



AstriDevCon 2015

What Call-centers Want

Perceptions and needs

Presented by:
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Founder, Loway
@lenz



QueueMetrics

What we do

Our History:

- Started working with Asterisk in 2003
- Developed QueueMetrics in 2005
- Developed WombatDialer in 2012
- Launched QueueMetrics Live in 2015

Installed base:

QueueMetrics currently deployed in thousands of call-centers worldwide

Average site: ~**50 agents**

Largest sites: ~**1000 agents live** (on Asterisk clusters)

WombatDialer deployed in ~**300 sites**

Average site: ~**80 channels**

Largest site: ~**4000 channels**



Client base:

- 30% USA / Canada
- 25% Europe
- 20% LATAM
- 10% Africa
- 10% Asia
- 5% Middle East

What do clients think about Asterisk?

- Extremely varied client skills
- Mature and „safe“ platform for buiding call centers
- Many systems still use very old versions of Asterisk
- Most systems use a GUI for configuring
- High level of satisfaction
- Adoption rates still growing
- No migration pressures to „brand name“ systems

Common themes we don't really see on our clients:

- Capacity is okay
- Stability is okay
- Features are about okay

High availability: nice to have but not critical

Truly distributed ACDs: not really needed

Audio recording capacity is good enough

Clustering still uncommon but for larger systems (>200 agents).
Most systems still run without HA solutions.

Common list of desiderata:

Inbound

- app_queue flexibility
- Music on hold
- Transfers
- WebRTC integration

Outbound

- ARI adoption
- Remote audio files



Inbound: queue flexibility

Often asked: more customizable queue strategies

- Skill based routing
- Preferred agents / agent affinity

We have been working on a solution together with **pascom GmbH**

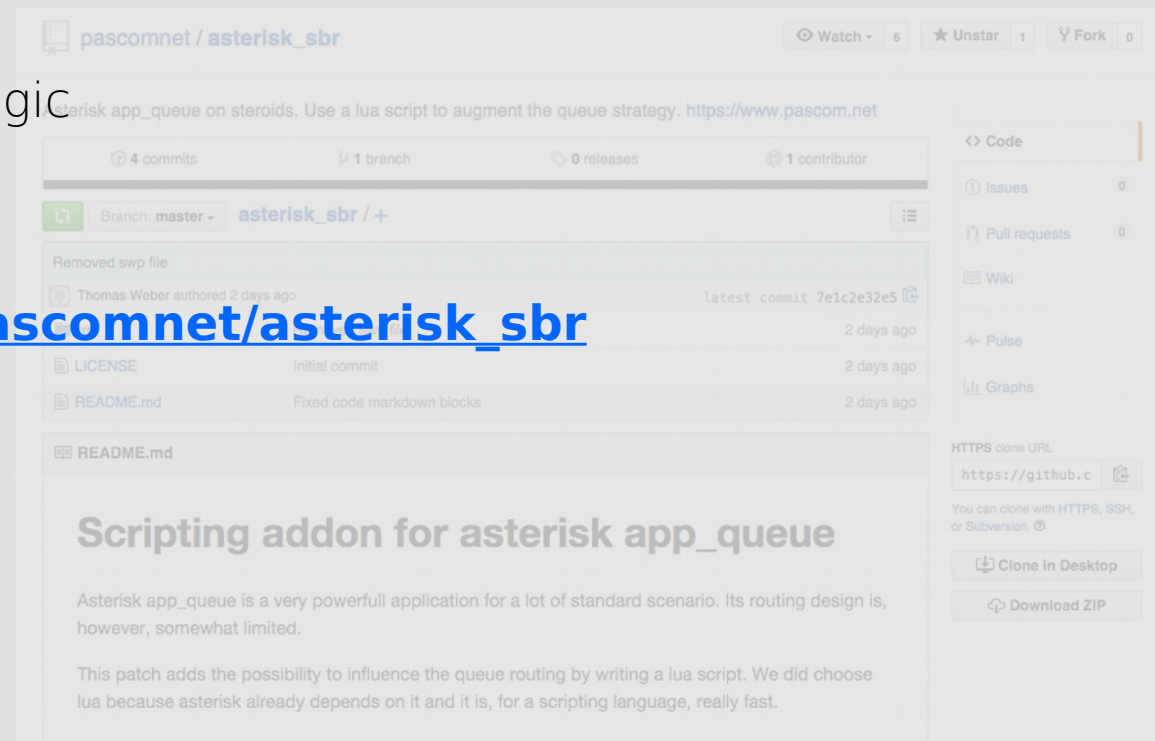
- Minimal patch to app_queue
- Embed a Lua script to customize logic
- app_queue life-cycle hooks
- Implements full skill-based routing

Available at https://github.com/pascomnet/asterisk_sbr

- Patch for Asterisk 11
- Sample Lua script available

Areas for improvement:

- Include in Asterisk! or
- Write standard hooks for similar result



Inbound: Music-on-Hold

Tracking MOH events on agent calls is central to call-center performance monitoring!

- High impact on caller satisfaction.
- Impacts perceived quality of Asterisk as a call-center engine.
- Every call-center would benefit.

Solutions

- Created a number of patches to Asterisk during the years (rejected)
- Custom solutions: e.g. FirstCallResolution presents their own
- We have an AMI based daemon
- Current state of the art: external daemon tracks and logs
- Non-standard
- Risk of losing events on reloads

Areas for improvement:

- Add functionality to `app_queue`

Inbound: Transfers

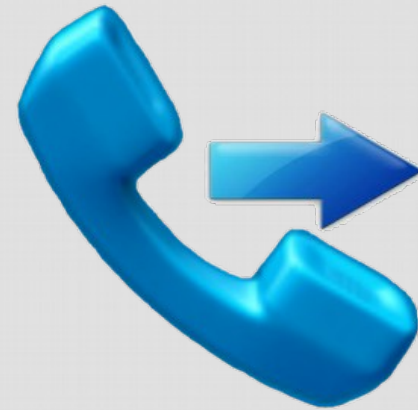
Attended transfers are often used but hard (or impossible) to make work correctly.

Impacts perceived quality of Asterisk as a call-center engine.

Behavior often inconsistent between Asterisk versions

Clients use a number of custom work-arounds (patches + procedures)

The „transfer“ button **must** work.



Areas for improvement:

- Track attended transfers to the queue_log, or
- Offer a standard way to do transfers for agents on a queue

Making WebRTC SIP softphones work with Asterisk is way too complex.

- Hard to understand
- Hard to debug
- Behavior often brittle due to browser inconsistencies / updates
- Still feels very immature
- Should be as hard as setting up a SIP extension – buy phone, plug it in, there you go.

Making WebRTC work without SIP softphones and third-party tools?

- Lots of people wanting it
- Should Asterisk do it?
- Should it be something else that is a „default“ for Asterisk? (think mpg123)

Areas for improvement:

- Make it work out of the box, or
- Produce a clear map of what works where
- Create default front end, and/or
- Create a „chan_webrtc“ that just needs a browser

Outbound: ARI adoption

For outbound, it would be very useful to have external tools to control specific dialplan sequences where data lives outside of Asterisk (think IVRs).

- ARI is a three year old baby
- Still not widely used, **perceived as „experimental“ or „unsafe“**
- Most questions on mailing lists are still **„can I do it with ARI?“**, not „how do I do it with ARI“?
- Call-centers are still deploying and developing plenty of AGIs / dialplan
- Missing killer app

Areas for improvement:

- Education (?)
- Killer app!

Outbound: ARI ecosystem

Hard to beat the dialplan!

- Lots of rich functions with complex configuration
- Covers most use cases
- ARI offers modern call control, but you have to reinvent the wheel

How can we:

- Write external, composable ARI scripts?
- What do we expect from a „function“?
- Because „a queue is a queue is a queue“

Areas for improvement:

- Define ARI interfaces for external apps
- Fall-back to default dialplan functions
- Compose apps built with different technologies

Leverage external ARI apps?

- In order to get more code reuse, you need to be able to build up bigger widgets from small pieces and then make a lot of useful small pieces.
- Since the components are generally stateful and produce events, you have to have a protocol for having them interact with each other and the rest of the app.

Outbound: remote audio

Deploying Asterisk still requires copying over plenty of configuration and audio files.

- Especially a problem for audio in outbound campaigns in „deploy as you go“ scenarios
- Would work well with ARI



Areas for improvement:

- Linking to remote audio files (HTTP)
- (Maybe) Remote audio streams
- Deploy a production box via ARI (configuration, audio, etc.)

Some trends we see that would be nice to start thinking about...

Video call-centers

- Remote service desks
- Remote surveillance
- *How much does video actually work with Asterisk?*
- *How much does WebRTC video work natively with Asterisk?*

Scalable solutions

- How can you deploy Asterisk instances on demand?
- Can you add more Asterisk cores on demand?



Daniel Jenkins Of course it does. I would have said the same thing a few years ago, and from what I recall I pretty much said "we have to make asterisk friendly to today's new developers" which in turn meant making asterisk friendly with how applications are developed today. Asterisk is becoming an awesome media engine; where you can dictate what it does outside of asterisk itself. The beauty of asterisk is that you can make it do almost anything you want. And that's beautiful. Asterisk has been adapting well to its new challenges in the ever evolving world of telephony/web

Mi piace · Rispondi · 2 · 2 ottobre alle ore 8:51

Dan Jenkins - Nimble Ape

Thank you for attending!

Loway
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QueueMetrics
call center solution

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Operations Managers can:

- See accurate reports of all call center activities.
- Run reports by single and by user-created queue groups.
- Measure agents activities, business targets and conversion rates.
- Fully configure security and privacy, queue-by-queue.

Team Leaders can:

- Create real time call and agent reporting.
- See agent status and realtime activities.
- Remotely listen to live calls as they are handled.
- Watch agent screens through a VNC client.

Agents can:

- See the calls they're handling and integrate with external CRM.
- Pass data gathered from IVR menus or CallerID.
- Set call status codes for all inbound and outbound traffic.
- Logon, logoff, go on pause and set pause reason codes.

IT Managers can:

- Support single-server or Asterisk clusters.
- Support database and flat-file storage.
- Tune Asterisk interaction to minimize the load on the Asterisk server.
- Avoid patching or changing an existing Asterisk installation.

QueueMetrics

www.queuemetrics.com

Loway

www.loway.ch

*A real programmer puts two glasses on his bedside table before going to sleep.
A full one, in case he gets thirsty, and an empty one, in case he doesn't.*

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