GNOME.ASIA™ Summit 2020

Creating a video conference system with Kurento.

And trying to avoid the nightmare of usage spikes

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Me

Me me me me me

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Why Kurento and not others

Jitsi, I’m looking at you.

04.

Poleaccess.online

A real life example

whoami<enter>

User: criptos aka Andres Tello

- log start: 1996
- home: /america/mexico/mexico_city
- Process tree:

```
--- Owner of Grupo Aullox.
  |--- Still developing core baking applications.
--- Co-Owner PoleAccess.online
  |--- Main developer.
```

RTMP vs HLS vs WebRTC

RTPM: Too proprietary, remember flash? they do...

HLS: Apple response to RTPM, also closed.

In a nutshell, both protocols provides a lag between 13-45 seconds or more, require "additional" software (like obs) to stream and are proprietary.

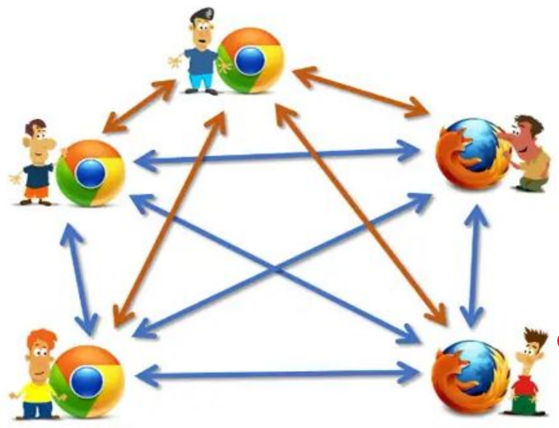
WebRTC: Designed for the web, more flexible, using new codes, and still evolving (last add, redundant audio channels).

SFU! WebRTC Rulez!

MESH vs **S**elective**F**orward**U**nit vs **M**ultipoint**C**onferencing**U**nit

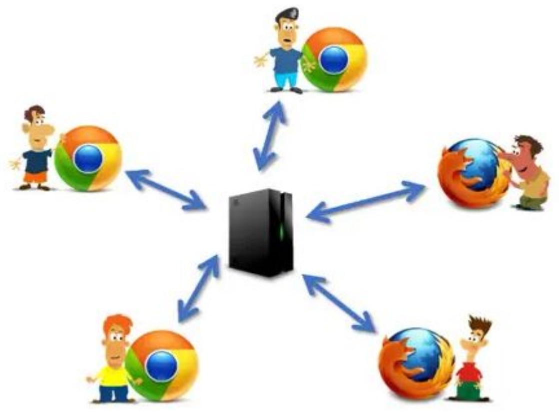
Mesh

Connections:	4 | 10
Uplink:	4 mbps
Downlink:	4 mbps
Total:	20 mbps



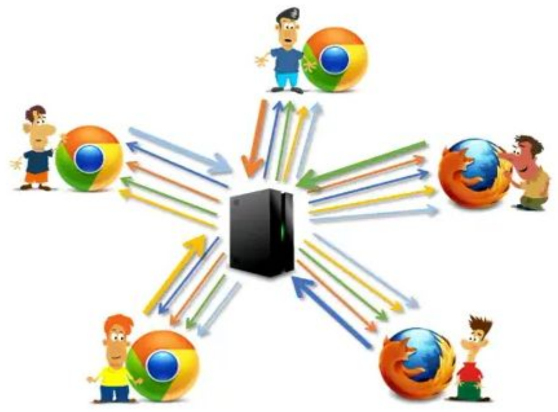
MCU

Connections:	1 | 5
Uplink:	1 mbps
Downlink:	1 mbps
Total:	10 mbps



SFU

Connections:	5 | 25
Uplink:	1 mbps
Downlink:	4 mbps
Total:	25 mbps



Why Kurento?

- Kurento is a Media Server for WebRTC with advanced capabilities for media transformation.
- Kurento provides the building blocks for a media system.
- Is Open Source: https://github.com/kurento
- MCU by design.
- Pluggable.
- Node.js, Vanilla JS, Java, and whatever you like.
- Fairly good documentation and active community
- Take a look: http://www.kurento.org/

Others media servers./solutions

This others were evaluated.

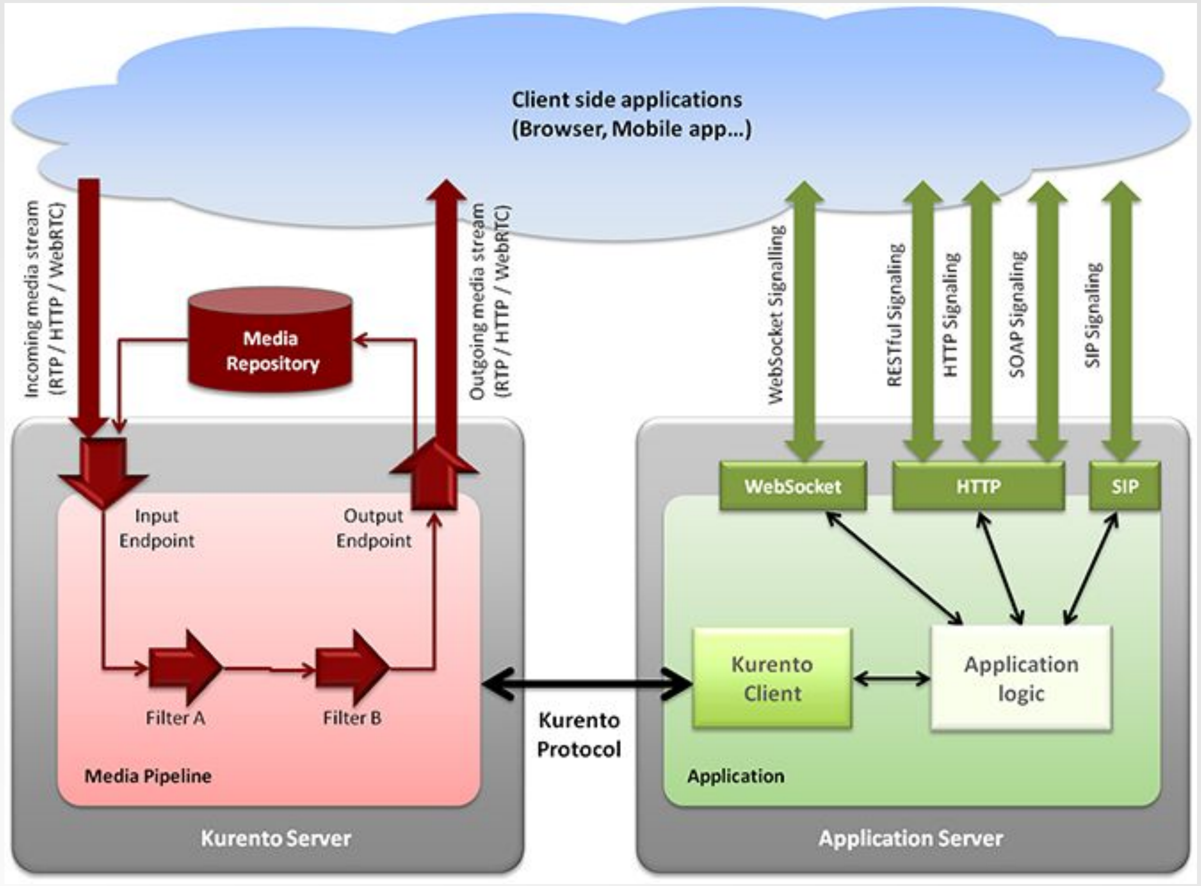
- ANT, not so open source, community edition = lag, more oriented to be a contained service, like conference room too...
- Jitsi, too oriented to be a “conference room” , “difficult to implement”, I simple didn’t liked for my use case.
- Nginx RTMP, goodie, oldie, but not very flexible and RTMP…
- Other implementation, please tell me…

Kurento in a nutshell.

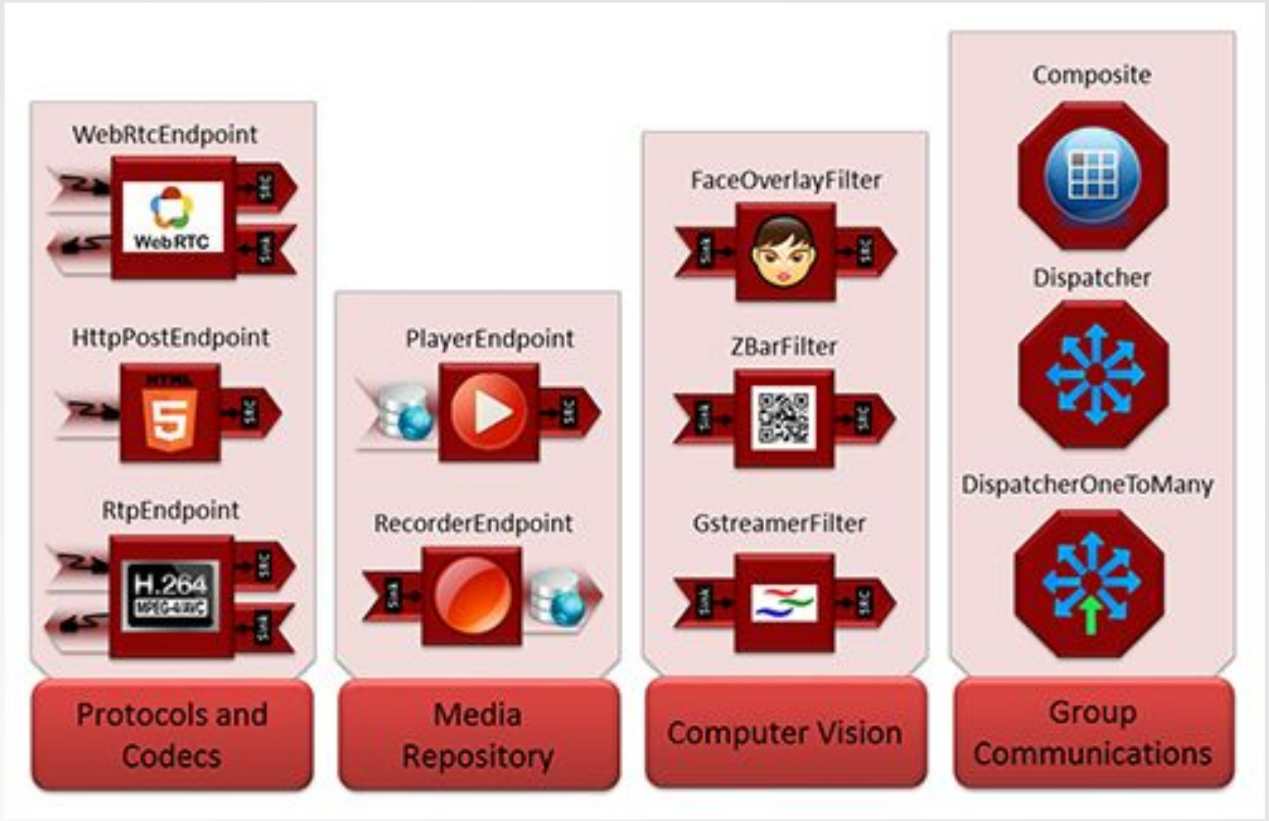
Jumpstart to kurento

- Please, use the docker image.
  - https://hub.docker.com/r/kurento/kurento-media-server
- Complex to build, too close to Ubuntu.
- Remember, STUN is required.
- GOOD tutorials, good examples at github.
- Is even better with a signalling server.

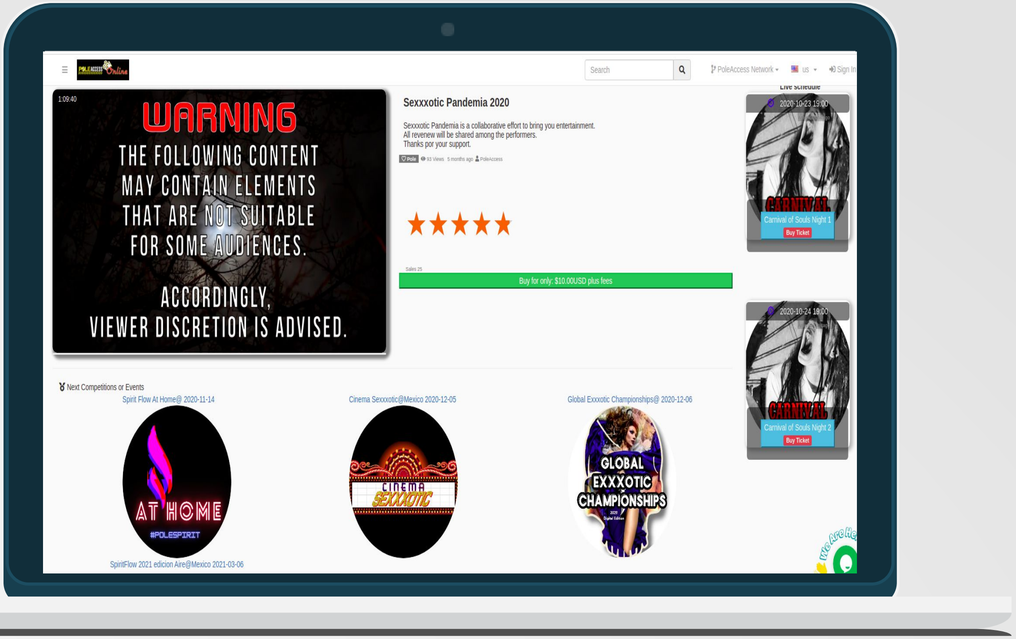
Kurento in a nutshell.



Kurento in a nutshell.



poleaccess.online, pandemic pushing innovation.



WARNING
THE FOLLOWING CONTENT MAY CONTAIN ELEMENTS THAT ARE NOT SUITABLE FOR SOME AUDIENCES.
ACCORDINGLY, VIEWER DISCRETION IS ADVISED.

Sexxxotic Pandemia 2020

Sexxxotic Pandemia is a collaborative effort to bring you entertainment.
All revenew will be shared among the performers.
Thanks por your support.

Pole 93 Views 5 months ago PoleAccess

Sales 25

Buy for only: $10.00USD plus fees

2020-10-23 19:00
Carnival of Souls Night 1
Buy Ticket

2020-10-24 19:00
Carnival of Souls Night 2
Buy Ticket

Next Competitions or Events

Spirit Flow At Home@ 2020-11-14
Cinema Sexxxotic@Mexico 2020-12-05
Global Exxxotic Championships@ 2020-12-06
SpiritFlow 2021 edicion Aire@Mexico 2021-03-06

- poleaccess.online is a site developed for the #polentrepeneur providing services for PPV videos, 1:1 video sessions and show streaming, where kurento is used.

Client specifications / CEO vision.

Oriented to show, not meetings

You can have up to 4 simultaneous co host, sharing the screen (composite) or single host . Kurento allows to have virtual switcher. Viewers only get video and audio, and interact by emotes and chat.

Tips

Viewers should have the ability to tip the performers, and emotes should be “felt” by the performer and the viewers.

Able to inject video

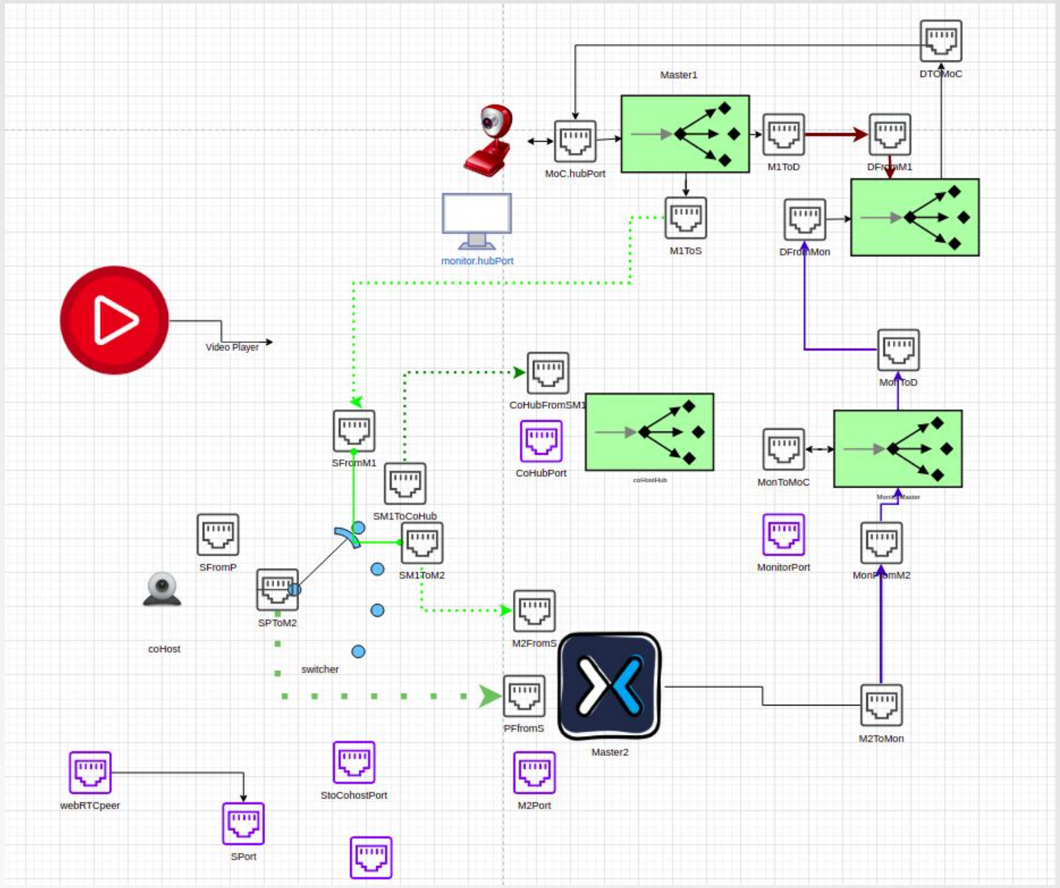
WebRTC is for live, but with kurento you are able to mix pre recorded video with live, using it’s switching capabilities.

Face 2 face video

Also a face 2 face video private rooms should be built, with all the same capability of tipping and with full control from one party to the other.

poleaccess.online, livestreaming with a twist.

poleaccess.online, switching architecture.



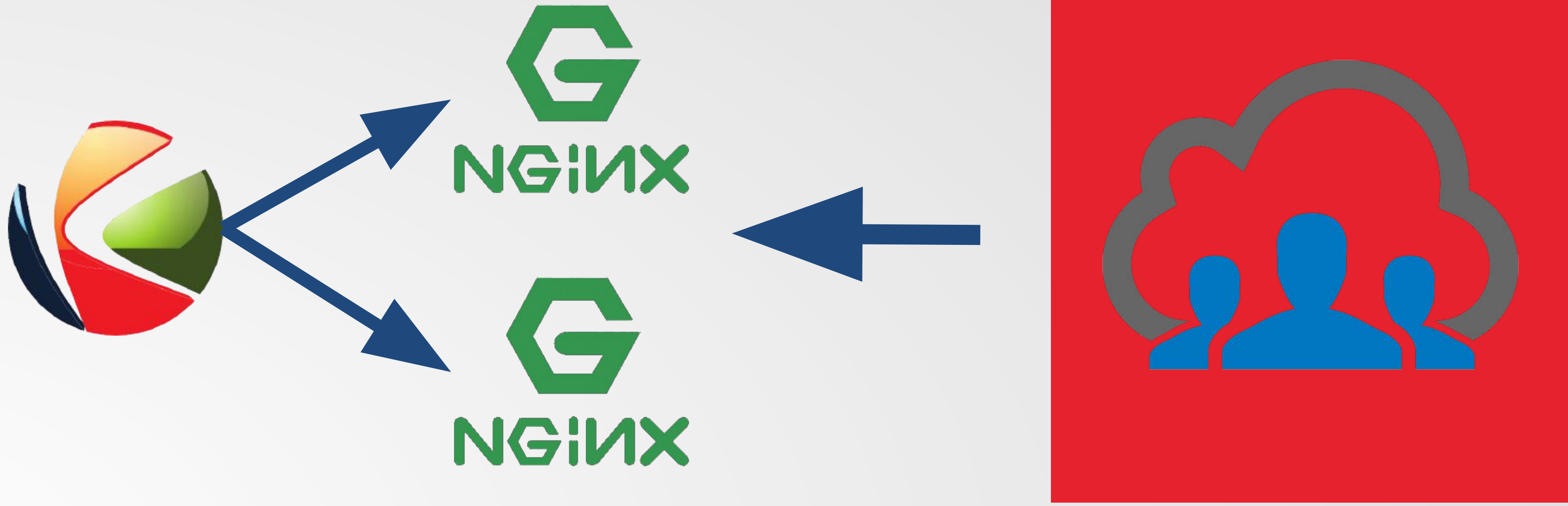
Resilience of infrastructure

Single server + STUN server

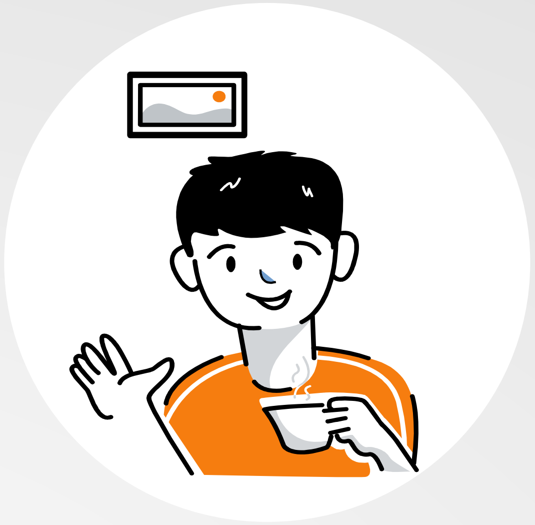
- Single server for 8 core, 32gb ram:
- Longest stream: 4 continuous hour.
- 2 co-hosts.
- Inline Videos.
- 250 Viewers max, 135 average.
- 2 “proxy servers”

Resilience of infrastructure

NGINX RTMP to the rescue.
Virtual Server created and destroyed in demand (thanks vultr)
Good old HLS streaming, (yes with some lag, but no issues)



email: criptos @ mobil.aullox.com
twitter: https://twitter.com/criptos
IG: https://www.instagram.com/photodot_poleaccess/
(yes I do photography too…)



Questions? …

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Thank You