# DB based FreeSwitch Configuration Documentation

**JUL 2022**

*A FreeSwitch with users and configuration in Postgres DB.*

# Contents

# Main Design

## Scenario

There are 4 users in database which have been written in PSQL by an application (for example by a WebUI APP).
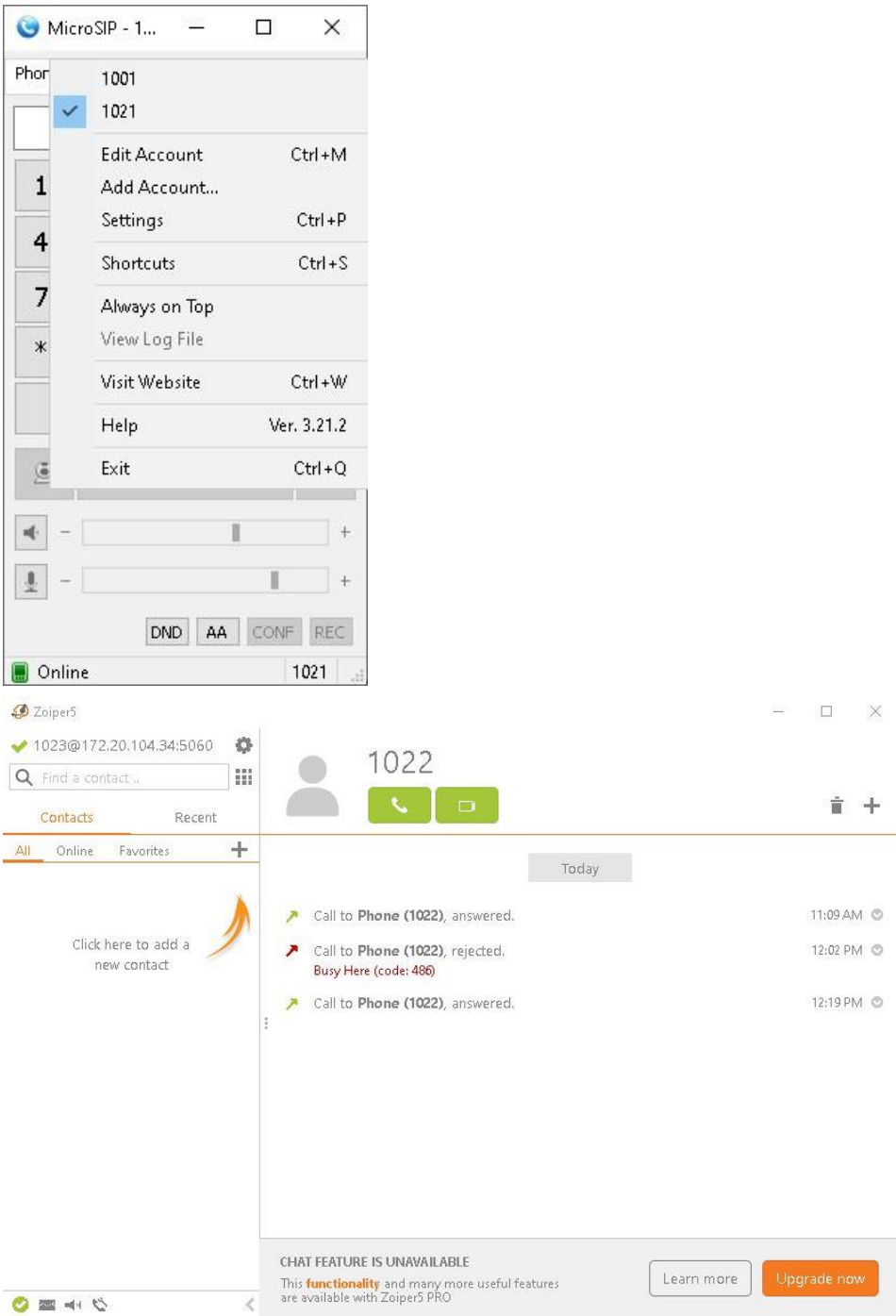
List of registered numbers: 1020, 1021, 1022, 1023

All are in same group and can call each other. I have set two fields in database for each number.

1- fwd_type: type of call forwarding(condition)
2- fwd_number: the number that  the call will forward to

based on our scenario if 1022 and 1023 are not registered, the calls to these numbers will forward to 1021.

I wrote a python app to check if 102x numbers are registered and ready to answer.

If we call 1022 or 1023 a python script will check registration status(we can also check other conditions) of them in database. If it is not registered then the destination called number will change to 1021.

## MicroSIP - 1...

Phor

| 1001 |
| ✓ 1021 |

Edit Account      Ctrl+M
Add Account...
Settings      Ctrl+P

Shortcuts      Ctrl+S

Always on Top
View Log File

Visit Website      Ctrl+W

Help      Ver. 3.21.2

Exit      Ctrl+Q

DND   AA   CONF   REC

Online      1021

---

## Zoiper5

✓ 1023@172.20.104.34:5060 ⚙

🔍 Find a contact ..

Contacts      Recent

All   Online   Favorites   +

Click here to add a
new contact

### 1022

Today

↗ Call to **Phone (1022)**, answered.      11:09 AM

↗ Call to **Phone (1022)**, rejected.      12:02 PM
    Busy Here (code: 486)

↗ Call to **Phone (1022)**, answered.      12:19 PM

CHAT FEATURE IS UNAVAILABLE
This **functionality** and many more useful features
are available with Zoiper5 PRO

Learn more    Upgrade now

## Database

In this scenario we use postgres to save configurations(dialplan, routes, directory) and call information(channels, calls, cdr,..). We have two databases in PSQL

1- 'fscore' to save FreeSwitch configuration and calls status
2- 'fsuser' include of users and numbers

I wrote a LUA script to connect and check user information for registration and authentication.

## Backup

We have a scheduler to take backup of Database everyday at 23:59 in crontab.
It will create a backup in zip format.

```bash
#!/bin/bash
db_name=fsdir
DIR=`date +%d-%m-%y`
DEST=/backups/$DIR
mkdir $DEST
zipfile=$DEST/$db_name-$(date +%d-%m-%Y_%H-%M-%S).zip
echo $zipfile
sudo -u postgres /usr/bin/pg_dump -Fc  --port=5432 fsdir > $zipfile
echo Backup Stored at $(date) >> $DEST/psqlbk_log.txt
```

## Logs

PSQL:
Postgresql logs are in daily rotation and will save for one week. After a week logs will overwrite with new logs. (it has been happened by configuration of postgresql.conf)

```
- "log_directory = 'log' "

- "log_filename = 'postgresql-%a.log'"

- "log_file_mode = 0600"

- "log_truncate_on_rotation = on"

- "log_rotation_age = 1d"
```

Freeswitch:
There are two options to set retention for freeswitch logs.
1- Configuration of logfile.conf.xml
2- Shell script in cronjob
I have used second option and wrote a script and put it in cronjob.

```bash
#!/bin/bash

LOGFILE=fs-log

rm -rf /backupfs/$LOGFILE-$(date +%a).log

cp /usr/local/freeswitch/log/freeswitch.log /backupfs/$LOGFILE-$(date +%a).log

svstemctl kill -s HUP freeswitch.service
```

## Ansible

Installation and configuration of PSQL, create DB backup, setting logs and creating VM machines  completely done by ansible playbook.

## Contact Information

**Mostafa Elyasi**
DevOps Engineer
**Tel** +989378152433
Mostafa83@gmail.com
https://github.com/mostafaelyasi/db-base-freeswitch