

Embed Player

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Example of a player that is embedded on a web page

This example may be used to embed player to the web page for live streams from web and IP cameras playback. These technologies are supported^

- WebRTC
- MSE

Embedding page interface:

Embed player



Server ?

Stream ?

Tech ☒ WebRTC ☒ MSE

Code

```
<iframe id='fp_embed_player' src='http://localhost:9091/embed_player?urlServer=ws://localhost:8080&streamName=test&mediaProviders=WebRTC,MSE' marginwidth='0' marginheight='0' frameborder='0' width='100%' height='100%' scrolling='no' allowfullscreen='allowfullscreen'></iframe>
```

Code of the example

Source code of the example is on server by this path:

```
/usr/local/FlashphonerWebCallServer/client2/examples/demo/streaming/embed_player
```

player.css - CSS style file
player.html - player page
player.js - script for player to work
sample.css - CSS style file for embedding interface page
sample.html - embedding interface page
sample.js - script to form embedding code

The example can be tested on this URL:

```
https://host:8888/client2/examples/demo/streaming/embed_player/sample.html
```

where host is your WCS server address

Analyzing the code

To analyze code get `player.js` file version with hash `24a69e1` that can be found [here](#) and is available to download in build [2.0.225](#).

1. API initializing.

Flashphoner.init() [code](#)

```
Flashphoner.init({ preferredMediaProviders: mediaProviders && mediaProviders !== "" ? mediaProviders.split(
','): [] });
```

2. Connection to the server

Flashphoner.createSession() [code](#)

The following parameters are passed to createSession() method:

- urlServer - WCS server URL
- mediaOptions - parameters to connect through the [TURN server](#)

```
let mediaOptions = {"iceServers": [{ 'url': 'turn:turn.flashphoner.com:443?transport=tcp', 'username':
'flashphoner', 'credential': 'coM77EMrV7Cwhyant' }]};
Flashphoner.createSession({urlServer: urlServer, mediaOptions: mediaOptions}).on(SESSION_STATUS.ESTABLISHED,
function (session) {
    ...
});
```

3. Receiving the event confirming successful connection

SESSION_STATUS.ESTABLISHED [code](#)

```
Flashphoner.createSession({urlServer: urlServer, mediaOptions: mediaOptions}).on(SESSION_STATUS.ESTABLISHED,
function (session) {
    setStatus(session.status());
    //session connected, start playback
    playStream(session);
}).on(SESSION_STATUS.DISCONNECTED, function () {
    ...
}).on(SESSION_STATUS.FAILED, function () {
    ...
});
```

4. Video stream playback.

Session.createStream(), Stream.play() [code](#)

The following parameters are passed to createStream() method:

- streamName - name of the stream
- remoteVideo - div element to display stream on page
- resolution to play the stream (transcoding will be enabled on server)
- useControls - enables a standard HTML5 video controls
- unmutePlayOnStart: false - disables automatic audio unmuting for autoplay to conform browsers requirements

```

let useVideoControls = true;
...
let options = {
  name: streamName,
  display: remoteVideo,
  useControls: useVideoControls
};
if (resolution) {
  playWidth = resolution.split("x")[0];
  playHeight = resolution.split("x")[1];
  options.constraints = {
    video: {
      width: playWidth,
      height: playHeight
    },
    audio: true
  };
}
if (autoplay) {
  options.unmutePlayOnStart = false;
}
playingStream = session.createStream(options).on(STREAM_STATUS.PENDING, function (stream) {
  ...
});
playingStream.play();

```

5.Receiving the event confirming stream is ready to playback

STREAM_STATUS.PENDING [code](#)

On this event:

- hide the custom preloader in Chrome browser because there is a standard one when standard controls are enabled
- set up `resize` video event handler
- set up video event handlers separately for Safari and other browsers

```

playingStream = session.createStream(options).on(STREAM_STATUS.PENDING, function (stream) {
  if (Browser.isChrome()) {
    // Hide a custom preloader in Chrome because there is a standard one with standard controls
    hideItem('preloader');
  }
  let video = document.getElementById(stream.id());
  if (!video.hasListeners) {
    video.hasListeners = true;
    setResizeHandler(video, stream, playWidth);
    if (Browser.isSafariWebRTC()) {
      setWebkitEventHandlers(video);
    } else {
      setEventHandlers(video);
    }
  }
}).on(STREAM_STATUS.PLAYING, function (stream) {
  ...
}).on(STREAM_STATUS.STOPPED, function () {
  ...
}).on(STREAM_STATUS.FAILED, function(stream) {
  ...
}).on(STREAM_EVENT, function(streamEvent){
  ...
});
playingStream.play();

```

6.Receiving the event confirming successful stream playback

STREAM_STATUS.PLAYING [code](#)

On this event, MSE stream playback is unpaused in Android Firefox browser

```

playingStream = session.createStream(options).on(STREAM_STATUS.PENDING, function (stream) {
    ...
}).on(STREAM_STATUS.PLAYING, function (stream) {
    // Android Firefox may pause stream playback via MSE even if video element is muted
    if (Flashphoner.getMediaProviders()[0] == "MSE" && autoplay && Browser.isAndroidFirefox()) {
        let video = document.getElementById(stream.id());
        if (video && video.paused) {
            video.play();
        }
    }
    setStatus(STREAM_STATUS.PLAYING);
    onStart();
}).on(STREAM_STATUS.STOPPED, function () {
    ...
}).on(STREAM_STATUS.FAILED, function(stream) {
    ...
}).on(STREAM_EVENT, function(streamEvent){
    ...
});
playingStream.play();

```

7. Stream playback stop

Stream.stop() [code](#)

```

playingStream.stop();

```

8.Receiving the event confirming successful playback stop

STREAM_STATUS.STOPPED [code](#)

```

playingStream = session.createStream(options).on(STREAM_STATUS.PENDING, function (stream) {
    ...
}).on(STREAM_STATUS.PLAYING, function (stream) {
    ...
}).on(STREAM_STATUS.STOPPED, function () {
    setStatus(STREAM_STATUS.STOPPED);
    onStop();
}).on(STREAM_STATUS.FAILED, function(stream) {
    ...
}).on(STREAM_EVENT, function(streamEvent){
    ...
});
playingStream.play();

```

9. Automatic playback starting if required

[code](#)

```

if (autoplay) {
    centralButton.click();
}

```

10. Setting up resize event handler

[code](#)

On this event, the container size for video element is changed

```
function setResizeHandler(video, stream, playWidth) {
  video.addEventListener('resize', function (event) {
    let streamResolution = stream.videoResolution();
    if (Object.keys(streamResolution).length === 0) {
      resizeVideo(event.target);
    } else {
      // Change aspect ratio to prevent video stretching
      let ratio = streamResolution.width / streamResolution.height;
      let newHeight = Math.floor(playWidth / ratio);
      resizeVideo(event.target, playWidth, newHeight);
    }
  });
}
```

11. Setting up event handlers for Safari browser

[code](#)

The following events are handled:

- playing - hide the custom preloader when stream is playing
- webkitbeginfullscreen, webkitendfullscreen - detect full screen mode to unpause stream playback when exiting this mode in iOS Safari
- pause - unpause stream playback when exiting full screen mode; stop playback by clicking the standard pause control in windowed mode

```
function setWebkitEventHandlers(video) {
  let needRestart = false;
  let isFullscreen = false;
  // Hide custom preloader
  video.addEventListener('playing', function () {
    hideItem('preloader');
  });
  // Use webkitbeginfullscreen event to detect full screen mode in iOS Safari
  video.addEventListener("webkitbeginfullscreen", function () {
    isFullscreen = true;
  });
  video.addEventListener("pause", function () {
    if (needRestart) {
      console.log("Video paused after fullscreen, continue...");
      video.play();
      needRestart = false;
    } else if (!(isFullscreen || document.webkitFullscreenElement)) {
      // Stop stream by standard play/pause control
      playingStream.stop();
    }
  });
  video.addEventListener("webkitendfullscreen", function () {
    video.play();
    needRestart = true;
    isFullscreen = false;
  });
}
```

12. Setting up event handlers in other browsers

[code](#)

The following events are handled:

- playing - hide the custom preloader when stream is playing
- pause - stop playback by clicking the standard pause control in windowed mode

```
function setEventHandlers(video) {
  // Hide custom preloader
  video.addEventListener('playing', function () {
    hideItem('preloader');
  });
  // Use standard pause control to stop playback
  video.addEventListener("pause", function () {
    if (!(document.fullscreenElement || document.mozFullscreenElement)) {
      // Stop stream by standard play/pause control if we're not in fullscreen
      playingStream.stop();
    }
  });
}
```