

# Odoo & Asterisk

The perfect PBX & Call Center

Maxim Litnitskiy

# About myself

- More than 10 years of Asterisk based development
- Co-founder of ATS Design, Digium's official distributor in Russia.
- Asterisk development, integration and support services (global customers).

# Barriers: where Asterisk met Odoo :-)

Asterisk PBX with:

- 250 SIP and 300 GSM intercoms connected to the Queue.
- 28,000 residents calling periodically to place guest entry orders.

The 1-st month of production:

- > 180,000 cars passed.
- > 15,000 guest orders.
- > 135,000 calls answered by call center agents.



GSM Open

Open CP HTTP

Open CP SIP

Call SIP

# ВП-2

Нет доступа к Стандарту, пароль неизвестен

Create Guest

23  
Guests

514  
Phones

1725  
Openings

1573  
Entries

UID 50924

Number 2

Facility [Объект №104 - Новоторжская & 25](#)

Barrier type Барьер

Address

Access phones [7491211329](#)

Call panel sip peer [10024](#)

Comment

СТРОГО ПРОПУСКАТЬ ТОЛЬКО  
СПЕЦТРАНСПОРТ...ОТКРЫВАТЬ  
КНОПКОЙ\*400055\*

Camera

Video

Open Log

Control

Phones

Input mode

Other



# Odoo & Postgres

- **UI** for:
  - Telephony **admin** (extensions, dialplan, queues, etc.).
  - Telephony **user** (call history, voicemail, recordings, call forward, etc).
- **Storage** for:
  - PBX related logic (peers, dial plan, user'r telephony settings)
  - Recorded calls
  - Voicemail
  - Call details records (CDRs) and Queue log.

# Asterisk

- Can keep all .conf files mapped to database.
- Can use database for realtime data:
  - SIP RealTime interface (SIP peers inside Odoo)
  - Realtime dialplan (Asterisk contexts inside Odoo)
  - CDR (Call Detail Records)
  - Queues and agents.

# Building parts

- **Odoo server** - UI & PostgreSQL storage of all Asterisk .conf files.
- **Asterisk Stasis application** - call control and execution using Asterisk REST interface (ARI) & OdooRPC.
- **Asterisk Middleware PBX Broker** - call origination, current calls, reload modules, etc - high level abstraction from Asterisk internals to be called from Odoo python or JS code.

# PBX features 0.1

- SIP extensions configuration
- Providers & gateways configuration
- Dialplan (call logic) configuration
- Call Detail Records (CDRs) with recording play / download.
- Current calls



# Call Center features 0.1

- Agents configuration (static and dynamic Q join)
- Queues configurations
- Queue Log - statistics on call center

# Dialplan context

context

## public-in

Extensions

1-7 of 7

Exten	Priority	App	Appdata
_X.	1	Verbose	INCOMING CALL FROM \${CALLERID(number)} TO \${EXTEN}
_X.	2	Goto	call-panel-in-old,\${EXTEN},1
_X.	3	Stasis	barrier2,call_panel_or_resident
_X.	4	Answer	
_X.	5	Wait	0.5
_X.	6	Verbose	ERROR IN STASIS APP call_panel_in GOING TO Q ANYWAY
_X.	7	Queue	dispatcher,tr,,,90

# Call Detail & Recording

**Started** 10/05/2016 15:49:58  
**Answered** 10/05/2016 15:49:59  
**Ended** 10/05/2016 15:50:19  
**Disposition** NO ANSWER  
**Src** 2041  
**Dst** callpanel  
**Duration** 20  
**Billsec** 19  
**Account code**  
**Uniqueid** 1475675398.288297  
**Userfield**

**Clid** "ВП-1 Фрунзенская 3-я д 4"  
<2041>  
**Dcontext** call-panel-or-resident-in  
**Channel** SIP/2041-00025d02  
**Dst channel** SIP/205-00025d04  
**Peer account**  
**Linked id** 1475675398.288297  
**Last app** Queue  
**Last data** dispatcher,tr,,,90  
**AMA flags** 3

## Recording

▶ 0:00 / 0:12   

[Download](#)

## QoS

**Local Lost Packets** | 0

**RX Count** | 0

# SIP peer (extension)

Name

**3076**

Barrier

31708

Call Panel

Beward (SIP+HTTP)

Host

dynamic

Caller ID

3076

Secret

Context

call-panel-in

Type

Friend

Accountcode

DTMF mode

Inband

Allow

alaw;ulaw,gsm

Disallow

all

RTP timeout

Can reinvite

No

RTP timeout

RTP hold timeout

Language

Nat

force\_rport,comedia

Qualify

2000

Permit

Deny

Default IP

Default user

3076

From user

From domain

Insecure

## Status

User agent

Beward SIP

IP Address

195.9.107.110

Port

31049

Full contact

sip:3076@195.9.107.110:31049\*3076

Last Reg

через минуту

# Queue

## support

### Calls

1-2 of 2

Caller number	State	
3046	Waiting	✘
9035467788	Waiting	✘

### Operators

1-3 of 3

Name	Exten	State
Max	101	ready
Mary	102	disconnected
Olga	103	oncall

# Future plan

- Asterisk CLI inside Odoo via Javascript console.
- SIPJS WEB phone inside Odoo
- Odoo 10 UI features
- Reports, more phone features (conference management, dialer, IVR builder, etc.)

# Questions?

- [http://github.com/litnimax/odoo\\_asterisk](http://github.com/litnimax/odoo_asterisk)
- [litnimaxster@gmail.com](mailto:litnimaxster@gmail.com)