

Rewinding (DVR) while playing HLS

A current playlist segments are cached by a browser while playing HLS. This allows to rewind a stream back (a simple DVR function) in HLS player. Let's consider the DVR implementation based on [VideoJS](#).

The following parameters should be set when creating a VideoJS player instance

code

```
const LIVE_THRESHOLD = 5;
const LIVE_TOLERANCE = 5;
...
const initVideoJsPlayer = function(video) {
  let videoJsPlayer = videojs(video, {
    ...
    liveui: true,
    liveTracker: {
      trackingThreshold: LIVE_THRESHOLD,
      liveTolerance: LIVE_TOLERANCE
    },
    ...
  });
  ...
  return videoJsPlayer;
}
```

Where:

- `liveui: true` - enables rewind interface
- `liveTracker.trackingThreshold` - sets a minimal time in seconds to play before displaying rewind interface
- `liveTracker.liveTolerance` - sets how far from the seekable end should be considered live playback, in seconds

A maximum time to rewind back depend on a segments count in playlist and on a segment size. The parameters are set at server side

```
hls_list_size=8
hls_time_min=2000
```

By default, the maximum time to rewind is 16 seconds

```
8 * 2000 = 16000
```

Playlist size should be increased to rewind a more time back

```
hls_list_size=30
```

Segment size should not be changed because some browsers (Safari) may stop playing HLS segments of other size.

Use `Player.currentTime()` method to rewind a currently playing stream. Get the maximum time range to rewind using `Player.seekable()` method

code

```
const backBtnClick = function(event) {
  if (player != null && player.liveTracker) {
    ...
    let seekable = player.seekable();
    let backTime = -1;
    if (event.target.id.indexOf("10") !== -1) {
      backTime = player.currentTime() - 10;
    } else if (event.target.id.indexOf("30") !== -1) {
      backTime = player.currentTime() - 30;
    }
    if (backTime < 0) {
      backTime = seekable ? seekable.start(0) : player.currentTime();
    }
    player.currentTime(backTime);
  }
}
```

HLS VideoJS Player Minimal

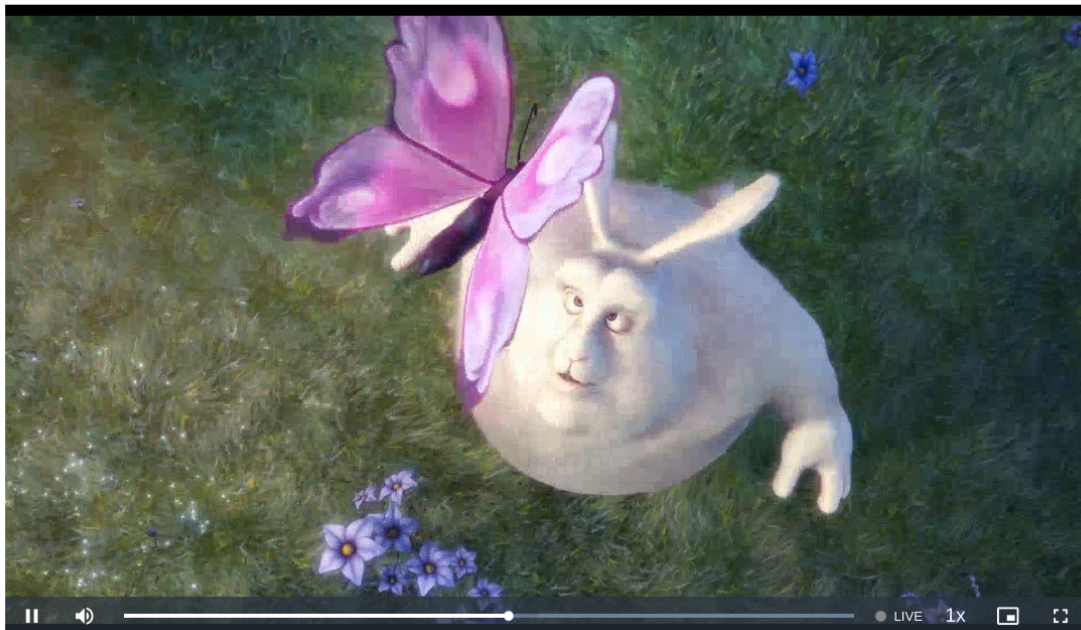
WCS

Stream

Auth

<< seconds

Max 30 10 Live



Use `Player.liveTracker.seekToLiveEdge()` to return back to live playback

code

```
const liveBtnClick = function() {
  if (player != null && player.liveTracker) {
    player.liveTracker.seekToLiveEdge();
    ...
  }
}
```

HLS VideoJS Player Minimal

WCS

Stream

Auth

<< seconds

Max 30 10



Rewind interface may not be enabled for the first HLS subscriber, in this case the `Player.liveTracker.seekToLiveEdge()` method should be called explicitly after some time since playback starts

code

```
const liveUIDisplay = function() {
  stopLiveUITimer()
  if (player && player.liveTracker) {
    liveUITimer = setInterval(function() {
      if (!player.liveTracker.isLive() &&
player.liveTracker.liveWindow() > LIVE_THRESHOLD) {
        // Live UI is not displayed yet, seek to live edge to display
        player.liveTracker.seekToLiveEdge();
      }
    }, LIVE_UI_INTERVAL)
```

```
}  
}
```