ZAARK

EUC June 2014

The third worst poetry in the Universe

"Oh freddled gruntbuggly,
Thy micturations are to me
As plurdled gabbleblotchits on a lurgid bee.
Groop, I implore thee, my foonting turlingdromes,
And hooptiously drangle me with crinkly bindlewurdles,
Or I will rend thee in the gobberwarts
With my blurglecruncheon, see if I don't!"

Prostetnic Vogon Jeltz

Zaark, An Erlang Themed Voyage into VOIP and Messaging

The Company

- Company based in Stockholm (Uppsala office)
- ISV (Independent Software Vendor)
- Founded 2009
- Privately held
- Extensive domain experience
- Modular, Scalable, Reliable solution
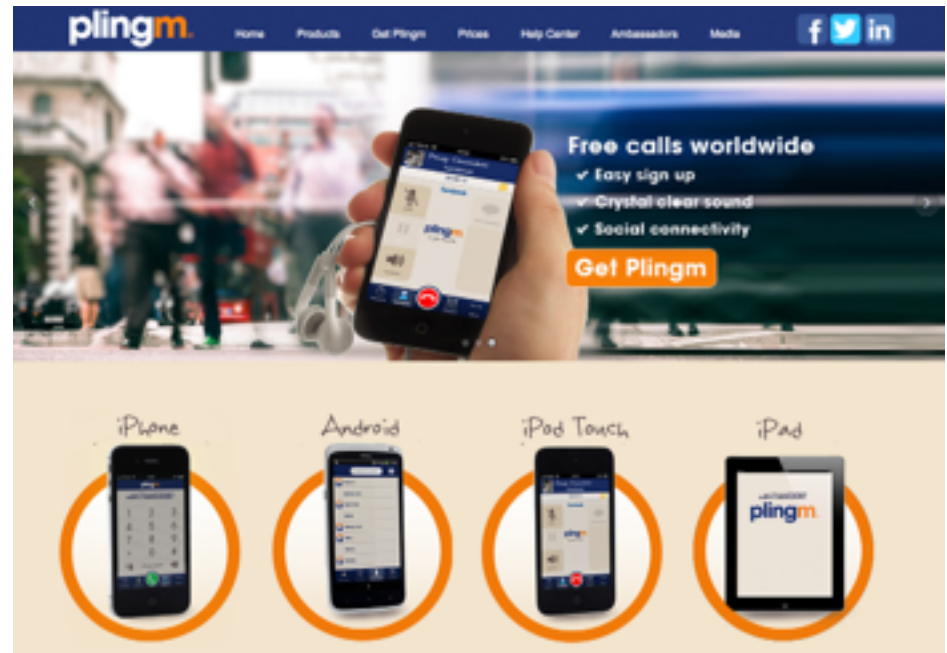- Open Source + Proprietary IP

Highlights

- Carrier Grade, platform agnostic
- Global, Scalable Infrastructure
- PSTN & VoIP calls
- Rich Messaging
- Encrypted communication
- SDK or White Label clients
- In-app purchase or web payment solution
- Multiple interconnect agreements

Call rates 10-15% under Skype

Where it all started: Plingm

- Plingm released as B2C application to end users
- Plingm
  - 2 million customers Globally
  - Strong user groups in the middle east
  - High global user-rating!

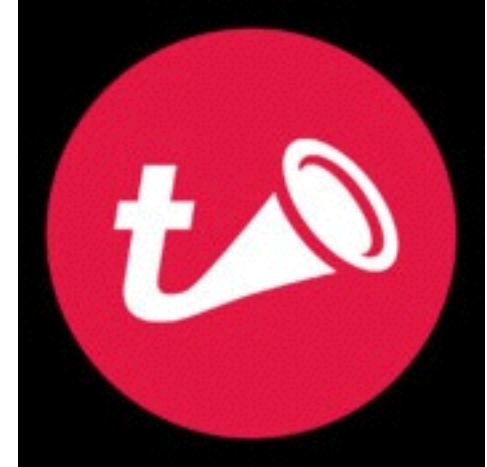# Scandinavian Airline Systems (SAS)

- Objective
  - Customer engagement
  - Deploying VoIP and Messaging app using Eurobonus Points as currency
- Solution
  - Zaark delivers SAS branded client based on Zaarks white label client
  - Integration with Eurobonus system
  - Branded web payment service
- Benefit
  - SAS can launch a VoIP app in very short time

SAS

EUROBONUS CONNECT

Ttrumpet

- Objective
  - Add VoiP and Messaging to existing app
- Solution
  - Integrate Zaark SDK
- Benefit
  - Operator was able to add VoIP support without prior knowledge of the technology in a few weeks.

NOVEMBER 11, 2013

ZAARK RELEASES SDK FOR VOICE & MESSAGING

Zaark, the mobile VoIP solutions provider, launches a SDK allowing call- and messaging functionality to be added to existing apps. The Zaark SDK solution offers revenues from day one enabling business and organizations to tap into the lucrative communications market.

Many companies are looking for ways to leverage existing operation and/or customer base and introducing communication services is a compelling alterative. The Zaark SDK solution allows quick, easy and seamless integration and uses the latest codec and encryption technology to ensure secure communication with optimum voice quality. The SDK solution comes complete with a CRM system and access to global infrastructure.

Zaark is unique in offering a SDK solution with support for both VoIP calls and low cost PSTN calls to any landline or mobile operator in the world. This creates an unrivalled opportunity to generate revenues and end users can call anyone in the world – not only other users of the service.

"The Zaark SDK is a powerful tool that brings added value to applications thereby increasing stickiness and customer loyalty whilst creating a new significant revenue channel" says Johan Öhman CEO at Zaark.

For additional information please contact CEO Johan Öhman, +46 727 11 7373

Technology

SDK features

- Uniform iOS and Android code base
- Support for multiple devices
- Address book integration
- VoIP with SIP online
- PSTN out
- Rich IM
- Seamless APNS/GCM support
- Cross ~~vendor~~ app connectivity
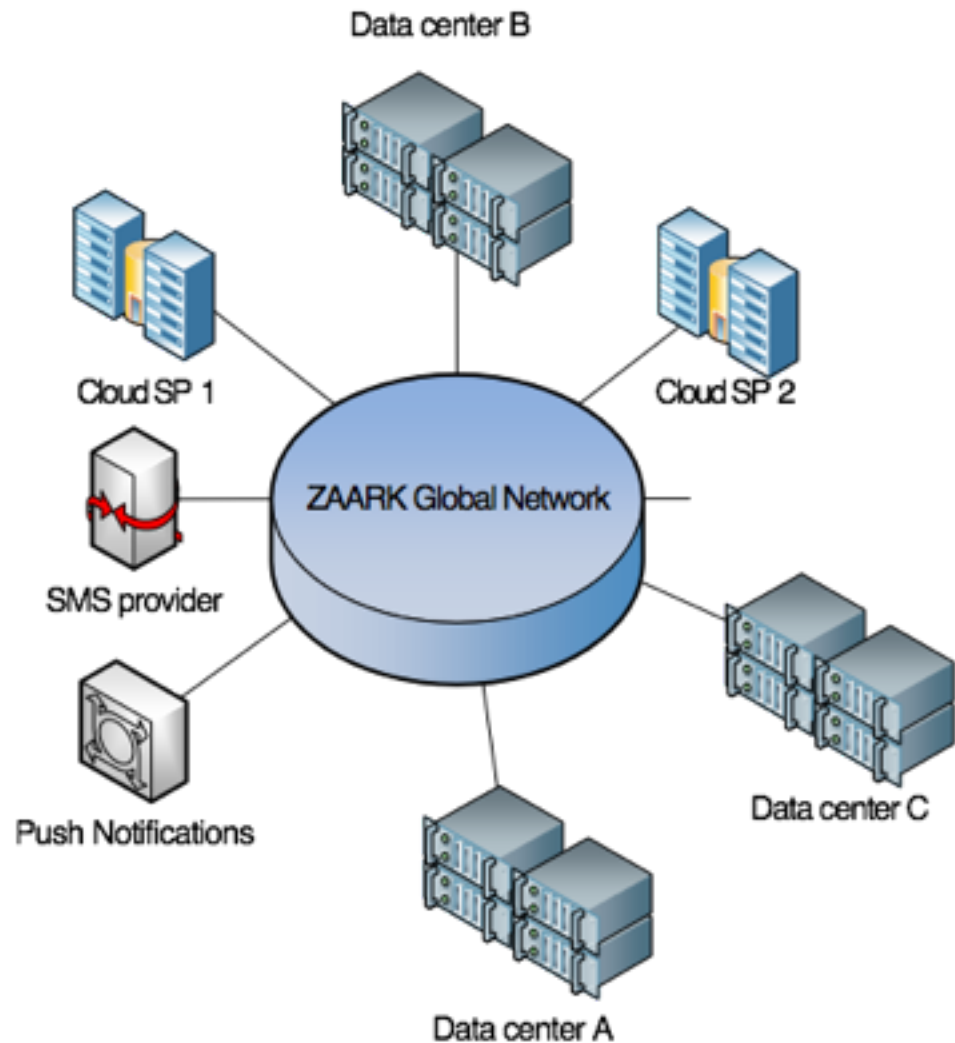
VoIP features

- Support for multiple devices
- SIP online
- External push support

IM features

- Support for multiple devices
- P2P and MUC
- Delivery reports
- Time limited archiving
- Message lifetime and revoke mechanisms
- Attachments
  - Position
  - Files (audio, video, photos, vcard, IM)
  - Emoticons
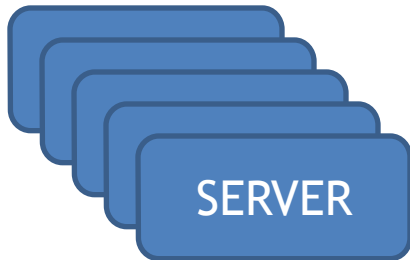- Contact management
- Presence

Global Network

- Data centers
  - Stockholm
  - Johannesburg
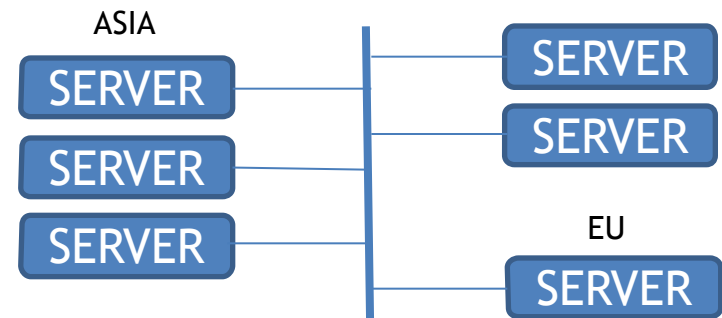 - More to come
- Cloud (AWS)

Scaling

- ## Horisontal Scaling
  - Virtualization where applicable
  - Add more resources when needed by adding more instances

- ## Geographical Scaling
  - Add resources dynamically in cloud and data centers
  - Add resources where the customer base grows
  - Dynamically control resources after patterns
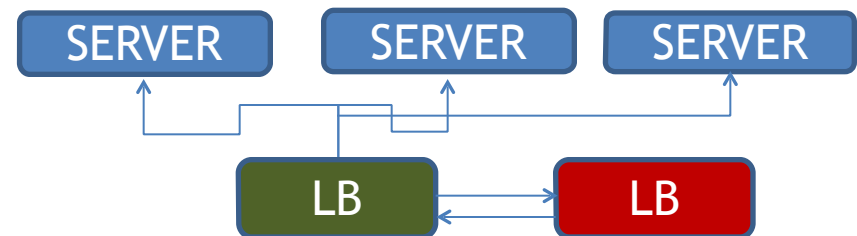
High Availability

- Build away *Single Points of Failures*

- Active/Passive Hot-Standby

- Load Balancing
  - XMPP clusters
  - Application servers

- Multi-AZ Deployment in the cloud and in data centers

The stack (open source, proprietary mix)

- **OpenSIPS (PHP)**
  - SIP signalling
  - CDR generation
  - Call control
- **Asterisk**
  - Voice validation
- **Proprietary JAVA/PHP**
  - CRM
  - Reporting

- **PHP**
  - APNS/GCM
  - Address book
  - SMS
  - Voice Validation
  - Social integration
- **MySQL**
  - hot standby
- **CouchBase**
  - speed layer

The stack (oh, yes some Erlang)

- Mongoose (Erlang solutions ejabberd fork)
- XEP-0184 Message Delivery Receipts
- Proprietary extensions
  - Call control (APNS/GCM)
  - Social network integration
    - Facebook
    - LinkedIn
    - …
  - Reduced client traffic
    - autojoin of MUC (conceptually always online)
    - only plain authentication over TLS
    - customized XEP-0313 Message Archive Management
    - Bits and bobs

The stack (new and improved)

- OpenSIPS (Lua)
  - SIP signalling
  - ~~CDR generation~~
  - ~~Call control~~
- Freeswitch (Lua, Erlang)
  - Call control
  - CDR generation
  - Voice validation
- ~~Asterisk~~
- ~~Proprietary JAVA/PHP~~
  Open Source
  - CRM
  - Reporting

- ~~PHP~~ Erlang
  - APNS/GCM
  - Address book
  - SMS
  - Voice Validation
  - ~~Social integration~~
  - *Attachments*
- MySQL
  - ~~hot standby~~
  - Percona XtraDB Clustering
- CouchBase
  - speed layer

The stack (Mongoose)

- XEP-0198 Stream Management
- XEP-0305 XMPP Quickstart
- Oh, don't get me started ...

Thank You!