the Tomcat is started (see section 5).

When the Tomcat has been started, the updated user interface can be found at:

<http://<the IP address of the Tomcat server >:8080/icecomswb/>

**Please note!**

When editing the Icecom SwitchBoard software, the Tomcat server must be closed. After editing the server is always restarted.

