Jitsi Meet

Presented Remotely by
Craig Maloney
Michigan!/usr/group
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jitsi.org

What is Jitsi?

- Started off as “SIP Communicator” in 2003
- Became “BlueJimp” in 2009
- Added Video Bridge / WebRTC in 2013
- Acquired by Atlassian in 2015
  - Work on Jitsi Desktop ceases
- Acquired by 8x8 in 2018

What makes up Jitsi

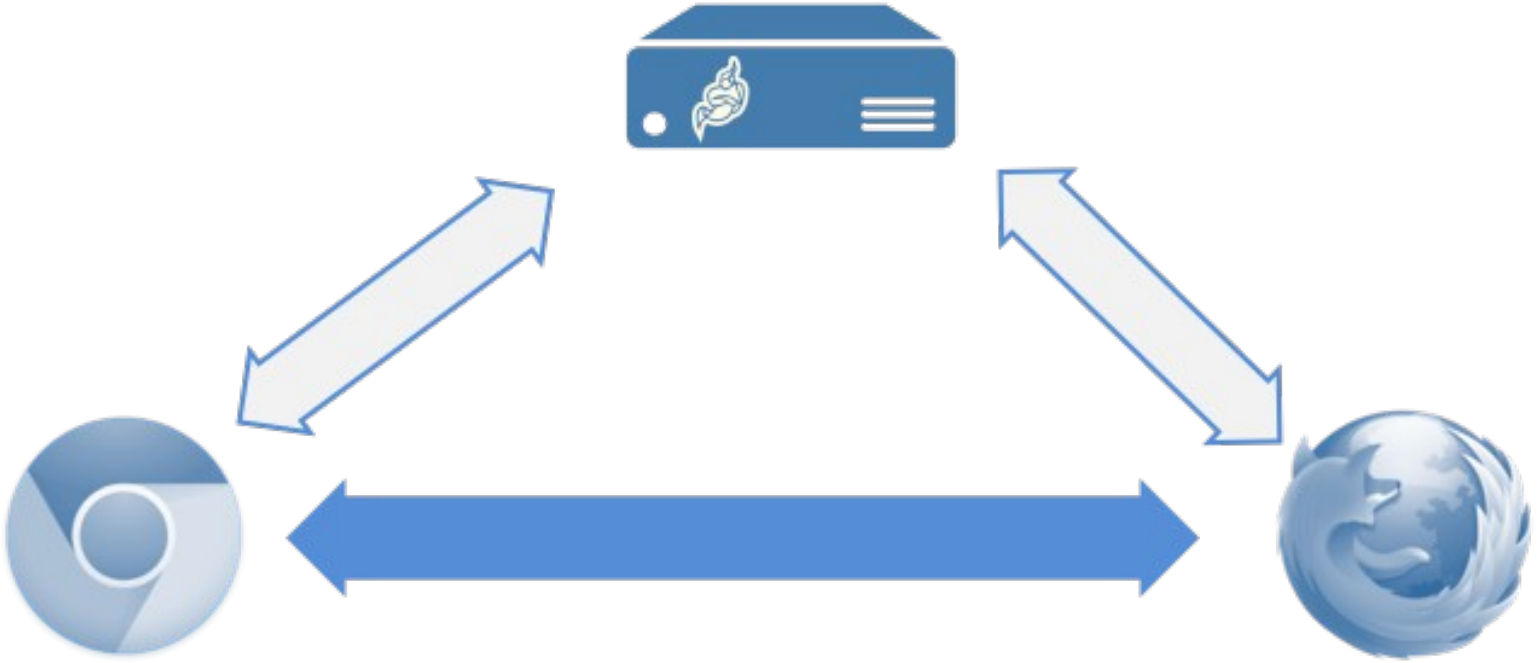
- **Jitsi Meet** (JavaScript / WebRTC front-end)
- **Jitsi VideoBridge** (XMPP server to manage thoursands of video streams from one server)
- **Jibri** (Streaming / Recording for Jitsi Meet conferences using Chrome virtual framebuffer / ffmpeg)
- **jicofo**: Jitsi Conference Focus: Manages media sessions between participants
- **jigasi**: Jitsi Gateway SIP for phone clients

What we’re using

- Jitsi Meet (Front-end interface)
- Jitsi Video Bridge (sending video to all of the participants on the call)
- Jibri (Streaming to Youtube)
- Jicofo (Sending the slides to everyone)
- Jigasi (In case someone dialed in to the call using the plain-old-telephone)

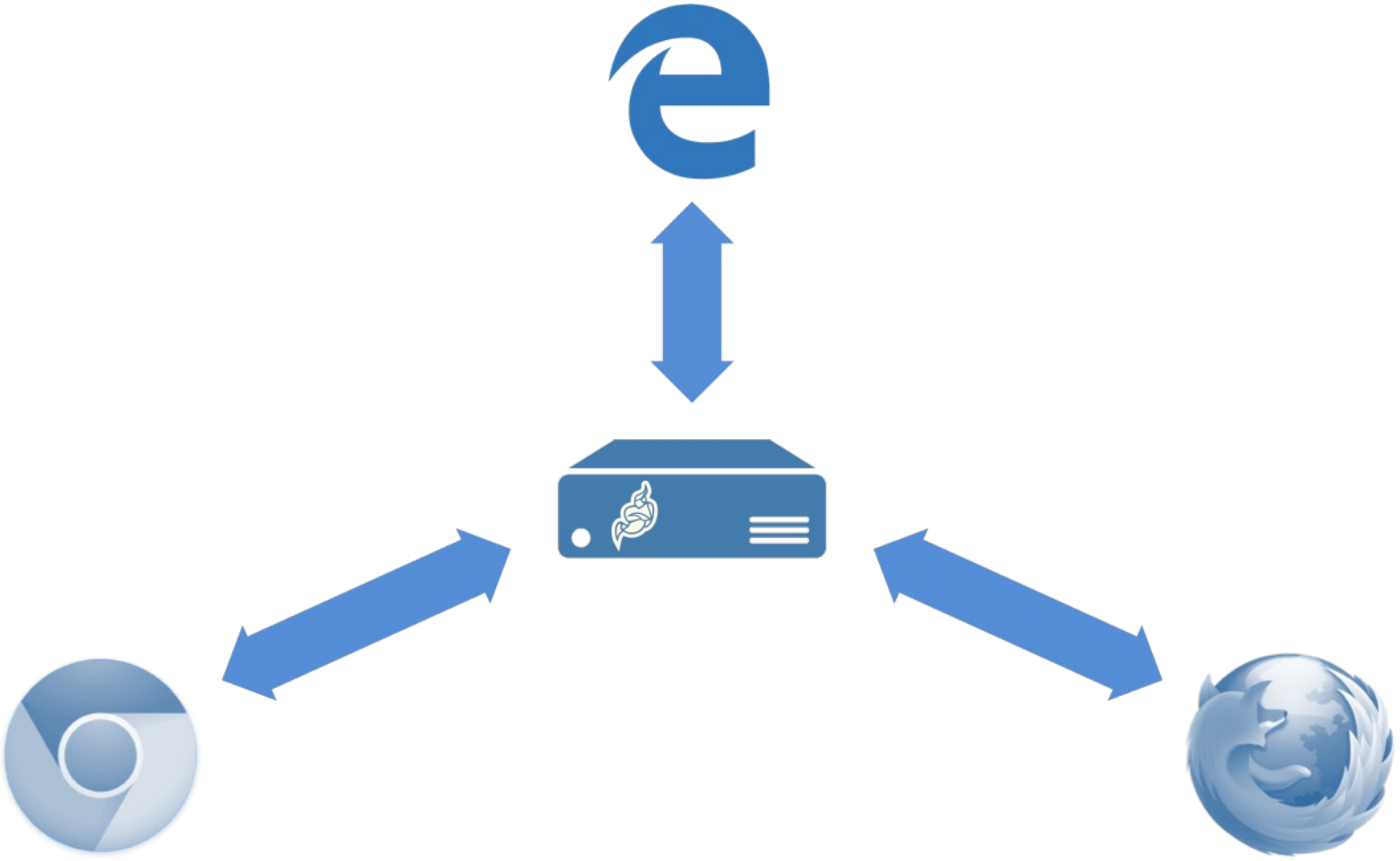
How it works

- One-to-one communication
  - Jitsi uses the Video Bridge to control the connection
  - Jitsi tries to create a P2P mode
    - Encrypts traffic using DTLS-SRTP from sender to receiver



How it works

- Multiple participants
  - Audio / Video still encrypted using DTLS-SRTP
  - Decrypted on the Video Bridge so it can be mixed with other traffic and re-broadcast.
  - Traffic isn’t stored in persistent storage (memory only).
  - Trade-off is better CPU / Bandwidth usage using Selective Forwarding Units (SFU)



More on security

- You can always track the status of your connection by hovering over your local GSM bars, clicking on “Show more” and looking for the (p2p) label there.
- `https://jitsi.org/news/security/`

Installing Jitsi

- Install nginx / Apache first! (Needs this to be present to set things up)
- First install the Jitsi repository key onto your system:
  - `wget -qO - https://download.jitsi.org/jitsi-key.gpg.key | sudo apt-key add -`
- Create a sources.list.d file with the repository:
  - `sudo sh -c "echo 'deb https://download.jitsi.org stable/' > /etc/apt/sources.list.d/jitsi-stable.list"`
- Update your package list:
  - `sudo apt-get -y update`
- Install the full suite:
  - `sudo apt-get -y install jitsi-meet`

https://github.com/jitsi/jitsi-meet/blob/master/doc/quick-install.md

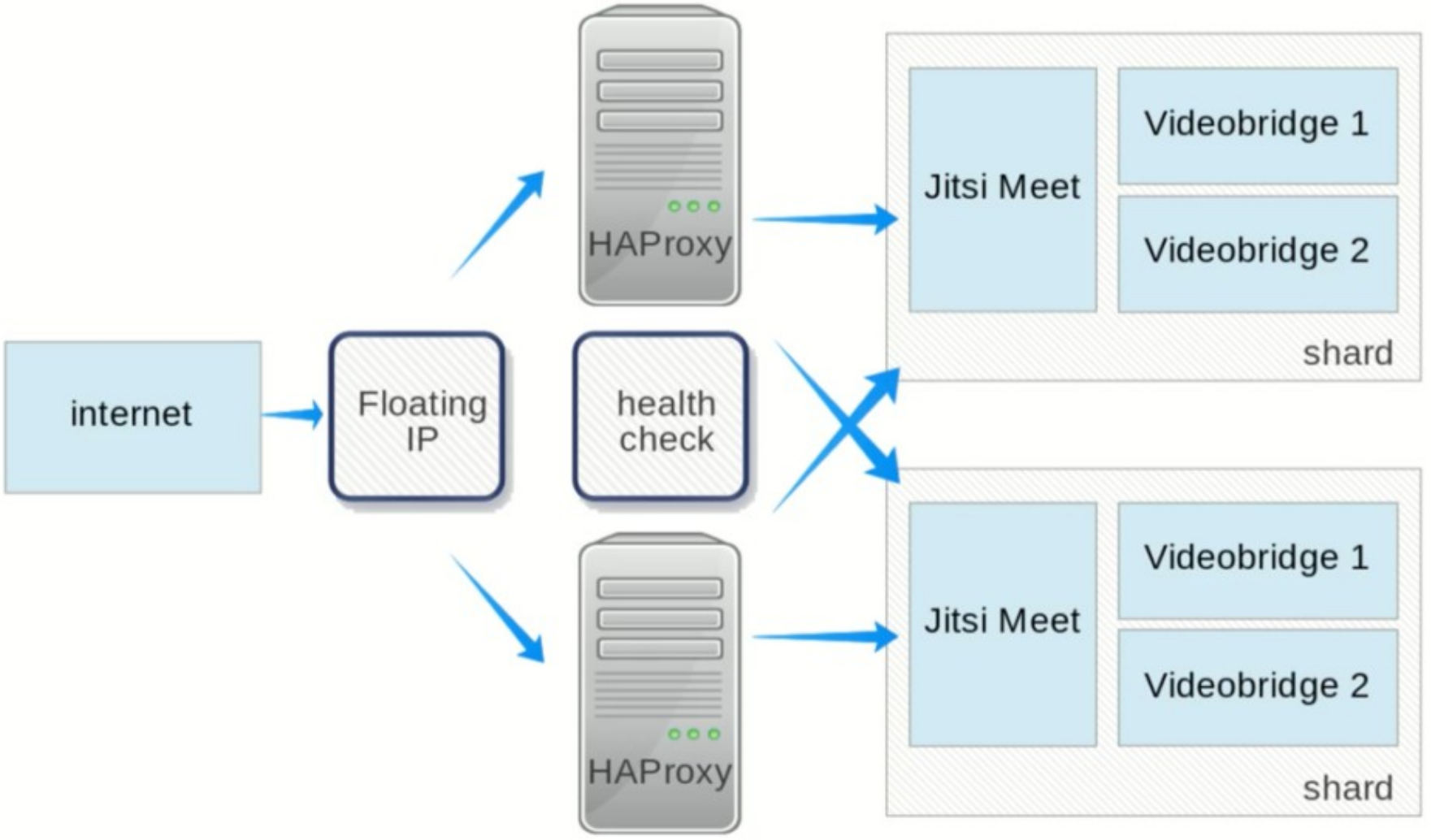
Nota Bene

- You’ll need to open ports 80, 443, and 10000 on your server
- Jitsi uses prosody for XMPP communications, and creates the necessary users for usage
- Jitsi should have letsencrypt installed. Use their script:
  - `/usr/share/jitsi-meet/scripts/install-letsencrypt-cert.sh`

Jitsi Authentication

- https://github.com/jitsi/jicofo#secure-domain
- This allows you to set up an authentication domain (internal_plain by default), and an anonymous user domain.
- Anonymous users can still click on external links with this setup, but can’t join meetings unless the moderator user arrives.
- (I’ll demo how this works)

Jitsi at scale



https://jitsi.org/news/new-tutorial-video-scaling-jitsi-meet-in-the-cloud/

What I’ve learned while using Jitsi?

- Jitsi is incredibly light on a well-powered server, but requires a lot of CPU on the clients
- One-to-One communication is really light on the server (P2P)
- Even with a simple link it can still be slightly confusing for folks to use Jitsi at first, but after the first time they get used to it quickly.
- Jitsi documentation is really great once you know the terminology for each of the components. Expect to be confused for a bit.

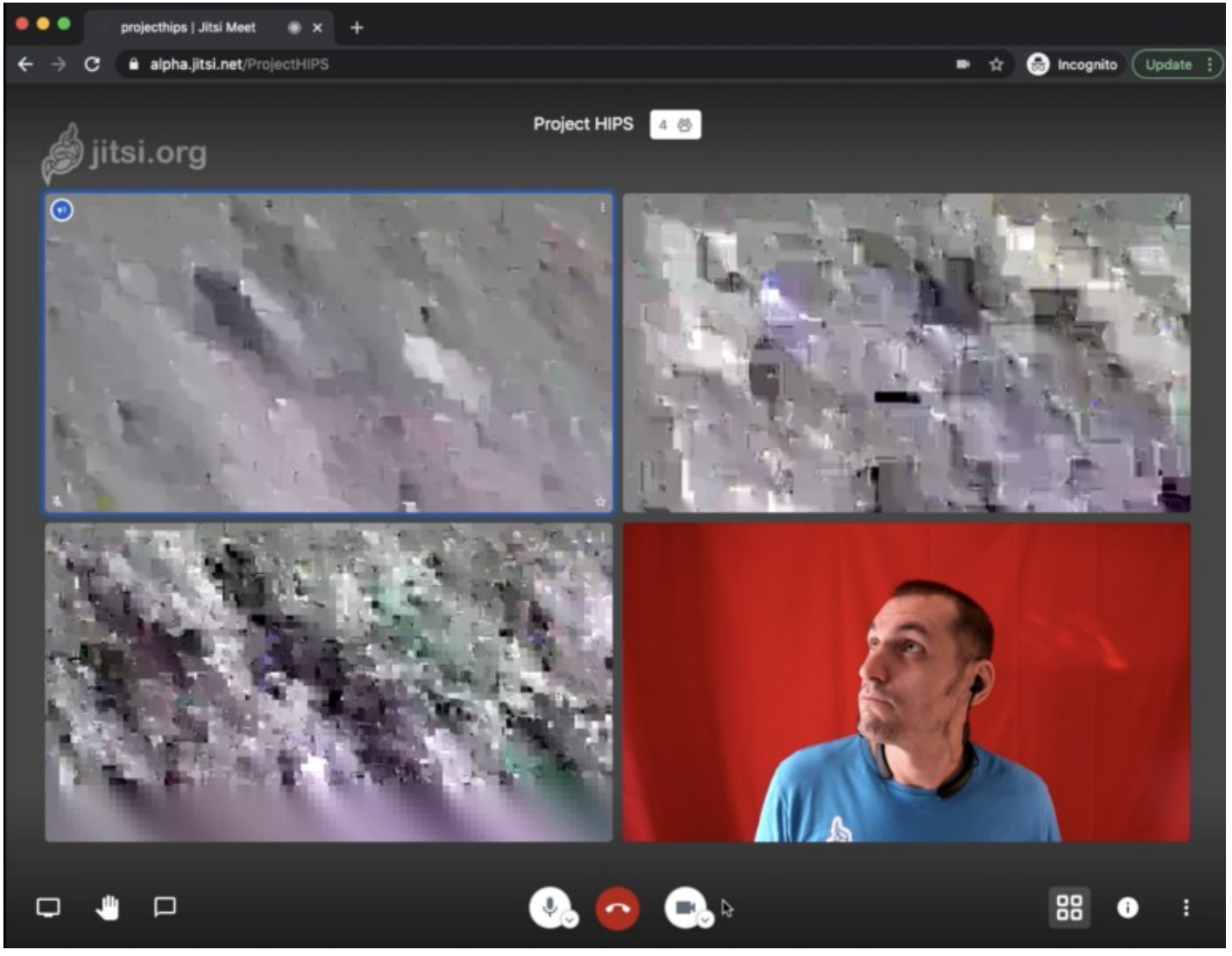
What I didn’t cover

- Using Jitsi with SIP (jigasi)
- Recording / Streaming (jibri)
- More complex authentication (LDAP)
- How to customize / rebrand the interface

BREAKING
NEWS

This just in: end-to-end encryption

https://jitsi.org/news/e2ee/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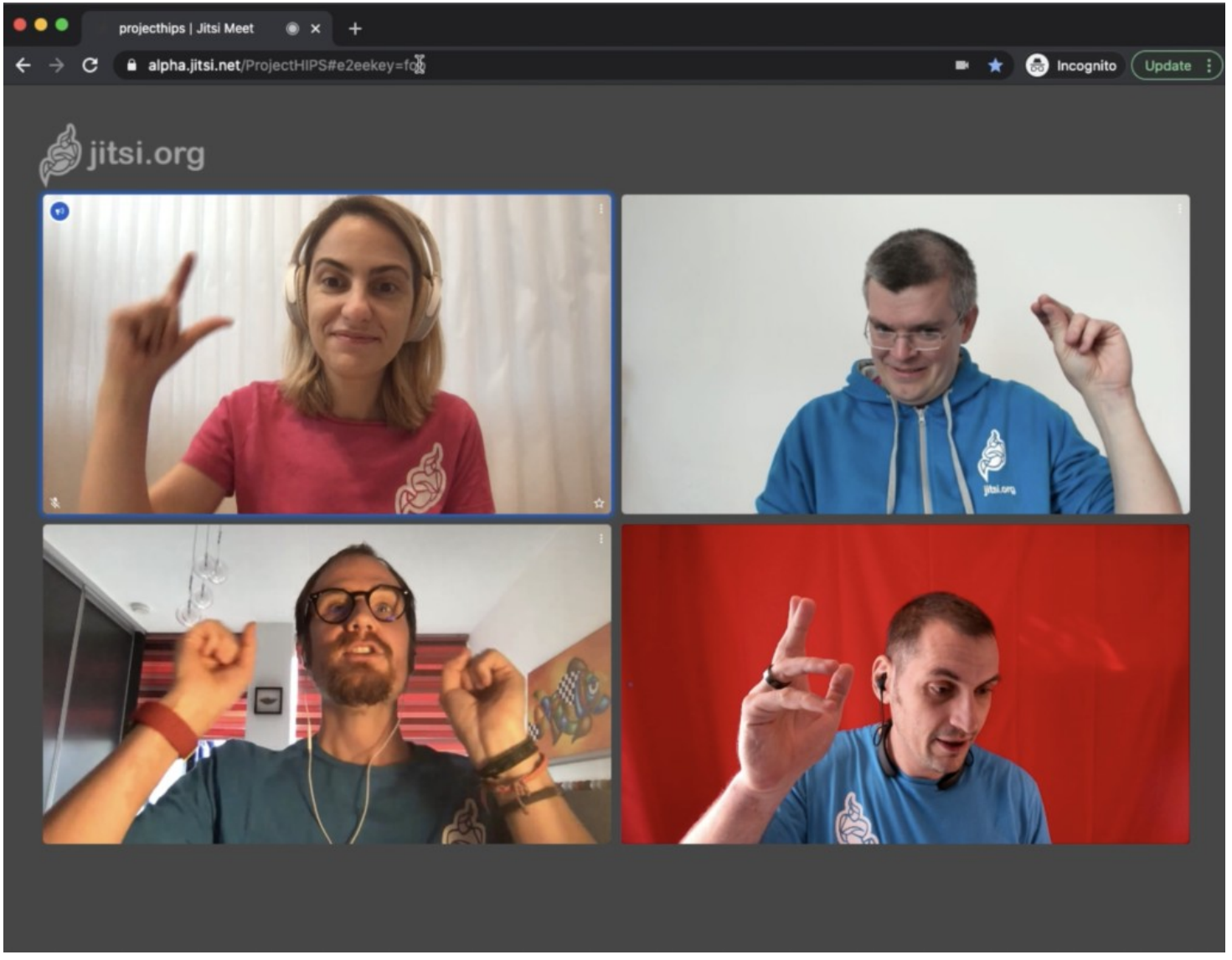
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Questions?

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Thank you!

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