

# draft-murillo-whep-02

<https://datatracker.ietf.org/doc/html/draft-murillo-whep-02>

Sergio Garcia Murillo - Millicast

# WHEP: WebRTC-HTTP egress protocol

- WebRTC is still the best media transport protocol for real-time streaming.
- However, there is no standard signalling protocol available to pair with it:
  - SIP or XMPP are not designed to be used in broadcasting/streaming services, and there also is no sign of adoption in that industry.
  - RTSP, which is based on RTP and maybe the closest in terms of features to webrtc, is not compatible with WebRTC SDP offer/answer model
- As a consequence, each WebRTC streaming services requires implementing a custom ad-hoc protocol.
- Why WHEP is needed?
  - Interoperability between WebRTC services and products.
  - Reusing player software which can be integrated easily.
  - Integration with Dynamic Adaptive Streaming over HTTP (DASH) for offering live streams via WebRTC while offering a time-shifted version via DASH (<https://dashif.org/webRTC/report.html>)
  - Playing WebRTC streams on devices that don't support custom javascript to be run (like TVs).

# WHIP and WHEP

- WHIP and WHEP are very similar in scope and technical solution.
- Egress is out of scope of WISH WG
- WHEP reuses all the mechanisms that have been put in place for WHIP: draft is basically /WHIP/WHEP/g
- WHIP and WHEP can be used together for service interoperability
- Should we recharter the WISH WG to include egress?

# WHEP Protocol Operation

- Sounds familiar?

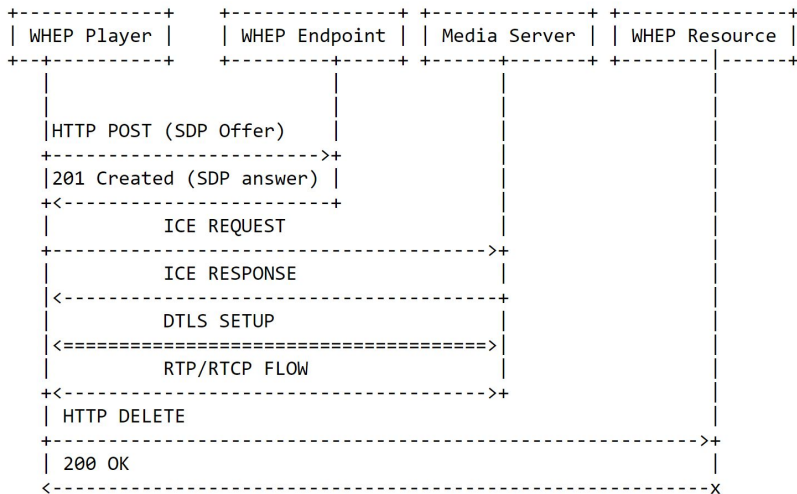
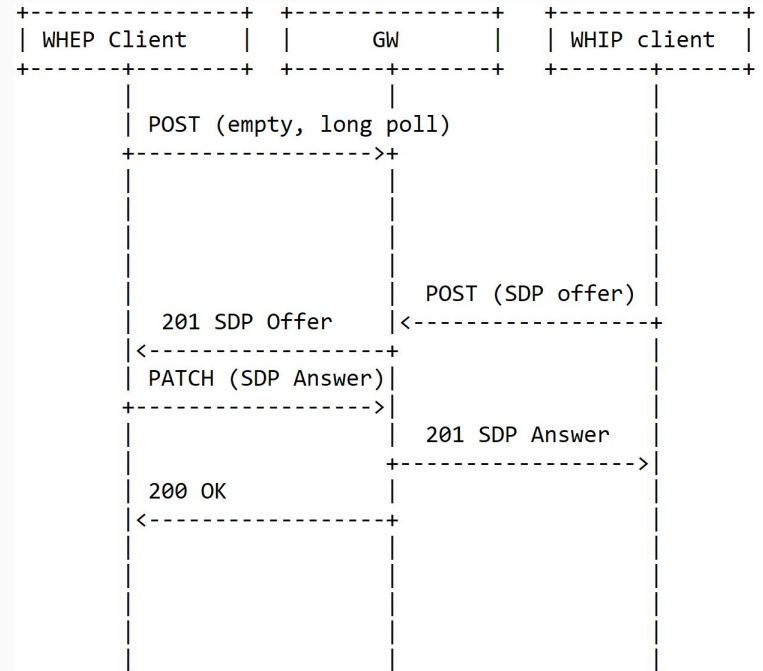
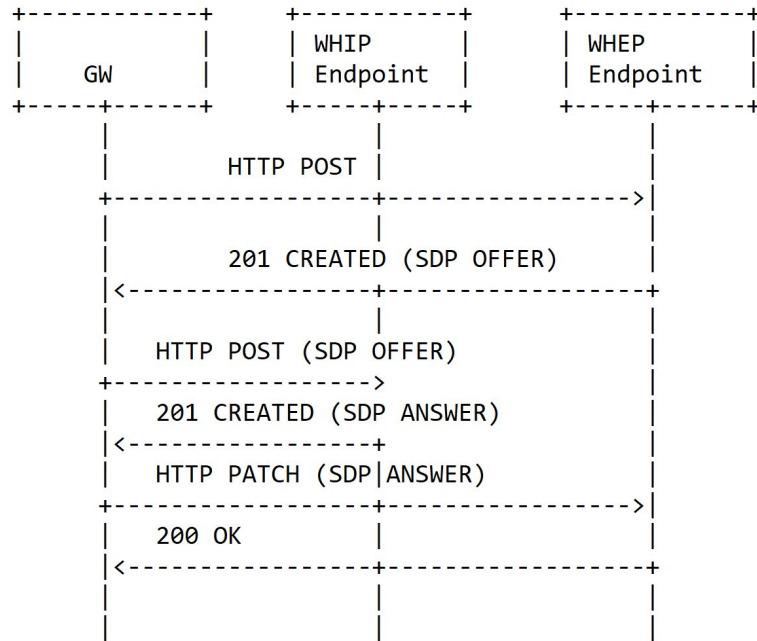


Figure 1: WHEP session setup and teardown

# WHIP/WHEP interoperability



# What's missing?

- **WHEP has more requirements in terms of functionality than WHIP**
- **Need to define extensions to match DASH functionality**
  - **Multilanguage support**
  - **Remote pause/mute**
  - **Subtitles/Live captions**
  - **Metadata**
  - **Client side resolution/quality selection**
  - **Events?**

# Next steps

- Recharter WISH WG or create a new WG?
- Define and add protocol extensions for missing metadata