

First MOQ public stream

Plan to stream the MOQ WG sessions

Wed 1530 - 1700 PST

Thu 1300 - 1430 PST

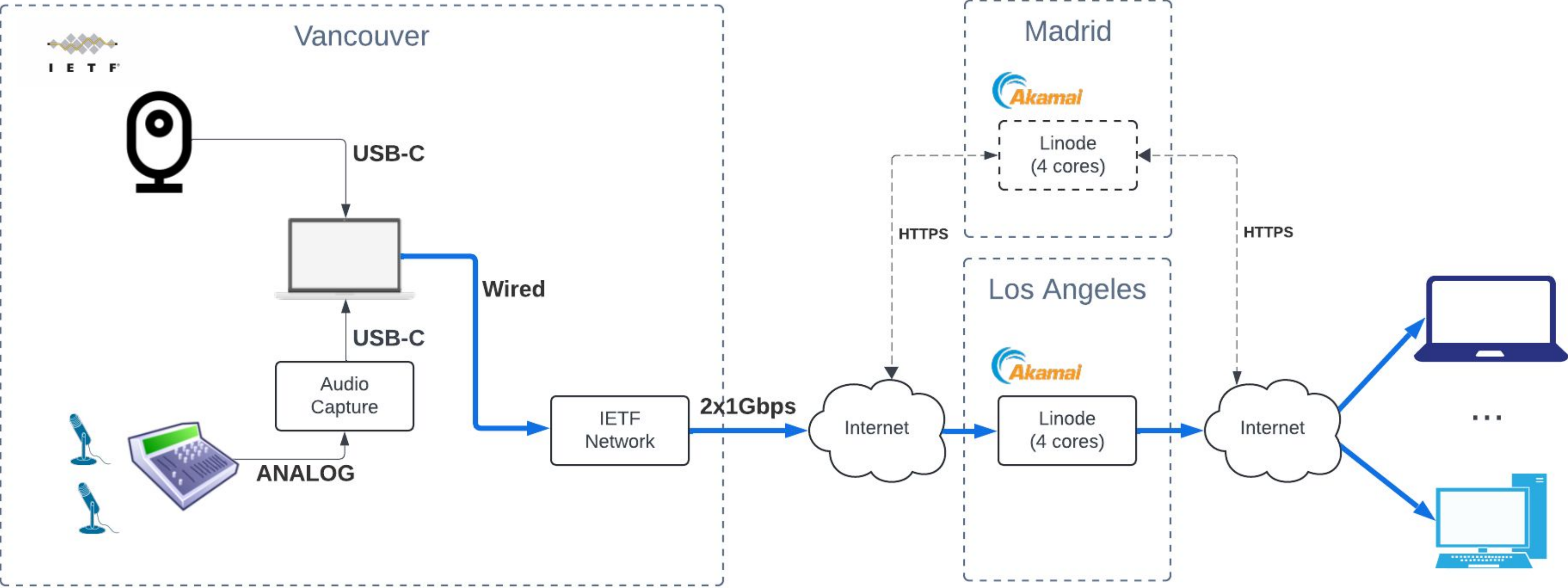
All alpha stage

Lower your expectations

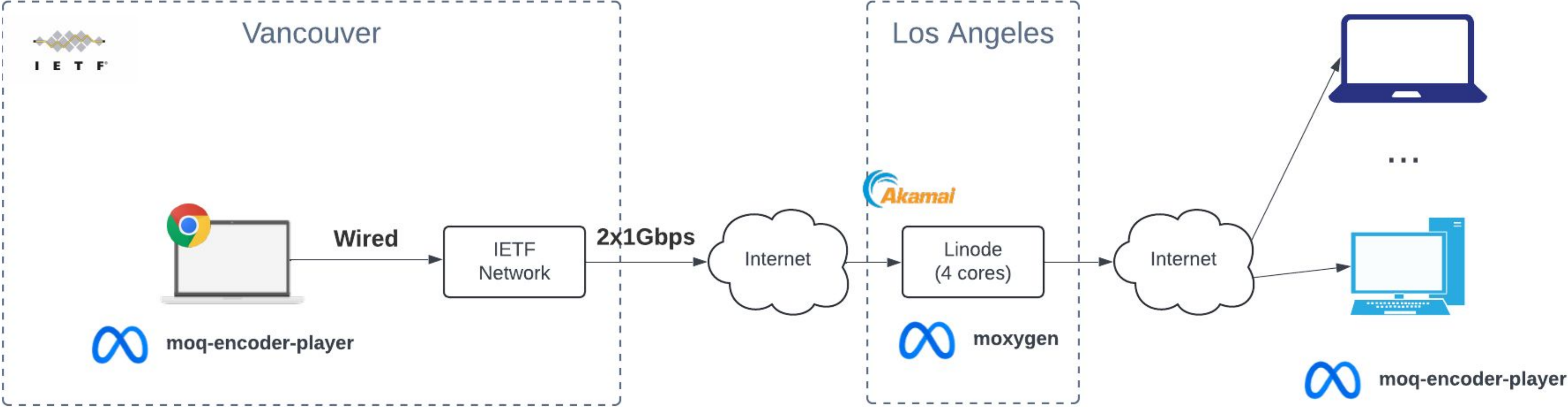
Please provide feedback!!!

To jcenzano@meta.com OR Slack QUICDEV-MOQ

Overview - Hardware



Overview - Software



Overview - MOQ

Encoder (moq-encoder-player)

- Javascript browser app
- WebCodecs for media processing
- WebTransport for MOQ communication

Stream

- Single video stream (NO ABR)
- Video: 854x480@30fps
- H264 - 750Kbps (KF every 2s)
 - Frame per object, object per stream
 - Group per GOP
- Audio
 - Opus - 32 Kbps (Frame 10ms)
 - Frame per object, object per stream
- LOC Container (modified)
- Draft-04

MOQT Test Ultra low latency with Webcodecs: ENCODER

WebCam(v+a) - Encode - Mux - Send - Server

Data needed

MOQT WT Relay:

Namespace:

Track name (audio,video will be added): Old Track name:

Full track names (based on namespace and track name):

Max inflight audio requests:

Max inflight video requests:

AuthInfo (for all tracks, shared with subscribers):

MOQ video packager: MOQ audio packager:

Video encoding params (h264)

Input sources:

Resolution @ fps: KeyFrame every (frames): Bitrate (bps):

Audio encoding params (opus)

Input sources:

Bitrate (bps):

Overview - MOQ

Relay (moxygen)

- C++
- Based on Meta prod stack
 - Proxygen, MvFst, Wangle, Fizz, Folly
- Draft-04
- NO PRIORITIES IMPLEMENTED
 - Yet!!

```
I0724 18:53:39.090125 28107 MoQServer.cpp:33] ClientSetup
I0724 18:53:39.119300 28107 MoQRelayServer.cpp:41] SubscribeRequest track=vc/20240724185202-audio
I0724 18:53:39.179043 28107 MoQRelayServer.cpp:41] SubscribeRequest track=vc/20240724185202-video
I0724 19:02:52.609396 28107 MoQRelayServer.cpp:50] Unsubscribe id=0
I0724 19:02:52.609422 28107 MoQRelay.cpp:123] Removed last subscriber for vc20240724185202-audio
I0724 19:02:52.638237 28107 MoQRelayServer.cpp:50] Unsubscribe id=1
I0724 19:02:52.638251 28107 MoQRelay.cpp:123] Removed last subscriber for vc20240724185202-video
I0724 19:02:52.640416 28107 MoQServer.cpp:78] SubscribeDone id=0 code=4 reason=Subscription Ended, received unsubscribe
I0724 19:02:52.668897 28107 MoQServer.cpp:78] SubscribeDone id=1 code=4 reason=Subscription Ended, received unsubscribe
I0724 19:02:57.122262 28107 MoQServer.cpp:33] ClientSetup
I0724 19:02:57.153829 28107 MoQRelayServer.cpp:41] SubscribeRequest track=vc/20240724185202-audio
I0724 19:02:57.218372 28107 MoQRelayServer.cpp:41] SubscribeRequest track=vc/20240724185202-video
I0724 19:08:43.626618 28107 MoQRelayServer.cpp:50] Unsubscribe id=0
I0724 19:08:43.626653 28107 MoQRelay.cpp:123] Removed last subscriber for vc20240724185202-audio
I0724 19:08:43.658005 28107 MoQServer.cpp:78] SubscribeDone id=2 code=4 reason=Subscription Ended, received unsubscribe
I0724 19:08:43.658378 28107 MoQRelayServer.cpp:50] Unsubscribe id=1
I0724 19:08:43.658400 28107 MoQRelay.cpp:123] Removed last subscriber for vc20240724185202-video
I0724 19:08:43.689551 28107 MoQServer.cpp:78] SubscribeDone id=3 code=4 reason=Subscription Ended, received unsubscribe
I0724 19:08:46.519244 28107 MoQServer.cpp:69] Unannounce ns=vc
I0724 19:08:46.519293 28107 MoQServer.cpp:69] Unannounce ns=vc
E0724 19:09:16.563741 28107 MoQServer.h:86] Got error=LocalError: Idle timeout, Idle timeout, num non control streams: 2
```

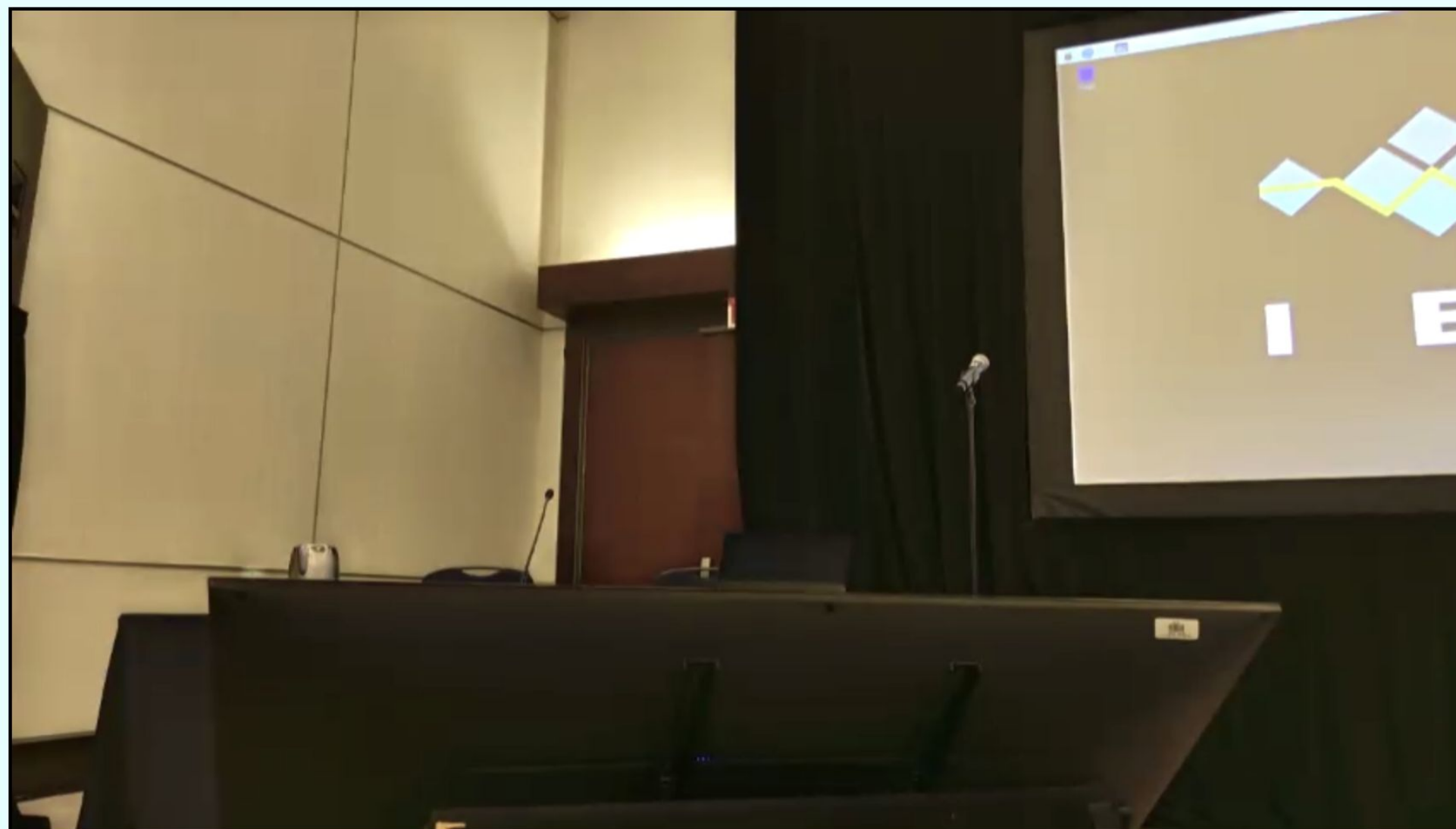
Overview - MOQ

Player (moq-encoder-player)

- Javascript browser app
- WebCodecs for media processing
- WebTransport for MOQ communication
- Selectable options for jitter buffer
 - From 100ms to 3s
- Plenty of stats to see if you are curious
 - Click "Show" playback stats
- No latency recovery implemented
 - No skip forward nor play x1.1
- Draft-04

IETF-120-MOQ-Demo-750Kbps

Please send feedback to: jcenzano@meta.com



Selected latency

✓ 100ms

200ms

500ms

1000ms

2000ms

3000ms

When you press START the video and audio will appear after this selected latency (ex: it will take 3s if you s

Start

Stop

Playback stats

<https://g28g.short.gy/moq120>

Note:

Low chances to work if now everybody in the room connects via IETF WiFi
(also no relay priorities implemented yet)



Thanks to:

- IETF, NOC, Meetecho, Encore (AV Crew)
- Akamai