Contact center on Steroids

VOICENTER

\> Whoami

Big open source fan	Voicenter	Clusterz

Modern contact center needs

Integration	Multi Chanel	Mobility

Voicenter federated cloud

Opensips	Other main projects we use	Topology

Big Data Usages

Customers Dashboards	Centralize logging	Network monitoring	MOS driven LCR

Endpoints

Sip Challenges	Webrtc	PBX – Voicenter connect

> whoami

Founder and Chief Technology Officer of Voicenter
a global leading provider of cloud based contact center solutions
And an Internet Service Provider

Co-founder of Clusterz
A unique comprehensive tool to monitor networks and telco's infrastructure using big data tools never seen before.

More than 15 years of business experience in establishing and managing large scale networks and information technology systems, and is involved with several open source projects.

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Cloud contact center provider offering advanced telecommunication solutions for businesses and contact centers world wide

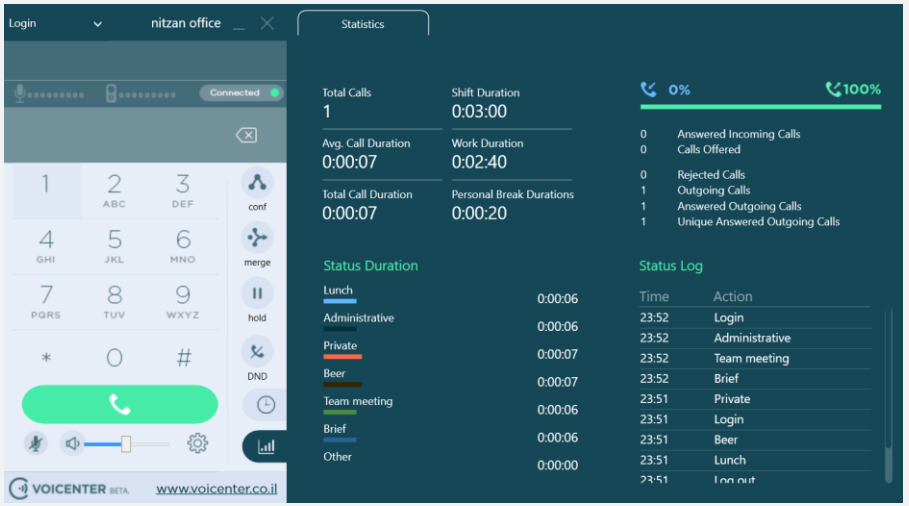
It is a distributed cloud platform based on bare metal designed from the bottom up to host real-time communications services and other network critical distributed applications

Modern contact center needs

- Unified Agent Workstation
- Monitoring and Reporting
- Intelligent, Multichannel Routing
- CRM Integration
- Self-Service Applications

Unified Agent Workstation

- Soft Phone
- Desk Phone
- Mobile (OTT / LTE / GSM Proxy)
- IOT Solutions
- WebRTC



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Monitoring and Reporting

- Marketing BI
- Gamification methods
- Work Force Optimization
- “Away from the office” – full control

Intelligent, Multi Channel Routing

Intelligent, Multi Channel Routing

Route the caller based on:

- caller profile in the business applications
- The last agent he talked with
- The last branch he was calling
- Hour of the day
- Any other cloud information you need

Integration with CRM

Many ready-to deploy APIs:

- Click2call
- Pop UP
- Calls History
- External IVR
- Auto dialer
- LDAP (login/out)
- Real time events reporting

salesforce

ZOHO

Microsoft Dynamics

leverate

Blat Lapidot
Business Applications

SPOTOPTION
Providing Platforms that Profit

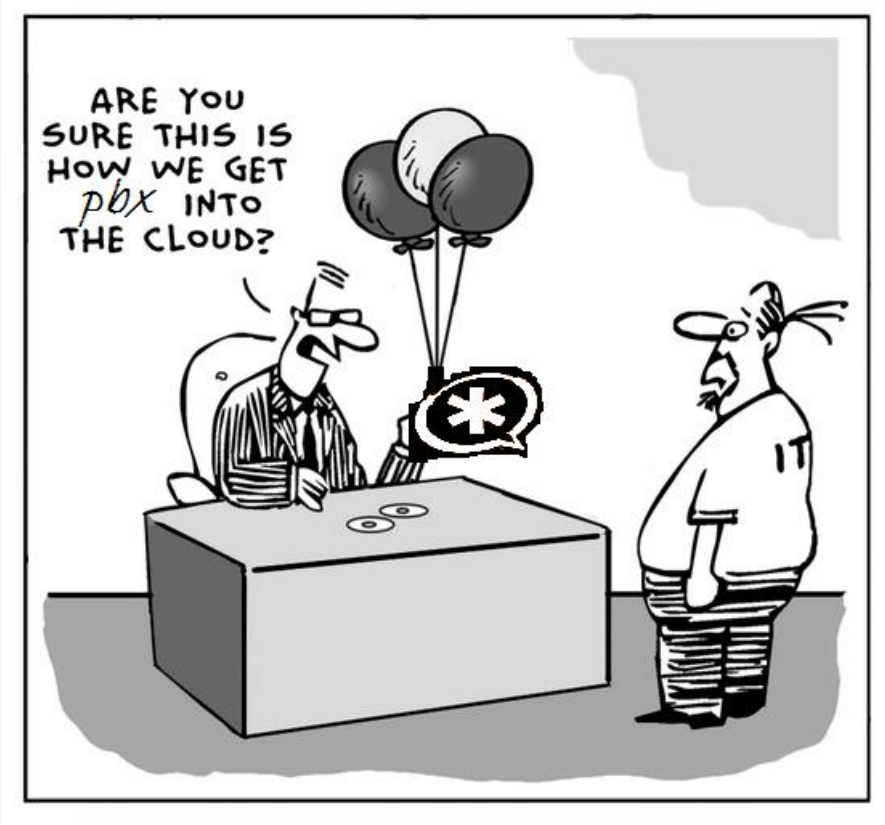
Powerlink

Self-Service Applications

- Build your own Voice based Chatbot for customer service
- Agent interface with Personal Data and configuration
- Manager Level Portal not only IT team

The Cloud Contact Center need's

- Connectivity
- Scalability
- Security
- Stability
- Flexibility



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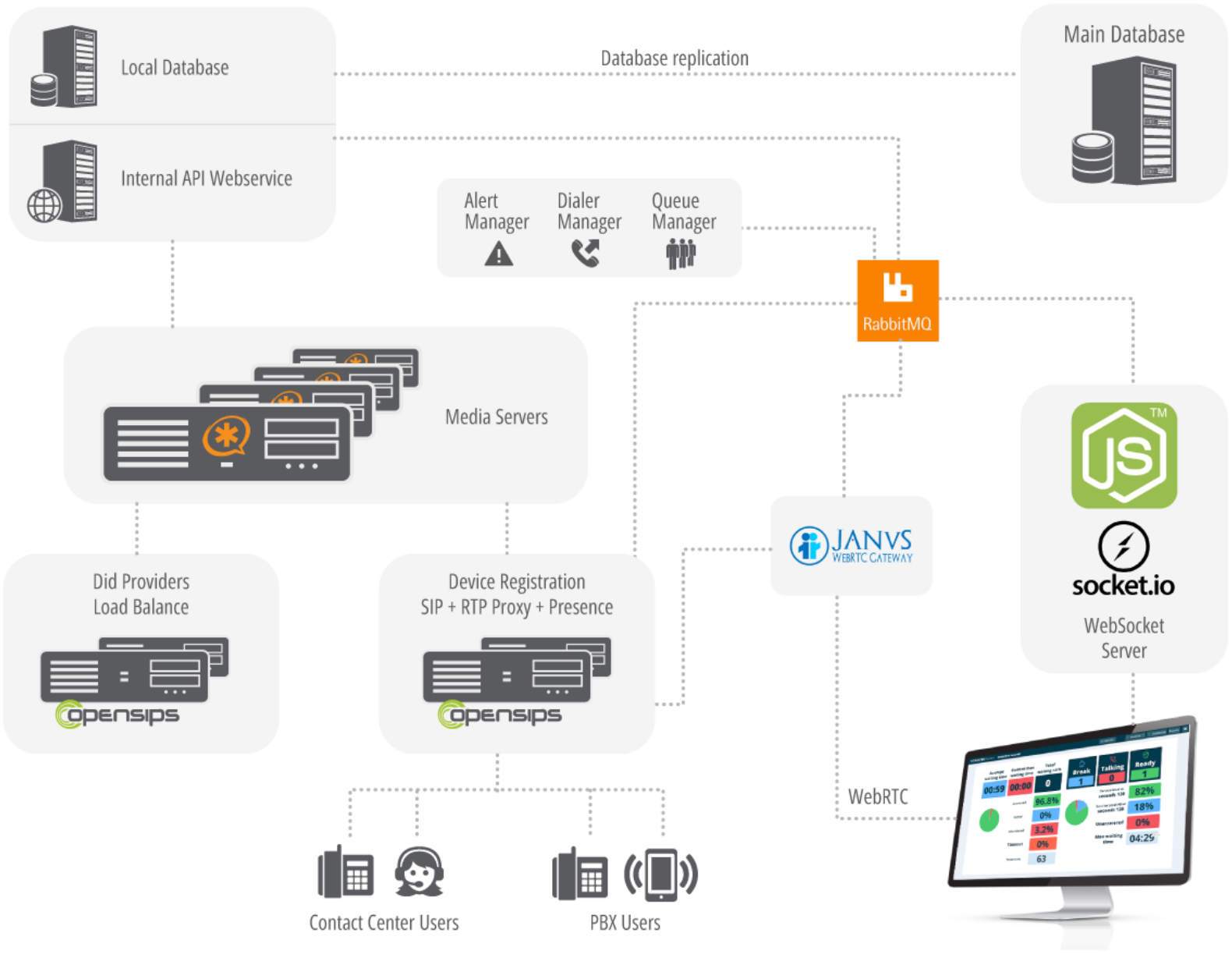
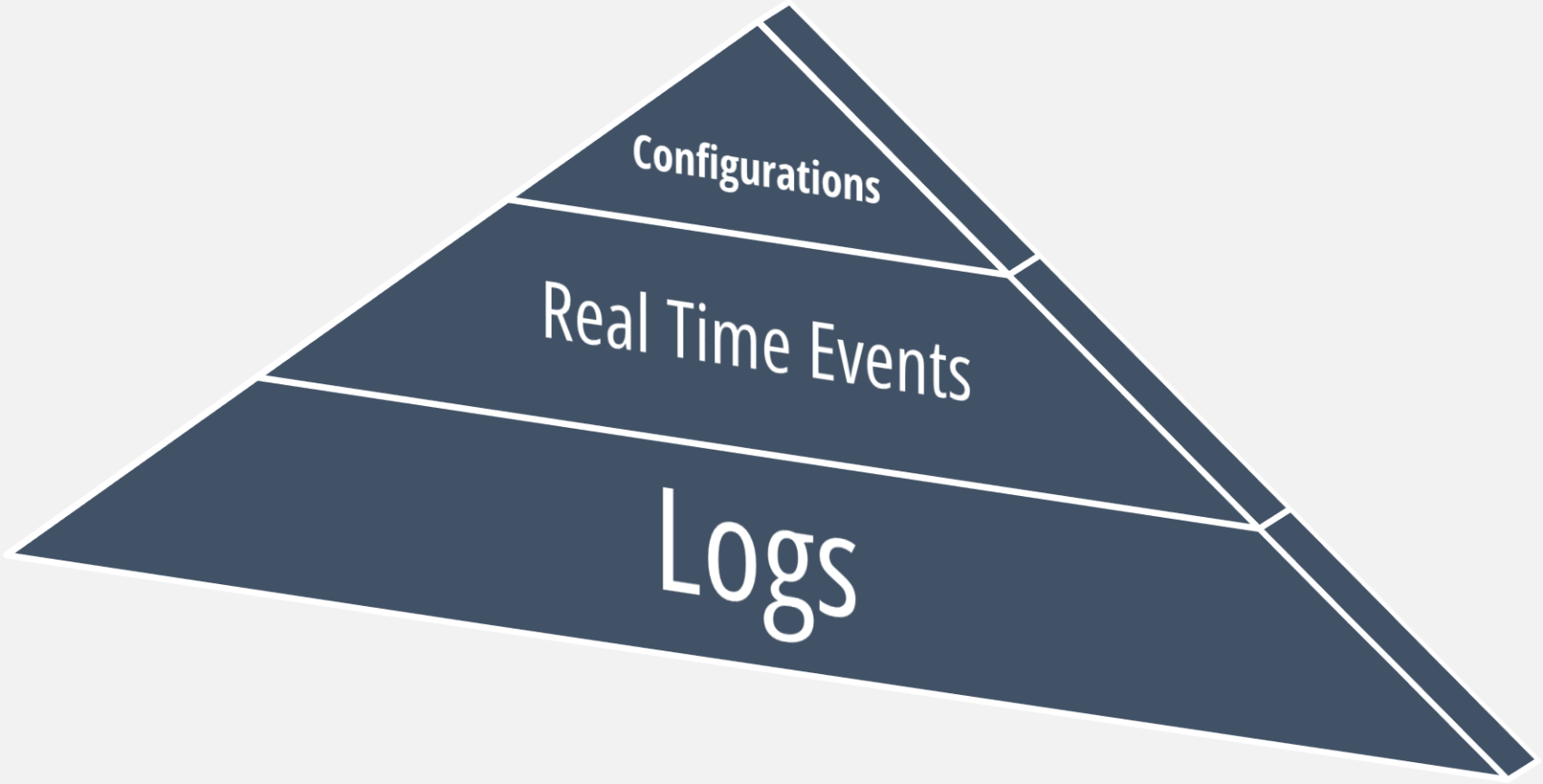
Federated Cloud Topology

- Smart Application based switching logic core
- Discrete functional units
- User Centric - not Hardware Centric
- Distribution via provisioning, not via sharding
- No single point of failure
- Network Management application automation

Voicenter General Topology



Data Layer Challenges



Provisioning with user orientation

- application based network management
- SIP proxy user oriented data provisioning
- Multi tenants media getaways with smart resources management
- Application micro services paradigm
- Quality based call routing for origination
- Endpoint holistic management solution

Application based Network management

- Address list provision
- Call quality based WAN failover
- Central logging
- Black list sharing
- Courtney connectivity testing

SIP proxy user oriented data provisioning

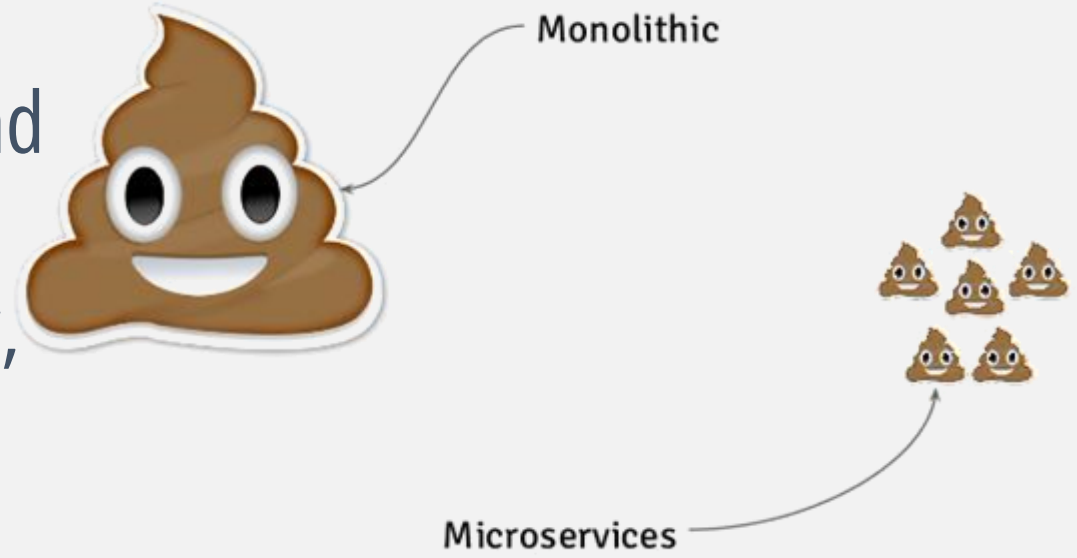
- Dynamic provision by organizational unit behavior.
- Add application header to your media server - distribute data not only call's
- Self PUBLISH for all dialog
- RabbitMQ massaging broker call state synching
- Massage header event based routing for all applications around the cloud.

Multi tenants Media getaway with smart resources management

- Application Resources syncing
- No one point of failure, supporting Active-Active approach
- Get more out of your hardware without needing to upgrade

Application microservices paradigm

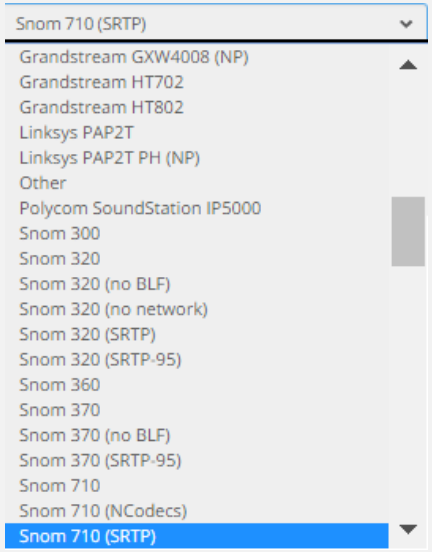
The idea behind microservices is that some types of applications become easier to build and maintain when they are broken down into smaller, composable pieces which work together.

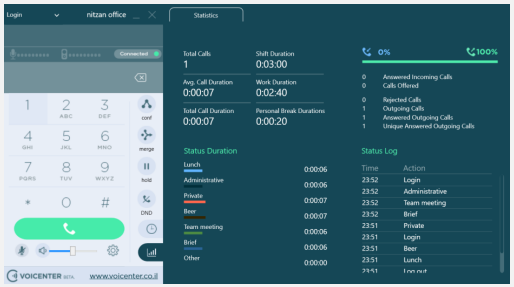


Quality based Call routing for origination

Endpoint holistic Management solution

- Securely changes default passwords
- Sets up the best Codecs to be used
- Timers and keep-alive
- Auth info
- Phone books
- BLF
- Logo , ringtone and more …





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Real Time Data consumer

- Dashboards
  - Agents Status
  - Queue and Caller
  - Dialer and campaign
- Presence awareness applications
  - Multi channels Distributed Queue
  - Dialer and callback application
  - Soft Phone BLF funcanlty on Steroids

Real Time Data Needs

- Real-time integration
  - Pop Up screen
  - Costume real time integration
- Real-time Resource Management
  - Dispatcher dynamic management based of calls and overall system load
  - Real-time Fraud detection
- Real-time Notification System
- And More .....

What is RabbitMQ ?

- **RabbitMQ** is open source message broker software .
- implements the Advanced Message Queuing Protocol (AMQP).
- Client libraries to interface with the broker are available for all major programming languages.

RabbitMQ evolution with OpenSIPS

- OpenSIPS can be easily integrated with RabbitMQ to publish messages to the message broker.
- These messages can be read on the other side by different consumer applications.
- You can specified the specifics consumer by using headers exchange logic in the broker side.

Opensips RabbitMQ flavors:

- Starting with version 1.7 OpenSIPS can automatically trigger events using RabbitMQ
- Starting with OpenSIPS 2.3, RabbitMQ messages can be published directly from OpenSIPS script in a more flexible and complex way

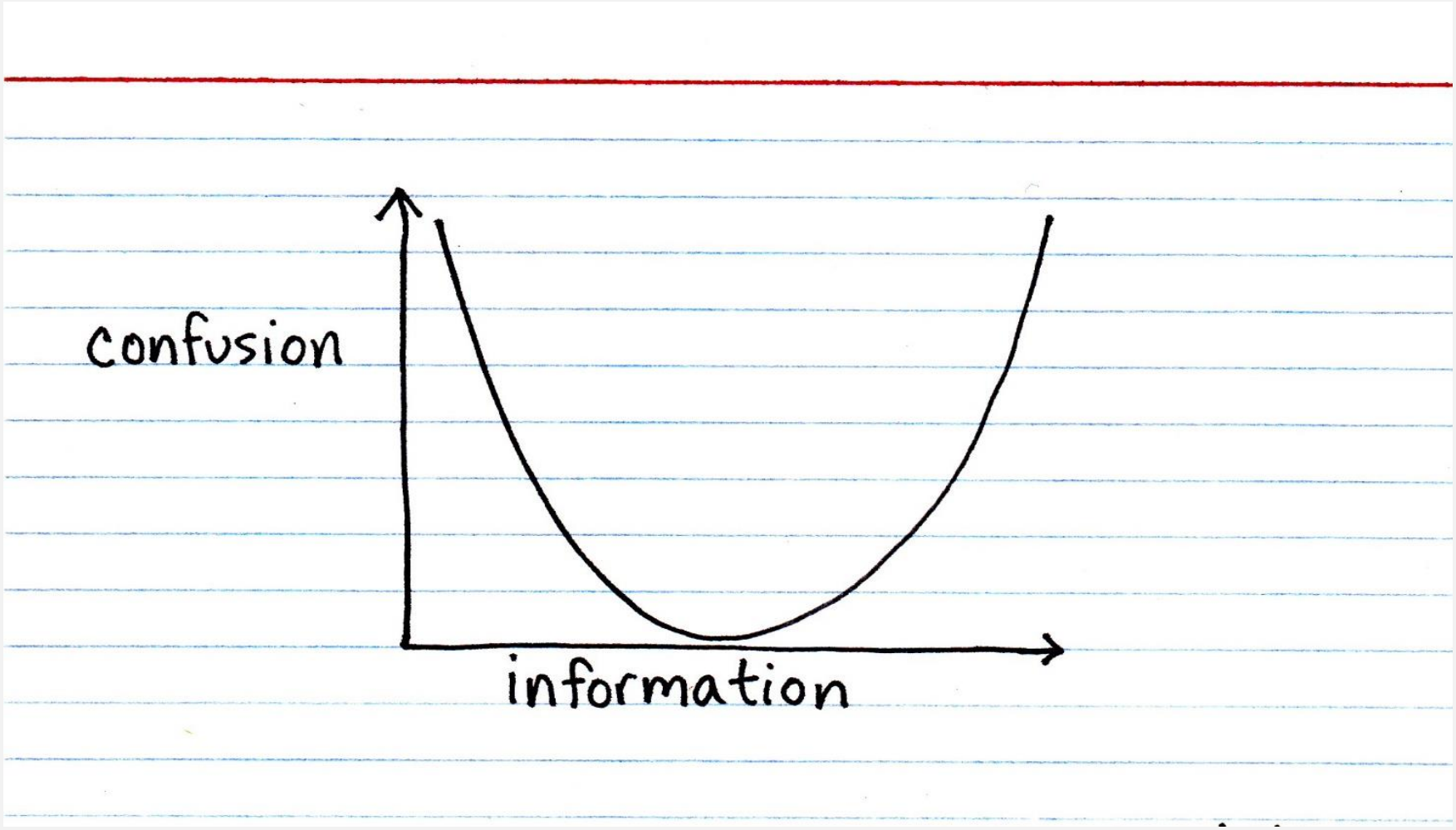
RabbitMQ module usage

- To use the new rabbitmq module all you have to do is to specify a RabbitMQ server and publish the message from your script.

```
...
# connection to the RabbitMQ server
modparam("rabbitmq", "server_id","[local]
    uri = amqp://user:password@127.0.0.1; heartbeat = 5")
...
route {
    ...
    if (is_method("INVITE") && !has_totag())
        rabbitmq_publish("local", "body", "$rb", "$cT");
    ...
}
...
```

message's body of every call to a local RabbitMQ server using the "body" routing-key

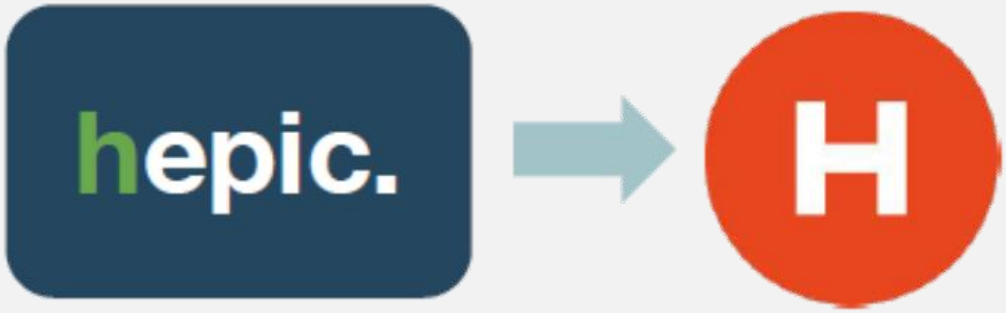
The data flood effect



Call Data ~~Record~~ Object

- Legacy CDR
- Origination custom data
- Call behavior information
- RTCP and SIP
- Application Log
- Proxy log
- Media Getaway Logs
- Billing logs
- And more

HEPIC , Homer on steroids



VoIP Network proactive monitoring

1. Sip messages behavior
2. ASR behavior
3. Prefix and cost behavior
4. User Agent and New ips
5. Quality of calls
    1. RTCP
    2. RTPAgent
    3. Voicenter Phone Tester Platform

Shipping Big Data Log

- **paStash** is a tool to manage spaghetti I/O with input, processors and output.
- modules for all seasons and protocols.

https://**github.com/sipcapture/paStash**

PaStash Config

```
input {
  udp {
    host => 0.0.0.0
    port => 514
    type => syslog
  }
}

filter {
  regex {
    regex => /^(\S)/+/
    fields => [toto]
  }
}


output {
  elasticsearch {
    host => localhost
    port => 9200
  }
}
```

Input plugins

- File
- Syslog
- ZeroMQ
- Redis
- HTTP
- Websocket
- TCP / TLS
- Google app engine
- AMQP
- SQS
- NetFlow
- Freeswitch ESL
- Asterisk AMI

Filter plugins

- Regex
- Grok
- Mutate Replace
- Grep
- Reverse DNS
- Compute field
- Compute hash
- Compute date field
- Split
- Rename
- Multiline
- Json fields
- Geoip
- Eval
- Bunyan
- HTTP Status Classifier

Outputs

- ZeroMQ
- ElasticSearch
- Statsd
- Gelf
- File
- HTTP Post
- Websocket
- Redis
- Logio
- TCP / TLS
- AMQP
- SQS
- HEP

Voicenter Connect topology

- Cloud Solution
- Hybrid Solution -Manage Your own hardware
- Easy to connect

How to connect?

Get it done in 3 easy steps

1. Sign up for a Voicenter Connect server
2. Setup a PBX (SIP Trunk) extension in our Cpanel
3. Configure as many users as you have in the call center, with their internal incoming / outgoing code

How to connect?

1. Sign up for a **Voicenter Connect** Server

Meet us at our booth, or contact us later at: sales@voicenter.com

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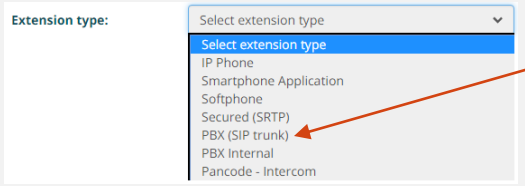
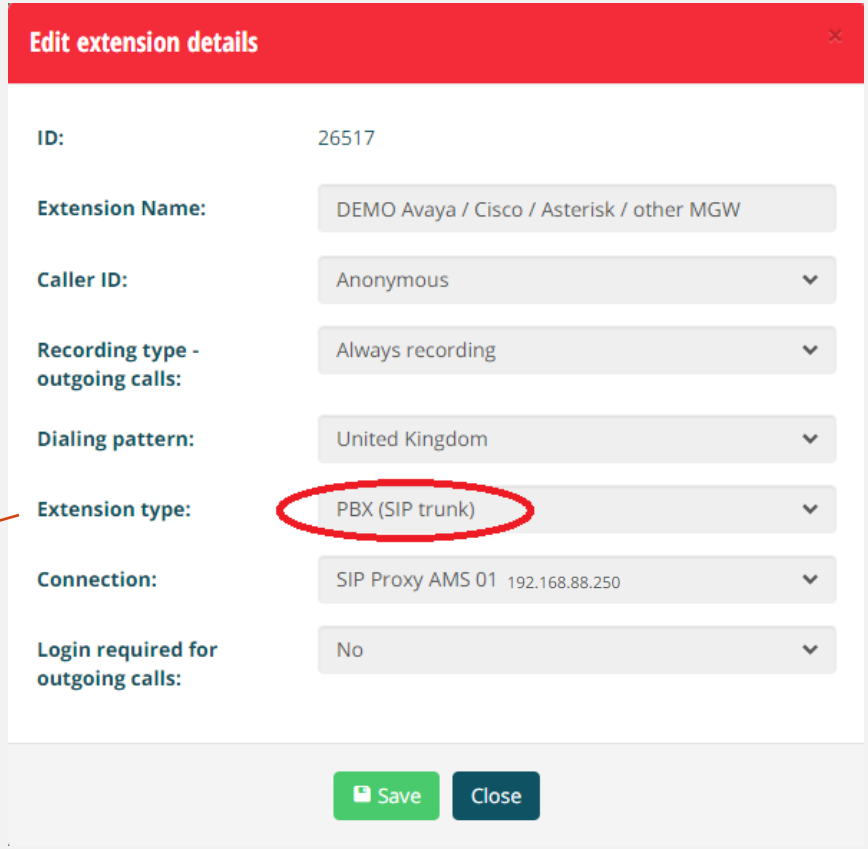
How to connect?

2. Setup a PBX extension in Voicenter's Cpanel





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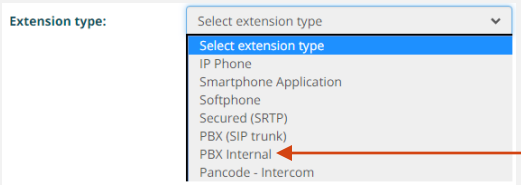
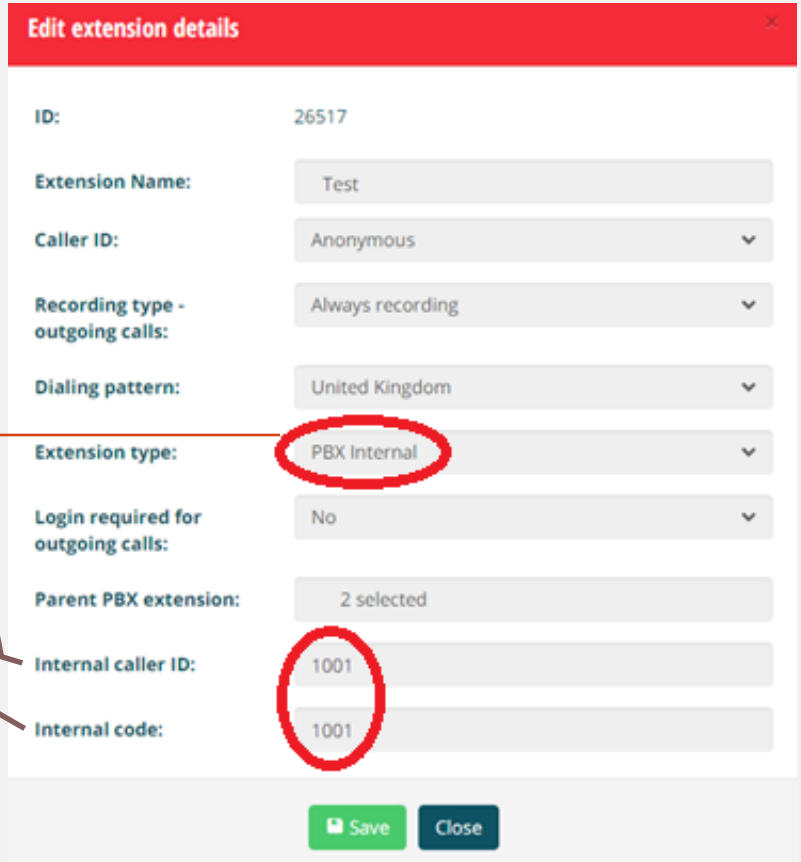
How to connect?

3. Configure as many users as you have in the call center, with their internal incoming / outgoing code





Incoming calls to the extension – set up the digits you need to dial in order to reach this extension dialing into the PBX

Outgoing calls from the extension – set up the digits this extension will present as her caller id when dialing out from the PBX

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Thank you for listening!